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Business Models in a Digital Age: Balancing Competitive & Collaborative Forces

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Preface

The world is becoming increasingly interconnected across all fronts at an unprecedented pace; it is deemed that networks, knowledge and innovation, and entrepreneurship drive growth and development. The rise of emerging markets and growth of global supply chains are attributed to globalization and ICT; nations and firms continue to form strategic levers using the power of comparative advantage; and human capital worldwide is becoming more mobile and virtually engaged despite the national boundaries. The developments have also caused dramatic structural and organizational changes and disruption of traditional businesses and job markets. Global investments in commodities and indiscriminate exploitation of natural resources affected the sustainability of global ecosystems. Equal access to education, knowledge and health are also under the microscope. The challenges of rising inequalities in wealth and income, economic stagnation, unemployment, and the impact of globalization have also taken the center stage of public discourse. These trends bring heightened levels of responsibility to business, institutions and society.

In view of the strategic importance of these challenges, the 15th International Conference of the Society for Global Business & Economic Development (SGBED) invited academic and professional perspectives in the form of empirical research, case studies and applications on a wide range of related topics. The overwhelming response received from scholars and practitioners from around the world bear testimony to the importance of the chosen theme and currency of the conference.

The papers included in these Proceedings have been selected through a rigorous review process of over 200 scholarly papers. Both full papers, as well as selected papers in the abstract form are published here. Altogether, the selected papers and research abstracts represent over 50 universities located in 10 different countries. The sheer size and scope of the conference necessitated the publication of the proceedings in the PDF format.

The full papers have been divided in broad categories of themes: Cross-Cultural Issues & Management, Data Management in Digital Age, Marketing, Customer Management, Entrepreneurship, Multinational Enterprises (MNEs) and Foreign Direct Investment (FDI), Leadership and Human Resource Management, Sustainable Development, Operations Management, Marketing and Brand Management, Human Resource and Knowledge Management, Knowledge Management and Innovation, Finance Management and Investment, Sustainable Development, Management Issues in Digital Age, International Business, and Technological and Business Model Innovation. These papers cover a broad range of issues. To name a few, the topics related to global, regional and country level trends in trade and investment, innovations and volatility in financial markets, rapid advancement of Information and Communications Technology and its influence on business delivery system, pedagogy, sports tourism, new trends in risk and resource management, cultural conflict, environmental equity and challenge of sustainable growth, choice of appropriate corporate governance system, and, enforcement of international accounting standards have received a great deal of attention in the conference contributions. Accordingly, the papers have been grouped under 17 sections representing the major topics of the conference.

Contributions from authors around the world helped make this volume an integrated, cohesive inquiry into the major drivers of global business today and the required directions for sustainable growth in business activities in the future. We express our sincere gratitude to all these authors.

We believe these proceedings offer some of the best information available in the area of global business and economic development. We hope this publication will contribute to the success of those willing to pursue scholarly research on global business trends in the context of a changing environment.

Editors
Disclaimer:

All papers and abstracts included in this volume have been formatted to ensure uniformity in style of representation. Uniform formatting could possibly modify some of the figures appearing in the papers. In view of the variations in writing styles and language proficiency of the authors, proof reading of these papers was kept confined to ensuring conformity with the APA style. Harmonization of language skill reflected across papers was beyond the scope of the editorial process. Language and grammar used in the papers, thus, remain to be the sole responsibility of the respective authors.
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Content</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track 1: Cross-Cultural Issues &amp; Management</td>
<td>14</td>
</tr>
<tr>
<td>‘Human Values’ Paradigm in China-India Managerial Interface: Converging Ancient Traditions to a Future of Multidimensional Engagement</td>
<td>15</td>
</tr>
<tr>
<td>Research and Analysis on Problems Faced by Chilean Wine in the Chinese Market—A Case Study of Guangdong Province</td>
<td>16</td>
</tr>
<tr>
<td>Garment Producers for the US Market: Central America versus China</td>
<td>28</td>
</tr>
<tr>
<td>Track 2: Data Management in Digital Age</td>
<td>36</td>
</tr>
<tr>
<td>The New Regional But Also Global Standard For Protection Of Personal Data</td>
<td>37</td>
</tr>
<tr>
<td>Big Data and Artificial Intelligence Technologies: Strategic Implications for Organizational Business Models</td>
<td>42</td>
</tr>
<tr>
<td>What’s Personal Data Worth? Exploring Remedies for Privacy Breaches</td>
<td>43</td>
</tr>
<tr>
<td>Standardizing Smart City's Cloud Service: A Case Study of Shanghai</td>
<td>48</td>
</tr>
<tr>
<td>Track 3: Marketing</td>
<td>51</td>
</tr>
<tr>
<td>Will You Buy Product in Moments?—A Study on The Impact Factors of Purchase Intention Based on WeChat Moments Marketing</td>
<td>52</td>
</tr>
<tr>
<td>The impact of virtual community context on users’ participation—An example from social Q&amp;A community</td>
<td>65</td>
</tr>
<tr>
<td>Research and enlightenment on brand building and brand management of video website in China</td>
<td>74</td>
</tr>
<tr>
<td>Brand Public Praise: Influence Factors of Customer Engagement Behavior in Virtual Brand Community Based on the Social Cognitive Theory</td>
<td>81</td>
</tr>
<tr>
<td>Track 4: Customer Management</td>
<td>92</td>
</tr>
<tr>
<td>The Role of Category Skepticism and Customer-to-Customer Interactions in Service Co-Production</td>
<td>93</td>
</tr>
<tr>
<td>A moderated mediation model of the relationship between nutrition knowledge and food label use among consumers with multiple chronic conditions</td>
<td>95</td>
</tr>
<tr>
<td>Study of Reference Group Effect on Luxury Herding Behavior in China</td>
<td>96</td>
</tr>
<tr>
<td>Ways to Enhance Customer Civility in P2P accommodation platforms</td>
<td>113</td>
</tr>
</tbody>
</table>
Track 5: Entrepreneurship

The Performance of Women Micro-Entrepreneurs in Zambia: exploring antecedents for success

Gender Differences in Entrepreneurial Attitude and Intentions: A Case of Dubai

Bridging the Gender Inequalities with the concept of Social Entrepreneurship: A Comprehensive Study of SADHNA ORGANISATION

Religious Entrepreneurs’ Innovative Attitudes in Chinese Private Enterprises after 2008 Financial Crisis

Understanding Ethical Challenges In Entrepreneurial Marketing: An Uae Perspective

Track 6: Multinational Enterprises (MNEs) and Foreign Direct Investment (FDI)

An Examination of the Salient Features of the Giant Multinationals in the Age of Globalization

3M: A new perspective on international expansion of emerging market enterprises

The impact of institutional distance and experiential knowledge on the MNE’s internationalization speed

R&D, Foreign Direct Investment and Firm Performance: Evidence from Chinese Listed Companies

Track 7: Leadership and Human Resource Management

Cultural Intelligence Effects on Expatriates' Adjustment and Turnover Intentions in China-mainland

Leadership Effectiveness in Multi-cultural Teams: an exploratory study

Emotional Intelligence, Psychological Safety, and Team Decision Making

Emerging Challenges of HRM in 21st Century: A Theoretical Analysis

A Study of Public Leadership Roles for Its Effect on Employees’ Organizational Commitment in Public Institutions: An Empirical Investigation in Pakistan’s Public Sector Context

Track 8: Sustainable Development

Gender Difference in Technology Acceptance: Evidence from China

University-Industry Partnerships in Making Cities Resilient

Emerging determinants for SME growth in Benin

Impacts of Economic Openness on Environment Sustainability in SAARC Countries
Track 9: Operations Management ............................................................... 329
A personalized recommendation method based on collaborative filtering algorithm ................................................................. 331
能力视角下 P2P 平台对资金存管政策的适应性研究 ................................................................. 337
基于低成本战略中国物流业的优化策略 ................................................................................................. 354
Decision analysis of dual-channel mobile phone recycling based on user preferences ................................................................. 364

Track 10: Marketing and Brand Management ............................................. 374
An Integrative Framework for Developing China’s Nation Brand ............... 375
What really matters? A triumph of brand extension: Evidence from Engro Corporation ................................................................. 378
Consumers purchase decision towards Private Label Brands: An Empirical Investigation for Select Indian Retailers ................................. 389
The Comparision of Conventional And Entrepreneurial Marketing: The Commonalities Study ........................................................................ 403

Track 11: Human Resource and Knowledge Management .......................... 413
The Global Process of MNC Knowledge Transfer: A Systematic Literature Review ........................................................................ 414
The Relationship between Knowledge Hiding and Employee Creativity: Task Independence as a Moderator .................................................... 440
独立董事参与度对 CEO 超额薪酬影响研究——基于深度与广度的双元视角 ................................................................. 448
Research on The Ingratiation Behavior of The Subordinates in Organization ................................................................................................. 471

Track 12: Knowledgement Management and Innovation ............................ 477
Knowledge Management and innovation in Western Mexico SMEs. An empirical study ................................................................. 478
The Research on the Technology-driven Reconstruction Path of Consumers, Goods and Scene of New Retail ––Take Hema Fresh as an Example .... 490
The Challenges of Innovation Approaches to Higher Education in Central Asia ................................................................................................. 497
Emerging Technological Innovation in HRM at Global Level ....................... 509

Track 13: Finance Management and Investment ........................................ 514
A Time-Line Study of Finance Management in India from Vedic-Literature, Epic, Ethical-Aphorisms, Fable, Three-Centurions, Gandhi and Satyabhakta ................................................................................................. 515
Approach in Modeling Abnormal Returns ............................................................... 532
A Strategic Investment Analysis Framework – Using Facebook as a Case Study ................................................................. 543

Track 14: Finance Management and Investment .............................................. 545
To Analyze for the Way of How to Achieve Sustainable Development in Developing Countries ................................................................. 546
Investigation of micro-enterprise's entrepreneurial environment in China 551
Can Environmental Information Disclosure Increase Corporate Value: Empirical Evidence from Chinese Listed Companies............................................. 557
出口经理的国际社会资本如何提升企业竞争绩效？——基于进口商参与中介作用的实证剖析 ................................................................................................................. 567

Track 15: Management Issues in Digital Age .................................................. 580
Mobile Advertising optimization Strategy Based on SICAS Model In China 582
The Construction of Enterprise Talent Management Supply Chain Model Under the Sharing Economy ................................................................. 589
The Potential of Digital Transformation for Healthcare Revolution in Emerging Countries ................................................................. 605
OTT Strategy for Thailand .................................................................................. 628

Track 16: International Business ................................................................... 629
Research on Global Value Chain Reconstruction of Cross-border E-commerce Based on C2F Full Link Operation ...................................................... 630
Task Performance of Expatriates from Emerging Economies ....................... 643
Sequential Investments in the study of International Business - importance, research results and future directions ................................. 659
Economic cooperation between Latvia and China on background of Belt and Road Initiative .................................................................................. 673

Track 17: Technological and Business Model Innovation ............................. 687
Analysis of Light Asset Operation Models-Taking Wanda Business Management as an Example ................................................................. 688
技术多元化促进了合作创新？——动态平衡的视角 ................................................................................................................................. 696
基于整合创新范式的科技服务业创新能力提升策略 ................................................................................................................. 708
Corporate Social Responsibility and firm growth, the mediating effect of technical innovation ................................................................. 717
Track 1: Cross-Cultural Issues & Management
Abstract

Minimization No serious observer will disagree that the world’s future is tied to China and India. Many experts even predict it to be amongst the most important bilateral ties in the world by 2025. The ties of complementary convergence inherited from the civilisational dialogues of the ancient traditions need to develop into forward looking multidimensional engagements for the fruition of this opportunity. It is indeed surprising that two of the world’s most ancient and rich traditions have collaborated and integrated their heritages over so many centuries. The Chinese perspectives of ‘shijie datong’ meaning ‘viewing harmony balancing the world’ and the Indian tradition of ‘Vasudhiava Kutumbakam’ meaning ‘the world is one family’ kept them in a close relationship until the recent decades. Reemergence of global business and large corporations in both the countries again present the new possibility of a multidimensional integration. The great maritime explorer Zheng He who visited India seven times in the fifteenth century erected a stone tablet in the coastal Sri Lankan town of Galle with prayers to Hindu Gods to bless his missions in building a peaceful world based on trade and commerce. President of the People's Republic of China echoed this Zheng He message in his report to the 19th National Congress in October 2017 through his 'three keys’ policy. The growing strength of India-China bilateral trade which was a staggering USD$84.44 billion in 2017 needs much deeper managerial competency, historical knowledge and the corresponding 'human values’ paradigm to sustain itself and enrich the visions of the leaders.

The paper outlines the unique historical traditions of mutual learning and respect in their societal and economic interface over centuries and explores their relevance in the context of recent economic resurgence of the two countries. A model exploring the ‘tradition-anchored’ managerial belief system is presented in deepening a multidimensional mutual engagement. The legacies of the social capital are examined against the remarkable rise of multinational companies from China and India. The conceptual model of the paper emphasises the need to rediscover and reinvent the traditional values in the context of the resurgence of the two economies, corporate globalisations and talent competitiveness. The paper concludes with outlines of an integrative managerial future.

References:

Research and Analysis on Problems Faced by Chilean Wine in the Chinese Market——A Case Study of Guangdong Province

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Abstract:

In recent years, sales of Chilean wines have yielded fast growth in the Chinese market. However, at the same time, the quality of the same types of wines varies suggesting that the market behaviors of the wine enterprises are short-sighted. This paper analyzes this issue from the perspective of supply chain management. It proposes that the Chinese and Chilean wine enterprises should enhance guidance for and study on the consumption demand of the end consumers of wine and carry out vertical and horizontal management of the wine supply chain. In addition, it proposes that the Chinese and Chilean governments should provide policy support to the enterprises of the two countries for the implementation of the supply chain management.

Key words: Chilean wine, consumer demand, supply chain management

1. Introduction

Chile is the model for economic development of Latin America. It ranks as No. 1 in Latin America in terms of its overall competitiveness, economic liberalization, market openness, international credit and social governance. Agriculture is an important economic sector of Chile, while agriculture, forestry, fishery and mining constitute the four pillar industries of Chile's economy.

Since 2010, Chile’s national economy has been in decline. At comparable prices, the real GDP growth rate in 2016 increased by 1.6% over the previous year, registering a 0.7 percentage points decline from the previous year. However, according to the statistics from Wines of Chile, the contribution rate of the Chilean wine industry to the economy of the country is rising.

China is Chile's largest trading partner, largest export market and the second largest source of imports, while Chile is China's third largest trading partner in Latin America. The industrial structures and the import and export commodity structures of China and Chile have led to highly complementary bilateral trade between the two. China's exports to Chile are mainly mechanical and electrical products, textile products, plastic products, home appliances and so on. Its main imports are mineral products, cellulose pulp, paper and agricultural products. Chile's narrow coastline, fertile land and climate resources make Chile a highly competitive supplier of agricultural products. Chilean wines make up a large share of Chile's exports of agricultural products to China.

Chile has become an important wine exporter in the 21st century. China is the first destination of Chile's wine exports thanks to China's rapid economic growth and the rising interest in and consumption of wine among the Chinese consumers. In the past decade, the volume and value of the exported Chilean wine has increased substantially. According to Wines of Chile, there are currently 300 wineries throughout Chile, among which more than 200 export wines to China.

According to the statistics from China Customs, China imported about 638 million liters of wine in 2016, registering a 15% year-on-year growth, among which about 146 million liters was from Chile, accounting for 22.92% of the total and registering a 5.19% year-on-year decline. The largest source of bulk wine for China is Chile, as China imported about 85.86 million liters in total, registering a 18.32% of year-on-year decline and accounting for around 60% of the total. The value of the bulk wine imported from
Chile was around 57.44 million U.S. dollars, 8.67% less than the same period of the previous year and accounting for about 50% of the total. Although the numbers have fallen, Chile has still far surpassed other countries such as Australia. The middle-to-low-end Chilean wines are still very popular in China.

In 2016, Chile exported a total of 195 million U.S. dollars of wine to China (about 1.34 billion yuan). China has replaced the United States as the largest export destination for Chilean wine.

It is clear that wine trade has a pivotal role to play on the sound development of the relevant markets and industries in both China and Chile. However, the research team found that Chilean wines are still faced with some problems in the Chinese market. This paper will analyze these problems based on the perspective of the supply chain management, and then present conclusions of the team.

2. Problems Faced by Chilean Wine in the Chinese Market

The research team carried out a program on the Chilean wine distributors and consumers in Guangdong Province. After analysis of the research results, it found the following problems faced by Chilean wines in the Guangdong market:

2.1 Price of Chilean Wine

The past few years have witnessed the sales growth of Chilean wines in the Chinese market. However, severe competition exists and has pushed many dealers to offer low prices to attract customers. In 2006, a bottle of ordinary Chilean wine was sold at 58 yuan to Chinese distributors by importers. The price has fallen gradually to 52, 42, 35, 28 and to 22 yuan in 2016. Although the total sales volume of Chilean wines in the Chinese market is increasing, the profits, overall, for the commodity is getting lower and lower for individual enterprises while the sales volume has failed to increase significantly.

In addition, some domestic low-end wines made by unscrupulous Chinese businesses, packaged in a fancy way and disguised as high-end foreign ones, are sold to consumers.

2.2 Quality of Chilean Wines

The research team found that China’s increasing import of wine has stimulated some unscrupulous Chilean wineries selling bulk wine to disguise their products as quality-one at the request of the Chinese importers. Some Chilean (or Chinese?) wineries even purchased unbottled wine that has been stored for a long time, bottled them and then sold them to customers as quality wine.

2.3 Consumption Intention for Imported Wine

The research team carried out a research in Guangdong Province on the consumption intention of the local consumers in terms of domestic and imported wine. The result shows that as the import of wine is growing, foreign wine culture is penetrating into and exerting impact on China's traditional drinking culture. However, in general, consumers lack expertise on wine and imported wine and fail to recognize their origin, level and vintage. When consumers are purchasing wines, they do not have a general knowledge of various brands. As a result, most of wine brands fail to attract the attention of consumers. In the middle-to-low-end market of imported wine, most consumers would prefer cheap wine, in the face of the price wars, to the brands with actual good taste and quality.

2.4 Wine Choice of Downstream Chinese Wine Dealers Determined by Import Price

The research team found that many low-end Chinese wine importers have neither visited the wineries of the Chilean exporters nor had any business exchanges with the Chilean exporters before the two sides sign import and export contract. They know each other only at the expo. When the contract is
enforced, the quality of the first batch of imported wines is satisfactory, but the quality of the second one is completely inferior to that of the first one.

With further research, a few reasons are found. First, the Chilean wine exporters who have signed contract with Chinese importers at the expo cannot guarantee the quality of their wine. Second, many Chinese wine distributors have no related experience in international trade, long-term branding planning for wine or full understanding of the close relations between wine quality and a stable supply chain. They choose certain wine just because of its low price.

In addition, high-end Chilean wine does not have a large share in the Chinese market as Chinese consumers generally consider Chilean wine as cheap and would choose expensive high-end brands from other countries instead of Chile. Chilean wine dealers and Chinese importers fail to make profits through high-end wine. As a result, they decide to boost sales by selling medium and low-priced wine.

2.5 Some Upstream Chilean Wine Enterprises Only focusing On Immediate Interests

According to the research, there are some small and interest-orientated upstream enterprises in the Chilean wine market. These enterprises do not have their own wineries and only have two to three employees, yet they export wine to the Chinese market and the annual volume even reaches over 200 standard containers.

These Chilean trade enterprises would sign contract with the Chinese dealers and provide them with the designated products by purchasing the unbottled wine from Chilean wineries at a low price and selling it to China in bottled or bulk form at a low price.

As the Chilean enterprises have no stable wine supply chain, they cannot control the wine quality. As a result, the quality of the exported wine varies greatly and some inferior products are even exported.

In addition, due to changes in the international market over the past few years, the Peso exchange rate has dropped, which has made Chilean products more competitive in the international market. At the same time, small Chilean wine traders reacted more rapidly to changes in the market than their larger counterparts. They reduced the price of wine over and over again to sign contracts with the Chinese importers. With these short-sighted behaviors, wine traders cannot guarantee the origin and quality of their wine.

2.6 OEM without Sufficient Management and Control

Many large scale Chilean wineries are doing OEM, some small wineries do business with limited production. Many wineries produce and design different categories for customers and allow customers to design their own wine labels. For example, Concha y Toro has many categories such as Casillero Del Diablo, Frontera and so on. This is probably because of the Chinese importers who hope to become the exclusive agents in China. In order to boost export and sales and to meet the demand of the importers, many large scale Chilean wineries outsource the production of some of their categories to small wineries. However, large wineries cannot manage and control the quality of the wine produced this way.

3. Analysis and Suggestion

This paper will analyze the problems from the perspective of supply chain management.

Supply chain is based on customer needs, with the objective of improving quality and efficiency. By integrating resources, it can help achieve a synergy of product design, procurement, production, sales and service. A supply chain is the organic whole formed by the node enterprises focusing on their respective core competitive advantages.
Through capital management or technology means, the core enterprises in the supply chain integrate upstream and downstream enterprises, effectively control key processes, and ultimately form a complete supply chain system. The core enterprises would play a dominant role in terms of pricing and sales in the industry and in the market in order to maximize the value of the supply chain, the interest of the enterprises in the supply chain and the interest of customers.

Supply chain operation and management focus on giving full play to the core competitiveness of all enterprises in the chain and creating the overall competitive advantage. Enterprises engaged in supply chain management and operation would conduct specialized division of labor and outsourcing for greater core competitiveness, faster response to the market and lower operation cost for their non-core businesses. The wine supply chain is shown in Figure 1.

![Figure 1: Wine Supply Chain](image)

### 3.1 Analysis of Preferences of Wine Consumers

In the building and management of the channels of supply and sales in the supply chain, it is important to first understand and satisfy the demand of the consumers around the world, because most consumers would only buy certain wines when they have a full understanding of the wine and want to taste it. Many wine agents focus on distribution and assume that their mission is accomplished the moment when they sell the wine to the distributors. However, they fail to recognize and meet the real demand of consumers due to a lack of communication with the consumers.

#### 3.1.1 Literature Review on Wine Consumers

Sanchez and Gil (1998) built a 4-stage model for the decision-making of wine consumers. That is to say, the decision-making process for wine can be divided into demand recognition, information searching, evaluation of the goods to be purchased and final choice. The model specifies the decision-making process of wine consumers and identifies what wine consumers would take into account at each stage. In demand recognition, consumption motivation and consumption scenarios are considered, because consumers' needs and motivations vary under different scenarios. During the information searching, the focus is on the importance of wine consumption (or the extent of involvement) and the search of information on the internal and external clues of wine products. The third stage is the study on consumer preferences of wine products and the evaluation of the quality and features of wine (variety, category, brand, country of origin, awards and other related information). The fourth stage focuses on the description of the purchase behavior of consumers, such as purchase volume, location, frequency and so on.

Famularo et al. (2010) found through research that wine consumers often judge wine quality based on their knowledge of wine and their previous consumption experience. Consumers' wine knowledge is consistent with their involvement in wine products; greater involvement means greater knowledge about wine; knowledge of the origin of wine plays a positive role in the decision-making of wine consumers.

In traditional wine-consuming countries such as Italy and France, people drink wine almost every day, including at regular meals, as it has become a habit. However, in emerging wine-consuming countries such as Ireland and China, people drink wine less frequently and only purchase and drink wine during festivals, parties or grand ceremonies.
Farren (2003) and Quinton and Harridge-March (2003) also found through research that the Irish wine market is changing, with more abundant supply of wine in the market, more affordable price and more types of wine to choose from. The content of the wine label is concise and easy to understand while purchase is also becoming more and more convenient. Wines are being transformed from luxuries to everyday consumer goods that more people can buy and drink.

However, in mainland China, an emerging wine-consuming region, consumers have very limited wine knowledge in general. Most consumers only have some basic knowledge about the classification of wine products and only a few wine professionals have some wine expertise (for example, the reading of wine labels, the description of tasting, the pairing of wine and food, wine regions, etc.).

Elodie Moreau (2011a, 2011b) conducted research on the wine consumption behavior of the citizens in first-tier cities such as Shanghai, Beijing, Guangzhou, Suzhou and Hangzhou. The result showed that consumers in the first-tier cities are most concerned about brand name, popularity of the wine type and wine origin when they buy wine. In general, consumers pay more attention to the attributes unrelated to the product (alcoholicity, the pairing of food and wine, grape variety, aroma, sweetness, etc.) than the attributes related to the product (trademark, brand name, brand feature, popularity of the wine type, origin, etc.). Elodie Moreau believes that consumers in Chinese first-tier cities are in extreme pursuit of brand products and have poor knowledge of imported wines. In addition, by comparing consumer behaviors under different scenarios, Elodie Moreau suggests that consumers in Chinese first-tier cities do not want to lose face, so they tend to buy famous international brands from well-known wine regions and are willing to pay premium for such wines.

3.1.2 Case Study

3.1.2.1 Factors Influencing the Purchase of Chilean Wine

Product quality has a significant impact on the purchase intention and purchase behavior. Purchase intention is mainly influenced by internal factors (such as the taste of the wine) while purchase behavior is influenced by both internal factors (taste and origin) and external ones (brand, label and price).

The research group conducted research on some of the consumers in Guangdong province, allowing respondents to select multiple influence factors and carried out an analysis of the valid research data (200 questionnaires sent and 162 valid ones received). The result shows that the main factors consumers consider when purchasing wines and their respective share are as follows: taste (73%), price (69%) and brand (56%). The result is consistent with the market performance of Chilean wine: good taste and low price are the main reasons why local consumers buy Chilean wine.

3.1.2.2 Prediction of Chilean Wine Sales in Guangdong Province

In this paper, Equation (1) is achieved by applying a fitted linear regression to identify the relationship between the logarithm of Guangdong’s total wine import volume from Chile from 2004 to 2016 (JKZL) (unit: liter) and time T (1 stands for the year 2004). Equation (1) is again used to estimate the total amount of imported Chilean wine in the future. STATA is used for regression estimate and the result shows that the equation has a high degree of fitting. The estimated result of the the equation is shown as (1).

\[
\ln(\text{JKZL}) = 8.336 + 0.0092 \times T \\
(t = 392.6) \quad (t = 84.3) \\
R^2 = 0.996 \quad F = 7107
\]  

In Equation (1), i represents the year of 2004, 2005..., 2016 while T represents 1, 2..., 13.
A conclusion can be drawn from the prediction of (1): empirically, under the condition of the existing satisfaction of the Guangdong Consumers towards Chilean wine, the demand for Chilean wine in the Guangdong market shows an upward trend.

### 3.1.2.3 Import Demand for Chilean Wine

The Rotterdam model was proposed by Theil (1965) and Barten (1969), which assumes that the share of the marginal expenditure of the model and the price substitution parameter represented by $\theta_i$ and $\pi_{ij}$ are constants. The model can reasonably estimate expenditure elasticity and price elasticity of the demand under the condition that the number of samples is not ideal. The Rotterdam model is shown as (2).

$$
\tilde{W}_i^t \Delta q_i = c_i + \theta_i \Delta Q_i + \sum_{j=1}^{n} \pi_{ij} \Delta p_{ij} + \epsilon_i
$$

In Equation (2), $i, j = 1, 2, 3, ..., n$, while $w_i$ represents the proportion of a country’s wine import amount from country $i$ to its total import amount. $q_i$ represents the quantity of the imported wine (litre) from country $i$ at the year of $t$. $p_i$ represents the average price of the imported wine from country $i$ at the year of $t$ while $n$ represents the number of country of origin. $\Delta q_i$ stands for the growth rate of China’s wine import volume from country $i$ at the year of $t$ to that at the year of $t-1$. $\Delta p_i$ stands for the growth rate of the import price. $\Delta q_i = \ln q_i - \ln q_{i-1}$, $\Delta p_i = \ln p_i - \ln p_{i-1}$, $\tilde{w}_i = 0.5 (w_i - w_{i-1})$ and $\lambda_i = \frac{\sum_{i=1}^{n} w_i (\ln q_i - \ln q_{i-1})}{\sum_{i=1}^{n} p_i q_i}$. $\theta_i$ is country $i$’s share of marginal expenditure of wine import and $\pi_{ij}$ stands for price coefficient and is used to measure the impact of country $i$’s wine import price on its import volume. $c_i$ stands for randomly and normally distributed error and $c_i$ represents constant term.

According to Equation (2), expenditure elasticity $\eta_i = \frac{\theta_i}{\tilde{w}_i}$ and the Slutsky compensated price elasticity is $\pi_{ij} / \tilde{w}_i$.

This paper uses data about imported wine from the top countries of origin for China from 2004 to 2016: France, Australia, Chile, the United States and Italy. STATA is used for seemingly unrelated regressions estimate. The estimated results are shown in Table 1.

<table>
<thead>
<tr>
<th>Country</th>
<th>Constant Term ($c_i$)</th>
<th>Share of the Marginal Expenditure ($\theta_i$)</th>
<th>Slutsky compensated price elasticity ($\pi_{ij} / \tilde{w}_i$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chile</td>
</tr>
<tr>
<td>Chile</td>
<td>0.013** (3.2657)</td>
<td>0.1268** (3.1425)</td>
<td>-0.1486** (-2.3670)</td>
</tr>
</tbody>
</table>

Note: the data in brackets are the t test results, *** means Sig<0.01, ** means Sig<0.05.

It can be found from the estimated result in Table 1,
(1) The "Chile" equation's constant term is 0.013 and reaches the significant level of 10%, which shows that on China's market of imported wine, the consumption of imported wine is affected not only by the price but also by consumption preference and consumption expenditure. The constant term is positive, indicating that Chinese consumers have consumption preference for wines from Chile and the preference has a tendency of being gradually strengthened.

(2) The share of the marginal expenditure is positive and reaches the significant level of 10%, indicating that for every 1% increase of the total budget of Chinese wine consumers, the share of the budget for consumption of imported Chilean wine will increase by 0.13%.

(3) Slutsky compensated price elasticity shows that Chile's own price elasticity has a significant impact on China's import demand of wine. Chile's own price elasticity is -0.15 and reaches the significant level of 10%, showing that for every 1% of increase in Chilean wine price, China's wine import from Chile will decrease by 0.15%.

In addition, the cross-price elasticity shown by the Slutsky coefficient shows that there is great cross elasticity between China's import demand for Australian wine and the import price of Chilean wine. The cross-price elasticity is positive 0.25, indicating that in the Chinese wine market Chile wines are competitive substitutes to Australian ones. This is probably because China is imposing import tariff reduction to both countries. In particular, Chile's tariff dropped to zero in 2015. Cheap price plus tariff reduction and exemption makes Chilean wine more attractive.

At the same time, Italian and American wine can also be easily replaced by Chilean wine probably due to the fact that the mass consumers have become the mainstream consumers in the wine industry, with middle-to-low-end products and cheap wine being more popular among the general public.

3.2 Division and Collaboration of the Wine Supply Chain

3.2.1 Operation and Management Model of the Supply Chain

For the wine industry, the core enterprises in the supply chain will be able to penetrate into the wine production base at the upstream level, control logistics and sales channels in the middle and attract consumers at the downstream level, with the purpose of stabilizing product quality, controlling logistics costs, reducing overall damage, streamlining distribution processes and improving consumer experience.

Take logistics as an example, on the one hand, a number of wine producers operate their own logistics. As a result, logistics services are barely open to the whole society and are poorly specialized, which leads to in a lot of repeated construction and wasted resources. The other hand, extensive management and inadequate types of logistic products lead to poor growth quality of the logistics industry and the high proportion logistics cost in GDP in the long-term. Therefore, in dealing with the relationship between wine production and distribution, we should break the industry boundaries between them, further deepen the division of the industry and realize the penetration and integration among sectors. From the perspective of supply chain optimization, the processes that lack cost advantage, inefficiency and consume a lot of enterprise resources should be redefine themselves through the supply chain system to reduce cost and boost efficiency.

Wine distribution enterprises should proactively undertake the value chain activities of the wine producers, make full use of their own competitive resources so as to play a more active and important role in logistics, assembly, manufacturing, procurement and distribution. No matter in wine production or distribution, the competitive advantage should be gained through the integrated operation of the supply chain system in the future, rather than working hard alone.

3.2.2 Global Extension of the Supply Chain

Wine enterprises should be aimed at building a globalized supply chain, combine market expansion
with capital operation and technology expansion, promote the global procurement and distribution of domestic wine enterprises, further diversify the sources and channels that provide effective and quality supply and cope with consumption upgrading and meet the quality demand as a global wine company. See Figure 2.

Globalization is the only way for Chinese enterprises to deeply integrate into the world economy and create international brands. It is also an important way to expand the sources of quality supply and achieve the goal of the supply-side reform. Global operation has always been the shortcoming of Chinese enterprises. The TNI, Transnationality Index by UNCTAD has been used to measure Chinese enterprises and the result shows that at present, there are only a few enterprises in China whose TNI is above 20%.

Figure 2 is a simulation model of the global supply chain, which shows that the upstream and downstream division of labor for a core enterprise can be distributed all over the world. Under the global supply chain system, cross-border trade can be involved in every aspect, from the procurement of raw materials to the sales of final products. Therefore, in the practice of international trade, supply chain management has become an important way for transnational corporations or international enterprises to make full use of the comparative advantages of the countries and regions, foster their competitive advantages and enhance their international competitiveness.

In the global extension of the supply chain, wine enterprises should pay attention to the following three aspects: First, they need to promote the transformation of business philosophy, innovate management mechanism, provide a new engine driving trade efficiency and break free from institutional constraints. Second, they should pay attention to the management of sales channels. The competition between modern enterprises, to a large extent, depends on whether they have effective control over their sales channels, which also reflects the core competitiveness of enterprises in terms of supply chain management. Some Chinese enterprises that have fully realized this actively, learned from enterprises in developed countries that have gradually extended themselves to the downstream of the industrial chain and have established their own international sales channels. Third, they should pay attention to the coordination of interests of all enterprises in the supply chain. For example, both the core enterprises and suppliers in the supply chain must operate in a coordinated manner and foster a strategic cooperation so as to achieve a satisfactory supply chain partnership. The way enterprises joining competition and cooperation in the international trade shows that, to gain advantages in global competition, enterprises need not just industrialize competitiveness but also optimize the efficiency of their industrial organization, that is, assure an efficient supply chain management system.
3.3 Suggestions for Problems

Therefore, based on the analysis from the perspective of supply chain management, the domestic Chilean wine enterprises and the government should endeavor to resolve the following problems in order to seize opportunities for future development:

3.3.1 Carry out Detailed Market Research

Based on the social and economic development stages, the consumption and the social and cultural environment in various regions of China, this paper analyzes the features of wine consumers’ demand and proposes targeted marketing strategies.

3.3.2 Foster Brand Awareness and the Collaborative Spirit of Agreements

Enterprises should provide quality goods and services and operate in an honest manner, shape the brand image of China’s distribution enterprises and strictly avoid inferior supply or dishonesty.

3.3.4 Optimize Logistics Systems, Reduce Product Costs and Enhance Commodities’ Price Competitiveness

The integrated supply chain operation to reduce the cost of imported wine is an important trend in the future. In international and domestic logistics operation, wine enterprises should embrace multi-modal transport and diversified modes of transport and delivery so as to reduce product costs.

3.3.5 Foreign Direct Investment

In order to better access the local market, wine enterprises should actively conduct strategic research on direct investment in Chile. The major investment areas should be ones related to wine production and distribution, namely, the upstream and downstream industries and their related industries in the wine industry for the procurement and distribution in the global supply chain and for the supply-side reform in the domestic market. In terms of the specific areas of investment, competitive wine enterprises can invest in local logistics infrastructure to break the circulation barriers for long-term benefits, achieve effective extension to the upstream and downstream of the industrial chain in the circulation and ultimately the overall competitiveness of the supply chain. In addition, enterprises can also directly invest in local distribution-related enterprises, such as retailing, wholesale and logistics ones and achieve the strategic goal of investment for the market through flexible equity participation, holding or merger and acquisition of local physical circulation enterprises or e-commerce platforms.

In addition, wine enterprises also need to optimize the production factors in international supply chain, increase investment in capital, talent, technical means and management systems, actively participate in competition in overseas markets and create international wine brands.

Chile has explicitly stated on different occasions that it welcomes the participation of Chinese enterprises in its logistics development and infrastructure construction. Chinese enterprises have rich experience and considerable strength and financing ability in this field. China-Chile cooperation in this area enjoys great potential. Based on their own interests and international development strategies, Chinese enterprises can take an active part in and grasp the opportunities in Chile’s logistics development. They can start with the more direct infrastructure construction and then expand to the entire logistics industry including investment in modern warehousing and distribution, export of logistics and communications Information technology and the establishment of a complete logistics chain. In particular, agricultural cooperation and logistics investment cooperation can be combined for overall advantages. However, no matter what stages enterprises are at, they should deal with it calmly, carry out in-depth studies in the market, carefully assess specific projects and take precautions against various kinds of risks.
3.3.6 Greater Openness and Cooperation in Supply Chain Management

Enterprises should learn from the operation mode of the advanced global supply chain management and comprehensively enhance its outsourcing, channels, brand, standard, logistics and e-commerce. They should gradually develop themselves as the contract-issuing party of the Chilean wine industry chain and adopt merger and acquisition, new establishments, alliance and service contract so as to strengthen their marketing and sales in transnational operations, approach consumers more quickly, respond to the market rapidly and cultivate their competitive advantages.

Multiple cooperation measures should be taken at the same time and different business patterns should be adopted at different stages and in different situations.

At the initial stage of cooperation, the main patterns include joint venture, cooperation, equity participation, and Chilean enterprises holding shares in Chinese-owned enterprises so as to participate in the operation and profit allocation of the local enterprises. Cooperation fields include technology, branding, project and product. The Cooperation objective is to familiarize with resources, markets, channels, consumer behaviors and law and establish a good social network. When the conditions are ripe, enterprises should consider repurchasing the shares or developing the market as a wholly-owned enterprise. The cooperation partners mainly are local Chilean enterprises, especially the Chinese immigrants or Chinese enterprises that have certain economic strength in Chile. During the building of the joint venture and cooperation, the Chinese-funded enterprises should make greater use of the local production, technology and management personnel, develop tangible asset and improve China’s native varieties as well as supporting technologies for production, such as the cooperation between Changyu Wine Group and the Chilean wine industry.

Enterprises should act in a timely way, adopting the merger and acquisition strategies of the Chilean enterprises. The merger and acquisition of Chilean companies, enterprises or international agricultural trading companies are the quickest and most efficient way to promote agricultural cooperation between China and Chile. In terms of merger and acquisition, various forms can be adopted, such as overall acquisition, restructuring of holdings, capital increase and stock acquisition. M & A should be focused on the core enterprise or companies at the key juncture of the wine agriculture industry chain. M & A should be aimed at helping enterprises to quickly capture the market, expand the scale of the operation, avoid competition with rivals in the industry and make full use of the existing brands for the Chinese wine enterprises to create profits such as the cooperation between Lenovo Group and the Chilean agricultural enterprises.

In addition, enterprises should endeavor to enhance the coordination of the industrial chain. Operation philosophy of the industrial chain should be followed to step up the planning of the major cooperation areas and construction projects with Chile, attract the upstream and downstream Chinese enterprises to follow up together and jointly develop the Chinese and Chilean market to form an industrial synergy to maximize the value of the wine industry chain. With the upgrading of the food consumption of the Chinese people, agricultural products industry and the severe situation of food safety, China Oil And Foodstuffs Corporation (COFCO) has proposed and is implementing an international development model in the entire industrial chain, that is, the extension to the upstream and downstream of the industrial chain and the integration of raw material supply, processing, production, warehousing, transportation, product sales and brand promotion into the economic management model within the enterprises.

3.3.7 Build New Logistics Channels

The Chinese government should encourage Chinese enterprises to improve the current logistics pattern for agricultural trade between South America and China so as to create a new logistics channels for multinational grain merchants that are not subject to laws of developed countries. For example, the government should support domestic enterprises in investing in and building logistics infrastructure in South
America and in creating large-scale ocean fleet so as to directly connect the South American market and the Chinese market.

China should step up its agricultural cooperation with South American countries and gradually establish a direct channel between the country of origin and the consumption market. This will boost China-South America agricultural cooperation and is an important way to protect the well-being of people in China and South American countries and promote common economic development.

3.3.8 **Establish a Domestic Policy System That Supports the Innovation of Supply Chain Management**

To enhance supply chain management, a mechanism should be built to coordinate industrial, regional, trade and financial policies. Work should be done to identify and manage the foreign trade enterprises that implement supply chain management. Favorable policies and support should be given to these enterprises just like high-tech enterprises and modern service industry in terms of tax system, financing, personnel and foreign cooperation.

4. **Conclusion**

It can be seen that China's market of imported wine from Chile still enjoys great potential. This trend is proved by the rapid development of the market. The market is bound to undergo twists and turns as it is maturing. For example, currently the Chinese consumers have limited knowledge about wine. To begin with, they do not understand the pricing of the product. Moreover, they do not know how to identify quality wine and fail to distinguish the good from the bad. Therefore, it is important to raise consumers’ knowledge about imported wine, which will allow consumers to accurately identify quality wine and inferior wine and help quality wine to gain a toehold in the market.

However, the market is gradually enjoying more rational development while improving market rules and regulations at the same time. Although at this stage in China, there are already some Chilean wines that have been defined as high-end products, yet the majority of the Chilean wines are low-end and popular products. Therefore, the positioning of Chilean wines in China and other international consumer markets at this stage is accurate, that is, cost-effective products, or products for consumers in developing countries. However, in the long run, if Chilean wine enterprises want to be competitive in this market, they must strengthen the operation and management of the wine supply chain to enhance their competitiveness in all aspects.

Chile is China's major trading partner and an important strategic partner in Latin America. The research team believes that in order to promote long-term, stable and healthy economic and trade cooperation between China and Chile, Chile's industrial policies have undergone some changes since 2000 as policies to promote the development of the service sector and a national innovation system were adopted. These show that the Chilean government is actively searching for new industrial opportunities. The industrial policy has gradually been shifted from horizontal to vertical with policy support given to boost technology and innovation and a Chilean system full of national characteristics formed to promote innovation. At the same time, the Chinese market is also deepening reform, actively cultivating a national innovation system and vigorously encouraging "mass entrepreneurship and innovation". Therefore, in the process of economic cooperation between China and Chile, we must pay attention to the following aspects:

Firstly, enterprises should be as the major player and the matching of industries should be carried out. Based on the current status of the Chile’s industry and the market share of China’s export products, both parties should improve the investment environment, formulate preferential policies and build service platforms so as to allow Chilean enterprises to invest in China and Chinese enterprises to invest in Chile.

Secondly, supply chain management impediments, which have become an important means in
international trade for multinational corporations or international enterprises, must make full use of the comparative advantages of various countries and regions, foster their competitive advantages and enhance their international competitiveness. In the course of implementing supply chain management, the Chinese and Chilean enterprises should pay attention to coordinating the interests of all enterprises in the supply chain.

Thirdly, it is necessary for Chilean wine companies to promote cooperation in production region and industrial integration. Wine enterprises should look beyond the traditional fields of cultivation, brewing and marketing. They should actively extend the industrial chain, integrate various factors and promote the integrated development of the industry.

In short, the relations between China and Chile have entered into a new development stage. The Chinese government attaches great importance to China-Chile relations. The two sides are both important players in and great supporters for the new type of strategic partnership between China and Chile. At the same time, the two sides need to look beyond and uphold the strategic interests in the globalized world and expand room for development.

References

Garment Producers for the US Market: Central America versus China

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Abstract

This is a descriptive paper on the comparative export performance of garment assemblers in Central America and the Caribbean Basin versus China into the U.S. market. A brief summary of the history of the region’s garment export industry in the face of evolving trade liberalization is provided. Attention is given to the evolution of CAFTA-DR’s apparel export industry according to changing US preferential trade programs. The crucial importance of China’s membership in the World Trade Organization, and the elimination of Multi-Fiber Agreement quotas are highlighted in the fortunes of Central American clothing exporters’ attempts to expand their shares in the US market.

Keywords: garments, commerce, treaties, competition, liberalization

Theoretical Context - The Eclectic Paradigm

This descriptive analysis can be situated within a wider context of the debate on the changing patterns of international production. Within this debate, the eclectic approach elaborated by John H. Dunning is of particular relevance and represents to some extent the culmination of the search for a comprehensive explanation of the patterns of cross-border value adding activities by firms (Dunning & Lundan, 2008). This eclectic theory, as its name indicates, incorporates elements of three other theories into what can be described as a dynamic framework for analyzing the phenomenon. These are: 1) the theory of industrial organization, 2) locational theory, and 3) product or investment cycle theory.

John Dunning’s eclectic ownership, locational and internalization approach (or OLI paradigm, as it became known) was subject to refinement over the years, and while the individual refinements will not be considered here, one in particular is helpful in understanding the present case study of the Central American competition to the Chinese exporters to the U.S. market: the Location Specific Factors. Even more specifically, the L-bound resources of overriding importance to the garment industry, as considered here, include mostly but not exclusively the availability of labor. It should be emphasized at this point that Dunning did not expect his OLI approach to result in a single generalized theory on international production as much as to provide a framework for analyzing the phenomenon. Reportedly at the suggestion of a colleague, Dunning subdivided his OLI categories into country, industry and firm specific characteristics.

The International Division of Labor in the American hemisphere

During the second half of the twentieth century, firms involved in mature industries in the United States, such as clothing, footwear, and some household appliances, among others, sought to improve their competitiveness by outsourcing their labor-intensive segments to low-wage foreign countries, and in particular to export processing facilities beyond the country’s southern border (Grunwald & Flamm, 1991). Countries of the Caribbean and Central America (IDB - INTAL, 2007) as well as Mexico (Gruben, 2007) welcomed and encouraged these production sharing developments as a way to earn foreign exchange, attract foreign direct investment, reduce unemployment and provide a boost for industrialization and economic development. Initially such assembly or maquiladora firms multiplied to become, in some cases, significant contributors to the economies of the countries of the region, particularly ventures with
enterprises in the garment industry. However, after the arrival of the twenty-first century, the outlook for such production sharing arrangements in the region of the Caribbean Basin changed mostly for the worse.

**Free Trade and the Caribbean Garment Assembly Industry**

The drive towards open markets led by the World Trade Organization meant the annulment or total elimination of preferential trade programs which had served as an incentive to the expansion of maquiladoras in the Caribbean Basin region. Of great impact were the incorporation of China into the World Trade Organization in 2001 and the final elimination of the textile quota system under the Agreement on Textiles and Clothing in 2005. According to the World Bank (Lopez-Acevedo and Robertson, 2012: 59), China increased its import share of U.S. clothing market from 10.5 percent in 2000 to 32.8 percent in 2008, while Vietnam has increased its market share from 3.7 percent in 2004 to 7.0 percent in 2008. Although Mexico remained exporting country number three in 2008, its share of imports severely decreased from 14.6 percent in 2000 to 5.6 percent in 2008. The share of U.S. imports from the group of countries that make up the Central America Free Trade Agreement - Dominican Republic (CAFTA-DR, which includes Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, in addition to the Dominican Republic) - also fell, from 15.3 percent in 2000 to 10.5 percent in 2008.

Several decades ago, it seemed that the garment assembly industry in the Caribbean Basin region, was only competing with itself (Mexico included) to expand its share of the U.S. market through favorable treatment clauses of the U.S. tariff system (Mathews, 2008). Historically speaking, the United States took particular interest in the region in the early eighties, offering what would be a succession of preferential trade agreements, and modifications to existing agreements with countries of the Caribbean Basin. These constituted what were the key country or region specific locational factors for the garment industry aimed at the US market at the time. The first of these, known as the Caribbean Basin Initiative (CBI), arose in response to the Central American and Caribbean geopolitical conflicts of the time (Dyhski, 2002).

The commercial component of the CBI initially consisted of tariff-free access to the U.S. market for all exports of designated countries, with certain exceptions (Industry wise, textiles and clothing were excluded, while country wise, Cuba was excluded for geopolitical reasons). The countries that were included in the agreement were Anguilla, Guyana, Antigua and Barbuda, Haiti, Aruba, Honduras, Bahamas, Jamaica, Barbados, Montserrat, Belize, the Netherlands Antilles, the British Virgin Islands, Nicaragua, Cayman Islands, Panama, Costa Rica, St. Kitts and Nevis, Dominica, St. Lucia, Dominican Republic, St. Vincent and the Grenadines, El Salvador, Suriname, Grenada, Trinidad and Tobago, Guatemala, Turkish and Caicos Islands. In order to qualify for entry into the US market CBI exports had to comply with a rules-of-origin criteria of at least 35% of value added in one or more beneficiary countries. At the time of its enactment, the CBI joined two other important tariff reduction programs available to U.S. trading partners: the Generalized System of Preferences (GSP) and applicable provisions under the U.S. Tariff System (known initially as section 807, but later converted to section 9802.00.80 of the new Harmonized Tariff System).

Apart from any political motivations, these trade agreements were also intended to link certain U.S. production chains with low cost Caribbean assemblers, thus making them more price-competitive in relation to other exporters to the US market, like China. This was particularly the case with regard to the US clothing/textile chain. Despite its initial exclusion from the CBI, regional exports of apparel to the United States received a boost in 1986 with the inauguration of a "Special Access" program known as Section 807a, or "Super 807" (later article 9802.00.8010 under the new harmonized system). Under said program, which was limited to the aforementioned countries in the Caribbean, Central America and later to Mexico, exports of clothing to the U.S. market enjoyed guaranteed access by virtue of their exclusion from bilateral quotas under the Multi Fibers Arrangement (MFA) still in force, but subject to special bilateral agreements. However, while these “guaranteed access levels” (GALS) were increased upon request (and thus were virtually unlimited), they only applied to garments assembled from fabric manufactured and cut in the United States (Mathews, 2008: 12).
By the turn of the century a new installment, known as the U.S.-Caribbean Trade Partnership Act (CBTPA), was passed into law. The CBTPA expanded the list of duty-free products and offered greater market access opportunities to eligible countries for a period of eight years. Essentially, the U.S. agreed to convert the preferential access regime into a duty-free regime for apparel assembled in CBI countries, provided they were sewn with US yarn and the fabric used in the production process was formed in the US from US yarn. This development encouraged some companies to shift cutting operations to the Caribbean basin where previously only the sewing process was performed. In addition, this placed the region on an equal footing with the neighboring country of Mexico, which had been granted an advantage as an export platform for the garment assembly industry with the establishment in 1994 of the North American Free Trade Area (USITC 2003).

CAFTA-DR

Also at the turn of the century, negotiations began for what would become the Free Trade Agreement between Central American countries, the US and the Dominican Republic (CAFTA-DR). It became law in 2004, based on the precedent of prior agreements. It was considered an improvement over previous agreements, as it converted preferential access to the US market into something comprehensive, reciprocal and permanent, among other things. It is important to note that CAFTA-DR entered into force for El Salvador, Honduras, Nicaragua and Guatemala on July 1, 2006, the Dominican Republic on March 1, 2007, and Costa Rica on January 1, 2009. According to Hornbeck (2012: 2), by advocating the elimination of regional trade barriers, the CAFTA-DR once again aimed to stimulate the development of production sharing between the U.S. and CAFTA-DR countries on the basis of comparative advantage and economies of scale. Hornbeck points to the areas of apparel manufacturing, automotive parts, medical equipment, integrated circuits and other products as likely beneficiaries.

With regard to the textile and clothing trade, the latter now enters the U.S. market under a "yarn forward" rule-of-origin whereby the yarn production and all operations that make up the product value chain, from the production of the fabric to the cutting and assembly of garments, are required to be carried out in a CAFTA-DR member-country in order to qualify for duty-free entry into the U.S. market (Hornbeck 2012). These new rules of origin, while containing certain exemptions, allow for the use of fabrics originating in Central America, an option that existed under the CBTPA but in limited quantities.

A preliminary review of the most recent data for the garment sector suggests a small increase in the participation of some countries of the Caribbean basin in U.S. imports of certain clothing sector items. However it is instructive to first review changing Caribbean Basin export trends throughout the period just discussed, with an eye on those exports which have entered the United States under none of the available preferential access programs.

Recent Performance of US Preferential Trade Programs for the CAFTA-DR Group

<table>
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<td>CAFTA-DR</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
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<td>2,952,494</td>
<td>5,154,049</td>
<td>5,679,232</td>
<td>4,889,799</td>
<td>5,616,143</td>
<td>6,295,467</td>
<td>6,590,064</td>
<td>6,935,898</td>
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<tr>
<td>No program claimed</td>
<td>8,824,360</td>
<td>4,149,300</td>
<td>3,320,817</td>
<td>3,215,833</td>
<td>3,377,248</td>
<td>2,934,810</td>
<td>2,768,194</td>
<td>2,353,682</td>
<td>1,789,455</td>
<td>1,330,535</td>
<td>1,589,284</td>
<td>1,541,355</td>
<td>1,204,661</td>
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<tr>
<td>Caribbean (CBI)</td>
<td>72,155</td>
<td>77,044</td>
<td>71,435</td>
<td>71,543</td>
<td>3,581</td>
<td>5,241</td>
<td>6,380</td>
<td>422</td>
<td>257</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>CBTPA</td>
<td>149,209</td>
<td>2,840,773</td>
<td>5,737,902</td>
<td>5,934,971</td>
<td>6,180,298</td>
<td>6,209,858</td>
<td>2,743,699</td>
<td>454,188</td>
<td>192,355</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>GSP</td>
<td>167</td>
<td>89</td>
<td>137</td>
<td>55</td>
<td>50</td>
<td>15</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Puerto Rico-CBI</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>38</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Total</td>
<td>9,045,890</td>
<td>8,067,206</td>
<td>8,120,293</td>
<td>8,224,429</td>
<td>8,561,177</td>
<td>8,149,925</td>
<td>8,470,721</td>
<td>7,962,340</td>
<td>7,661,298</td>
<td>6,220,334</td>
<td>7,072,478</td>
<td>7,884,751</td>
<td>8,131,419</td>
<td>8,140,558</td>
</tr>
</tbody>
</table>

Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua & Dominican Republic

Sources: Data in this Table have been compiled from tariff and trade data from the U.S. Department of Commerce and the U.S. International Trade Commission.
Table 1 presents apparel export data from the CAFTA-DR countries of El Salvador, Honduras, Guatemala, Nicaragua and the Dominican Republic since the year 2000, when the U.S.-Caribbean Trade Partnership Act (CBTPA) was put into play. What is noteworthy from the first two years of the Table is the "surge" in export values under the CBTPA from $150 million in the year 2000 to $4.8 billion in 2001, while overall (Total) export values remained flat. Said increase in CBTPA exports was evidently drawn from the category of apparel exports wherein no preferential program was claimed, hence it can be surmised that companies merely shifted their apparel production to the program that stipulated quota and duty free benefits. Similarly, production can be seen to shift programs once again in 2006 when the CBTPA was being superseded by the CAFTA-DR. Overall exports from the region dropped and haven't yet recovered to the levels prevailing during the first half of the first decade of the new millennium.

Preferential trade programs are used to advance U.S. goals, such as the protection of intellectual property rights and other business interests. In the case of apparel, strict rules-of-origin criteria are applied to products in order to enjoy duty-free treatment on their way to the US market. According to article 19 USC 4112: Earned Import Allowance Program (EIAP), under the CAFTA-DR:

Eligible apparel articles wholly assembled in an eligible country and imported directly from an eligible country shall enter the United States free of duty, without regard to the source of the fabric or yarns from which the articles are made, if such apparel articles are accompanied by an earned import allowance certificate that reflects the amount of credits equal to the total square meter equivalents of fabric in such apparel articles, in accordance with the program... (Office of the Law Revision Counsel of the United States House of Representatives, n.d.)

It has historically been the case that such preferential trade programs are designed to favor US inputs over cheaper foreign inputs. As noted by the US Government’s General Accounting Office:

One of the assumptions implicit in the design of the EIAP is that, generally speaking, most producers currently prefer to use non-U.S. fabrics and yarns; otherwise there would be no need for an incentive to use U.S. inputs. The reasons for this can vary, but industry stakeholders reported that it is primarily because certain non-U.S. inputs are usually less expensive than U.S. inputs. (Yager, 2010: 18)

It can therefore be inferred from TABLE 1 that there continues to be a demand among CAFTA-DR apparel export companies for input sourcing outside of the US preferential regime. Added to the fact, noted earlier, that CAFTA-DR allows for the use of fabric originating in Central America, there is a provision to the agreement which permits fabric manufactured in Mexico or Canada to be used in woven apparel products (Lopez -Acevedo and Robertson, 2012: 281). On the question of the use of extra-hemispheric inputs, whether yarn or fabrics, it has been pointed out that a mechanism known as Tariff Preferential Levels (TPLs) provides for temporary exceptions to CAFTA-DR’s "yarn forward" rule-of-origin. Out of the Central American countries that make up CAFTA-DR, Nicaragua has been granted such an exception, thereby allowing local manufacturers to source fabric from anywhere in the world, including, of course China and other Asian countries. Some authors believe these TPLs have fueled Nicaragua’s recent export dynamism to the US apparel market. (Bair & Gereffi, 2013: 3-4).

Competing with China: comparing promising CAFTA-DR apparel items with similar imports from China

Several CAFTA-DR apparel exports to the US market have shown a growth trend, even if minimal, and merit comparison with similar imports from China. Most of them belong to the man-made fiber categories and the most notable are listed in Table 2. The only item wherein the value of exports to the US market of any individual Central American country surpasses that of China’s is the cotton knit T-shirt, singlets and tank tops category (HTS # 61091000). In fact, three Central American countries surpass China in this respect for the years since the enactment of CAFTA-DR, and in some cases prior to. Of particular note is Nicaragua’s meteoric rise from zero at the beginning of the millennium.
China leads in the other four categories, although Guatemala appeared to be closing the gap for a
spell in the women's and girls’ trousers (not knitted) category (HTS # 62046335). According to the World
Bank, Guatemala is mainly a supplier of women’s apparel to US firms, with 130 of 244 firms Korean owned
(Lopez -Acevedo and Robertson, 2012: 283). Of particular note is the fact that the country has a strong
woven fabric manufacturing sector centered on the VESTEX association. Projections at the beginning of
the year are for Guatemala’s textile exports to rise between 4 and 5 percent in 2014 (Fiber2Fashion, 2014),
with growing exports going to Haiti and Nicaragua.
TABLE II: US Imports Customs Value by HTS Number
U.S. Imports of Select Items for Consumption
Annual Data
HTS Number
& Description
61091000
T‐shirts,
singlets,
tank tops
knitted, of
cotton

Country

Honduras
China
El Salvador
Nicaragua
Dominican Rep.
Guatemala
Costa Rica
61099010
China
T‐shirts,
Nicaragua
singlets,
Honduras
tank tops
El Salvador
knitted, of
Guatemala
Man‐made
Dominican Rep.
fiber
Costa Rica
61102020
China
Sweaters,
Honduras
pullovers,
Guatemala
sweatshirts,
Nicaragua
knitted, of
El Salvador
cotton
Dominican Rep.
Costa Rica
61103030
China
Sweaters,
Honduras
pullovers,
Guatemala
sweatshirts,
El Salvador
knitted, of
Nicaragua
Man‐made
Dominican Rep.
fiber
Costa Rica
62046335
China
Women's or
Guatemala
girls' trousers El Salvador
Synthetic Fiber Nicaragua
Not Knitted
Dominican Rep.
Honduras
Costa Rica

2006

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

in $ 1000 dollars (US)

560,983 510,980 624,746 399,857 556,105
120,038 184,318 200,925 339,859 477,325
344,736 358,929 415,454 344,196 452,204
92,861 106,149 135,583 148,070 176,182
197,896
96,752
79,542
91,572 127,478
184,710 115,176 154,422 162,805 187,400
4,956
7,221
8,988
3,105
1,126
30,389
53,250
59,992
94,994 136,401
9,738
11,948
41,379
51,484
61,920
88,951
62,519
79,630
20,239
56,799
45,765
66,704
81,683
80,815 101,302
24,835
14,241
16,362
18,019
23,535
17,961
14,552
31,697
9,044
11,074
1,848
2,974
5,211
4,292
4,385
1,043,034 1,755,823 1,990,607 2,778,361 3,360,590
650,558 595,405 516,519 414,773 389,239
597,842 556,823 495,845 413,256 384,585
215,413 310,298 276,998 278,571 274,979
251,274 264,375 265,827 193,855 202,047
52,536
49,753
57,623
33,517
60,859
1,360
1,142
898
382
39
751,285 970,734 806,198 963,866 1,101,712
104,283 213,115 240,118 197,222 259,631
62,990
59,881
45,039
64,099
77,504
55,702
73,729
69,067
46,690
84,735
13,084
19,166
27,787
36,384
50,310
36,004
26,680
26,545
29,397
27,962
4,922
5,487
6,367
5,207
3,986
168,220 228,559 192,029 152,542 167,965
77,939
73,448
92,940
78,285 100,613
13,924
15,770
18,458
9,735
6,191
11,259
11,389
10,112
5,983
6,356
7,749
6,002
4,124
3,306
5,726
9,799
11,268
8,326
5,477
4,500
1,610
1,812
1,776
699
203

707,977 659,438
467,835 459,355
419,943 477,332
244,312 194,020
147,120 161,215
169,539 148,386
1,486
2,159
161,744 201,123
81,428 102,103
66,381
98,340
117,227 132,072
35,428
40,882
15,292
22,762
3,246
1,903
3,402,050 3,056,377
440,189 335,758
413,474 336,007
361,435 361,159
217,006 139,895
81,817
58,397
76
0
1,265,306 1,368,495
306,354 380,934
119,236 134,894
81,766 111,531
72,352 106,033
18,768
24,444
4,739
4,421
191,583 165,781
117,084 117,651
13,857
16,505
8,116
10,483
6,869
7,164
4,327
3,673
313
236

548,114
435,804
432,366
173,308
191,269
177,529
337
217,734
89,283
116,598
146,121
64,689
16,033
668
3,289,257
334,696
309,299
368,566
121,720
46,514
0
1,385,026
341,136
132,948
138,200
147,056
20,982
2,275
182,981
123,354
16,613
14,199
6,819
4,240
294

489,696
393,803
422,397
280,495
226,432
169,388
331
244,042
123,453
129,278
139,052
81,005
14,231
148
3,094,448
359,206
316,268
291,153
110,830
63,361
0
1,513,557
428,191
161,789
195,590
153,369
24,982
2,436
176,089
106,190
15,227
9,420
6,328
5,192
86

Sources: Data in this Table have been compiled from tariff and trade data from the U.S. Department of Commerce and the U.S. International Trade Commission.

32

522,318
553,708
387,067
352,510
377,857
369,730
316,528
306,626
267,215
309,796
198,080
180,492
416
618
287,987
275,184
165,309
194,828
159,035
181,258
155,020
188,799
87,072
104,309
22,832
26,320
165
268
2,844,789 2,339,435
385,846
309,607
321,452
265,056
250,502
232,798
156,285
151,837
72,696
60,272
26
0
1,576,961 1,523,974
441,080
426,914
217,461
267,493
208,003
234,699
110,241
106,799
23,194
29,365
1,732
14
172,746
109,289
101,921
54,555
13,636
12,830
7,395
6,071
7,201
5,110
4,633
2,898
152
78


Although China dominates the pull-over categories for both women and men, several Central American countries are showing a steady growth in export values, particularly since the enactment of CAFTA-DR. The increasing establishment of textile factories in several Central American countries has enabled the expansion of value added in the region. Nevertheless, there is still a lack of diversity in the apparel products being exported from the region, in comparison to countries like China.

Comparing Chinese exports of garments and clothing, woven and non-woven (ie knit and non-knit) to the United States with similar figures for all the countries that make up the CAFTA-DR, It is evident that China enjoys an advantage in terms of the diversity of garments that it is capable of exporting at present. This is despite advances in Central American countries such as El Salvador, where most of the sector now offers full package services, and whose garment exports account for almost half of total national exports. (Castano Freeman, 2016)

Figure 1 shows that China exports thirty categories of garments (classified to four digits, according to the Harmonized Tariff Code) to the United States, each valued at more than $ 150 million, whereas the entire set of countries that constitute the CAFTA-DR only manages to reach thirteen categories (Figure 2). These figures for the year 2015 highlight the superior capacity of the garment industry in China in relation to the same Central American export industry.

Conclusions

Clothing assembly, among other production sharing industries, has been an important economic and export activity for several countries of Central America and the wider Caribbean Basin throughout recent history. In particular, apparel exports from the CAFTA-DR region have prospered during the previous century and into the beginning decades of the current one due largely to a series of preferential trade
programs enacted by the region’s chief market destination for such exports: the United States. Said preferential trade programs constituted what were the key region specific locational factors for the garment industry aimed at the US market during the lead-up to the new century. These included such programs as the Caribbean Basin Initiative, sections of the US tariff system, the U.S.-Caribbean Trade Partnership Act (CBTPA) and (in the new century) the Central American–Dominican Republic Free Trade Agreement (CAFTA-DR). The overall effect of these programs has been the promotion of production sharing via the integration of the Central American and wider Caribbean Basin garment assembly industry into the North American clothing commodity chain.

The end of the Multi-fiber Agreements on January 1, 2005, however, signaled the elimination of the quota system which had conditioned the development and expansion of the region’s clothing exports under Sections of the US Harmonized Tariff System. This event empowered an extra regional rival exporter, China, whose exports to the US market had been constrained for years by that mechanism. China (among other Asian exporters) has expanded its presence in the US clothing and textile market as a consequence of having joined the WTO three years prior to the final stage elimination of MFA quotas.

It is believed these two events combined to counter any significant expansion that Central American clothing exporters could have achieved in the US market. This situation has been further exacerbated by the ascent of other Asian rivals such as Viet Nam that stand to supplant China in the low value added range of garment production as the latter’s wages rise.

However, some considerations must be weighed in forecasting future trends regarding garment exports from Central America and the Caribbean basin to the U.S. market. The approval of CAFTA-DR may have the effect of prolonging the life of the Central American garment assembly sector within the US apparel supply chain. New developments such as the expansion of the textile sector should be closely monitored in the future. It has been suggested that a liberalization of the still restrictive US rules of origin to allow use of cheaper Chinese and Asian fabric in offshore garment manufacturing firms could benefit the Central American apparel industry.

Finally, it is incumbent on Central American and Caribbean Basin exporters to do what is possible to ascend the value added ladder. An export industry focused on selling T-shirts, and low-end clothing in general does not form the basis of an economically sustainable model. Producers must try to expand away from mere assembly and (where possible) into design and marketing. The US preferential trade regime has evolved over the years to finally allow offshore assemblers to expand into the production of cloth, cut, make and trim and even full package production. If the clothing export industry has a future in the region, it must develop its capacity in these areas to its fullest.

References


Track 2: Data Management in Digital Age
The New Regional But Also Global Standard For Protection Of Personal Data

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Abstract

The paper is dealing with the new EU regulation popularly already known as the GDPR or the General Data Protection Regulation, that by itself represents one of the most revolutionary legislative changes in the overall history of the EU system of legislation or as it is generally well known “acquis communautaire”. Accordingly, it is about the protection of the personal data but also in general of other related data being collected, stored, processed, communicated and utilized not only on the territory of the EU but also globally. The later case concerns all cases when the subjects registered in the EU are doing their business and/or any other kind of activities and operations outside of the territory of the EU. But the same it is of course concerning and required also from other foreign subjects that although registered outside of the territory of the EU are doing any kind of their business and/or any other kinds of activities or operations on the territory of the EU. Hence, in this respect due to the enormous extend of the various business and non-business activities and operations related to the EU either directly or indirectly, the protection of personal data according to this new EU GDPR and its impact will truly and fully be a global one. Hence, it is now the best time still yet before its entry into operation to pay due attention to this new system of protection of personal data.

Keywords: protection of data, personal data, GDPR – General Data Protection Regulation, “acquis communautaire”, EU regulation, EU HORIZON 2020

Introduction

On the 25 May 2018 there will be enacted and will enter into force in the entire EU the new EU Regulation No. 2016/679 of the European Parliament and the EU Council of 27th April 2016 that will be totally changing the conditions and all various aspects of the existing system of the protection of the personal data in the EU. But as the EU is not only the community of the existing twenty eight member countries but it has also various and numerous associated, candidate and other related countries it could be stated that the impact of this new EU regulation on the protection of personal data will have not only internal effect within the existing bounders of the EU. But to some wide extent it will effect directly or indirectly globally also the rest of the world especially in such areas of the general data protection like e.g. in the global cloud computing, Internet, social networks, media electronic and/or traditional, etc. And of course the new GDPR will be directly effecting also all various business and all other relations between subjects registered on the territory of the EU or outside of its territory as long as their business and other activities are related to their partners registered in any of the EU member states.

Main Features of the New EU GDPR

Hence, it is worth to devote some attention to this new and very strong EU legislation as sooner or later after its entry into force on 25th May 2018 it will be directly effecting the processing, storage, dissemination and usage of the personal data globally. In the next parts of this paper we are going to present at least some basic principles of this new EU personal data protection legislation and its entire new system in some more details as we have already found out them on the basis of our ongoing research work under the EU/HORIZON2020/Justice Programme JUST-JTRA-EJTR-AG-2016 INFORM Project - Introduction of the data protection reform to the judicial system. This project is one of the research projects funded by the EU in order to serve as one of the tools to help and make the preparation of the implementation of this new EU Regulation for the practical utilization from the very first day of its enforcement on the 25th May 2018 as smooth as it is possible with such a comprehensive and innovative personal data protection system.
If we are at this place going at least briefly to present some basic principles and features of this new system of the protection of the personal data they are on the basis of our ongoing research in summary as follows.

**New much wider concept of personal data**

In difference to the existing legislation of the EU on the protection of personal data as it has been defined in the existing EU/Directive 95/46 that has defined them in a rather narrow sense and just as personal data directly related to the physical person, in the GDPR there is a substantial widening of the very concept of the personal data as such. Accordingly as personal data will be considered and thus also protected also such data that until now have not directly belonged among the personal data themselves like e.g. email addresses, telephone numbers, IP addresses, cookies, wide area of biodata, an extended list of health data and various other identification and classification data on physical persons.

**Explicit consent**

In difference to the existing above EU directive that has not explicitly and/or strictly required an explicit consent in connection with the personal data to be collected, stored, recorded, etc., the new GDPR requires much more strict respect to obtaining above mentioned explicit consent for any processing of personal data and their storage, handling, publication, etc. This will finally be the end of all such unfair practices as existing now when the person contacting some institution e.g. over phone then such a call has been automatically taken as a consent of that person e.g. to record the entire that phone conversation for the so-called “improvement of services in the future”, or for taking the photo or video recording on the entry into the vehicle of the public transport and like that. For any collecting of personal data will be under the GDPR needed an explicit consent of that person. And in addition such a consent will have to be obtain directly, explicitly and what is the most important in advance! Hence such unfair practices like giving so called implicit consent by the fact that a person has been contacting some institution will have to be completely abolished under this new EU GDPR!

**Protection of personal data of minors under the age of 16**

Under the new GDPR much more strict rules will be introduced regarding the protection of personal data of the young people up to the age of 16 years. However, the United Nations Convention on the Right of Child is stating absolutely clearly and explicitly that the protection of a child and thus also personal data of children have to be up to the age of 18 as it is defined there. Hence, we see some difference between the GDPR in comparison with the International law that is superior to all other legislative acts. It really is not quite clear why the EU that is so sensitive regarding the respect and adherence to law has decided not to respect the UN International law that is superior to all other laws including those of the EU “acquis communautaire” and also to all national laws of the EU member states. Moreover, all EU member states are directly signatories and thus parties to the above UN Convention on the right of child and have to respect that Convention in full. But in any case the GDPR requires to protect personal data of minors even more strictly than it is in the case of adults who by themselves are more prepared and ready and aware of the importance of the protection of their own rights than their own or other children. Hence, this means also much more responsibility not only for parents but also for all schools, various other children services, dormitories, educational and other institutions and providers of any kind of services for children regarding the protection of children’s personal data in their recordings, files, documents, storages, etc.

**Certification for dealing with personal data**

Under this innovation, there will be introduced under the GDPR a new codex for certification mechanisms regarding all legal persons and all other subjects that are handling personal data. All of them will need due and obligatory certificates giving them rights but also duties in respect of the overall handling and processing of the personal data belonging to their area of responsibility. This new certification will require among others also the particular training for this new professional staff and all that has to be prepared and carried out well in advance before the GDPR will enter into force on the 25th May 2018.
Every such a certified and thus authorized entity and/or its staff for the handling and processing personal data will have to have also the so-called responsible authorized officer who will be directly responsible for overseeing the overall handling and processing of personal data strictly according to the rules and regulations as being stated in the GDPR

Risk identification system

Every processing of personal data will have to have a system that will be - in advance yet before the processing itself - able and also responsible to identifying any potential risks in the future processing of the particular category of personal data. In addition all that has to be evaluated and properly documented and thus being at disposal for evaluation and for taking a necessary action yet before that processing will take place in order to secure proper and efficient processing of the personal data strictly according to the requirements of the GDPR. And all that has to be prepared well ahead before the actual processing of those personal data will be carried out and of course this risk and thus to enable to remove some such risks yet before that processing has been scheduled. This identification system has then to monitor also the entire processing and also after that up to the final step in the processing of those personal data.

Registration and documentation

A very strict and comprehensive system of the official registration and documentation for every personal data processing will have to be established and carried out and kept for any subsequent controls, monitoring or evaluation of the particular personal data processing. This newly introduced registration and documentation system for all and every personal data processing systems will have to be at disposal for subsequent period of time for any potential regular and/or ad hoc controls on the given personal data processing. Thus it has to ensure that the particular processing has been carried out strictly according to the requirements of the GDPR.

New reporting system

There will have to be introduced under the new GDPR a new responsibility regarding the reporting duty to the personal data protection authorities on any breaches that have been identified during the entire system of handling and processing personal data. In case that any violation to prescribed rules and regulation as required by the GDPR has been detected in handling personal data at any stage of their overall system of their processing or utilization, then the authorities concerned will have to take necessary actions against any subjects that have caused such misconduct in the personal data processing And as we are presenting it in the following parts of this paper the system of penalties in this respect are a really very severe.

Explicit consent

One of the most innovative measures and features to be introduced by the GDPR is to enacting the right of all persons to give and in advance their explicit consent for any transfer and handling of their personal data. Without their explicit consent there will be absolutely not possible to transfer their personal data to any other subject than the one that was authorized by that person to handle those particular personal data. This new rule it very important and many service providers or vendors will have to change their existing policies and practices according to which their without this explicit consent are collecting various personal data e.g. on the basis of the phone communications and their recording for the so called purposes of “improving services to customers” as we have already mentioned it above or collecting personal documents on the entry to some properties, camera surveillance in case it is not as a crowd controlling but directly focusing on specific persons, etc. Especially, the security staff at airports will have some new problems regarding their arrogant approach towards passengers, etc. Under the new rules of the GDPR this unlawful practices and arrogance will have to be substantially changed in favor of persons and protection of their personal data!
Right to be forgotten

A very similar and very strict rule will be introduced for all physical persons regarding their right that their personal data have to be forgotten i.e. to be completely and absolutely being erased what has been a quite often a very sensitive problem in the existing systems of various social and other data and information networks. Until now once the personal data have been recorded mostly it has been there for ever and/or it was permanently recorded there. Again, especially the social networks operators will have to change substantially their handling of personal of their users. Once the person will require to erase his/her personal data from any such system then it has to be carried out without any delay, completely and without any exemption or technical or other reasons!

No cross border transfer without explicit consent

Any cross-border handling, transfers or processing of personal data will have to be under the direct control of a special authorized organ for the processing of personal data. Any kind of cross-border personal data handling and processing will have to be authorized in advance.. It means that any such data processing in general as far as being conducted in other countries than the country of their origin will have to be under the direct supervision of that particular special authorized organ being established by the GDPR for processing of personal data abroad. Transferring personal data without prior authorization of that organ will be considered as a very serious breach and violation of some of the fundamental principles of the protection of personal data according to the GDPR. In view of this, especially the current cloud computing providers and similar agencies handling personal data within various international systems will have to pay a due attentions to these new provisions in their handling personal data in this respect

Severe penalties

As we have already mentioned that in the previous part of this paper, the GDPR is going to strengthen substantially the entire system of enforcement of its provisions regarding the protection of personal data as we have some principles of them presented in the previous parts of this paper. In addition to the various rules and regulation as being outlined above, it is going to introduce and implement also the entire and brand new system of penalties for any breaches in handing personal data as a violation of any of the particular rules and regulations as being established by that new GDPR. The direct individual financial penalties may go up to 20 million Euro or in the case of companies like e.g. cloud computing providers, social networks operators but in principle any business or non-business entity could be in such cases penalized even up to 4 per cent of their total and worldwide turnover within the previous fiscal year..

Conclusions

In view of the above new rules and regulations as being introduced by the new future EU GDPR to be enacted on the 25th May 2018 it is now the best and now also the last time to familiarize with this new regulation in time and prepare and implement all necessary organizational and personnel measures in order not to be negatively and very severely effected by this new system of protection of personal data. That all has to be strictly according to all provisions as required by this new EU general regulation. As we have already stated in the previous parts of this paper it concerns not only any particular subjects registered on the territory of the EU but as we have shown it above also on the global scale due to the existing and ongoing globalization not only regarding various and many businesses but also regarding the related personal data. In this connection it is necessary to take into account that in the contemporary globalized world there are millions of various business and nonbusiness entities that have been carrying out their activities on the territory of the EU and its member states. On the other hand there are thousands of entities registered in their home EU member states that are carrying their business and non-business activities not only on the territory of the EU but also in various other countries all over the globe. And it is quite clear that all these entities either being registered in the EU or all other that are not directly registered in the EU but are carrying out their activities on the territory of the EU member states will be directly or indirectly forced to fully company with this new EU regulation on the protection of personal data. In final words and in view of these facts, the GDPR is really going to representing by itself the real revolution not only regarding the protection of personal data in the EU but also globally to be fully respected by all that are in one or other ways performing their activities in a kind of relation to the EU and its member states.
References

Big Data and Artificial Intelligence Technologies: Strategic Implications for Organizational Business Models

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Abstract
Recent advances in information technologies, including artificial intelligence (AI) algorithms (e.g., machine learning) and big data (i.e., collecting large volumes of unstructured data about social phenomena translated through analysis to information suitable for managerial decision-making) are reshaping the conventional management approaches towards value creation and capture, and redefine the established ways of developing and sustaining competitive advantage. On a broad level, machine learning algorithms trained on big data to a large extent remove the managerial “bounded rationality” problem and allow switching from satisficing to optimizing approach in managerial decision making. In this conceptual study, we employ the business model level of analysis to investigate the impact of technology-enabled move towards managerial optimizing on organization of firm activities. We demonstrate that the focal technologies have a similar impact on firms across all industries, by this means shaping the look of commercial enterprises and management function of the future. In practical terms, the artificial intelligence coupled with big data will affect the way the firms define and segment their target market, define their stakeholders and formulate optimal value propositions to each, organize their activity system to deliver on the promises of the value propositions, and define, develop and sustain the crucial resources.
What’s Personal Data Worth? Exploring Remedies for Privacy Breaches

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Scott Wright, Providence College, U.S.A.

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Extended Abstract

Although consumers deem much of their data to be private, companies frequently collect and disseminate consumer data for crucial business purposes (e.g., behavioral targeting and retargeting, data analytics, and market analyses). While companies often obtain consumer consent to collect and share consumer data, these terms are rarely read or acknowledged and consumers tend to react negatively when they learn their data has been disseminated (Wright & Xie, in press). This research aims to explore what managerial practices may mitigate the negative consumer sentiments following the dissemination of consumer data. This issue is of particular concern given the myriad of information dissemination and data privacy breaches, as “Big Data” technologies continue to evolve. Facebook, for example, is said to be “facing an existential crisis” (Byers, 2018) in light of the recent scandal where they allowed a third-party company access to the private information of over 50 million Facebook users (Cohen, 2018).

Prior research suggests that consumers tend to hold a lay belief that a company or organization should not release private customer information to third parties (e.g., Martin, Borah, & Palmatier, 2017). This lay belief forms a social contract between the customer and the company at the moment of submitting or collecting personal information. As a result, consumers react negatively when they believe this social contract is violated (Wright & Xie, in press). Importantly, very little research has explored what companies can do or give in exchange for disseminating consumer information. Drawing on the privacy expectation and service recovery literatures (e.g., Maxham & Netemeyer, 2002; Ringberg, Odekerken-Schröder, & Christensen, 2007), the present research proposes that a suitable remedy should either attenuate perceptions that a privacy violation has occurred, or the negative reactions following a privacy violation. Three experiments empirically validate a systematic process by which companies can identify such remedies.

In Study 1 (N = 351), participants were randomly assigned to one of five conditions in an online experiment. They first read an email notice from a fictitious online travel agency (i.e., Delivia Inc.), saying that Delivia shared sensitive customer information with partnership companies for marketing purposes. Three kinds of sensitive information were chosen based on a pretest: phone numbers, credit card numbers, and online search/browsing histories. Following the data sharing incident, the company provided one of five remedies: 1) “implied consent”, 2) “opt-out,” 3) “compensation,” 4) “donation,” and 5) “gratefulness.” (see Appendix 1). “Implied consent” has become a popular alternative in gaining users’ consent whereby consumers indirectly consent to privacy policies without explicit acts of agreement (see Wright & Xie, in press). In the “opt-out” condition, consumers were allowed to discontinue data sharing at their will. In the “compensation” condition, consumers were given reward’s points. In the “donation” condition, participants could choose one out of five charity funds supported by this new program. In the “gratefulness” condition, the company expressed sincere appreciation to customers.

Participants reported their attitudes towards the company on a 3-item scale anchored from 1 (bad, unfavorable, negative) to 7 (good, favorable, positive), followed by a 7-point purchase intention scale. They also rated the degree to which Delivia provided “implied consent,” “opt-out option,” “compensation,” “donation,” and “gratefulness” (1: strongly disagree; 7: strongly agree) as manipulation checks. Planned contrasts showed that “compensation” was the only practice attenuating customers’ negative attitudes toward the company, relative to the implied condition, t (346) = 1.97, p = .05. None of these practices significantly increased participants’ intentions to continue purchasing from the company, ps >.05 (see Appendix 2).
Study 2 (N = 241) extends Study 1 by examining the combined effectiveness of remedies. Participants were randomly assigned to one of four conditions in an online experiment in the same setting as that in Study 1: 1) “control” (i.e., no remedy), 2) “implied consent,” 3) “implied consent and opt-out,” and 4) “implied consent, opt-out, and compensation” (see Appendix 1). The attitudinal and purchase intention measures remained the same as those in Study 1. A one-way ANOVA revealed a main effect of remedy conditions on attitudes toward the company, $F(3, 237) = 3.16, p = .03$. Planned contrasts showed the most effective technique was to provide compensation on top of implied consent and the opt-out option, in terms of attenuating customers’ negative responses to the company, $t(123) = 3.10, p = .002$. The same pattern was found on purchase intentions (see Appendix 2).

Study 3 (N = 498) further specifies the remedial practices, using different types of compensation, in particular. In an online experiment, participants were randomly assigned to one of twelve conditions with one condition being a control and the others featuring potential remedies. Participants began by naming a real company with which they had shared personal information along with three pieces of sensitive information they have shared with the company. Next, all participants read a fictitious company letter reporting that the named company had in tentionally shared the sensitive data with client companies for their own marketing purposes. In the remedy conditions, the company letter contained one of eleven proposed remedies designed to prevent negative reactions to the information release: 1) opt-out, 2) small stipend, 3) big stipend, 4) coupon, 5) offering fraud protection, 6) non-monetary compensation, 7) exclusive membership, 8) donation, 9) small stipend and exclusive membership; 10) opt-out and exclusive membership, and 11) small stipend and opt-out (see Appendix 1). The control condition did not include any remedy information.

A one-way ANOVA revealed a main effect of the remedy conditions on attitudes toward the company, $F(11, 443) = 1.92, p = .04$. Planned contrast showed that participants’ attitudes were more favorable when the information release was paired with the option to opt-out of the program and an exclusive membership, relative to the control condition, $t(89) = -1.99, p = .05$. Conversely, participants’ attitudes were more negative when the information release was paired with a low monetary compensation and an exclusive membership, relative to the control condition, $t(80) = 1.97, p = .05$. None of the other remedies were significant (all ps > .20). Similar patterns were found regarding purchase intentions.

Consumers can react negatively when companies collect and use customer data to develop or adapt to new digital business model - particularly when they discover companies have disseminate sensitive consumer data (Wright & Xie, in press). Combined, three studies provide valuable insights for companies wishing to overcome the negative reactions following data dissemination. The findings suggest that companies can leverage effective remedies to compensate for private information. Although monetary compensations can help, offering exclusive benefits to consumers combined with the option to opt-out may be a more effective technique. By examining consumer sentiments, this research contributes to the literature by detailing how to resolve perceived violation of privacy in disseminating customer data. In the domain of privacy breach, this work suggests a paradigm shift in how information exchange can be understood, as consumers realize that their personal data become part of the marketplace transactions. They recognize their data rights intuitively and expect specific types of compensations once the rights are violated. Companies, thus, should act to meet the expectations accordingly in the events of data dissemination.
Reference

Appendix 1: Remedies across Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Managerial Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1</td>
<td>Implied Consent</td>
</tr>
<tr>
<td></td>
<td>&quot;...Using Delivia’s services will indicate that you allow Delivia to release your CI...&quot;</td>
</tr>
<tr>
<td></td>
<td>Opt-out</td>
</tr>
<tr>
<td></td>
<td>&quot;...If at any time you would prefer that Delivia not use your confidential information to offer you additional products and services, please opt-out using the link delivia.com/cioptout, or calling 1-866-DELIVIA 24 hours a day, 7 days a week...&quot;</td>
</tr>
<tr>
<td></td>
<td>Compensation</td>
</tr>
<tr>
<td></td>
<td>&quot;...For sharing your confidential information, you are awarded 5,000 reward points to receive gift cards, travel discounts, or cash back...&quot;</td>
</tr>
<tr>
<td></td>
<td>Donation</td>
</tr>
<tr>
<td></td>
<td>&quot;...For sharing your CI, you can choose one out of five charity funds supported by this new program (i.e., 5 cents of every dollar in sales generated by this program will be donated)...&quot;</td>
</tr>
<tr>
<td></td>
<td>Gratefulness</td>
</tr>
<tr>
<td></td>
<td>&quot;...For sharing your CI, we here at Delivia would like to sincerely thank you and your family...&quot;</td>
</tr>
<tr>
<td>Study 2</td>
<td>Control</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Implied consent</td>
</tr>
<tr>
<td></td>
<td>&quot;...Using Delivia’s services will indicate that you allow Delivia to release your CI...&quot;</td>
</tr>
<tr>
<td></td>
<td>Implied consent &amp; opt-out</td>
</tr>
<tr>
<td></td>
<td>Combining &quot;implied consent&quot; and &quot;opt-out&quot;</td>
</tr>
<tr>
<td></td>
<td>Implied consent &amp; opt-out &amp; compensation</td>
</tr>
<tr>
<td></td>
<td>Combining &quot;implied consent,&quot; opt-out,&quot; and &quot;compensation&quot;</td>
</tr>
<tr>
<td>Study 3</td>
<td>Control</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Opt-out</td>
</tr>
<tr>
<td></td>
<td>&quot;...If at any time you would prefer that &lt;&lt;Company name&gt;&gt; not use your CI to offer you additional products and services, please opt-out using the link &lt;&lt;Company name&gt;&gt;.com/cioptout...&quot;</td>
</tr>
<tr>
<td></td>
<td>Non-Monetary Compensation</td>
</tr>
<tr>
<td></td>
<td>&quot;...you are awarded 5,000 reward points to receive gift cards, free shipping, or cash back...&quot;</td>
</tr>
<tr>
<td></td>
<td>Donation</td>
</tr>
<tr>
<td></td>
<td>&quot;...you can choose one out of five charity funds supported by this new program (i.e., 10 cents of every dollar in sales generated by this program will be donated)...&quot;</td>
</tr>
<tr>
<td></td>
<td>Discount</td>
</tr>
<tr>
<td></td>
<td>&quot;...you will receive a 30% discount on your next purchase...&quot;</td>
</tr>
<tr>
<td></td>
<td>Small Stipend</td>
</tr>
<tr>
<td></td>
<td>&quot;...$5 will be mailed directly to your home address...&quot;</td>
</tr>
<tr>
<td></td>
<td>Big Stipend</td>
</tr>
<tr>
<td></td>
<td>&quot;...$50 will be mailed directly to your home address...&quot;</td>
</tr>
<tr>
<td></td>
<td>Membership</td>
</tr>
<tr>
<td></td>
<td>&quot;...you will be upgraded to the Business Elite Membership, which offers exclusive promotions, discounts, and free samples from &lt;&lt;Company name&gt;&gt; and its family of partnership companies...&quot;</td>
</tr>
<tr>
<td></td>
<td>Fraud Protection</td>
</tr>
<tr>
<td></td>
<td>&quot;...you will receive complimentary identity theft monitoring and 100% fraud protection...&quot;</td>
</tr>
<tr>
<td></td>
<td>Membership + Opt–out</td>
</tr>
<tr>
<td></td>
<td>Combining &quot;Membership&quot; and &quot;Opt–out&quot;</td>
</tr>
<tr>
<td></td>
<td>Small Stipend + Membership</td>
</tr>
<tr>
<td></td>
<td>Combining &quot;Small Stipend&quot; and &quot;Membership&quot;</td>
</tr>
<tr>
<td></td>
<td>Small Stipend + Opt-out</td>
</tr>
<tr>
<td></td>
<td>Combining &quot;Small Stipend&quot; and &quot;Opt-out&quot;</td>
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</table>
Appendix 2: Means across Conditions

<table>
<thead>
<tr>
<th>Study</th>
<th>Managerial Remedy</th>
<th>Attitude toward the Company</th>
<th>Purchase Intentions</th>
<th>Cell Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1</td>
<td>Implied Consent</td>
<td>1.85 (1.27)</td>
<td>1.67 (1.35)</td>
<td>72</td>
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<tr>
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<td>Opt-out</td>
<td>2.04 (1.33)</td>
<td>1.72 (1.26)</td>
<td>65</td>
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<td></td>
<td>Compensation</td>
<td>2.33 (1.57)</td>
<td>2.08 (1.63)</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>Donation</td>
<td>2.16 (1.60)</td>
<td>1.90 (1.51)</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>Gratefulness</td>
<td>2.12 (1.50)</td>
<td>1.84 (1.45)</td>
<td>74</td>
</tr>
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<td>Study 2</td>
<td>Control</td>
<td>1.89 (1.25)</td>
<td>1.74 (1.30)</td>
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<td>Implied Consent</td>
<td>2.28 (1.57)</td>
<td>2.07 (1.65)</td>
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<td>Implied Consent + Opt-out</td>
<td>2.43 (1.74)</td>
<td>2.22 (1.89)</td>
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<tr>
<td></td>
<td>Implied Consent + Opt-out + Compensation</td>
<td>2.78 (1.91)</td>
<td>2.75 (2.10)</td>
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<tr>
<td>Study 3</td>
<td>Opt-Out + Membership</td>
<td>3.45 (1.93)</td>
<td>4.08 (2.27)</td>
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<tr>
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<td>Opt-Out</td>
<td>2.79 (1.54)</td>
<td>3.72 (2.06)</td>
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<td>Small Stipend</td>
<td>2.80 (1.87)</td>
<td>3.64 (2.07)</td>
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<td>Big Stipend</td>
<td>2.51 (1.63)</td>
<td>2.93 (2.17)</td>
<td>43</td>
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<td></td>
<td>Small Stipend + Opt-out</td>
<td>2.48 (1.69)</td>
<td>2.88 (1.99)</td>
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<tr>
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<td>Fraud Protection</td>
<td>2.74 (1.57)</td>
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<td></td>
<td>Control</td>
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<td>3.34 (2.07)</td>
<td>44</td>
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<td>Non-Monetary Compensation</td>
<td>2.56 (1.40)</td>
<td>2.87 (1.77)</td>
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<td>Membership</td>
<td>2.46 (1.76)</td>
<td>2.80 (2.15)</td>
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<td></td>
<td>Donation</td>
<td>2.49 (1.46)</td>
<td>2.75 (1.84)</td>
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<tr>
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<td>Coupon</td>
<td>2.20 (1.35)</td>
<td>2.68 (1.67)</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Small Stipend + Membership</td>
<td>1.98 (1.13)</td>
<td>2.18 (1.49)</td>
<td>38</td>
</tr>
</tbody>
</table>
**Standardizing Smart City's Cloud Service: A Case Study of Shanghai**

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**Keywords:** *Smart City, Cloud service, standardized evaluation system, Shanghai*

**Objectives**

Researches show that the development of smart city is strategically important to the competitiveness of a city. The objectives of this study is 1) to analyze and evaluate the development and construction of smart city and cloud service in Shanghai, and 2) to propose a standardized evaluation index system of smart city cloud service using three layers (namely base layer, platform layer and user layer).

**Literature Review**

The IBM company proposed the concept of “Smart Earth” in 2008, which leads to the popularity of the “Smart City” concept globally. Smart city refers to the comprehensive utilization of all information technologies and products, featuring “digitization, intelligence, networking, interaction, coordination and integration” (Huang, Goo & Nam, 2017). The concept of “Smart Cities” relies on the development of information technology, big data and infrastructure. It is a complex system that requires the integration of urban resources and innovation. Xu, Wu, and Chen (2012) proposed an architectural model of "three-layer and four-column". Wang, Zhang, & Liu (2013) suggested that the development of smart cities in China should honor public needs, highlight local characteristics, design strategic action with implementation phased, raise the level of urban management information, and facilitate the urbanization transformation.

The Cloud Service consists of three levels: 1) Infrastructure as a Service (IaaS), which is composed of various servers, databases, storage devices, and parallel distributed computing systems; 2) Platform as a Service (PaaS), which includes operation, support and exploitation platforms; 3) Software and Application as a Service (SaaS), providing software, data, information and other applications (Wang, 2017).

Standardization is the axis of the city management innovation system and plays an important role in this process. Standardization provides technical support for smart cities and addresses the complexity of smart cities. Based on the development characteristics of public services, Xu (2011) focuses on the inherent role of standardization in improving public service quality and value, and proposes that standardization is essential for the development of public service in China and suggests to raise the effectiveness of standardization of public services.

**The Case of Shanghai, China**

The government-sponsored "Cloud-Sea Plan", with three implementation phases, is a cloud computing industry cluster with Shanghai characteristics. The "citizen cloud" application platform (Figure 1) is a one-stop "Internet +" public service platform and an extension of public services (Junglas, & Watson, 2008). It provides a variety of public services such as health care, transportation, social security, community life, tourism and leisure activities. In the future, "citizen cloud" will not only integrate government services, but also explore and market-oriented applications to meet more widely the actual needs of citizens in their daily lives.

Figure 1: Shanghai Citizen cloud platform diagram
Based on the cloud service platform model proposed by Brandt (2017) (Figure 2), the authors proposed a three-layer standardized evaluation index system to measure the quality of smart city cloud service (Table 1).

Figure 2: Building a Cloud service platform model.

In order to ensure that the ultimate cloud service technology can support the development of the cities in a large scale and make full use of its conveniences for urban visitors, it is critical for governments to make overall plans to facilitate and regulate the comprehensive coordination among destination management systems, hardware and software operating system development, and the involved enterprises. It is necessary to dynamically monitor and adjust the evaluation indicators due to the continuous development of the smart city cloud service practice in Shanghai.

Table 1: Three-dimensional standardized evaluation index system to measure smart city cloud service quality (Cheng, & Yang, 2017; Cheng, Zhou, & Lin, 2015).

<table>
<thead>
<tr>
<th>Base layer</th>
<th>Cloud data platform</th>
<th>The number of urban cloud data platform construction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Big data service support platform</td>
<td>Urban big data service support platform construction</td>
</tr>
<tr>
<td></td>
<td>ICT business application platform</td>
<td>ICT business application platform</td>
</tr>
<tr>
<td></td>
<td>City operation and management platform</td>
<td>Urban operation and management platform construction</td>
</tr>
<tr>
<td>Application layer</td>
<td>Platform visitors to the number of applications</td>
<td>Cloud service platform for the number of city visitors</td>
</tr>
<tr>
<td></td>
<td>Relevant support unit business coverage</td>
<td>Such as hotels, transportation, weather and other comprehensive coverage of the application</td>
</tr>
<tr>
<td></td>
<td>Information quality</td>
<td>Information is true, completeness, consistency, one-stop service</td>
</tr>
<tr>
<td></td>
<td>Security level value</td>
<td>Cloud service security level, released by cloud service providers</td>
</tr>
<tr>
<td>User layer</td>
<td>Operational ease</td>
<td>Users experience timely use of the client</td>
</tr>
<tr>
<td></td>
<td>Customized service</td>
<td>For different user groups, provide different service versions</td>
</tr>
<tr>
<td></td>
<td>Personalized settings</td>
<td>For different users to provide personalized choice</td>
</tr>
<tr>
<td></td>
<td>Customer satisfaction</td>
<td>User satisfaction with cloud services</td>
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References


Track 3: Marketing
Will You Buy Product in Moments? — A Study on The Impact Factors of Purchase Intention Based on WeChat Moments Marketing

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Abstract

WeChat moments marketing is based on strong interpersonal relationships. It has the characteristics of word-of-mouth marketing in social network, such as short-channel, instance, strong relationships, and equality communication. This article explores the impact of four factors on consumer perceived risk and purchase intention in WeChat moments marketing, including the relationship between seller and consumer, the professionalism of the seller, the quality of seller moments content, and the scale of moments. The result shows that: relationship have no significant effect on the perceived risk reduction and the increase in purchase intention, this is contrary to the hypothesis of this study and our daily understanding; the quality can reduce the perceived risk of consumers, but it can not increase the purchase intention; the other two factors indirectly increase consumers purchase intention by reducing perceived risk. Finally, this paper proposes management inspiration based on the above findings.

Keywords: WeChat Moments Marketing; Perception of Risk; Purchase Intention; Impact Factors

你会购买朋友圈的商品吗？——基于朋友圈个人营销对消费者购买意愿影响因素的研究

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摘要

朋友圈个人营销是建立在强人际关系的基础上的，具有短渠道、即时性、强关系以及对等互动性等熟人社交网络口碑营销特征，本文探究了微信朋友圈个人营销中卖家与消费者的人际关系强度、卖家专业性、朋友圈内容质量和朋友圈言论规模四个因素对消费者感知风险以及购买意愿的影响。结果显示，人际关系对消费者感知风险的降低以及购买意愿的提升并无显著作用，这有悖于本文的研究假设以及我们的日常认知；朋友圈内容质量能够降低消费者感知风险，但是却不能提高购买意愿，其他两个因素都能通过降低消费者的感知风险，间接提高消费者的购买意愿。最后，本文根据以上研究结论提出了管理启示。

关键词：朋友圈个人营销；感知风险；购买意愿；影响因素；
引言

微信是腾讯公司于2011年推出的一款即时通讯软件，它支持语音、文字和图片等不同形式的信息传播。微信因其免费、便捷、功能齐全等特点，一经推出便受到了用户的大力追捧。截止至2017年9月，日平均登陆用户达到9.02亿[1]。微信已成为人们现实生活中满足即时通讯、社交及在线支付等需求的主要工具。

2017年《微信用户行为分析报告》指出，语音聊天、发送图片、朋友圈成为被使用最多的三个功能。截至2017年12月，朋友圈以87.3%的使用率高居社交应用排行榜第一[2-3]，它是承载微信社交网络功能的重要应用。微信朋友圈中，人们可以通过不限长度的文字、九张以内的图片或者小视频向好友分享生活状态。朋友圈内容及其评论仅能让互为好友的用户看见，这相比微博、QQ空间等社交应用，微信大大增强了用户的隐私权，满足了用户对私密熟人社交圈的需要。

自从2014年“代购潮”出现以后，微信朋友圈已不仅是一个熟人、密友的社交平台，它也逐渐成为互动营销的一个新阵地。微信朋友圈中出现了不少如“代购”、“海外直邮”、“正品”“好友低价”等字眼，这些微信朋友圈的发布者不是某一商家，更不是微信官方的广告，而是朋友圈中某一熟悉的个人，他们以自媒体的形式，通过朋友圈发布相关商品信息，将这一社交网络平台的熟人好友作为受众，进行微信营销，成为朋友圈商品卖家。这些卖家往往具有好友和商家的双重身份。这双重身份为他们向目标消费者传递商品信息提供了便利，因为好友身份往往也是吸引顾客的另一保障。以微信朋友圈为平台进行个人自媒体营销，可以省下不少商品营销费用；将商品卖给好友，也在一定程度上节省了渠道及运输费用；最后，加上该商业模式进入门槛较低，微信朋友圈个人自媒体营销因此应运而生，成为一种热门的新型互动营销手段。

虽然这一模式在不断地发展成熟，但我们发现微信朋友圈的个人卖家也在不断地分化与更新。不少卖家遭遇好友抵触，朋友圈被屏蔽，顾客寥寥无几，经营不久就遭遇滑铁卢，然而有些卖家却能持续经营，不少好友在其朋友圈购买商品，并愿意保持长期的顾客关系。我们不禁思考，是什么原因造成顾客对不同卖家的态度差异？影响消费者对朋友圈营销购买意愿的因素又有哪些呢？

此外，不少学者在针对线上购物感知风险以及购买意愿的研究中就表明，线上购买行为因为存在触觉、嗅觉、味觉等感官体验的严重缺失，往往会带给消费者增加更多的不确定性[4]。国内学者李宝玲在研究中也表示：与实体购物相比较，网络环境是一种虚拟空间，会使消费者具有一种不真实感[5]。因此，我们可以发现，线上购物的感知风险比实体购物的更大。但是，朋友圈个人营销因个人卖家往往具有好友和商家的双重身份，这使它同时存在线上购物的高感知风险，也具备朋友身份的感知保障。那么前人针对在线购物的消费者感知风险以及购买意愿的相关研究理论，是否又对这一特殊的营销方式适用呢？

从以往的相关研究来看，由于朋友圈营销是国内近年来特有现象，国外并未出现该领域的研究，但是在朋友圈营销中，卖家兼具着商家与好友的双重身份。我们不难发现，朋友圈营销也是一种社交网络营销。国外针对社交网络营销的研究主要集中在企业营销方面，并未涉及到个人商家的营销，并且国外关于社交网络研究主要集中在推特和脸书两个平台。在以这两个平台为基础的研究中，Shankar将社交网络营销定义为"企业通过互联网技术以及新媒体与消费者进行互动并进行产品推广"[6]；Wiedemann认为企业进行社交网络营销的最终目的是提升品牌知名度、促进销售以及提高顾客忠诚度[7]；Gao等认为企业社交网络营销的优势主要在于其具备及时性、互动性、高准确性以及高经济效应性[8]；Colliander则认为消费者会将博客作为朋友，更信任博客上的信息，因此鼓励企业进行博客
营销[9]；Jansen在针对推特口碑效应的研究中发现，推特内容差异会影响消费者品牌情绪，因此建议企业使用推特作为在线沟通工具[10]。

而国内研究主要集中在企业微信营销模式、微信朋友圈营销现象及微信朋友圈与人际交往之间的关系这几个方面。戚蕾、张莉在其《企业微信营销》中针对微信营销的模式及其优缺点、适用范围进行讨论，并对微信营销的特点进行分析。最后就微信营销对企业提出了几点建议：认为企业在进行微信营销时要注意推送信息频率的适度性、推送信息内容的可读性、微信客服服务的可亲性以及客户管理系统的科学性[11]。王寅在其《掘金朋友圈》中分析了朋友圈营销的特点，“朋友圈分享的意义并不限于熟人间的感情交流”，还扩展到了熟人间的生意往来。微信朋友圈的营销模式具有行业小众、一对多营销、关系客户众多、评价具备区隔性、成本低等特点，其中，“靠关系和信任积累维系客户”是微信朋友圈营销的一个重要的特点[12]。王寅在其《微信口碑营销对大学生消费行为的影响》中指出，“微信口碑营销具有深社交、精传播、强关系的特性”[13]。对于网络购物感知风险的研究，叶乃沂在《消费者感知风险及网上购物行为研究》中建立了围绕感知风险的消费者网上购物行为的理论框架，定义了中国消费者感知风险的变量及量表。指出影响消费者网上购物意愿的感知风险包括商店不可靠风险、产品效果风险、金钱损失风险、配送风险及私人信息被滥用风险这五个维度[14]。

综上所述，我们发现国内外的相关研究都只聚焦于企业营销方面，并没有准确针对个体商家营销的研究，但是相关研究也为本文的提供了一定的借鉴意义和理论基础，本文需要从感知风险理论的角度出发，探究卖家人际关关系强度、专业程度、发布内容、以及言论规模等因素对消费者购买意愿的影响。

### 一、理论基础与研究假设

1. **朋友圈个人自媒体营销的特点**

当前，朋友圈营销的传播表现在如下几个方面的特征：短渠道、即时性的传播方式；强人际关系；对等的交流方式；新型的口碑营销模式。

（1）**短渠道、即时性的传播方式**

张艳在《传播学视角下即时性营销模式与战略实现》中指出，微信的朋友圈功能为口碑营销提供了最好的渠道，用户可以将营销信息快速分享到朋友圈之中[15]。董亦在其《病毒式营销在企业的应用研究》中指出，在即时性的营销传播方式下，潜在消费者与个体商家的联系更加亲近，所以消费者会更加自愿地参与到营销传播中去，大大提高了朋友圈的传播速率，降低了商家的宣传成本[16]。在朋友圈营销中，微信卖家需要做的只是在朋友圈中发布商品的图片及其相关信息描述，待到有微信好友对其进行咨询，才开始正式的销售流程。由此可见，在朋友圈营销中，消费者对于商品的首要印象来自微信朋友圈，朋友圈中的商品信息构成了消费者与卖家交往的内容基础，其内容对消费者的购买意愿具有决定性的影响作用。

（2）**强人际关系特征**

微信是目前最为热门的社交应用，微信朋友圈目前主要是社交交友，局限于个体间一对一以及多对一的方式传播，其受众范围较窄，基本关系网络是基于现实的熟人关系网络，属于强关系人际网。“熟人心理”使消费者乐意与熟悉的好友商家进行交流，也使消费者认为可以降低购买到假冒伪劣产品的风险。朋友圈卖家正是依靠这种熟人间的信任关系及私密性，使其朋友圈营销在熟人圈中产生高效的广告效应。因此，人际关系及人际关关系网，对微信朋友圈的营销效果具有直接而重要的影响，人际关系网是微信营销的重要特点之一。
（3）对等的交流方式

微信用户之间需要双方相互添加好友才能进行交流，评论与状态分享。当朋友圈卖家发布商品相关信息或分享状态时，双方都可以即时、对等地浏览到信息动态。当消费者对卖家所发布的商品信息以及动态感兴趣，进行评论咨询时，卖家可以实时对消费者进行回复与反馈，形成一种良性互动。由此可见，与消费者的保持对等、实时的交流是微信朋友圈营销的另一特点。

（4）新型的口碑营销模式

微信朋友圈通过向微信好友推荐相关产品信息，配以精美的图片来吸引好友的目光。我们注意到，个体商家经常在朋友圈配上诸如“亲试有效”、“自用”等字眼来博取好友对产品的信任，这样的宣传形式属于网络口碑营销的范畴。同时，通过对比发现，微信朋友圈与网络口碑均具有以下特点：一是均注重视觉线索。微信朋友圈与网络口碑在使用言论吸引潜在消费者时，均善于使用丰富与精美的图片进行表现。展示产品的方方面面。二是尽量大的言论规模。网络上对于同一产品的言论规模越大，越能引起消费者对产品的关注。卖家在进行朋友圈营销时，也不乏分时段、多次发布同一产品的营销朋友圈的现象，并且，卖家还会鼓励好友进行转赞，以达到最大的宣传效果。三是较高的言论质量。微信朋友圈与网络口碑在对产品进行描述时，言论质量均比较高，主要体现在产品的效果、性价比方面的推荐，并以消费者的身份，向用户传达产品的效益。因此，我们可以发现卖家在朋友圈中是以一个好友或消费者的身份，向其他受众进行自媒体式的口碑营销。

2. 相关理论基础及研究假设

（1）消费者感知风险对购买意愿的影响

感知风险的概念最初由哈佛大学的Bauer从心理学延伸出来，并将其应用于消费者行为研究领域。用于定义消费者在制定购买决策时因不能确定购买和使用产品的结果而需要承担的风险。Cunningham将感知风险分为不确定性与后果两部分，前者指消费者对某事件发生可能性的主观感知，后者指该事件的发生所导致结果的危险性。Garretson和Clow的研究指出，消费者因为对消费行为结果及该行为能否满足需求是无法预知的，这是一种不确定性，这种不确定性所导致的消费者感知风

而从不确定性降低理论的角度来看，当消费者想要购买商品时，他会尽可能的去通过各种方式和因素去降低他的确定性，也就是说，消费者在做出消费行为前，往往会采取措施预先降低感知风险。不少研究也因此证实消费者感知风险与消费者意愿存在明显相关性。我们提出假设H1：消费者感知风险的降低能够显著提升购买意愿

（2）卖家与消费者的人际关系强度对消费者感知风险以及购买意愿的影响

人际关系强度的相关理论研究最早可以追溯到Granovetter于1973年提出的弱关系理论。他认为人与人之间的关系强度体现在亲密程度和接触频率上，由于不同的关系对组织和个人产生不同的影响，因而将其分为强关系和弱关系。此外，他还提出了测量关系强度的四个维度：互动频率、情感力量、亲密程度以及互惠交换。

该理论在应用上，较多地用于消费者行为以及信息传播领域的研究当中。Stanko等基于商家和消费者的的关系强度，分析了关系时长、互惠服务、相互信任、亲密程度、关系质量（承诺）等因素直接和间接的对传统购买行为的影响，发现商家和消费者的关系强度能够对消费者的购买意愿产生显著的正向影响。Liang等分析了社会支持、关系质量、网站质量对社会化商务购买意图的积极影响，并从关系质量的满意、信任、承诺方面进行深入分析，也发现了相同的结论。冯娇和姚忠则基于强弱关系理论分析了用户间关系强度对用户接收信息的差异性影响，从而对用户购买意愿的间接作用。
玲则在研究中表示关系强度越强，信任程度也必然越高，强关系能提高受众对信息源的可信度[26]。来自强关系的信息对信息接收者的影响大于弱关系信息[27]，直接来说，信息接收者对自己从所熟悉的亲人或朋友处获得信息接收度更高[28]。微信朋友圈营销虽然具有强关系属性，但是随着社交用户好友越来越多，根据Robin所提出150定律指出，人类所能稳定交往的人数大约在150个左右，其中约30人是为强关系，剩余约120人是为弱关系[29]，我们可以认为微信朋友圈当中同样存在着“相对弱关系”的人群，那么朋友圈中这些不同的关系强度就会产生不同的风险感知和购买意愿。综上所述，我们提出以下假设：

H2a：卖家与消费者的人际关系强度对消费者的感知风险降低有显著的正向影响。
H2b：卖家与消费者的人际关系强度对消费者的购买意愿有显著的正向影响。
H2c：消费者感知风险在卖家与消费者的人际关系强度对购买意愿的影响关系中起中介作用。

（3）卖家专业性对消费者感知风险以及购买意愿的影响

由于微信朋友圈营销的渠道较短，产品将直接从商家到达消费者的手中，缺少了经销商或专卖店等营销渠道的保障，朋友圈卖家的专业性显得尤为重要。本文所指的专业性个体商家在营销过程中所体现出来的销售素质及对产品的了解程度，包括提供安全、有保障的交易方式；提供正品保障，如代购卖家身处海外，说明商品来源的渠道合理性；具有亲身使用的经历，这说明商家对产品具有一定的了解。以上三点对消费者感知风险以及购买意愿的影响，前人也做了相关研究，Kaplan将感知风险维度区分为财务风险、功能风险、社会风险、心理风险和身体风险五个维度时，就曾表示财务风险以及功能风险对购买意愿存在着影响[30]。而交易方式、商品来源以及使用经历往往又会影响消费者财务风险以及功能风险的感知。

在消费者行为与信息传播领域的研究中，Voyer等在探究发送者口碑对接收者购买决策的影响研究中发现，无论是发送者的专业性还是接受者的专业性，都对口碑接收者的购买决策产生显著的影响[31]。Hovland等的传播说服理论认为传播者以及传播信息内容特质中专业性能够显著提高传播信息的说服性，对于口碑信息的研究中，就有相当多的研究证明了这一点[32]。张耕等以及宋亚非针对负面评论的研究中发现口碑传播者专业能力对产品销量以及接受者的购买意愿产生影响[33,34]。而章晶晶在针对口碑信息再传播研究中，信息源的专业性同样起着显著作用[35]。而朋友圈营销中所涉及口碑信息的说服以及购买意愿两方面，因此卖家专业性必然是个非常重要的影响因素，并且还有研究认为，认识的人（朋友）分享的信息是社会化商务中重要且最具代表性的特征，通过和朋友分享、交流商品信息（经验或观点）影响朋友的购物决策[36]。朋友圈营销中，卖家同时兼具朋友身份，当他们给出的意见或者建议更具专业性时，往往会产生更大的影响。综上所述，我们提出以下假设：

H3a：卖家专业性对消费者的感知风险降低有显著的正向影响。
H3b：卖家专业性对消费者的购买意愿有显著的正向影响。
H3c：消费者感知风险在卖家专业性对购买意愿的影响关系中起中介作用。

（4）朋友圈营销内容质量对消费者感知风险以及购买意愿的影响

Akerloff等经济学家提出的信息不对称理论认为，市场中卖方比买方更了解有关商品的各种信息；买卖双方中拥有信息较少的一方会努力从另一方获取信息；市场信号显示在一定程度上可以弥补信息不对称的问题[37]。Chakravarti认为，这种信息不对称正是感知风险的主要来源[38]。朋友圈营销的买卖双方同样存在着信息不对称的现象，卖家相比买家具有更多产品信息，那么朋友圈中所发布的营销信息便成了一种市场信号，内容质量往往也就体现了卖家所传递出来的信息，她会影响卖家的感知风险以及购买意愿。李晶认为微信快速发送文字、照片、多功能语音对讲及签名档的信息显示以及朋友圈等功能为微信口碑信息传播提供了多种方式，提高了信息的趣味性[39]。因此本文将朋友圈营销中的内容质量分两部分：一为文字言论质量，主要包括产品细节的描述；二为视觉线索质量，主要包括
在相关研究领域里，也有不少研究证明了文字内容以及图片的重要性。

Herr分析了口碑内容的语

在相关研究领域里，也有不少研究证明了文字内容以及图片的重要性。Herr分析了口碑内容的语言特点对口碑影响力的研究表明，生动有趣的口碑信息比平淡叙述的口碑信息对消费者更有号召力；反之有序的口碑信息比笼统描述的口碑信息对消费者的影响更大。Mooy表示营销信息中涉及到感官体验的信息越详细，对消费者的产品价值感知影响就会更大。文字、图片均与朋友圈的内容质量息息相关，具有吸引力的视觉元素如大量的图片、细致的产品细节是刺激消费者的重要元素。这一点已经得到在线评论相关研究的大量证实。包括涂荣庭等在针对信息内容对新产品感知风险影响的研究中也发现，不同类型的信息内容会影响消费者不同的感知风险。也就是说高质量的朋友圈内容能使消费者深入细致地接触、了解到更多有关商品的信息，并有效降低消费者感知风险以及增强消费者购买意愿。因此，我们提出以下假设：

H4a：朋友圈营销内容质量对消费者的感知风险降低有显著的正向影响。
H4b：朋友圈营销内容质量对消费者的购买意愿有显著的正向影响。
H4c：消费者感知风险在朋友圈营销内容质量对购买意愿的影响关系中起中介作用。

（5）朋友圈营销言论规模对消费者感知风险以及购买意愿的影响

在传统的印象，我们往往会将言论规模与言论活跃度和言论数量相联系起来。龚诗阳在《网络口碑决定产品命运吗——对线上图书评论的实证分析》研究了网络口碑与网上图书销量之间的关系，发现无论是否控制网络口碑潜在的内生性影响，网络口碑的数量都能保持对图书销量十分显著的正向影响。苏雪佳以亚马逊购物平台为基础，探究B2C在线评论有用性影响因素的研究发现，在线评论的有用性受到其他消费者对该评论的回复评论活跃度的影响。左文明在研究中也发现社会资本通过网络口碑数量以及质量的中介作用影响着购买意愿。郑春东在探究网络文化对消费者购买意愿的影响研究中，将网络水军的言论属性分为言论数量、言论质量、文本相似度及时间集中程度四个维度，并得出结论言论数量通过对消费者感知有用性、感知专业性以及感知风险产生影响，从而影响消费者购买意愿。以上对网络口碑的研究说明了言论数量对消费者购买意愿的显著影响关系，言论规模会提升营销信息的曝光率，使消费者能够接触到营销朋友圈的概率有所改变，微信营销朋友圈的言论规模越大，对消费者的感知风险和购买意愿的的影响程度就越强烈。因此，本文将朋友圈言论规模分为评论活跃程度、好友帮转次数和同一产品重复宣传次数三个方面，并基于上述前人研究提出以下假设：

H5a：朋友圈营销言论规模对消费者的感知风险降低有显著的正向影响。
H5b：朋友圈营销言论规模对消费者的购买意愿有显著的正向影响。
H5c：消费者感知风险在朋友圈营销言论规模对购买意愿的影响关系中起中介作用。

3. 研究模型

图一：研究模型
这四个因素主要通过消费者感知风险的中介作用对购买意愿产生影响，这些因素间的相互影响的关系如图一所示。

二、实证分析

1. 问卷结构设计

本文研究模型主要包含卖家与消费者人际关系强度、卖家专业性、朋友圈发布内容质量、言论规模、感知风险以及购买意愿，共6个变量。由于文献中鲜有微信朋友圈营销的实证研究，本文将借鉴前人的测量工具，结合微信朋友圈营销的实际情况对测量题项进行设定。问卷期初设定19个题项，题项采取七点Likert分值作答。经小规模前测后，剔除其中3个不符合要求题项，剩余16个题项。各变量最终的具体测量题项如下表：

<table>
<thead>
<tr>
<th>所测变量</th>
<th>题号</th>
<th>题项</th>
<th>参考来源</th>
</tr>
</thead>
<tbody>
<tr>
<td>卖家与消费者人际关系强度(X1)</td>
<td>X11</td>
<td>这些朋友圈的卖家与我的关系十分亲密</td>
<td>Stanko 等、Liang 等 [23-24]</td>
</tr>
<tr>
<td></td>
<td>X12</td>
<td>这些朋友圈的卖家经常在朋友圈与人互动</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X13</td>
<td>这些朋友圈的卖家经常释放出好友优惠的信号</td>
<td></td>
</tr>
<tr>
<td>卖家专业性(X2)</td>
<td>X21</td>
<td>这些朋友圈的卖家可以使我购买到正品</td>
<td>Gilly等[48]</td>
</tr>
<tr>
<td></td>
<td>X22</td>
<td>这些朋友圈的卖家具有亲身使用的经历</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X23</td>
<td>这些朋友圈的卖家可以让我自行选择交易方式</td>
<td></td>
</tr>
<tr>
<td>朋友圈内容质量(X3)</td>
<td>X31</td>
<td>这些朋友圈篇幅较长，对产品的介绍细致全面</td>
<td>Vries等[49]</td>
</tr>
<tr>
<td></td>
<td>X32</td>
<td>这些朋友圈配图质量较高，充分展示产品细节</td>
<td></td>
</tr>
<tr>
<td>朋友圈言论规模(X4)</td>
<td>X41</td>
<td>我看到这些朋友圈有许多评论支持者</td>
<td>毕继东 [50]</td>
</tr>
<tr>
<td></td>
<td>X42</td>
<td>我看到这些朋友圈得到广泛帮转</td>
<td></td>
</tr>
<tr>
<td>感知风险(Y)</td>
<td>Y1</td>
<td>这些朋友圈使我感觉该商品可能会有预期的效果</td>
<td>Bansal &amp; Voyer等 [28]</td>
</tr>
<tr>
<td></td>
<td>Y2</td>
<td>我感觉购买商品可能得到良好的售后服务</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y5</td>
<td>朋友圈能够使我更有效率地购买到想要的商品</td>
<td></td>
</tr>
<tr>
<td>购买意愿(Z)</td>
<td>Z1</td>
<td>如果我有需要，我将从该朋友圈的发布者购买产品</td>
<td>Gilly等[48]</td>
</tr>
<tr>
<td></td>
<td>Z2</td>
<td>根据我回忆的朋友圈，我有购买该商品的打算</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Z3</td>
<td>我愿意在朋友圈内进行转发将产品推荐给别人</td>
<td></td>
</tr>
</tbody>
</table>

2. 问卷的发放及数据收集

本研究结合线上与线下相结合的问卷调查方式，总共邀请了来自全国19个省、直辖市的201名微信用户参与调查。填写问卷前，首先请填写者回忆最近一段时间在朋友圈上看见的或亲历的微信朋友圈营销经历，随后填写既定问卷，剔除了部分漏选及无效问卷后，共回收有效问卷数据177份，有效回收率为88.06%。经过统计分析，填写问卷的男女百分比分别为33.34%和67.66%，男⼥比例接近1:2，符合女生喜欢网购、会更多接触到朋友圈营销的实际。89.55%的受访者具有本科及以上的学历，并且有88.56%的受访者会每天刷新朋友圈。受访者中有47.26%的人曾将向朋友圈上的营销好友购买过产品或服务，然而却有超过51.74%的受访者曾因朋友圈上的营销内容而将好友“拉黑”。
### 3. 数据分析

#### (1) 信度效度分析

<table>
<thead>
<tr>
<th></th>
<th>AVE</th>
<th>CR</th>
<th>R Square</th>
<th>Cronbachs Alpha</th>
<th>Communality</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1人际关系</td>
<td>0.589971</td>
<td>0.809008</td>
<td>0.651027</td>
<td>0.589971</td>
<td></td>
<td>X11 0.806  X12 0.861  X13 0.616</td>
</tr>
<tr>
<td>X2专业性</td>
<td>0.622454</td>
<td>0.829802</td>
<td>0.698266</td>
<td>0.622454</td>
<td></td>
<td>X21 0.874  X22 0.823  X23 0.653</td>
</tr>
<tr>
<td>X3内容质量</td>
<td>0.788606</td>
<td>0.881754</td>
<td>0.733851</td>
<td>0.788606</td>
<td></td>
<td>X31 0.867  X32 0.909</td>
</tr>
<tr>
<td>X4言论规模</td>
<td>0.865919</td>
<td>0.928141</td>
<td>0.845303</td>
<td>0.865919</td>
<td></td>
<td>X41 0.935  X42 0.926</td>
</tr>
<tr>
<td>Y风险感知</td>
<td>0.764264</td>
<td>0.906668</td>
<td>0.686999</td>
<td>0.845227</td>
<td></td>
<td>Y1 0.900  Y2 0.890  Y5 0.831</td>
</tr>
<tr>
<td>Z购买意愿</td>
<td>0.751133</td>
<td>0.900511</td>
<td>0.572746</td>
<td>0.834260</td>
<td></td>
<td>Z1 0.849  Z2 0.888  Z3 0.862</td>
</tr>
</tbody>
</table>

本研究利用SmartPLS2.0进行统计分析。从表二数据结果可以看到本次调查问卷中各变量的CR值都大于0.8，说明问卷题项具有较好的组合信度；除了人际关系与专业性两个变量的克朗巴哈系数略低于0.7以外，其余4个变量都大于0.7，说明问卷具有较好的内部一致性。表二中各变量AVE（平均方差提取值）值均大于0.5，说明问卷具有较好的收敛效度。表三中AVE开平方根后所得出的数值均大于两两变量间的相关系数值，说明问卷具有较好的区分效度；表二中显示了各变量测量题项的Factor Loading（因子载荷数值），除极少数题项略低于0.7外，其余题项数据结果良好，说明问卷具有较好的判别效度。表二中风险感知以及购买意愿的R Square都大于0.5，说明研究模型具有较好的拟合优度。

#### (2) 假设检验
表四：风险感知、购买意愿标准化回归路径系数

<table>
<thead>
<tr>
<th></th>
<th>Y风险感知</th>
<th>T-Statistic</th>
<th>Z购买意愿</th>
<th>T-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1人际关系</td>
<td>-0.077</td>
<td>1.383</td>
<td>0.106</td>
<td>1.512</td>
</tr>
<tr>
<td>X2专业性</td>
<td>0.458***</td>
<td>6.547</td>
<td>0.345***</td>
<td>3.978</td>
</tr>
<tr>
<td>X3内容质量</td>
<td>0.189**</td>
<td>3.072</td>
<td>-0.040</td>
<td>0.438</td>
</tr>
<tr>
<td>X4言论规模</td>
<td>0.383***</td>
<td>7.411</td>
<td>0.410***</td>
<td>6.058</td>
</tr>
</tbody>
</table>

注：***表示P值小于0.001

表五：模型整体标准化回归路径系数

<table>
<thead>
<tr>
<th></th>
<th>Y风险感知</th>
<th>T-Statistic</th>
<th>Z购买意愿</th>
<th>T-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1人际关系</td>
<td>-0.082885</td>
<td>1.501158</td>
<td>0.148939*</td>
<td>2.348328</td>
</tr>
<tr>
<td>X2专业性</td>
<td>0.455530***</td>
<td>6.629201</td>
<td>0.114621</td>
<td>1.084077</td>
</tr>
<tr>
<td>X3内容质量</td>
<td>0.192201**</td>
<td>3.092895</td>
<td>-0.139378</td>
<td>1.670518</td>
</tr>
<tr>
<td>X4言论规模</td>
<td>0.384247***</td>
<td>7.407554</td>
<td>0.202466**</td>
<td>2.617234</td>
</tr>
<tr>
<td>Y风险感知</td>
<td>0.517816***</td>
<td>5.390216</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

注：***表示P值小于0.001

图二：因子载荷以及模型回归路径系数

通过结构方程模型对本研究中的各假设进行验证，由表四可知，
H3a、H3b、H4a、H5a、H5b成立。由表五可知，H1、H3c、H5c成立，并且，对比表四及表五可知，卖家专业性的回归系数在加入感知风险中介变量后变得不显著，因此感知风险在卖家专业性对购买意愿的影响中起完全中介作用，而言论规模在加入中介变量感知风险后，回归系数依然显著，但系数明显变小，因此感知风险在言论规模对购买意愿的影响中起部分中介作用。而13个假设中，其中7个假设得到数据分析结果支持，通过实证检验，剩余6个假设未能通过实证检验，其具体验证情况如表六所示：
表六：研究假设验证结果

<table>
<thead>
<tr>
<th>假设内容</th>
<th>验证结果</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1：消费者感知风险降低能够显著提升购买意愿</td>
<td>支持</td>
</tr>
<tr>
<td>H2a：卖家与消费者的人际关系强度对消费者的感知风险降低有显著的正向影响。</td>
<td>不支持</td>
</tr>
<tr>
<td>H2b：卖家与消费者的人际关系强度对消费者的购买意愿有显著的正向影响。</td>
<td>不支持</td>
</tr>
<tr>
<td>H2c：消费者感知风险在卖家与消费者的人际关系强度对购买意愿的影响关系中起中介作用。</td>
<td>不支持</td>
</tr>
<tr>
<td>H3a：卖家专业性对消费者的感知风险降低有显著的正向影响。</td>
<td>支持</td>
</tr>
<tr>
<td>H3b：卖家专业性对消费者的购买意愿有显著的正向影响。</td>
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<td>H3c：消费者感知风险在卖家专业性对购买意愿的影响关系中起中介作用。</td>
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<td>H4a：朋友圈营销内容质量对消费者的感知风险降低有显著的正向影响。</td>
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<td>支持</td>
</tr>
</tbody>
</table>

三、结论与讨论

1. 研究结论

本研究首先对微信朋友圈营销的特点进行了分析并阐述。随后在前人相关领域的研究基础上，结合微信朋友圈的实际情况，将微信朋友圈营销对消费者感知风险以及购买意愿的影响因素归纳为4个，分别是：卖家与消费者的人际关系强度、卖家专业性、朋友圈内容质量和朋友圈言论规模。通过对数据进行分析，最终得出以下结论：

（1）卖家与消费者的人际关系强度对消费者风险感知以及购买意愿的影响

微信朋友圈卖家与消费者的人际关系对消费者感知风险和购买意愿具有正向影响的假设没有得到支持。可能的原因是，当信息发布主体过多的“与朋友圈与人互动”或者经常释放出好友优惠的信号时，可能会使消费者产生对信息发布主体动机的疑问。Williams等人就曾针对不同身份人员与消费者互动对消费者感知的影响进行研究，研究发现商家员工比起非员工的互动，更容易引发消费者对互动意图的恶意揣测，从而使得消费者产生提防心理。[[51]](#) 汪辉等人在研究企业社会责任行为中得出结论，即使企业商家做出让利行为或慈善行为，也并不总是能够提高企业品牌权益的，如果行为不恰当，会使得消费者对企业动机产生怀疑，使得企业费力不讨好，品牌权益不升反降。此外，关于微信朋友圈营销“杀熟”的观点在网上流行，这让消费者感知风险加大。基于以上理论研究，我们认为有理由怀疑过多的互动并不能显著的增加消费者的购买意愿，并且因为消费者与卖家的熟人关系，可能会使得消费者出现规避互动的行为，以防止人情绑架购买。

（2）卖家专业性对消费者风险感知以及购买意愿的影响

微信朋友圈发布者专业性对消费者感知风险降低以及购买意愿的提升具有显著正向影响的假设
得到支持，并且感知风险在卖家专业性对购买意愿的影响中起完全中介作用。这表明微信朋友圈卖家的专业性通过消费者感知风险来影响行为意向。“代购”、“代理”的微信商家，若身处海外或者有正品货源渠道证明。并且告知消费者自身的使用体验。对降低消费者感知风险会有显著的效果。这同时也证明了消费者对朋友圈营销的感知风险很大一部分都是来源于对货品品质以及货品质量的怀疑。当这些一些疑虑能够得以打消的话，对营销的帮助会有巨大的提升。

（3）朋友圈营销内容质量对消费者风险感知以及购买意愿的影响

朋友圈营销发布的内容质量对消费者感知风险降低具有显着正向影响的假设得到支持。内容质量对消费者对购买意愿具有显着正向影响的假设没有得到支持。且感知风险的中介作用也未能得以验证。这表明卖家所发布的朋友圈信息并不是决定消费者是否购买所考量的因素。它只是作为消费者了解产品、降低不确定性的信息来源。卖家想要通过微信营销发掘市场最终还是要找到用户痛点，以消费者需求作为导向进行信息发布。但是。这并不是说明朋友圈所发布的信息质量就不重要了，当消费者有其需求后，还需要大量的图片、文字或细致的产品细节为消费者判断产品质量提供必要的线索。以降低消费者的感知风险。这也表明内容质量是朋友圈营销的“保健因素”，它虽然不能提升购买意愿，但太差则会放大风险，进而影响购买行为。

（4）朋友圈营销言论规模对消费者风险感知的影响

朋友圈营销言论规模对消费者感知风险降低以及购买意愿的提升具有显著正向影响的假设得到支持。但是感知风险在言论规模对购买意愿的影响中起部分中介作用。这表明。朋友圈好友对同一产品的讨论和话题量越多，就越会降低消费者的感知风险。从而促进购买。这可能是来源于其他朋友的消费体验，使得消费者更早地了解到了产品，从而降低了不确定性。也有可能圈中好友消费过后所带来的良好口碑增加了消费者的信任。但是，话题量增多并不一定仅仅通过降低感知风险这一路径促进购买，也有可能是从众心理或迫于社会压力所形成的购买行为。因为当身边朋友都在讨论或者已经消费，会使得未购买的消费者产生从众心理而跃跃欲试，也有可能迫于社会压力或者为了融入朋友圈子，作为朋友，别人都帮衬了，自己也应该帮衬一份。因此，朋友圈营销如何更好的利用言论规模是一件考验卖家智慧的事情。卖家更应该考虑如何利用言论规模去降低感知风险以及激发消费者好奇心里，而非利用言论规模对消费者进行人情绑架。那样只会适得其反。

2. 管理启示

根据以上研究结论，得出如下启示：

（1）微信朋友圈营销过程中坚持以质取胜、注重信誉。鼓励微信商家在发布产品宣传的过程中，通过亲身试用，将产品效果如实传达给消费者，以降低消费者的感知风险。

（2）鼓励买家通过微信朋友圈下方的评论进行咨询与反馈。由于买家的评论与好友的帮转对消费者购买意愿具有正向影响，因此微信买家应鼓励好友通过评论咨询与反馈，并帮助转发朋友圈，以更高的产品口碑效应及曝光率。

（3）尽量减少单一产品的宣传次数。本次问卷受访者中将近一半的人曾将营销好友拉黑。而在数据分析中发现，卖家人际关系对消费者感知风险降低有负向作用，说明部分商家所标榜的频繁发布朋友圈并不能真正起到吸引顾客的目的，更有可能会弄巧成拙。微信商家应对每次产品发布的时间与方式精心设计，以较低的时间成本和人力成本去获得最大的效益。

（4）避免对兼具朋友身份的买家进行人情绑架。为最大程度降低微信营销带来的负面效应，卖家需要控制与买家的互动频率以及措辞技巧。尽量通过产品的品质去吸引买家购买。避免向买家施压，让其认为需要通过购买产品去维系彼此之间的友谊，不然不买就是不给面子。

（5）卖家在发布朋友圈时，需要关注内容质量。将必要的产品信息展示给买家受众，但不必过度投入，花过多的心思去组织内容与修图。
3. 未来研究展望

朋友圈卖家是具有多种分类的，主要包含代购、品牌代理、直销三种。不同类型的卖家可能会售卖不同的商品，并有不同的营销侧重点。消费者对不同产品会有不同的涉入程度，而不同的营销侧重点就会对消费者的感知风险以及购买意愿产生不同影响。然而，本研究并未对以上所提及的情况进行分类研究，未来的研究可以考虑在结合前人研究的基础上，探究不同类型的卖家所存在的区别。

参考文献


The impact of virtual community context on users’ participation—An example from social Q&A community

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Abstract:
Knowledge transmission and acquisition has undergone tremendous changes through the development of social question & answer community. To ensure a steady flow of high quality content, community needs to push users to participate. However, the impact of context features of the community on users’ participation has attracted little research attention. Based on the stimulus–organism–response paradigm, this study develops a model to investigate the effects of stimulus (personalized recommendation, perceived interactivity, information quality, information richness) of Q&A community on users’ virtual experiences (social presence, self-efficacy) and subsequently their participation behavior (content contribution, knowledge sharing). Conclusions indicate that users’ experience is positively influencing their participation. These experiences, in turn, are influenced by interactivity and informational features of community. Especially, users’ social presence was determined by interactivity features. And their self-efficacy was positively infected by interactivity features and information quality while negatively infected by information richness.

Keywords: Social Q&A community; User’s participation; Stimulus–organism–response paradigm

虚拟社区情境对用户参与的影响机制研究——以社会化问答社区为例

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摘 要:
社会化问答社区深刻的影响着人们传播和获取知识的方式，为保障源源不断的高质量内容出现，社区需要用户积极的参与，但目前的研究对社区情境对用户参与的影响缺乏关注。本研究基于刺激-有机体-反应模型分析社区情境对用户不同参与行为的影响机制，即社区个性化推荐、感知互动性、信息质量、信息丰富性的刺激因素如何影响用户社会临场感和自我效能的体验，从而促进用户参与内容创建和分享知识的行为。结论显示，社区互动性因素和内容性因素均影响用户的体验，而体验显著影响其在社区的不同参与行为。具体来说，用户的社会科学影响受社区互动因素的影响，而其自我效能受到互动因素和信息质量的正向影响，并受信息丰富性的负向影响。

关键词：社会化问答社区；用户参与；刺激-有机体-反应模型

引言

随着网络社区的不断发展，知识传播的途径和方式发生了重大变革，专业的社会化问答社区（social question & answer community）逐渐成为人们发布和搜寻信息的重要平台。这些社区中的内容完全由用户创建，并通过社区向其它此类信息感兴趣的人传播。如果社区中用户可以发布其感兴趣的问题，并等待其他用户回答的话，这些答案可能会成为其对用户搜寻的结果，他们可以针对答案的内容进行回应，或者评估。
因此，社会化问答社区是一个由知识和用户组成的复杂网络，用户聚集于某一知识话题之下，并在互动中创造出高质量的用户生成内容（UGC），用户的参与对此类社区的发展至关重要。[2]


基于社会化问答社区的特点，本研究在刺激-有机体-反应（stimulus–organism–response, S–O–R）模型的背景下，从关系维度和信息维度出发，试图通过对国内规模较大的专业知识问答社区“知乎”用户的调研，解释如下问题：1. 社区的互动性和内容质量是否影响顾客参与，如何影响顾客参与？2. 用户的体验对不同参与行为影响的程度如何？

一、文献回顾

1. 刺激反应理论


2. 刺激因素：社区交互性与内容质量

社会化问答社区作为在线社区的一种，肩负着实用性和连接性双重功能，因此这类在线环境对用户的影响可归纳为两类平台性能，即与用户完成任务相关的信息性能和满足用户关系和互动需求的交互性能，[12]本研究也依照此分类进行刺激因素的归纳。

对知乎这类综合性问答社区而言，其所含的信息的总体情况可由信息质量（内容深度）和信息丰富性（内容广度）来概括。信息质量主要指平台所包含信息的准确性与有用性，说明了平台上的信息能不能帮助用户完成目标，以及信息的内容是否正确、及时。[13]信息丰富性是常用于社交媒体和用户生成内容平台中的变量，说明了一个平台拥有信息的广度和用户可以参考信息的数量，对平台信息的可用性有较强的影响，[14]更多的内容也能帮助用户更好的完成决策。[15]

在社区互动方面，用户在社区中的互动存在着人机互动和人际互动两个层面，[16]用户通过与平台的交互对社区产生认同，通过与其它用户的交互对使用社区的群体产生情感。[17]人机互动层面，随着大量信息带来的信息过载的压力，个性化推荐（personalized recommendation）系统开始在网络社区
中应用，通过了解用户偏好，平台将用户感兴趣的内容推送到客户手中，实现“私人定制”的效果，提高了用户决策的质量和互动的效率。人际互动层面，用户的互动可以理解为一种社区支持用户互动能力的动态质量，感知互动性（perceived interactivity）即通过社交媒体的技术支持实现与平台其它用户互动的程度，感知互动性与人际关重新建立和社区意识的产生有显著联系。因此是网络社区的重要技术特征。

3.社会问答社区的用户体验与用户参与

从社会认知的角度来看，用户的体验是一种心理感知，表现为对自我的主观判断和对情境的总体感知，Amandeep Dhir 将用户的在线体验总结为社会临场感（social presence）、声誉感（social status）和自我效能（self-efficacy）三类。我们选取了其中社会临场感和自我效能两组变量，因为本项研究对用户参与行为的概括是多元的，并不是所有参与者都存在声誉的体验。其中社会临场感指通过互动与他人建立良好关系的程度，并且特指在环境下的互动过程中感受的亲密性和联系性，体现了用户对在线关系的感受。而自我效能是指用户对自己技能的评价和判断，即自己能够完成某项任务或者进行某项活动的自信程度，与真实能力相比，自我效能更偏向于对能力的信心。自我效能感会影响用户使用某项技术的意愿，因此在信息系统的研究中被广泛使用，主要分为用户使用信息系统获取知识的自我效能和用户在信息系统中分享知识的效能两类。

用户参与是顾客在产品与服务传递过程中，自身的卷入与努力程度。基于顾客卷入的程度不同可分为高度、中度和低度卷入。在社区中，顾客参与的形式多种多样，包括信息分享等直接参与，也包括评论点赞等互动性参与，体现了顾客对社区不同维度的贡献。总的来说，用户参与是一个综合性概念，内容分享和互动是最常见的社区参与形式，阅读被视为较低度的参与形式，不创造内容但对社区用户的忠诚存在影响。

二、模型及假设

研究遵循刺激-有机体-反应理论建立模型假设，模型框架如图 1 所示

图 1 假设模型

1. 社区交互性对用户体验的影响

交互性是社区的一项重要功能，人机交互层面，个性化推荐的实施可以让消费者提高搜寻信息的效率、降低认知负担，对消费者完成任务有帮助。可以推论，个性化推荐的实施对用户提升完成任务的自信可能有帮助。同样的，当用户在社区中阅读推荐内容时，会对平台和内容提供者产生更强的社会认同感和熟悉感，即用户通过推荐更多的与平台和其它用户相接触，从而增强目标用户的存在感和对平台的兴趣，促进和谐关系的生成。因此，我们假设：
H1a. 社区的个性化推荐对用户的社会临场感有正向影响
H1b. 社区的个性化推荐对用户的自我效能有正向影响

人际交互层面，网络社区的发帖、评论、点赞等功能，为用户间的互动提供了渠道，通过这些渠
道，用户可以获得情感和信息上的支持，增进社会地位并发展用户间的友谊。通过更多的交互，用户可以更多的掌握使用平台的技术，提高使用平台的自信。现有的研究强调了社会技术对网络购物中的人际关系的重要性，技术的可用性对用户交到新朋友和维持存在的人际关系都十分重要。互动使用用户聚集在一起，并在互动中产生更强烈的情感、信任、归属感和温暖感。可见社区互动性对用户的社会临场感起到了促进作用。因此，我们假设：

H2a. 社区的感知互动性对用户的社会临场感有正向影响
H2b. 社区的感知互动性对用户的自我效能有正向影响

2. 内容质量对用户体验的影响

在线的内容质量被定义为用户对网站信息质量的感知，即社区提供的信息符合用户期望的程度，其质量可以通过信息相关性、数据丰富度、交互性和定制能力等指标来识别。高质量的信息往往更能满足用户的需求，从而提升用户对社区有用性的感知。现有研究指出，高质量的信息可以增强品牌影响力，提升用户对品牌社区的互动性和持久的关系。与此同时，糟糕的信息会分散用户的注意力，增加用户的信息搜索和处理成本。在问答社区中，内容大部分由用户生成，信息的质量成为用户相互了解和建立联系的桥梁。

H3a. 社区的信息质量对用户的社交临场感有正向影响
H3b. 社区的信息质量对用户的自我效能有正向影响

在线品牌社区为用户提供丰富的信息，会更有利于客户完成任务或取得目标。在社交媒体中，丰富的内容可以满足不同用户的个性化需求，增强信息的价值，随着这种有用性的提升，会员会更愿意在社区中建立和维护与其他成员的关系。人际关系的建立会为用户带来社会存在感。此外更丰富的信息给不同用户参与社区讨论的空间，提升他们发表意见和获取信息的自信。因此，我们假设：

H3a. 社区的信息丰富性对用户的社交临场感有正向影响
H3b. 社区的信息丰富性对用户的自我效能有正向影响

3. 用户体验对参与行为的影响

社会临场感对用户使用某项技术的意愿存在显著影响，如同在线购买行为和在线参与行为的影响。同样，社会化问答社区的背景下，关系的建立对用户使用的意愿同样存在显著的影响。社会临场感是许多网络社区的用户共有的特征，社区通过鼓励用户评论、发布内容和浏览，让陌生人在社区中建立联系，这种体验让用户在社区中找到融入团体的感觉、完善自我认知，对社区忠诚和用户行为都有积极影响。因此，我们假设：

H5a. 社会临场感对用户的内容参与有正向影响
H5b. 社会临场感对用户的知识分享有正向影响

自我效能同样是个体行为的一个强有力的决定因素，有积极自我评价的人通常更愿意努力作出贡献，因为他们觉得自己有足够的精力和资源投入任务中。自我效能感主要指知识自我效能，即用户觉得在平台上回答问题或分享知识是一件容易的事，因此知识自我效能会显著影响知识分享持续性，而且具有高知识自我效能的成员一般会贡献高质量的知识。与此同时，由于对知识的自信，成员在评论等方面也会积极参与，发表自己的意见。也有学者使用了更广泛的社会网络概念，在在线社区中，由于参与行为常常是没有经济回报的，如果用户自觉没有足够的能力参与进去，就会一直在社区边缘“潜水”。自我效能感会影响用户使用某项技术的意愿，高的自我效能感对用户在平台中提问和回答都有积极作用。因此，我们假设：

H6a. 自我效能对用户的内容参与有正向影响
H6b. 自我效能对用户的知识分享有正向影响

三、研究设计，实施与结果

1. 问卷设计与数据收集

本研究在理论分析的基础上，参考国内外验证成熟的量表进行问卷编制，问卷共分8个变量26个题项，题项来源与内容信息如表1所示。题目采用Likert5点量表进行测量，编制过程中涉及题目翻译和对社会问答社区的适应性修改，编制过程中咨询了相关专家，以保证题目表述准确、减少理解偏差。
问卷的调查对象是社会化问答网站知乎的用户，通过在网站中发私信的方式，广泛的向用户推送问卷链接，最终收回问卷332份，剔除其中随意填写的问卷后，得到有效问卷327份。其中男性占比57.3%，女性占比42.7%，年龄在18岁以下用户占21.4%，在18-30岁的用户占55.7%，30岁以上用户占22.9%，用户整体偏向年轻化，性别比例相对均衡，男性偏多。

2. 信度与效度

为检验问卷和量表的信度与效度，研究使用PLS2.0软件对测量模型进行检验，结果如表1所示。信度检验使用Cronbach’s α数和组合信度系数CR测量，一般认为问卷整体及分量表的α系数在0.7以上，CR在0.7以上，问卷的内部一致性较高，本研究的测量模型符合上述信度标准。

效度检验包括聚合效度和区分效度，聚合效度指显变量间的关联程度，通过题目的因子载荷和平均方差抽取值AVE体现，当因子载荷大于0.5、AVE大于0.5时，认为问卷具有良好的聚合效度，检验结果如表1所示。区分效度指各变量间的区分程度，用于验证一个题项是否应该属于其对应的因素，通过Fornell-Larcker准则进行判断，即任一维度的AVE的平方根需大于其与其他维度的相关系数，区分效度检验结果如表2所示，本研究的测量模型符合上述效度标准。

表1 量表信度与效度

<table>
<thead>
<tr>
<th>变量</th>
<th>量表来源</th>
<th>载荷</th>
<th>α</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>个性化推荐（PR）</td>
<td>当我浏览时，知乎推荐我感兴趣的话题</td>
<td>Xihu, 2016</td>
<td>0.91</td>
<td>0.85</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>当我浏览时，知乎推荐与我相似的话题</td>
<td></td>
<td>0.84</td>
<td>0.85</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>知乎会推荐我感兴趣的内容</td>
<td></td>
<td>0.88</td>
<td>0.85</td>
<td>0.91</td>
</tr>
<tr>
<td>感知互动性（PI）</td>
<td>知乎为社区用户的互动提供平台</td>
<td>Xihu, 2016</td>
<td>0.77</td>
<td>0.82</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>知乎为社区用户的建立关系提供平台</td>
<td></td>
<td>0.80</td>
<td>0.83</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>知乎支持用户间的互动</td>
<td></td>
<td>0.84</td>
<td>0.83</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>知乎支持用户间的顺畅沟通</td>
<td></td>
<td>0.79</td>
<td>0.84</td>
<td>0.89</td>
</tr>
<tr>
<td>信息质量（IQ）</td>
<td>知乎社区中的内容是可信的</td>
<td>Raffaele, 2015</td>
<td>0.81</td>
<td>0.83</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>知乎社区中的内容与我的需求相符</td>
<td></td>
<td>0.86</td>
<td>0.83</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>知乎社区中的内容基于事实</td>
<td></td>
<td>0.77</td>
<td>0.83</td>
<td>0.89</td>
</tr>
<tr>
<td>信息丰富性（IR）</td>
<td>知乎社区中的内容满足我的需求</td>
<td>Raffaele, 2015</td>
<td>0.91</td>
<td>0.82</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>知乎社区的内容总量很大</td>
<td></td>
<td>0.93</td>
<td>0.82</td>
<td>0.92</td>
</tr>
<tr>
<td>社会临场感（SP）</td>
<td>知乎中成员的互动很温暖</td>
<td>Zhang mingli, 2017</td>
<td>0.84</td>
<td>0.79</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>知乎中成员的互动很紧密</td>
<td></td>
<td>0.79</td>
<td>0.79</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>知乎中成员的互动很人性化</td>
<td></td>
<td>0.86</td>
<td>0.79</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>我有能力参与社区中的讨论</td>
<td></td>
<td>0.85</td>
<td>0.79</td>
<td>0.88</td>
</tr>
<tr>
<td>自我效能（SE）</td>
<td>我有能力在社区中获取知识</td>
<td>Zhou junjie, 2014</td>
<td>0.88</td>
<td>0.88</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>我有能力在社区中学习成长</td>
<td></td>
<td>0.86</td>
<td>0.88</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>我有能力在社区中帮助他人</td>
<td></td>
<td>0.82</td>
<td>0.88</td>
<td>0.92</td>
</tr>
<tr>
<td>知识分享（NS）</td>
<td>我在知乎中回答问题</td>
<td>Bo xu, 2014</td>
<td>0.90</td>
<td>0.84</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>我编辑完善回答的问题</td>
<td></td>
<td>0.83</td>
<td>0.84</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>我在知乎撰写专栏</td>
<td></td>
<td>0.87</td>
<td>0.84</td>
<td>0.91</td>
</tr>
<tr>
<td>内容参与（CP）</td>
<td>我为高质量的答案投票</td>
<td>Bo xu, 2014</td>
<td>0.79</td>
<td>0.81</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>我参与问题的讨论</td>
<td></td>
<td>0.87</td>
<td>0.81</td>
<td>0.89</td>
</tr>
<tr>
<td></td>
<td>我帮助提问者解决问题</td>
<td></td>
<td>0.89</td>
<td>0.81</td>
<td>0.89</td>
</tr>
</tbody>
</table>

表2 区分效度

<table>
<thead>
<tr>
<th>PR</th>
<th>PI</th>
<th>IQ</th>
<th>IR</th>
<th>SP</th>
<th>SE</th>
<th>NS</th>
<th>CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.87</td>
<td>0.50</td>
<td>0.49</td>
<td>0.56</td>
<td>0.59</td>
<td>0.63</td>
<td>0.66</td>
<td>0.63</td>
</tr>
<tr>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
<td>0.80</td>
</tr>
</tbody>
</table>

3. 模型与假设检验
在检验测量的有效性和可靠性后，我们使用 PLS2.0 对所提出的模型及假设进行了验证。由模型 R 方可知，模型对社会临场感、自我效能的解释比例分别为 50%、59%，对内容参与、知识分享的解释比例分别为 62%、54%，模型解释力较好，模型与数据之间达到了较高的拟合。

结构模型路径的验证结果如表 3 所示，假设方面 H1a、H1b、H2a、H2b 都得到得到验证，即社区交互性正向影响用户体验，社区的个性化推荐和感知互动性都能够促进用户的社会临场感和自我效能；假设 H3b、H4b 得到验证，即内容质量对用户的自我效能存在影响，信息质量促进用户的自我效能、信息丰富性削弱用户的自我效能；假设 H5a、H5b、H6a、H6b 得到验证，即用户体验正向影响用户参与，社会临场感和自我效能的体验都能促进用户内容参与和知识分享的行为。假设 H3a、H4a 未被支持，即社区的内容质量，包括信息质量和信息丰富性，都与用户社会临场感间不存在统计显著的影响。

### 表 3 模型假设验证

<table>
<thead>
<tr>
<th>路径假设</th>
<th>路径系数</th>
<th>T 值</th>
<th>是否支持</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a 个性化推荐→社会临场感</td>
<td>0.35***</td>
<td>7.87</td>
<td>支持</td>
</tr>
<tr>
<td>H1b 个性化推荐→自我效能</td>
<td>0.45***</td>
<td>10.10</td>
<td>支持</td>
</tr>
<tr>
<td>H2a 感知互动性→社会临场感</td>
<td>0.43***</td>
<td>10.82</td>
<td>支持</td>
</tr>
<tr>
<td>H2b 感知互动性→自我效能</td>
<td>0.27***</td>
<td>5.85</td>
<td>支持</td>
</tr>
<tr>
<td>H3a 信息质量→内容参与</td>
<td>0.01</td>
<td>0.28</td>
<td>不支持</td>
</tr>
<tr>
<td>H3b 信息质量→自我效能</td>
<td>0.35***</td>
<td>7.12</td>
<td>支持</td>
</tr>
<tr>
<td>H4a 信息丰富性→社会临场感</td>
<td>0.05</td>
<td>1.02</td>
<td>不支持</td>
</tr>
<tr>
<td>H4b 信息丰富性→自我效能</td>
<td>-0.21***</td>
<td>4.11</td>
<td>反向支持</td>
</tr>
<tr>
<td>H5a 社会临场感→内容参与</td>
<td>0.49***</td>
<td>12.95</td>
<td>支持</td>
</tr>
<tr>
<td>H5b 社会临场感→知识分享</td>
<td>0.48***</td>
<td>12.21</td>
<td>支持</td>
</tr>
<tr>
<td>H6a 自我效能→内容参与</td>
<td>0.44***</td>
<td>12.21</td>
<td>支持</td>
</tr>
<tr>
<td>H6b 自我效能→知识分享</td>
<td>0.39***</td>
<td>9.29</td>
<td>支持</td>
</tr>
</tbody>
</table>

*表示 p<0.05;**表示 p<0.01;***表示 p<0.001

四、讨论

本研究揭示了一个有趣的现象，一个社会化问答社区的环境特质明显的影响顾客的体验，体验又促进了用户在平台上回答、评论、提问等参与行为，而参与产出的结果又成为情境特质的一部分，网络社区中技术和互动因素的相互渗透性[50]在模型中得到了充分的体现。研究的大部分假设被证实，2 项假设未通过、1 项假设的负向影响被证实。

结论中值得关注的地方有：首先，在这样一个以内容为核心的社区中，人机互动和人际互动的质量比内容质量更显著的影响用户体验，互动的价值再次被强调，即访问问答平台的用户携带着自身的知识资源或获取知识的任务而来，在感知平台交互性的刺激下，做出了对平台有贡献的参与行为，[9]体现了问答平台内容的共同创造性。其次，问答社区中的内容与用户社会临场感的关系不显著，可能的原因有信息质量主要代表社区的可操作性，用户获取信息时需要通过互动才能获取临场感，而不能由信息发送直接与其它用户达成某种联系。[9]与此同时，信息丰富性负向影响用户的自我效能，与我们的假设相反，问答社区中的信息并没有带来更多解决问题的自信，而是产生了过载，从而显著降低了用户获取有效信息的效率和发布信息的信心，[19]由此可见，社会化问答社区中，出现一个好的答案比出现很多回答更重要。最后，用户体验与用户在社区中内容参与的相关性高于其与用户的知识分享的相关性，这与平台运行的实际情况相一致，良好的体验让用户参与到社区的讨论和互动中，但在平台进行评论、点赞等行为的用户量是高于回答问题的用户量的。

五、启示与展望

1. 理论与实践启示

本研究对社会化问答社区的理论研究作出了一定贡献。首先，研究划分了不同的用户参与行为，并验证了情境的技术特征与消费者参与的联系。用户参与问答社区的行为是多维的，将不同行为纳入一个模型进行研究存在难度，主要原因在于每个用户的特质不同，但从另一个角度来说，使用用户参与的社区情境是一致的，因此本研究侧重从情境的刺激因素出发，探讨社区交互性和内容质量对用户不同参与行为的影响机制，通过对内容参与和知识分享行为的区分，深入了解了社会化问答平台的用
户参与。其次，S-O-R模型的应用情境得到了扩展。虽然模型已经在网络社区中进行应用，但其主要结论在于探讨消费者的购买行为，本文将模型应用于社会化的问答社区，验证了模型在非交易情境下的合理性，从而形成了情境促进参与，参与又反过来贡献情境质量的循环。最后，研究印证了用户体验对行为的指导作用。用户在社区中对关系的体验和对自我效能的体验都正向影响用户参与，表明用户的参与不仅受到其自身任务需求的驱动，还与在社区中关系的连结有关，情境价值和任务价值共同构成了用户的体验，从而促使用户以不同形式参与到社区中。

本研究的结论可以帮助社区从提升技术的角度促进用户参与。一方面，社区互动性对用户的体验和参与有显著的正向影响，因此，问答社区在的管理中，需要格外关注促进用户互动的技术特征，结合知乎现有的互动支持技术，如信息个性化推送、评论系统、关注系统、好友添加功能、私信功能等，为用户提供便捷无阻且全方位的互动体验，这将鼓励用户从一个阅读的旁观者变成内容的参与者和生成者。此外，参考网络社区现有的互动形式，组织对同一话题有兴趣的用户的线下活动将使用户对社区的忠诚度和参与意愿大大提升。一些促进互动的手段，如给用户虚拟礼物、勋章或者加入有社交性的小游戏等，都对促进用户间的互动，并将普通用户转化为内容贡献者有益。另一方面，社区的内容对用户的自我效能体验十分重要，准确、及时的高质量信息会让用户更乐于使用平台，从而促进参与，而信息的过度丰富会降低用户的效能感与使用意愿。因此，信息的筛选对这类社区十分重要。问答社区需利用大数据等手段对用户发布的信息进行筛选，在问题端对重复的、相似的进行合并，在答案端，识别与问题无关或不适宜的内容，结合用户对答案质量的自发的评价，保证用户搜寻到的答案都是较好的，在认可社区功能价值的基础上，用户才更愿意参与进来，贡献内容、帮助他人。

2. 不足与展望

在获取一些结论的同时，本研究也存在一定局限性。一方面，我们关注的用户参与都是回应性的点赞、评论、回答等贡献，没有考虑一些学者提到的旁观者效应，即信息的搜寻者、阅读者的参与，在今后的研究中将这些潜在的参与者纳入进来，会加深对网络社区用户参与行为的理解。另一方面，受参与行为多样化的因素，我们的模型主要考虑了社区技术因素对参与行为的影响，并发现社区的互动性和内容质量都影响用户的参与，在今后的研究中，可以将消费者的个性特质，如乐于助人或者乐于分享等因素作为调节变量加入进来，有助于分析用户体验与行为的关系中，用户自身因素渠道的作用。

参考文献


[38] Gorla N, Somers T M, Wong B. Organizational impact of system quality, information quality, and


Research and enlightenment on brand building and brand management of video website in China

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Abstract:

With the rapid development of Internet and human society, and the acquisition mode of knowledge and information fragmentation, video website APP will become one of the core applications of mobile terminals. At present, the video website industry is facing the situation of technical innovation, content optimization and multimedia development, based on iQIYI company as the research object, comprehensive analysis of the use of copyright, the high quality homemade program, unique personalized services such as methods to quickly boost its brand image, to strengthen the construction of its brand, in order to give certain enlightenment and reference to the rest of the video website about the brand building and product up-gradation.

Keywords: iQIYI; Video web site; Brand management; Brand construction

1 品牌管理定义

1.1 品牌管理定义

主流品牌管理理论认为，品牌是一组价值的承诺，消费者对品牌的感知与其自身的价值体系一致时，有助于消费者做出积极的购买行为。品牌价值同时包含理性和感性两个层面的价值，其中理性价值
主要来自于产品和服务，而感性价值则体现在品牌形象和联想上。

1.2 视频网站品牌管理

媒介的品牌形象通常指媒介的社会形象，是媒介消费者对媒介的知觉性概念，是由媒介外在和内在的特征和风格构成的，常常经验由公共宣传、广告和公共关系等有意识地树立或更正的。CIS (Corporate Identity System) 被称作企业形象识别系统，1988 年我国市场后开始以品牌为导向和核心以强调企业自身形象和产品品牌形象为主旨的经营手段和整体形象管理。CIS 由 MI(理念识别 Mind Identity, VI(视觉识别 Visual Identity, BI(行为识别 Behavior Identity)三方面组成。CIS 将企业文化与经营理念统一设计利用整体表达体系(尤其是企业的形象)促进企业产品和服务的销售。[1]

2 视频网站发展现状

2.1 视频网站模式发展

视频网站模式的发展都是在互联模式发生变化的基础进行改变。我国视频网站的兴起就是伴随着内容创作模式的兴起而诞生的。UGC (User Generated Content) 指用户原创内容，是伴随着以提倡个性化为主要特点的 Web2.0 概念而兴起的。它并不是某一种具体的业务，而是一种用户使用互联网的新方式，即由原来的以下载为主变成下载和上传并重。UGC 具有三个特征，分别是：1. 内容具有一定程度的创新性：非专业人士或权威组织创作。

最开始阶段，网民自行拍摄录制视频内容上传到网上，比如土豆网。共享的视频内容需要媒介平台进行传播，继而产生了视频网站，但是随着时间的推移，UGC 模式的弊端也逐渐显现，主要表现在：1. 版权归属问题模糊；2. 上传的有些视频内容低俗、质量无法保证；3. 内容同质化严重。所以随着这些问题的显现，主流视频网站开始实行 PGC 模式探索。

PGC (professionally generated content) 即专业内容生产模式，模式的具体意义是专业内容生产，与 UGC 问题不同，视频网站转换了内容生产机制，开始转向播出传统电视媒体和专业的影视制作公司寻找播放的内容、买断版权和资源。时代进入 PGC 内容，都是专业生产制作的内容，使得视频网站内容质量提升到更高的水平，网台联动持续了几年以后，同样无法解决内容同质化的问题，同样也会面对版权法律纠纷，经营成本过高等问题，在这一模式下视频网站没有自主研制的视频内容，只是起到了一个“媒介转化”作用，无法自主研制内容，内容方面依然没有主动权，内容生产机制开始向 PGC 转化。[2]

现在有些视频网站，例如优酷，还保留着由用户自主上传视频内容，但是现在都有专门的监管机制，对视频有很好的审核机制，审核通过后才可以成功上传到网站供他人观看。

现在，更多的视频网站依托 PIPG(Internet Professional Generated Content)模式，即互联网专业内容生成模式，这使得视频内容掌握在更多的主动权，可以针对自己网站的特点，打造自己品牌特色的视频节目、剧集，可以自己掌握主动权，自制节目的发展过程，不仅可以对自身节目和视频内容进行控制、更是缓解了版权以及资金方面的压力。

2.2 视频网站节目精品化

根据《2017 中国网络视听发展研究报告》，2017 年视频网站共创作网络剧 555 部，6921 集；网络电影 5620 部；网络动画片 659 部；专业类节目 2725 档(包括综艺、娱乐、财经、体育、教育)。

随着监管政策的完善与加强，网络视听行业更加规范化，线上下统一标准对整个行业格局产生重大影响。网络视听节目数量在稳中有升的基础上，进入了“精品化”阶段——无论是网络剧、网络电影还是网络综艺都从粗放的数量增长变为追求精品的质量增长。

虽然网站自制内容在节目数量、播放量上屡创新高，但调查显示，在节目口碑、人气上不如传统版权节目，未来仍有较大的提升空间。但较前期的网络作品质量已经提升很多，未来逐渐精品化。

2.3 视频网站用户付费意识已经养成
网络视听产业用户规模和使用率进一步提升，视频网站行业还有很大的发展空间。截至2017年6月，我国网络视频用户规模达到5.65亿，占网民总数的75.2%，继续保持网络娱乐类应用首位。与2016年底相比，用户规模增长206万人，增长率为3.7%，增速超过整体网民，增速明显提升。相当于每天有11万新增视频用户。2017年国内网络视频用户的付费比例继续增长，有超过四成的用户曾为视频付费，付费意识已经养成。并且相比去年，用户的付费能力也有较大提升，每月支出40元以上的付费会员从2016年20.2%增加到了2017年的26.0%。

2.4 视频视听移动化促使视频网站飞速发展

随着智能手机的成熟发展，视频视听活动逐渐向移动化转变，这也进一步加快了视频网站的发展，视频网站纷纷开展优化自己的手机APP，以适应行业的发展。95%的视频用户会使用手机收看网络视频节目，这使得大众利用碎片化的时间，例如挤地铁的时间，来使用移动视频终端，这也进一步促进视频网站的发展。确实，比起传统媒体，这种视频视听移动化更能满足现今人们快节奏的生活，更加方便传达最新时讯。例如，以前我们会在每天下班后通过观看新闻联播来获取新闻资讯，但是现今，只要有重大新闻，视频APP会直接推送给用户，这种高效，即时的获取新闻资讯的方式更受大家欢迎。所以，视听移动化在促使视频网站发展，因为要想留住用户，必须提升自己的网站及周边应用建设。

2.5 视频网站市场竞争依旧激烈

2018年11月31日，中国互联网络信息中心（CNNIC）在京发布第41次《中国互联网络发展状况统计报告》。报告称，截至2017年12月，我国网民规模达7.72亿，普及率达到55.8%，超过全球平均水平（51.7%）4.1个百分点，超过亚洲平均水平（46.7%）9.1个百分点。我国网民规模继续保持平稳增长，互联网模式不断创新发展，线上线下服务融合加快以及公共服务线上化步伐加快，成为网民规模增长推动力。虽然网民规模在不断增长，但是视频网站市场竞争依然激烈，现如今不只有我们熟悉的优酷、爱奇艺、腾讯视频、搜狐等，还有很多新起的小视频网站或视频APP跃跃欲试，有些甚至拥有很多忠诚客户，例如哔哩哔哩动画视频网站，这些现象都表明，现如今视频网站的竞争依然激烈。

3 视频软件品牌管理模式——以爱奇艺为例

3.1 爱奇艺公司简介

爱奇艺，中国高品质视频娱乐服务提供者。2010年4月22日正式上线，秉承“悦享品质”的品牌口号，积极推动产品、技术、内容、营销等全方位创新，为用户提供丰富、高清、流畅的专业视频体验。目前，爱奇艺已成功构建了包含电商、游戏、电影票等业务在内、连接人与服务的视频商业生态，引领视频网站商业模式的多元化发展。

爱奇艺品质、青春、时尚的品牌调性深入人心，网罗了全球广大的年轻用户群体。爱奇艺打造涵盖电影、电视剧、综艺、动漫在内的十余种类型的丰富的正版视频内容库，并通过“爱奇艺出品”战略的持续推动，让“纯网内容”进入真正意义上的全类别、高品质时代。同时，作为拥有海量付费用户的视频网站，爱奇艺倡导“轻奢新主义”的VIP会员理念，主张人们对高品质生活细节的追求，坚持为广大VIP会员提供专属的海量精品内容，极致的视听体验，以及独有的线下会员服务。

2014年，爱奇艺在全球范围内建立起基于搜索和视频数据分析人类行为的视频大脑——爱奇艺大脑，用大数据指导内容的制作、生产、运营、消费。并通过大型的云计算能力、带宽储备以及全球性的视频分发网络，为用户提供更好的视频服务。在技术与内容双核驱动的营销创新时代，爱奇艺创造性地提出了“iJOY悦享营销”客户服务价值观和方法论。通过多屏触点、创意内容、技术优化、互动参与、实现购买等路径全面提升ROI，让客户享受到创新营销带来的成功与快乐。

未来，爱奇艺将在多元化的内容储备、个性化的产品体验、定制化营销服务领域继续发力，引领视频体验革命。不断提升连接人与服务的能力，更好的改变人们的生活。

3.2 爱奇艺品牌管理研究

3.2.1 拥有优秀经典的国内外影视版权
爱奇艺重视版权，清楚地明白要想在市场中占有一席之地必须先要拿到优秀影视的独播权力。爱奇艺优先重视那些优秀经典影视剧的版权，基本以“独家”来获得关注，以此来提升自己的品牌形象，加大自己的品牌价值。例如，在今年3月5日，爱奇艺锁定版权的6部获奖影片拿到了13个奖项，超过一半，其中就有最近大火的《水形物语》。爱奇艺再次提前锁定获奖佳作，显示出对优质内容的精准预判和采买眼光。拥有更多优秀的影视版权就会吸引更多的用户选择爱奇艺进行视频观看，进一步加强爱奇艺的品牌建设，提升爱奇艺的品牌形象。

2014年积极参与“中国互联网版权保护行动计划”，全国多家视频企业共同参加，旨在更好的推动国内网络视频正版化进程，携手共建互联网行业科技维权平台、集体维权平台，联合形成长效的版权保护机制。2015年爱奇艺宣布成立文学版权库，牢牢地握住了IP与平台两大内容生产传播的关键环节。同时，拥有众多优质热门IP意味着拥有强有力内容源头优势，可在内容生产上不断整合资源。然而，爱奇艺并没有对文学版权库采取IP封锁，而是依托其优质的IP资源与业内最为优秀的制作人联合出品。同时，为实现IP价值最大化，爱奇艺在多个环节围绕IP优质资源展开全产业链式开发—广告服务、会员服务、衍生品销售、游戏、电商等等。

3.2.2 创作、开发优秀具有前景的原创IP剧

IP，即Intellectual Property，直译是知识产权，它可以是一个故事，一种形象，一件艺术品，一种流行文化。更多是的适合适合二次或多次改编开发的影视文学、游戏动漫等。IP剧，是指在有一定粉丝数量的国产原创网络小说、游戏、动漫等IP背后成千上万的狂热粉丝和他们不容小觑的消费能力。爱奇艺正是利用这种已经积聚一定人气的IP资源，再加上团队的优良创作以及优秀演员的表演，是爱奇艺推出的网剧点播率都非常的高。例如，之前大火的《最好的我们》，爱奇艺请当时人气小生演员刘昊然为其剧担任主演，而《最好的我们》这个作品在小说阶段阶段就非常受欢迎，使得这部网剧在还未播出的阶段就受到非常多的关注。播出后后因为其高度还原小说内容以及演员们的出色表演使得这部网剧点播率非常高，也为爱奇艺在网剧创作方面打开了新的领域，提高其知名度，由于自制网剧对会员有可以提前知晓剧情的优势，所以随着这部网剧的火爆，爱奇艺的会员用户量也增加不少，演员的知名度也提高不少。爱奇艺正是利用这种已经积聚一定人气的IP背后成千上万的狂热粉丝和他们不容小觑的消费能力。爱奇艺正是利用这种已经积聚一定人气的IP资源，再加上团队的优良创作以及优秀演员的表演，是爱奇艺推出的网剧点播率都非常高。例如，之前大火的《最好的我们》，爱奇艺请当时人气小生演员刘昊然为其剧担任主演，而《最好的我们》这个作品在小说阶段阶段就非常受欢迎，使得这部网剧在还未播出的阶段就受到非常多的关注。播出后后因为其高度还原小说内容以及演员们的出色表演使得这部网剧点播率非常高，也为爱奇艺在网剧创作方面打开了新的领域，提高其知名度，由于自制网剧对会员有可以提前知晓剧情的优势，所以随着这部网剧的火爆，爱奇艺的会员用户量也增加不少，演员的知名度也提高不少。爱奇艺正是利用这种已经积聚一定人气的IP资源，再加上团队的优良创作以及优秀演员的表演，是爱奇艺推出的网剧点播率都非常高。

3.2.3 创作高品质、有针对性的综艺节目

爱奇艺在自制综艺和网剧创作方面一直坚持高质量以及有针对性，换句话说就是网剧和综艺的制作时针对于特定观看人群。就算今年年初开始进行录制播出的《偶像练习生》，就是针对青少年观众开发的选秀综艺，首期播出之后，短短一小时内播放量便已破亿，更是在当天众多优秀网综中播放量遥遥领先。

在爱奇艺2018年的节目单上，不仅有第二季《中国有嘻哈》，还有以同样的制作模式，开发《热血街舞团》、《机器争霸》、《偶像练习生》等综艺节目。爱奇艺未来可能更多的倾向开发大制作、优质的综艺节目，以及综艺节目的带动的周边开发等。

3.2.4 注重用户体验、技术创新

爱奇艺客户端依靠大数据分析实现了个性化内容推荐，达到了“千人千面”的水平。根据用户的浏览记录、分享历史及搜索内容等，建立用户个人收视兴趣模型，向用户提供完全个性化的内容推荐。这样精准的推荐使得客户使用满意度增加，依赖产品的水平增加。平台会根据用户之前关注的影视剧或其他节目将相关的节目新闻或演员信息个性化地展示在用户的客户端首页上，并且随着用户关注内容的改变而改变。同时，爱奇艺去掉了电视剧的片头片尾部分，让用户真正地从片头开始观看节目，从而大大节约了用户的时间，这一深受广大用户好评的做法在整个行业内也是首创。除此以外，爱奇艺还通过使用大数据的分析技术判断用户的兴趣范围，经过整理、编辑后，将其中的精彩内容整合为“精华版”视频，来吸引更多用户的关注。

爱奇艺客户端更是开通弹幕功能，弹幕可根据用户自己的喜好选择开通还是关闭。用户在观看视频的同时可以和观看相同视频的用户分享观看感受，吐槽影视剧情等。更有些用户并不因为一部剧作本身而去观看这部剧，有时仅仅是因为某部剧弹幕比较有趣而选择观看这部剧。由此我们可以看出，弹幕的开发对剧作本身是有一定积极影响的因素，而这也体现了互联网媒体的优势所在。
在最新的爱奇艺手机客户端更是添加投屏播放模式以及 VR 播放模式，这两项优秀的技术创新优化用户观影感受，吸引更多用户使用爱奇艺并希望成为其会员用户。

3.2.5 明星效应、建立付费会员模式

（1） 明星效应、“轻奢”主义

作为国内视频行业领先者，爱奇艺一直致力于以优质高清正版内容培养用户付费习惯，促进普通用户向 VIP 会员的转化，且卓有成效。截止到 2015 年 6 月，爱奇艺付费会员达到 501.7 万，拥有中国最大规模视频付费用户，同比增速达 765%，带动中国视频个人付费市场规模进入快速增长期。

2015 年 6 月爱奇艺首开行业先河，率先发布 VIP 会员品牌及口号“轻奢新主义”，推崇精致而实用的生活态度，倡导格调与乐趣的双重质感，代表对高品质生活细节的极致追求。

结合用户需求和品牌调性，通过大数据分析、甄选，爱奇艺邀请了黄渤、AngelaBaby 和杨洋三位最受用户喜爱的明星担任 VIP 会员品牌代言人，分别代表 70、80、90 后。并围绕三位明星的不同特点打造微电影，进一步具象化“轻奢新主义”的品牌理念，同时巧妙地表达出震撼视听体验、海量内容、追剧不等待的 VIP 会员服务特点。运用多平台创意互动的整合营销模式，通过多元形式的品牌曝光与受众互动，利用代言人的明星效应和粉丝经济，建立品牌的独特个性并树立口碑。

对比如此前 4 年累计 500 万量级，爱奇艺 VIP 会员明星代言营销推广推动 VIP 会员数量 6 个月内高速增长，于 2015 年 12 月 1 日正式突破 1000 万，远超行业第二和第三名总和。“轻奢新主义”品牌主张风靡全网，掀起付费视频新潮流，让视频行业看到盈利曙光。

随后爱奇艺更是邀请当红流量明星吴亦凡、赵丽颖代言爱奇艺 VIP 会员品牌，持续表达当下年轻一代潮流态度。

（2） 建立付费会员模式

视频网站的盈利模式一直是行业困扰的问题，首先视频网站在版权、内容自制、宽带、技术研发上已经付出巨大的成本代价，过去视频网站的盈利模式采取的是“网站+广告”的模式，但是受众体验非常不好，用户享受度、付费观看模式应运而生，在视频网站探索多种盈利模式之后开始蓬勃发展的。

爱奇艺 2018 年 3 月公布的数据显示，爱奇艺付费会员数是 6010 万。从付费会员对视频用户规模的渗透率、以及目前付费会员发展速度看，未来在线视频付费会员还会会有不错的增长空间，目前还没有看到增速放缓的迹象。尽管现在几家在线视频的收入来源仍旧是广告业务，但是以爱奇艺为例，其会员业务以超过 70%的同比增长速度的快速发展，可以完全实现收入循环。在这个趋势下，头部几家在线视频公司有望更迅速变现盈利，并通过增加投入更多高质量的自制内容以及知名 IP 的收入。这些高投入的自制或版权剧可以不断加强付费会员黏性，同时也可以极大地吸引更多新付费会员。

3.2.6 影视周边、线上线下多方位发展

爱奇艺同样利用线下活动来加强品牌建设，比如已经成功举办四届的爱奇艺一年一度的青春时尚娱乐活动——“爱奇艺尖叫之夜”。“爱奇艺尖叫之夜”通过搜索直播、网络播放量、票房、收视率等多数据维度，将对全年度渗透于中国娱乐产业链上的出品人、制片人、编剧、导演、演员、主持人等进行致敬。依托众多明星演员、导演以及歌手艺人等多为明星加盟更是使得这项活动精彩、博人眼球。未来爱奇艺的这项活动必定会越来越受重视，话题度也会越来越高，奖项分量也会逐年升级。

爱奇艺还打造电影业发展，成立爱奇艺影业公司。依托大荧幕的帮助，爱奇艺的品牌已逐渐深入人心。

在影视周边方面，爱奇艺注重开发优秀 IP 周边，例如开发与影视相关的周边产品或者开发更多相关的综艺节目。
4.1 视频网站品牌建设挑战与问题

4.1.1 盗版问题、视频质量难以保证

虽然各个视频网站注重版权问题，但是还是有不少盗版视频在网上流出，这使得购买视频原作版权的视频网站损失较大，我们已将看到视频网站对盗版视频已经采取一些措施，但是未来在怎样控制盗版视频问题上，视频网站还是要寻求更好的解决办法。

几乎现在所有的视频网站都有用户自制视频内容上传的版块，虽然内容有所优化，但是还是不免有些低级趣味的视频出现在网站上，在怎样更好的审查视频，控制视频上传方面，视频网站还是需要继续努力，寻求最佳的解决办法。

4.1.2 市场竞争激烈

视频网站行业内部竞争白热化，据数据显示，三年前，人均拥有视频 APP 的数量是 3.4 个，现在则是 1.7 个。这说明，共享版权的网剧和电视综艺虽然（各大视频网站）你有我有全都有，但用户收看时是有所选择的，这也是为什么同一部戏在这家网站上播得好，其他网站播不好的原因；同样，对于自制内容，如果你不持续投入供给精品综艺、网剧，用户转头就会抛弃你。国内首位移动大数据服务商”极光大数据“的数据也印证了这种趋势：截至 2017 年 7 月，中国移动视频 APP 用户规模约为 6.42 亿人。在去年同期，这一数字还是 6.69 亿。这意味着，“以价搏量”的用户争夺战走到尽头，下半场是“掘金用户”的时代，靠什么“掘”，答案还是优质的自制内容。而要想自制内容精致、优良，视频网站首先想到的就是大制作、高投资的影视作品、网络综艺，所以说，视频网站接下来的挑战更是激烈的，视频网站行业内的市场竞争还是激烈的。

4.2 视频网站品牌建设未来发展建议

4.2.1 优化视频内容、保证视频质量

2017 年网络选秀三大节目《明日之子》、《中国有嘻哈》、《快乐男声 2017》突破了 20 亿的点击量，其中《明日之子》总播出量收官时突破了 40 亿；从收入上看，《明日之子》赞助收入达 3 亿元，《奇葩说》第四季的赞助达到 4 亿级别；从话题上讲，《明日之子》冠军毛不易比赛三个月，微博粉丝数从 101 人增加到了 299 万，他个人的视频点击率目前就达到了 15 亿。以前只能作为“地下歌手”的 PG ONE 参加完《中国有嘻哈》马上迎来了雅诗兰黛的口红代言。走红的是个人，获利的是网站，以后你会发现这些人，马上会联想到他是从哪个网站、哪档节目出来的。所以优秀的视频内容才是吸引用户，加强品牌建设的法宝。

加强用户自制视频上传的审查力度，确保网站上视频的质量，保持良好的品牌形象。

4.2.2 重视品牌建设、购入质量可观的影视版权

爱奇艺独播的韩剧《来自星星的你》以 20 亿的播放量不仅使剧作获得很好的口碑，也使爱奇艺拥有许多会员用户以及大量非会员用户习惯使用爱奇艺观看视频。同样作为爱奇艺具有独家版权的韩剧《太阳的后裔》更是以 28 亿的播放量超越 2012 年的《来自星星的你》。这两部剧在爱奇艺上成功地播出，不仅得益于网络平台这个开放的空间，更是爱奇艺具有独到的眼光选择了这两部高质量的韩剧。所以，在未来的发展，视频网站更应该注重购入优秀影视的独家版权，以此获得更高的点播量，关注度以及更高的利益。

4.2.3 线上线下互联、举办传达网站品牌观念的相关活动

为了打造自己的品牌，各大视频网站似乎一直在进行横向的竞争，与其他视频网站开展“大战”。然而网络作为一种新媒体，并不是全部媒体，想要真正的打出品牌，拓宽自己的渠道，就应该加强跨媒体的合作。例如与电视媒体进行合作，开办网视互联的节目内容；又比如与传统出版社进行合作，为新书进行网络同步试听宣传等。同时，为了加强与更多受众的接触，视频网站应该多多组织各种线下活动，走到现实生活中去进行宣传，以争取到更多用户，让自己的品牌拥有更广泛的影响力。
4.2.4 坚持以用户为中心

现今的视频网站都注重用户感受，所以现如今的视频网站都开通弹幕服务。弹幕服务不仅吸引用户注册会员，而且提升用户观影乐趣，保证用户观影感受。在今后视频网站的发展应该更加注重用户感受，以用户为中心，开发以更多确保用户良好体验的观影方式或更多观影功能。

除了观影功能的提升，视频网站在开发自己网剧的时候也应该关注用户观影后的感受或建议。比如，爱奇艺自制网剧《最好的我们》在听取网上观众的呼声后，也会考虑改编原有的剧作结局。

综上两点，建议视频网站在今后的剧集创作或网站开发、APP开发时，应更加关注用户的感受及体验，以用户为中心。

4.2.5 提升技术创新、精准服务

现如今，科技发展日新月异，所以视频网站要想获得更多的用户，建立良好品牌形象，就要与时俱进，加强技术创新。例如，爱奇艺CEO龚宇在2018iJOY悦享会上提到最多的词是“AI”，龚宇介绍到当前爱奇艺基于深度学习的多时间窗口流量票房预测，180天模型在512部电影上预测准确率为83%；电影票房预测准确率已经高达77%；电视剧流量预测方面，提前一年与半年的数据准确度均高达88%，基于算法的理性判断意味着高性价比、精准地版权采买，同时，也意味着更有可能自制出爆款内容。所以，视频网站应充分利用当前的先进科学技术清晰自身的投资方向，提高自制网剧、网综的效益，建立良好的品牌形象。

5 总结

在综合分析、研究了爱奇艺的品牌管理方法以后，作为新兴行业——视频网站，应对注重技术创新的同时，加强优化内容、提升内容品质，坚持以用户至上，以用户的需求为中心。在当今这个高速发展的时代，视频网站更是要多方位发展，加强与多媒体的合作，坚持线上线下活动原则，积极建设自身品牌，加强品牌管理。

参考文献:
Brand Public Praise: Influence Factors of Customer Engagement Behavior in Virtual Brand Community Based on the Social Cognitive Theory

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Abstract

In the era of Web 2.0, with huge change taking place in people’s social activities, virtual brand communities become a new consideration of enterprises in the competition. And this brings a hot topic of customer engagement behavior which represents the communication and interaction among customers as well as between customers and enterprises. Based on the Social cognitive theory, this research strives to explore the customer engagement behavior influencing mechanism in the virtual brand community context of enterprises’ perspective, applying the questionnaire and structural equation model method. The result is revealed that subjective norm, self-efficacy, relationship proneness and information quality are the four key decisive factors of customer engagement behavior and brand public praise.

Keywords: brand public praise; virtual brand community; customer engagement behavior

品牌口碑：基于社会认知理论的虚拟品牌社区中顾客契合行为影响因素研究

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摘要：

互联网 Web2.0 时代，随着人们的社交方式发生巨大变化，虚拟品牌社区正在逐渐成为企业提高竞争优势新的着眼点，这推动着代表顾客与顾客、顾客与企业之间的交流和互动的顾客契合行为一时成为热点话题。本文基于社会认知理论，运用问卷调查与结构方程模型的方法，以企业的视角致力于虚拟品牌社区背景下顾客契合行为的影响因素探究，研究结果发现主观规范、自我效能、关系倾向和信息质量是顾客契合行为及品牌口碑的四个重要决定因素。

关键词：品牌口碑 虚拟品牌社区 顾客契合行为

引言

随着互联网的普及与发展，虚拟品牌社区（Virtual Brand Community，VBC）如雨后春笋般涌现。它在互联网的沃土上蓬勃发展，爆发出令人眩目的能量，其传播的信息已成为人们浏览互联网的重要内容。虚拟品牌社区的信息共享性、形式多样性和成员参与度高的特点把有着相同品牌偏好的顾客联系起来，使他们能够比线下更便捷地相互分享购物体验，影响购物抉择，而且顾客往往更加信任那些允许消费者发表产品评论的品牌。在虚拟品牌社区的推动下，顾客有了更多的信息和选择，反映顾客与品牌之间亲密程度并影响顾客忠诚的顾客契合（Customer Engagement Behavior，CEB）也越来越受到了企业的关注。在这个交互的、动态的商业情境中，频率越高的顾客契合行为也将越能为企业带来较高的公
司绩效 (Kumar et al., 2010)，如优良的口碑、销售增长、竞争优势、盈利能力等等。


在顾客契合行为的研究中，对于哪些因素会对顾客契合行为产生影响、影响机制又如何，学者们分别从关系质量（Malciute 等，2013）、参与动机（Barhemmati 等，2015）、信息质量与品牌社区认同（Poor 等 2014）以及顾客涉入（Hollebeek 等，2014）等不同的角度进行了研究。这些研究的共同特点都是从个体特质以外的因素考虑对顾客契合行为的影响，而作为品牌社区的共同参与者，伴随着个体的特质或情感反应，顾客会对顾客契合行为产生什么样的作用，无论是国外学者还是国内的研究人员都鲜有提及。

Bandura（1986）的社会认知理论提出社会环境和主体认知均可并共同影响个体行为，它摈弃了传统行为主义对环境的依赖，重视人的自我系统和自我效能感，这在验证个体行为方面得到了广泛的应用。社会认知理论的应用目前主要集中在现实社区、企业内部、教育群体等一些现实群体中成员的行为和心理特征的研究中。

本文将以虚拟品牌社区为背景，基于社会认知理论（Social Cognitive Theory, SCT）的主体认知和社会环境两个维度，结合关系营销和服务主导逻辑等理论，探究虚拟品牌社区中顾客契合行为的影响因素，构建虚拟品牌社区中顾客契合行为的影响机制模型并进行分析，进而研究虚拟品牌社区中顾客契合行为对品牌口碑的影响。期待通过对这些问题的讨论，进一步丰富顾客契合行为的理论研究，并对企业提高品牌竞争力有一定的实践指导意义。

1 研究假设

1.1 研究思路

本文参考 Van Doorn 等（2010）及 Hollebeek（2014）的研究，定义顾客契合行为是指顾客出于某种动机而关注某企业或品牌的非交易性行为。这种非交易性行为可从认知处理、喜爱和激活三个维度去进行刻画。在某一特定的顾客/品牌交互中，认知处理指的是消费者一定程度地整合与处理与品牌相关的信息；喜爱指的是消费者表达有关该品牌的积极情感；激活中指的是消费者为某一品牌花费的精力、努力和时间。

基于社会认知理论，在虚拟品牌社区的背景下，一方面，以自我效能为主的包括个体的自我构念、认知需要、名誉、自我提升、心里所有权等主休认知因素影响或决定着他的行为方式，另一方面，以信息质量和主观规范为主的包括社会认同、群体规范等环境状况作为行为的对象或现实条件决定着行为的方向和强度。

因此，本文将从主体认知和社会环境两个维度来讨论顾客契合行为的影响因素。一方面，除了 Bandura（1986）提出的自我效能会影响个体行为外，带有不同程度关系倾向的个体可能也会产生并影响与品牌联系程度或高或低的契合行为。故本研究将以自我效能和关系倾向作为主体认知维度的两个
变量。另一方面，虚拟品牌社区中海量的信息和中国传统集体主义理念的影响，信息质量（平台因素）和主观规范（环境因素）可看做社会环境维度的两个变量。本文将二者结合起来讨论其对顾客契合行为的影响。

品牌口碑指的是以口碑形式存在的品牌印象，它具体表现为人们对品牌的议论与评价。本文将品牌口碑视为结果变量，探讨顾客契合行为对品牌口碑的影响。

1.2 研究假设

1.2.1 关系倾向与顾客契合行为

Christy 等（1996）认为存在一部分消费者，与其他消费者相比较，他们本身就倾向于参与到关系中，并用“心理上的预先倾向”来表达这种观点。Sheaves 等（1996）观察到非关系型顾客偏爱短期的交易行为，而关系型的顾客更渴望长久亲密的关系。顾客契合行为正是顾客在长期与某一品牌的互动中，被吸引、占有、完全涉入，全神贯注于某物，并得到特别吸引人的、亲密的结果(Higgins 等,2009)。因此，带有关系倾向或关系倾向程度较强的顾客更可能主动地对特定的虚拟品牌社区所提供的信息进行思考，并结合自己的需求主动从该平台寻求和获取关联信息；由于这种潜在的个人偏好，他们从成功搜集到的信息或者搜集过程与他人的交互中，也更容易获得被帮助的快乐和好感，因而愿意继续投入更多的精力，时间等。

基于以上分析，本文提出以下假设：

假设 1a 在虚拟品牌社区中，关系倾向对顾客的认知处理有直接、显著的正向影响。
假设 1b 在虚拟品牌社区中，关系倾向对顾客的喜爱有直接、显著的正向影响。
假设 1c 在虚拟品牌社区中，关系倾向对顾客的激活有直接、显著的正向影响。

1.2.2 主观规范与顾客契合行为

主观规范指的是个人实施某一行为时预期所受到的压力(Ajzen 等,1977)。在虚拟品牌社区中，发表评论的其他顾客作为重要关系人之一，发表意见、建议和看法无形中会形成个人的感知压力。主观规范带来的这种感知压力使个体广泛搜集和深入加工相关信息，喜欢复杂的任务并主动且努力地投入更多的认知精力，以便自己了解新事物、参与新话题，避免集体排斥感，更好地融入特定社区中的集体。由于消费者总是不愿被认为是不友好的或是难以接近的，因此，他们总是采取与社会规范一致的行为(Pookulangara 等,2011)，并从中产生满足感、成就感，激发出更强的依赖性。

因此，本文提出以下假设：

假设 2a 在虚拟品牌社区中，主观规范对顾客的认知处理有直接、显著的正向影响。
假设 2b 在虚拟品牌社区中，主观规范对顾客的喜爱有直接、显著的正向影响。
假设 2c 在虚拟品牌社区中，主观规范对顾客的激活有直接、显著的正向影响。

1.2.3 自我效能与顾客契合行为

自我效能是指个体对达成其特定工作的自我能力的判断，它是外在环境、自我调整机制、个人能力、经验、成就交互作用的结果(Bandura, 1986)。Bandura 认为个体是根据自我效能来启动、规范并维持自己的行为的，相似地，“使用与满足理论”(use and gratification theory) 也认为个体是由信念(如满足其自我感知需要)与虚拟品牌社区中的品牌发生契合的。这种信念鼓励个体完成对自己主动积极参与
的社区活动并取得较好效果的能力的判断。一个人在不同的虚拟品牌社区中，其自我效能感是不同的。高的自我效能感促使一个人去尝试高挑战的工作，设置较高水平的目标。对于品牌相关信息予以搜集、整合甚至思考，更多地带有更加积极的情感，并表现出较强的目标承诺。从而与其他同类品牌社区相比，对于该特定平台愿意付出更多，比如花费更多的时间浏览或赋予优先权。

所以，我们假设：
假设 3a 在虚拟品牌社区中，自我效能对顾客的认知处理有直接、显著的正向影响。
假设 3b 在虚拟品牌社区中，自我效能对顾客的喜爱有直接、显著的正向影响。
假设 3c 在虚拟品牌社区中，自我效能对顾客的激活有直接、显著的正向影响。

1.2.4 信息质量与顾客契合行为

顾客感知到的信息质量会影响其感知到的服务质量，从而影响消费者的行为决策。在虚拟品牌社区中，随着消费者不断趋向理性购买，他们开始不再单纯地只相信商家提供的商品信息，而是倾向于通过客户评价，使用心得等途径获取更加客观真实的高质量信息，从而有助于全面地了解商品。认知处理过程也因此受到影响。在虚拟品牌社区背景下，高质量信息使得顾客更容易满足自己获得知识和信息并进行深入思考的内在动机和好奇心。表现为积极地参与到虚拟品牌社区中，通过互动、分享的积极契合行为可以深入整合现有的信息知识，深入整合的结果给消费者带来好感或厌恶等情感，并增加或减弱他们的购买信心。另一方面，当今社会，随着信息化时代的到来，以及传媒业的广泛发展，企业在向消费者传递大量信息的同时，也导致信息传递收效不足（段涛，2015），伴随着信息质量的降低，消费者感知到自己对于该商品了解不够全面，甚至可能产生怀疑、失望等不稳定情感，因而也就不会愿意付出更多的顾客努力，激活其他行为。

基于以上分析，我们提出以下假设：
假设 4a 在虚拟品牌社区中，信息质量对顾客的认知处理有直接、显著的正向影响。
假设 4b 在虚拟品牌社区中，信息质量对顾客的喜爱有直接、显著的正向影响。
假设 4c 在虚拟品牌社区中，信息质量对顾客的激活有直接、显著的正向影响。

1.2.5 顾客契合行为与品牌口碑

品牌口碑是消费者之间的关于产品/信息、企业等方面的沟通，具有非正式性和非商业性的特点。随着互联网的快速发展，信息的获取更加快捷。企业之间的竞争也变得愈发激烈。在顾客满意和顾客忠诚的基础上，通过顾客的口碑、推荐等方式为消费者带来更大的利益。因此，顾客契合行为可以产生口碑效应，如再次访问、重复购买、关系增强以及积极的建议等，会使顾客进一步对网站内容、功能、产品和服务产生积极的态度，表现出依恋等忠诚行为。即顾客契合行为是顾客忠诚的一种表现。

因此，我们提出以下假设：
假设 5 在虚拟品牌社区中，顾客的认知处理对品牌口碑有直接、显著的正向影响。
假设 6 在虚拟品牌社区中，顾客的喜爱对品牌口碑有直接、显著的正向影响。
假设 7 在虚拟品牌社区中，顾客的激活对品牌口碑有直接、显著的正向影响。

2 研究设计与问卷调查

2.1 变量测量

2.2 样本与数据收集

本文以虚拟环境中的社交平台(如微博、微信)或论坛中的某几个知名品牌社区(如中国小米公司的小米社区、美国苹果公司的威锋论坛和美国DELL公司的DELL官方微博等)为背景，采用问卷调查方式收集数据。这些虚拟品牌社区制定相关服务规定、提供顾客反馈和顾客间交流的平台来为已注册顾客或关注该品牌的顾客服务的。我们之所以选择电子通讯行业的品牌进行数据收集是因为：一方面，在电子通讯业这个竞争尤其激烈的行业领域，越来越多的公司选择使用虚拟品牌社区以维持顾客忠诚；另一方面，有实证研究证明，在电子通讯行业的虚拟品牌社区中，顾客契合行为是消费者购买行为的重要影响因素 (Gamble 等, 2013)。正式问卷调查始于2015年9月上旬，截止11月上旬。共收回问卷650份，剔除答案带有规律性或有关问题等，有效问卷603份。有效样本的社会统计学特征见表 1。

### 表 1. 有效样本的社会统计学特征

<table>
<thead>
<tr>
<th>特征指标</th>
<th>频率</th>
<th>百分比</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>性别</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>男性</td>
<td>279</td>
<td>46.3</td>
</tr>
<tr>
<td>女性</td>
<td>324</td>
<td>53.7</td>
</tr>
<tr>
<td><strong>年龄</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;=18</td>
<td>149</td>
<td>24.7</td>
</tr>
<tr>
<td>19—23</td>
<td>323</td>
<td>53.6</td>
</tr>
<tr>
<td>24—28</td>
<td>49</td>
<td>8.1</td>
</tr>
<tr>
<td>&gt;=29</td>
<td>82</td>
<td>13.6</td>
</tr>
<tr>
<td><strong>学历</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>高中及以下</td>
<td>28</td>
<td>4.6</td>
</tr>
<tr>
<td>大专</td>
<td>3</td>
<td>0.5</td>
</tr>
<tr>
<td>本科</td>
<td>526</td>
<td>87.2</td>
</tr>
<tr>
<td>研究生（在读）及以上</td>
<td>46</td>
<td>7.6</td>
</tr>
<tr>
<td><strong>职业</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>学生</td>
<td>243</td>
<td>40.3</td>
</tr>
<tr>
<td>企业人员</td>
<td>201</td>
<td>33.3</td>
</tr>
<tr>
<td>事业单位人员</td>
<td>151</td>
<td>25.1</td>
</tr>
<tr>
<td>其他人员</td>
<td>8</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>浏览频率</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>一个月几次或更少</td>
<td>156</td>
<td>25.9</td>
</tr>
<tr>
<td>一周几次</td>
<td>154</td>
<td>25.5</td>
</tr>
<tr>
<td>一天一次左右</td>
<td>156</td>
<td>25.9</td>
</tr>
<tr>
<td>一天很多次</td>
<td>137</td>
<td>22.7</td>
</tr>
</tbody>
</table>

3 研究方法与计算结果

3.1 测量模型
本文使用 SPSS19.0 和 AMOS21.0 进行结构方程模型分析。

3.1.1 信度分析

如表 2 所示，所有因子 Cronbach's α 系数位于 0.778~0.887 之间，高于最低临界值 0.70，说明量表具有较好的可靠性。各个潜变量的组合信度 CR 位于 0.779~0.892 之间，也均高于最低临界值 0.70，说明量表具有较好的内部一致性。

表 2. Cronbach's α 系数，组合信度（CR），因子载荷，平均方差提取量（AVE）

<table>
<thead>
<tr>
<th>构念</th>
<th>条目描述</th>
<th>因子载荷</th>
<th>AVE</th>
<th>CR</th>
<th>Cronbach's α</th>
</tr>
</thead>
<tbody>
<tr>
<td>关系倾向</td>
<td>1. 一般来说，我喜欢成为某平台的固定关注者。</td>
<td>0.837</td>
<td>0.743</td>
<td>0.852</td>
<td>0.851</td>
</tr>
<tr>
<td></td>
<td>2. 一般来说，我愿意成为某平台的固定关注者。</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>主观规范</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. 那些能够影响我的行为的人认为我应该使用该平台。</td>
<td>0.845</td>
<td>0.732</td>
<td>0.845</td>
<td>0.845</td>
</tr>
<tr>
<td></td>
<td>2. 那些对我来说很重要的人认为我应该使用该平台。</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>自我效能</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. 通常情况下，如果我尽力去做的话，我总是能够解决问题的。</td>
<td>0.871</td>
<td>0.652</td>
<td>0.789</td>
<td>0.782</td>
</tr>
<tr>
<td></td>
<td>2. 通常情况下，如果我付出必要的努力，我一定能解决大多数的难题</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>信息质量</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. 该平台上的信息很实用。</td>
<td>0.718</td>
<td>0.544</td>
<td>0.782</td>
<td>0.782</td>
</tr>
<tr>
<td></td>
<td>2. 我会给该平台上给出的信息以很高的评价。</td>
<td>0.737</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. 该平台为我提供了高质量的信息。</td>
<td>0.758</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>认知处理</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. 浏览该平台时会使我对它产生思考。</td>
<td>0.728</td>
<td>0.540</td>
<td>0.779</td>
<td>0.778</td>
</tr>
<tr>
<td></td>
<td>2. 当我在使用该平台时会想到很多关于该平台的事情。</td>
<td>0.732</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. 浏览该平台时激励我去了解更多关于它的信息。</td>
<td>0.745</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>喜爱</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. 浏览该平台时我感到正能量。</td>
<td>0.709</td>
<td>0.650</td>
<td>0.847</td>
<td>0.838</td>
</tr>
<tr>
<td></td>
<td>2. 浏览该平台让我感到快乐。</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. 浏览该平台让我感到轻松愉悦。</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>激活</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. 相比于其他专业的线上品牌社区，我会花较多时间浏览该平台。</td>
<td>0.798</td>
<td>0.622</td>
<td>0.831</td>
<td>0.830</td>
</tr>
</tbody>
</table>

86
每当我准备浏览一些线上品牌社区时，我都会优先使用该平台。

每当我准备浏览一些线上品牌社区时，该平台总是我的备选平台之一。

我很乐意将该平台介绍给他人。

我很乐意将该平台推荐给他人。

3.1.2 效度分析

效度分析包括收敛效度和区别效度。所有测量条目标准化因子载荷位于0.709~0.961之间，均大于0.6，具有统计显著性；平均方差提取量（AVE）处于0.540~0.805之间，说明各个变量具有较好的收敛效度。所有潜变量的AVE的平方根均大于0.5，说明量表具有较好的区别效度。具体数值参见表2和表3。

表 3. 区别效度检验

<table>
<thead>
<tr>
<th>潜变量</th>
<th>关系倾向</th>
<th>主观规范</th>
<th>自我效能</th>
<th>信息量</th>
<th>认知处理</th>
<th>喜爱</th>
<th>激活</th>
<th>品牌口碑</th>
</tr>
</thead>
<tbody>
<tr>
<td>关系倾向</td>
<td>0.862</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>主观规范</td>
<td>0.369</td>
<td>0.856</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>自我效能</td>
<td>0.289</td>
<td>0.190</td>
<td>0.807</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>信息量</td>
<td>0.516</td>
<td>0.490</td>
<td>0.409</td>
<td>0.738</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>认知处理</td>
<td>0.407</td>
<td>0.445</td>
<td>0.405</td>
<td>0.573</td>
<td>0.735</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>喜爱</td>
<td>0.506</td>
<td>0.381</td>
<td>0.385</td>
<td>0.618</td>
<td>0.655</td>
<td>0.806</td>
<td></td>
<td></td>
</tr>
<tr>
<td>激活</td>
<td>0.578</td>
<td>0.533</td>
<td>0.464</td>
<td>0.641</td>
<td>0.621</td>
<td>0.612</td>
<td>0.789</td>
<td></td>
</tr>
<tr>
<td>品牌口碑</td>
<td>0.423</td>
<td>0.406</td>
<td>0.305</td>
<td>0.679</td>
<td>0.496</td>
<td>0.546</td>
<td>0.557</td>
<td>0.897</td>
</tr>
</tbody>
</table>

注：对角线上的数字为AVE的平方根，对角线下方是各潜变量的相关系数

3.2 假设检验

对之前的研究假设进行拟合验证结果显示，$\chi^2/df = 3.900$，RMSEA = 0.069，GFI = 0.910，AGFI = 0.866，CFI = 0.933，NFI = 0.912，IFI = 0.933，以上数据基本达到建议临界值。假设模型与数据的拟合程度处在可以接受的水平，对各变量之间的关系进行分析，假设检验结果见表4。

表 4. 假设1—假设7检验结果

<table>
<thead>
<tr>
<th>假设</th>
<th>$\beta$</th>
<th>T值</th>
<th>结论</th>
</tr>
</thead>
</table>

87
最终我们得到了虚拟品牌社区中顾客契合行为的影响因素以及顾客契合行为对品牌口碑影响的结构方程模型，如图 1 所示。由模型中各变量间的标准化系数可以看出主观规范、自我效能、关系倾向和信息质量对虚拟品牌社区中的顾客契合行为都有较大的影响，而顾客契合行为中的喜爱和激活维度又对品牌口碑有着重要的影响。

图 1 模型假设检验结果

4 分析与结论

通过以上研究，总的来看，主体认知维度和社会环境维度的四个变量对虚拟品牌社区中顾客契合行为有着直接显著性的影响。

首先，关系倾向和自我效能对契合的三个维度均有显著影响，且影响程度不同，消费者的地域特征、生活习惯、家庭教育等方面的差异造成了不同强度的关系倾向和不同程度的自我效能。而关系倾向和自我效能感的强弱将直接影响到消费者的行为、对关系的感知程度以及对企业关系努力的反馈。关系倾向强和对于特定任务自我效能强的消费者更可能主动、自发地搜寻品牌信息，以了解该品牌及其产品与服务，基于信息地掌握甚至产生积极的情感从而愿意投入更多的时间和努力成本。这拓展了 Wei 等
对关系倾向和 Bandura (1989) 对自我效能的研究。另一方面，研究表明，关系倾向对于顾客契合行为中的喜爱和激活的影响程度更大，而自我效能对于顾客契合行为中的认知处理和激活的影响程度更大。这可能是因为关系倾向强的涉入型群体本身就对社区及其品牌有“渴望与之建立长久和亲密关系的”好感，他们并不需要在收集、获取和整合相关信息的基础上产生积极（或消极）的情感；而自我效能高的顾客对于自己的契合行为能力持肯定和信任的态度，所以即便他们付出努力获取到大量有用信息并通过评论和分享行为活跃在社区平台上，获得的成就感和自我满意度也不高，因此，企业应更加重视对目标市场顾客的关系倾向和自我效能强度的了解和分布。当顾客类型不同时，企业所采取的营销策略也应有所不同。在虚拟品牌社区中，人际交往无时无刻不在发生，并且更加开放和便利，具有高关系倾向、高自我效能感，易于与企业维持关系的顾客提供了开放的环境。若企业将资源集中在那些较容易产生顾客契合行为的目标顾客群体，有助于其在制定营销策略时降低成本、提高效率；同时从虚拟品牌社区中的话题引导、鼓励导向的语言、信息提供方式、简化互动过程等方面入手，有针对性地提高人们的自我效能感，从而激发顾客与品牌的契合。

第二，主观规范和信息质量对契合的三个维度均有显著影响，且影响程度不同。由于感知压力和个人的重要参考群体可以对消费者特定行为的选择产生实质性的影响，可获得的信息质量也会影响个体进一步的判断。主观规范和信息质量往往会主导行为意图。对顾客契合行为有着积极的、显著的影响，消费者感知到的社会压力和信息来源不只来自于父母、兄弟姊妹、朋友或同事，也来自于社会环境。所以虚拟品牌社区中其他顾客的评价和看法和平台上来自企业和其他顾客的信息会影响到个体是否继续参与话题、了解品牌、甚至自发组织活动并产生优越感等积极情感。另一方面，研究表明，主观规范对于顾客契合行为中的认知处理和激活的影响程度更大，而信息质量对于三个维度的影响程度差异不大。这可能是因为主观规范是个人对于环境感知压力的本能迎合，个体情感从某种程度上来说受环境控制，个人能动产生的喜爱或厌恶相对微弱；而信息质量较客观，取决于企业和平台提供，具备高质量信息的虚拟品牌社区有利于消费者进行认知处理、喜爱和激活行为，因此，企业应更加重视提供高质量品牌信息和引导顾客整合信息。企业营销人员在打造虚拟品牌社区时，除了提高信息本身的功能性、娱乐性和社交性，更要引导顾客发表或关注正面和积极的评论，如建立容易引发共鸣和传递正能量的话题区，整合某一话题下其他用户的正面评价，对于顾客自发组织的活动予以更多支持等，这有助于企业在制定营销策略时提高营销信息质量，拓宽目标市场的信息渠道，从而引导顾客契合行为，达到提升品牌价值的目的。

第三，假设 H5 被拒绝。其他假设都通过验证。假设 H5 被拒绝的原因可能是，当顾客对平台的信息进行收集或整合后，可能会产生对特定品牌正向或反向两种可能的判断。也就是说，消费者未必会产生积极的情感，从而乐意进行口碑推荐。这可能与顾客的自我一致性有关。当某个网站的个性符合顾客对自身的感知时，顾客往往会认为该网站的个性更具有吸引力，所以顾客对那些与自身个性相吻合的网站会更愿意参与互动，契合和品牌口碑传递。

虽然 H5 被拒绝，但顾客契合行为的喜爱和激活维度对品牌口碑均有显著直接的影响，而前者的影响力大于后者。由于喜爱是指顾客产生判断和情感的过程，而相对于喜爱来说，激活行为更具外在性，能更容易和直观地为其他顾客参考、借鉴或效仿，从而较容易帮助形成品牌口碑。
参考文献


Track 4: Customer Management
The Role of Category Skepticism and Customer-to-Customer Interactions in Service Co-Production

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Extended Abstract

Research on customer participation (CP) has so far been guided predominantly by the service dominant logic (S-D logic), which holds that firms and customers co-create value that results in desirable services for customers and cost efficiencies for firms (Vargo and Lusch, 2008). But research examining customer contribution and benefits of co-creation has almost exclusively focused on benefits to the transacting customer and the firm, ignoring potential benefits that may accrue to other customers. Consumers regularly dedicate time and effort to working with firms to improve the wellbeing of their fellow consumers. For example, diabetics often volunteer to work with their local hospitals or clinics on diabetic awareness programs intended to improve the quality of self-care of community members. In addition to being socially responsible, these initiatives are also co-productive. Hence, this study focuses on customer willingness to engage in community preventive healthcare efforts as a form of CP by drawing support from the customer co-creation literature and uncovers a dark-side to C2C interactions in which there is an apparent divergence between the interest of the consumer and that of the service firm. Therefore, the purpose of this study is to examine the effect of customer-to-customer interactions while using a service on the willingness of consumers to engage in customer participation or co-production efforts aimed at helping other customers. It further examines the role of consumer skepticism toward the service category in moderating the effects of customer-to-customer interactions on customer satisfaction and customer participation.

The study's main thesis is that consumers’ skepticism about a product category influence their willingness to engage in CP activities with firms to help their fellow consumers. It is contended that C2C interactions quality directly increases CP and customer satisfaction. Customer satisfaction also increases CP. Thus, customer satisfaction may partially mediate the effect of C2C interaction quality on CP. These relations are moderated by category skepticism such that as category skepticism increases, the aforementioned relationships decrease. The effects of age, gender, education, and health status are controlled for in assessing these relationships.

A survey methodology was used to collect data from 374 consumers of healthcare services in India. The survey focused on type two diabetics aged 18 years and older, resident in the Chittoor district of Andhra Pradesh, India.

The results show that consumer category skepticism does not moderate the effect of customer-to-customer interaction quality on customer willingness to participate. However, category skepticism does have the moderating effect of significantly reducing the positive effect of customer-to-customer interaction quality on customer satisfaction. The results suggest that consumer negative perceptions of a category can reverse the benefits of customer interaction.

The findings contribute to the service co-creation literature by demonstrating that category skepticism has the potential to disrupt the value integration processes by which consumers and the service firm work cooperatively to co-produce value. The results show that firms can increase customer satisfaction and willingness of customers to do CP by facilitating high quality interactions among their customers. Customer satisfaction does not by itself increase CP; its effect is moderated by category skepticism making it a moderated mediator. This implies that managers need to renew their emphasis on addressing negative perceptions of their service categories, especially given the potential of social media to accelerate negative perceptions. The present study encourages researchers to consider the
possible dark-side aspect of C2C interaction and CP. Managers need to work jointly with policy makers
to address industry problems since the effectiveness of their marketing strategies may be contingent
on consumer perceptions of the industry.

Keywords: category skepticism, C2C, customer participation, service co-production,
customer satisfaction


**A moderated mediation model of the relationship between nutrition knowledge and food label use among consumers with multiple chronic conditions**

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Extended Abstract

With the expansionary role of Internet, comparison shopping, and increased awareness of health and nutrition, food labeling has become an increasingly important source of information when selecting packaged foods. As compared to developed countries, only a handful of studies have assessed the factors that influence the use of food labels in India. These studies focused on demographics and socio-economic factors such as gender, education, income, location of residence and found conflicting results (Ali and Kapoor 2009; Gupta and Dharni, 2016). Preliminary studies highlight the dearth of empirical research on Indian consumers’ knowledge, attitudes, self-efficacy, and trust on nutrition and food label and its impact on decision making (Vemula et al., 2014; Laxmaiah et al., 2009). Thus, this study examines the indirect influence of nutritional knowledge and consumer motivation on food label use through food label self-efficacy and trust, as well as the moderating impact of gender. Our study extends literature on food labeling and its impact on consumer decision making in three ways. First, this study sheds light on conflicting findings of previous studies examining the effects of food literacy and knowledge on food label use. Second, to explain factors predicting food label use, we draw from the Information–Motivation–Behavioral Skills (IMB) model. Finally, given the importance of health and nutrition, and the role of women in the choice of food basket for households, this study examines the moderating role of gender to determine whether or not the hypothesized relationships differ by gender.

A sample of Indian adults with multiple chronic conditions was surveyed about their nutritional knowledge and motivation, behavioral skills, and use of food labels. Hypotheses were tested using Hayes's (2013) PROCESS macros for SPSS with Model 4 for mediation effects and Model 7 for moderated mediation effects.

The results show that consumers’ nutritional knowledge and motivation positively predicts food label use through self-efficacy and trust. However, these findings are qualified by participant gender such that the mediation effects are stronger among males than females. Food marketers and government agencies who are engaged in nutritional educational campaigns should consider promoting patients’ confidence on the information displayed by food labels. Since food labels can be a valuable tool to help patients with chronic diseases to make informed decisions about their diet and lifestyle, regulators may consider mandating nutritional labels on foods to help consumers improve their food or dietary choices. This is the first study to apply Fisher and Fisher’s (1992) IMB model to explain food label use. Results confirmed the theoretical relationships in the IMB model. This suggests that the IMB model is useful for predicting the food label use of Indian adults with multiple chronic diseases.

**Keywords:** Nutritional knowledge, attitude, self-efficacy, trust, food label use, gender, multiple chronic conditions, IMB model
Study of Reference Group Effect on Luxury Herding Behavior in China

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Abstract

With the rapid economic growth and huge population, China has become the world's largest consumer of luxury goods, surpassing the Japan in 2012, accounted for 28% of the global luxury market with an annual growth rate of 20%. This paper aims at examining why and how the herding effect is engaged in the Chinese consumers’ behaviour in purchasing luxury goods. Separately speaking, on one hand, this paper focuses on why the herding behaviour can be taken into action during the luxury purchase; on the other hand, it tells about three herding reference groups’ effects in terms of intimacy of the interpersonal communication: online customers, friends and families, celebrities.

The total structure of this thesis can be divided into 6 parts: introduction, literature review, herding behaviour within different reference groups, methodology, conclusions and implications, references. Among them, the inherent characteristics of different groups and herding research are the paper’s core contents. For the luxury industry, the author found that the motivating factors are mainly considered to be individual’s internal needs and external ones. Therefore, when analysing this market in China, the influence of culture that is based on social relationships is more influential in promoting the development of China's luxury market. Due to different application areas of statistical analysis software, we do the binomial test and the test for equality of means between series. The test for equality of means is the way approaching the question of whether the herding behavior is contributed to luxury purchase or how many persons who have luxury buying experience are characterized with herding. The binomial test is mainly for doing comparisons of impacts on herding behavior between each two-reference group and figuring out the least and the most influential reference groups. How to get the data that can well explain the phenomenon is the key. One of the best choices is the questionnaire that well organized not only to describe luxury-buying motives in detail but also to relate these behaviors with herding and different reference groups.

Based on the conclusion we reached from these studies, we have reached some practical implications in terms of the three reference groups: Herding behaviour is rooted in large amount of luxury consumers in China. The celebrity has less impact on luxury herding behaviour than the online customers. However, both the online customers and friends and family may have relatively strong influence on luxury herding behaviour. As to the celebrity group in China, luxury companies should be aware of the fact that the utility of celebrity advertising is mainly to the extent of drawing consumers’ attention but not necessarily translate to purchase behaviour. In terms of online consumer effect, luxury products that sell mostly through online channels should concern more on the online consumers’ reviews, goods recommendations. In a word, a mix of online and offline WOM information should be well detected to help improving the brand perception and customer purchase. Taken family and friends effect into consideration, a good customer relationship management system may be quite important in China because of the strong effect on luxury herding purchase. The fruitful results the study documented can be used as inputs in developing efficient marketing strategies in Chinese Market, especially after acknowledging the characteristics of these different groups and the relationships among them. As is known to all, the luxury consumption behaviour is more complex than other buying behaviour. Especially in China, the culture-based specific characteristic and the interpersonal relationships have given herding more doubts and attractiveness. Of course, there are limits to this finding: based on data obtained from the questionnaire, these conclusions can be meaningful within the scope of application, which are among the young white-dominated society and the emerging middle class. They constitute the main customers in the Chinese luxury goods market; their attitude is both internationalization and traditional. How to comprehend this group and get their brand recognition and attract their attention is the main direction of future research. Although this paper presents relatively meaningful conclusions, but not proceed with the specific marketing strategies, so future research would be better to strengthen this analysis.

Key words: herding behaviour, luxury consumption, online customer, friends & family, celebrity

CLC: F713.5
1. Introduction:

This section aims to communicate the overall structure of this paper. It is composed of four subsections: the background concerning the luxury market situation and the customers’ characteristics; a brief review on previous research and some points of interest; research problems to be addressed; last but not least, a conclusion of the quantitative method used to gather and analyze data.

1.1. Background

1.1.1 Luxury market situation

China Brand Strategy Association states that a nation’s luxury consumption growth rate should probably be about twice of its GDP growth. With the rapid economic growth and huge population, China has reasonably become the world’s most attractive luxury markets in the world. Furthermore, according to the newest report from World Luxury Association, Chinese has become the world’s largest consumer of luxury goods, surpassing Japanese in 2012, and accounted for 28% of the global luxury market with an annual growth rate of 20%. Today’s China has estimated 20,000 billionaires, 500,000 multimillionaires and fast rising middle-class (around 300 million) who have high purchasing power and eager to spend on luxury goods. These wealthy Chinese have spent $12.6 billion on luxury goods in 2012. Despite the depressed international economy happened nowadays in western countries and emerging economies, the still robust Chinese market supports the prospective future of luxury industry. Luxury brands, to start up or expand worldwide, must win in China given of the size and scale of the Chinese market. However, large population can be two edges of a sword: on the positive side, luxury market is large enough to gain profits, while on the negative side, this market is also too complex to target real customers. Therefore, understanding the customers is the key to explore and develop this profitable market.

1.1.2 Chinese consumers’ characteristics

Based on previous research, characteristics that luxury consumers may have in common in the Chinese market are concluded as follows:

1.1.2.1 Age range

Luxury customers in China are almost young people under the age of 40 as shown below in figure 1, in which 61.5% affluent consumers are aged among 25 to 34. This young generation in China refers to those born after the market reform started in 1978 and the ‘one child’ policy introduced by the Chinese government in 1979. This generation was born in a new era: experience the market economy and live in a family context where a single child is the ‘king’. Families and the society viewed them as the ‘young emperors’ because they grew up spoiled. The impacts on the luxury goods market lead by these younger consumers are manifold: on one hand, psychological immaturity (comparatively outstanding characteristic due to their younger age) can reduce brand loyalty and lead to mimic behavior; on the other hand, they are more easily influenced by diversified social media used by luxury companies.

![Figure 1 Age of Affluent Chinese Consumers](http://info.1688.com/detail/1130167026.html)

All these data are from World Luxury Association report in 2013.
1.1.2.2 Product category

For Chinese people, most have focused on buying perfume, watches, luxury clothing and other personal items. To be exact, according to Time (2007), More than 50% of the affluent Chinese consumers own either a Lancôme or an Estée Lauder product; 22% of affluent consumers in China own a Rolex and 66% of affluent Chinese men have bought at least one watch (average of $2,253 per watch) in the past six months.

1.1.2.3 Disposable income

China's middle-class consumers are becoming important targeted groups of luxury brands (Unger, 2006). According to McKinsey & Company, China's middle-class is defined as household consumers whose annual incomes are around 40,001-100,000 Yuan (i.e. 4984-12460EUROS) (Farrell Gersh and Stephenson, 2006). In addition, Chinese consumers save a larger portion of their growing incomes in banks than their peers in America, United Kingdom, and Japan (Orr, 2004; Wang & Lin, 2009). So they may view purchasing luxury goods as a big event due to the higher price compared with daily necessities.

1.1.2.4 Collective culture

Collective culture emphasizes on group harmony and individual responsibility within the group, so consumers from collective cultures tend to choose products that conform to group norms (Kim & Markus, 1999). Social norms can have great influences in China due to its collective culture. Thus, a critical issue for understanding and predicting Chinese luxury market is to identify the social norms that guide Chinese middle-class consumers. However, few researchers conducted international analysis to highlight the effects of cultural differences on luxury consumers (e.g. consumption motivations, attitudes towards luxury). Even though this paper will not do comparisons, it’s credible that consumers’ behavior is formed basically on their different cultures. In China, under two thousand years’ feudal social and historical process, collective culture has dominated Chinese society. Therefore, it does not allow personal values prevailing over the interests of the group. However, Western countries, which are to respect individual as the centre, try to develop individual self-expression. Such cultural differences between East and West are destined to distinguish the factors influencing consumers’ luxury buying behaviour.

1.1.2.5 Less knowledge about luxury

Investigations from leading marketing research firms find that most Chinese consumers can tell only one or two luxury brands in each product category (Atsmon & Dixit, 2009; KPMG, 2007). In other words, the best-known brands may represent the whole categories of luxury products in China. This finding is also consistent with the fact that affluent Chinese consumers choose only from famous luxury brands and are unwilling to risk paying a high price to buy an unknown brand. In addition, Chinese consumers have difficulty in identifying luxury brands also because of their very limited experience in this market as well as the ambiguous of the luxury concept (Vigneron & Johnson, 2004).

1.2 Literature introduction about herding

The history of herding behavior analysis can be divided into three sessions: herd behavior in economics, herd behavior in social psychology, an economic psychological approach to herding behavior. In general, economists focus more on specific issues about herding behavior, such as how to benefit from this effect; While, psychologists primarily answer why people would be very actively engaged in certain kind of collective behavior. So far, the analysis of motivations concerning herd behavior is a major weakness in economics except for Veblen’s Theory of the Leisure Class (1899) and an article by Leibenstein (1950)—but this is not what the paper interested in. So let’s turn to the psychological aspect. Different from the economic research, psychological studying has repeatedly demonstrated a fact that: a majority group is not important, what important is a highly consistent reference group (Asch 1951, 1952, 1956; Festinger, 1954). If people reached a strong consensus, they will choose to believe in that reference group, no matter how big or small the size is (Festinger, 1954). If people decide to participate in small reference group, they will do serious rational analysis before; while they
chose big reference group primarily because they somewhat like this reference group (Thomas Turner, 1991; Martin and Hewstone, 2001, 2003). If more people share this thought, the entire group may be polarized, and decided to engage in herding behavior (Kruglanski and Webster, 1993). Therefore, the reference groups other than their actual size is of more importance. This is the theoretical foundation to explain why this paper focused more on the reference groups’ influence power. Nevertheless, this theory only applies to normal circumstance concerning the herding behavior. When coming to luxury buying environment, can this theory be set up reasonably?

1.3 Research problem

As we mentioned before, reference groups’ impacts are more important in analyzing herding behavior. While the reference groups are formed mainly due to interpersonal communication. Such questions will come into mind: How can these interpersonal communications happen and what effects do they bring out? From this point of view, the interpersonal relations can be rather meaningful to be studied as core factor in affecting herding behavior in luxury buying. Hence, the research questions can be forwarded as below:

Q1: What are the main effects brought by interpersonal reasons during luxury buying? How?

Q2: If one’s decision to acquire luxury goods has relation to do with others, then which reference groups are the most influential given of celebrities, online customers, and friends and family?

1.4 Methodology introduction

This paper will do analysis based on the data gathered from survey that would be conducted through the random sampling way. By fulfilling an age, gender, and education profile e.g., respondents can be basically acknowledged, allowing the researcher to explore the topic. As for the quantitative way to organize the data, this dissertation will use the typical statistical tool—hypothesis test (binomial test) and the test for equality of means between series that are always used to explore the relations between two or even more variables.

2. Methodology

2.1 Approach

Generally, there are two types of researching approach we can use: qualitative and quantitative approaches. What the author wants to exploit is whether the herding behavior would affect the customers’ purchasing of luxury goods. And after that, more interests will be focused on the comparisons between three reference groups in order to define which one would be the most effective in influencing luxury herd purchasing. It’s more convincing and rational using the data to analyze the two questions by statistical way. How to get the data that can well explain the phenomenon is the key. One of the best choices is the questionnaire that well organized not only to describe luxury-buying motives in detail but also to relate these behaviors with herding and different reference groups. To design this survey and ensure its efficiency, learning from other researchers is inevitable.

2.2 Questionnaire

2.2.1 Questionnaire design

After the decision to use the questionnaire, how to design the questions is the key before implementing the simple random sampling. According to the questions we want to exploit, the survey may divide into four parts including basic information, purchase background, brand awareness and purchase behavior.

2.2.1.1 Basic information

The basic information is for understanding the characteristics of the sample. And the questions put forward are based on the study of Guoxin Li, Guofeng Li and Zephaniah Kambele, in which they studied the demographic characteristics of survey respondents in "luxury brand purchasing in terms of
perceived value, fashion lifestyle and willingness to pay”. According to the researchers study, the author designed the basic information part including: gender, age, monthly disposable income, education, and occupation. As for each option of the question, such as education, I used the choices listed on the study of “consumers’ perceptions of best-known brands” by Lingjing Zhan and Yanqun He [22]: high school (and below), college, graduate, postgraduate. And I also take doctor and above degree into consideration.

2.2.1.2 Luxury purchase background

After we acknowledging the basic information of the respondents, we may also need to understand their luxury purchasing experience. Only in this way can we exploit the Chinese customers’ characteristics in luxury buying. On this part, there is supposed to be 4 questions: choose the luxury brands; preference in buying which kinds of luxury categories; frequency of luxury buying; preference on online communication ways. I used Gucci, Prada, and Louis Vuitton as the three options to the question “which brands are luxury brands” due to their top brand awareness in China. However, Zara, Swatch, Swarovski and Guess are functioned as confusion brands because these four brands also achieve high brand reputation in China. This question is designed to find out how much knowledge Chinese respondents know on luxury brands. The preference on product category is used for understanding Chinese customers’ often buying. This category segmentation is listed based on the IPSOS market research of BCG analysis including cosmetics and fragrances, leather goods and accessories, watches and jewelry, fashion and clothing, luxury cars, furniture and decorations. For the respondents’ better understanding of the question, I used some examples to better explain the options: such as rings and necklace in jewelry; handbag in leather goods and accessories; villa in furniture and decorations. As for the frequency to buy luxury goods, I use the option “very often as a lifestyle” as a meaning to express habitual behavior in luxury acquisition. Last but not the least, based on the theory mentioned on online customers, I divide online communication ways into several choices, such as official websites, chatting forums, firm-to-consumer communication imitating consumer-to-consumer communication and so on.

2.2.1.3 Brand awareness

This part is mainly for reaching the perceptions on luxury goods among the respondents. These five questions listed are results after taken into consideration the research done by Guoxin Li, Guofeng Li, Zephaniah Kambele[15]. In this popular research, the researchers put forward the argument “I believe that wearing famous brands helps me acknowledged by others” as a judgment to define fashion lifestyle in terms of brand prestige aspect. “A person who wears luxury fashion brands appears to be a member of a high social class” and “A person who wears luxury fashion brands appears sophisticated” are used to be a question to define perceived social and emotional brand value. “Luxury brands have a consistent quality” helps in displaying utilitarian value. I also use “Luxury goods make people more fashionable and temperament” as a judgment of stylistic lifestyle. Based on all these questions, we can get the general knowledge on perceptions that respondents may have on luxury brands and lifestyle. To better display all the questions and by the way do the comparison, in these final two parts, the author used a five-point Likert scale (1 = “strongly disagree,” 2 = “disagree”, 3 = “neutral”, 4 = “agree”, and 5 = “strongly agree”). It’s one of the most commonly used tools in the survey research, which is featured with following advantages: easier to design; can be used in broader situation compared with other scales; higher reliability than the scale of same length; help respondents to mark their own position among the five answers. These are also the reasons that I chose Likert scale as main way to analyze the two core parts: brand awareness and purchasing behavior.

2.2.1.4 Purchasing behavior

These questions are the cores in understanding the Chinese customers’ herding behavior and different reference groups’ influence, and most of them are adopted from “The Effects of Cultural Values in Word-of-Mouth Communication” by Desmond Lam, Alvin Lee, and Richard Mizerski[13] and “Understanding luxury consumption in China: Consumer perceptions of best-known brands” by Lingjing Zhan and Yanqun He [22]. Due to lack of literatures and questionnaires concerning the exact same areas to be studied, questions are to some extent modified according to the theme to be researched. Seven questions are put forward as follows: first, the question “If I want to be like someone, I often
try to buy the same brands that they buy’ is originated from the studies of ‘susceptibility to normative influence’ by Lingjing Zhan and Yanqun He [22]. However, the reference group is not exactly defined and luxury purchase is not mentioned. Therefore, I use the question “If I want to be like some celebrity, I often try to buy the same luxury brands that they buy” in replace. This question is for verifying whether the celebrities have the significant effect on the luxury herding purchase. Second, the question “When buying products, I generally purchase those brands that I think others will approve of” is also from the analysis cited from the susceptibility to normative influence. But to study the reference group of friends and family, I changed the question into “When buying luxury products, I generally purchase those brands that I think friends and family will approve of”. Third, in the study of out-group WOM, Desmond Lam, Alvin Lee, and Richard Mizerski[13] used “I share information about new brands and products with people other than my close friends or family” as a judgment basis. But what we want to understand is the influence of close friends and family, so I changed this question into “I share information about new luxury brands and products with my close friends or family”. This question is mainly aim to understand offline WOM and the influence of friends and family on luxury herding behavior after combined with the fourth question “If most close friends or family have at least one piece of luxury accessories, you will also desire to own one”. The fifth question is “Compared to celebrity endorsement, your friends’ or family's opinions in luxury buying are more convincing”, which aims at doing comparison between the two factors that both influence the luxury buying. The sixth question is based on the analysis “like to seek information and advice of people, other than my close friends or family, before making a purchase decision” cited from WOM analysis, while taken online background into consideration, I replace this question with “I like to seek information and advice from online consumers before making a luxury purchase decision”. This is for verifying the luxury consumers’ perception on online reviews and recommendations. After connecting it with the seventh question: “If information and advice are almost positive, I will decide to buy the luxury goods”, we can further acknowledge the influence of online information and advice on luxury herding purchase.

2.2.2 Questionnaire implementation

The population targeted for this research was people of Chinese who formally resided in China. The way used to access these persons is simple random sampling also known as pure random sampling, which means a random selection of a sample of n units from Overall N units, so that each possible sample is drawn at an equal probability. After sent out these online questionnaires, the study obtained 138 valid questionnaires from total 150 pieces, representing a rate of 92% for valid responses. The left 12 questionnaires are abandoned due to incomplete questionnaires. The research is based on the analysis of data collected from these 138 units.

2.2.3 Questionnaire analysis

2.2.3.1 Sample characteristics

For the full sample, approximately 52.17% of the respondents were female and 47.83% were male. Most of the 138 respondents were between 20 and 45 years of age (M = 30.5 years old). Approximately 39.13% of the sample was below 25 years old and 2.17% was above 45 years old. Most of the respondents have undergraduate degree (36.96%), followed by graduate education (27.54%) and college education (24.64%). The represented occupations in the sample included university students (39.13%), private company (21.74%), national company (13.77%), nonprofit organizations and government officers (13.04%) and foreign companies (12.32%). Monthly income was 2000 RMB or below for 29.71% of respondents, between 2000 and 4000 RMB for 13.77% of respondents, between 4000 and 6000 RMB for 12.32% of respondents, between 6000 and 8000 RMB for 10.87% of respondents, and over 8,000 RMB for 33.33% of respondents. Last but not the least, according to the IP address that answered the questionnaires, we can find that approximately 75% of the surveys were collected in first-tier and second-tier cities such as Beijing, Shanghai, Hangzhou, Nanjing, and Suzhou. They are all among the top-richest cities in China, where more and more people are exposed to luxury brands and experiencing luxury purchasing.

2.2.3.2 Luxury purchase experience

Among the 138 units, 49.28% of the sample has the once or more but few times experience, followed by 28.26% of none experience and 20.29% of several times per month. And 2.17% has
experienced luxury buying as a lifestyle, which may mean they have been accustomed to using luxury goods as a necessity in daily life. In terms of the luxury category, 78 respondents choose to buy watches and jewelry such as necklace or ring in the near future, followed by 76 persons also buying leather goods and accessories such as handbag. 56 respondents would also like to buy clothing, while surprisingly, 45 will choose to buy luxury cars if they have money in the near future followed by 44 purchase of fragrance. The top three luxury brands are Gucci, Prada, and Louis Vuitton because more than 110 respondents recognize them as luxury brands. However, there are also respectively 10.14%, 7.97%, 19.57% of persons who have taken Swatch, Zara, Guess as luxury brands. 43.48% of respondents would like to believe in the online information and advice in the official website before purchasing luxury, followed by 40.58% of them believing in the chatting forums.

2.2.3.3 Luxury purchase perception of the respondents

Based on the purchase experience before, we may doubt about the reasons the respondents buy luxury goods and what are their perceptions on the luxury brands. The table is built up to show respondents’ perception in terms of perceived social and emotional value (Adapted from Guoxin Li, Guofeng Li, Zephaniah Kambele[15]). For each question, the average scores around 4 means that most people appreciate the social and emotional values brought by luxury brands. In another word, they purchase the luxury goods in large degree due to the social or outside reasons other than inner needs. These are some basic reasons that rooted in herding behavior and social conformity during the luxury purchase.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree 1</th>
<th>Disagree 2</th>
<th>Neutral 3</th>
<th>Agree 4</th>
<th>Strongly agree 5</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxury brands have a consistent quality.</td>
<td>7(5.07%)</td>
<td>12(8.7%)</td>
<td>17(12.32%)</td>
<td>51(36.96%)</td>
<td>51(36.96%)</td>
<td>3.92</td>
</tr>
<tr>
<td>I believe that wearing famous brands helps me acknowledged by Others</td>
<td>5(3.62%)</td>
<td>11(7.97%)</td>
<td>21(15.22%)</td>
<td>51(36.96%)</td>
<td>50(36.23%)</td>
<td>3.94</td>
</tr>
</tbody>
</table>

Table 1 Respondents’ Perception in Terms of Perceived Social and Emotional Value

2.2.3.4 Herding behavior shown among the respondents

This part concentrates on discussing the problems related to herd behavior caused by three kinds of groups: friends and family, celebrities and online customers.

Naturally speaking, the friends and acquaintance, online customers are the two aspects of word-of-mouth: offline and online. Given the data concluded from 138 units, we can obviously arrive that friends and family (average score of 4.04) are more influential than other two reference groups. On the contrary, the celebrities’ effects in China are less important than other two factors (average score of 2.98). At the meantime, the average score of 3.54 shows that online consumers’ information and advice also have crucial impacts on luxury herding purchase.
If I want to be like some celebrity, I often try to buy the same luxury brands that they buy.

I like to seek information and advice from online consumers before making a luxury purchase decision.

Compared to celebrity endorsement, your friends or family are more convincing.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree 1</th>
<th>Disagree 2</th>
<th>Neutral 3</th>
<th>Agree 4</th>
<th>Strongly agree 5</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>If I want to be like some</td>
<td>10(7.25%)</td>
<td>32(23.19%)</td>
<td>57(41.3%)</td>
<td>29(21.01%)</td>
<td>10(7.25%)</td>
<td>2.98</td>
</tr>
<tr>
<td>celebrity, I often try to buy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the same luxury brands that</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>they buy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like to seek information</td>
<td>5(3.62%)</td>
<td>21(15.22%)</td>
<td>35(25.36%)</td>
<td>48(34.78%)</td>
<td>29(21.01%)</td>
<td>3.54</td>
</tr>
<tr>
<td>and advice from online</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>consumers before making a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>luxury purchase decision.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compared to celebrity</td>
<td>4(2.9%)</td>
<td>7(5.07%)</td>
<td>23(16.67%)</td>
<td>50(36.23%)</td>
<td>54(39.13%)</td>
<td>4.04</td>
</tr>
<tr>
<td>endorsement, your friends or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>family are more convincing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 Herding Behavior Shown Among The Different Reference Groups
To combine the luxury buying behavior with the different reference group effects on the herding, we have the following 3 charts.

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Strongly disagree 1</th>
<th>Disagree 2</th>
<th>Neutral 3</th>
<th>Agree 4</th>
<th>Strongly agree 5</th>
<th>Sum</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>5(12.82%)</td>
<td>9(23.08%)</td>
<td>11(28.21%)</td>
<td>12(30.77%)</td>
<td>2(5.13%)</td>
<td>39</td>
<td>2.92</td>
<td></td>
</tr>
<tr>
<td>Once or More but few times</td>
<td>1(1.47%)</td>
<td>14(20.59%)</td>
<td>38(55.88%)</td>
<td>12(17.65%)</td>
<td>3(4.41%)</td>
<td>68</td>
<td>3.03</td>
<td></td>
</tr>
<tr>
<td>Often, several times per month</td>
<td>3(10.71%)</td>
<td>9(32.14%)</td>
<td>7(25.00%)</td>
<td>4(14.29%)</td>
<td>5(17.86%)</td>
<td>28</td>
<td>2.96</td>
<td></td>
</tr>
<tr>
<td>Very often, as a lifestyle</td>
<td>1(33.33%)</td>
<td>0(0.00%)</td>
<td>1(33.33%)</td>
<td>1(33.33%)</td>
<td>0(0.00%)</td>
<td>3</td>
<td>2.67</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 Celebrities’ Effects

**Note:** Y is “If I want to be like some celebrity, I often try to buy the same luxury brands that they buy”.

From this table, we can see the celebrities’ effects on persons who have different purchase frequency. Nevertheless, the average score of each frequency is comparatively low with only 2.92, 3.03, 2.96, and 2.67 respectively. So we conclude that the celebrity effect on luxury herding behavior among the persons who purchase luxury goods at least once or more is less influential. This second table displays the online customers’ effects on persons who have different purchase frequency. Obviously, the average scores of “once or more but few” and “often, several times per month” are comparatively higher with 3.65 and 4 respectively. So we conclude that the online information and advice effects’ on luxury herding behavior among the persons who purchase luxury goods at least once or more is much more influential than the celebrities’.
<table>
<thead>
<tr>
<th>X\Y</th>
<th>Strongly disagree 1</th>
<th>Disagree 2</th>
<th>Neutral 3</th>
<th>Agree 4</th>
<th>Strongly agree 5</th>
<th>Sum</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>3(7.69%)</td>
<td>9(23.08%)</td>
<td>16(41.03%)</td>
<td>8(20.51%)</td>
<td>3(7.69%)</td>
<td>39</td>
<td>2.97</td>
</tr>
<tr>
<td>Once or More but few times</td>
<td>0(0.00%)</td>
<td>13(19.12%)</td>
<td>14(20.59%)</td>
<td>25(36.76%)</td>
<td>16(23.53%)</td>
<td>68</td>
<td>3.65</td>
</tr>
<tr>
<td>Often, several times per Month</td>
<td>0(0.00%)</td>
<td>3(10.71%)</td>
<td>4(14.29%)</td>
<td>11(39.29%)</td>
<td>10(35.71%)</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td>Very often, as a lifestyle</td>
<td>0(0.00%)</td>
<td>0(0.00%)</td>
<td>1(33.33%)</td>
<td>1(33.33%)</td>
<td>1(33.33%)</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 3 Online Customers’ Effects
Note: Y is "If online information and advice are almost positive, I will decide to buy the luxury goods"

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree 1</th>
<th>Disagree 2</th>
<th>Neutral 3</th>
<th>Agree 4</th>
<th>Strongly agree 5</th>
<th>Sum</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>4(10.26%)</td>
<td>15(38.46%)</td>
<td>10(25.64%)</td>
<td>8(20.51%)</td>
<td>2(5.13%)</td>
<td>39</td>
<td>2.72</td>
</tr>
<tr>
<td>Once or More but few times</td>
<td>0(0.00%)</td>
<td>9(13.24%)</td>
<td>11(16.18%)</td>
<td>32(47.06%)</td>
<td>16(23.53%)</td>
<td>68</td>
<td>3.81</td>
</tr>
<tr>
<td>Often, several times per month</td>
<td>0(0.00%)</td>
<td>0(0.00%)</td>
<td>3(10.71%)</td>
<td>8(28.57%)</td>
<td>17(60.71%)</td>
<td>28</td>
<td>4.50</td>
</tr>
<tr>
<td>Very often, as a Lifestyle</td>
<td>0(0.00%)</td>
<td>0(0.00%)</td>
<td>1(33.33%)</td>
<td>1(33.33%)</td>
<td>1(33.33%)</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 4 Family and Close Friends’ Effects

Note: Y is "If most friends or family members have at least one piece of luxury product, you will also desire to own one”.

This third table shows that the family and close friends’ effects on persons who have different purchase frequency. What we most interested in is the loyal luxury customers (in this table with purchase frequency of often and very often) and we find out that loyal customers’ herding behavior are much more influenced by family and intimate friends given of the average score of 4.5 and 4 correspondingly.

2.3 Empirical results and analysis

Due to different application areas of statistical analysis software, we use SPSS20.0 version and EViews to do the binomial test and the test for equality of means between series. The test for equality of means is the way approaching the question of whether the herding behavior is contributed to luxury purchase or how many persons who have luxury buying experience are characterized with herding. The binomial test is mainly for doing comparisons of impacts on herding behavior between each two-reference group and figuring out the least and the most influential reference groups.
2.3.1 Hypothesis

We have two questions to be solved: on one hand, we need to assure the conformity or the herding in the customers’ buying luxury behavior; on the other hand, I separate the reference groups into three groups: friends and family, online customer, and celebrity. To be convenient, we use the following assumptions: A= celebrities’ effects, B= friends and family effects, C= online customers’ effects. Hence, we can collect 138 data from each question that may represent the typical herd behaviors caused by these three groups. Furthermore, we assume three judgments listed in the questionnaire to show A, B, C correspondingly: A= celebrity effect= “If I want to be like some celebrity, I often try to buy the same luxury brands that they buy”; B= friends and family effect= “If most friends or family members have at least one piece of luxury accessories, you will also desire to own one”; C= online customer effect= “If online information and advice are almost positive, I will decide to buy the luxury goods”. D=purchase behavior= “Have you ever purchased luxury goods? If yes, how often you buy luxury goods”. When we do analysis by inserting data to the software, A, B and C use the scores chosen by respondents’ and the purchase behavior need to be transformed into binary variable such as: purchase=1 (we consider all kinds of frequencies as purchase except “none”), non-purchase=0. We can also define the herding behavior (herding=1, non-herding=0) as A>3 (each respondent’s score) or B>3 or C>3. Only if the respondent cannot fulfill these three conditions shall we take it as rational or non-herding.

2.3.2 The test for equality of means

The basic theory behind this test is to compare the herding probability obtained from purchase units with that of non-purchase sample. Based on the assumptions before, we transformed all the data according to the herding definition, and we find the following results: 138 units have 102 herding behavior and just 36 non-herding respondents. From this superficial data, we reach the conclusion that a large percentage (P=73.91%) of respondents are featured as herding. To further verify the herding behavior rooted in luxury buying customers, we use the test for equality of means. What's more important is that we need to be clear about the each step to do the analysis and the meaning behind each step. First, we sort out the 99 units with luxury purchase behavior and 39 units of non-purchase (it is also shown in the table). Second, find out the 78 herding units among the 99 units and 24 herding units among 39 units in Excel. Third, after comparing the percentage obtained from purchase units (it is P1=78.79%) with that of non-purchase sample (it is P2=24/39=61.54%) listed in the table below, we can see that P1>P2, here comes to our core part. The fourth step is hypothesis test as shown below:

\[ H_0: P_1 = P_2 \]
\[ H_1: P_1 \neq P_2 \]

As we have 138 units (N>30), so we assume that the data is submitted to normal distribution. So we can get the conclusion from the T-test method: H1: P1≠P2 can be established under the 5% confidence level. Due to the conclusion we get before: P1>P2, we conclude that the herding probability among the luxury-buying units is larger than that of non-buying units. Therefore, herding behavior is rooted in large amount of luxury consumers.
And after running the EViews and do the test for equality of means, we get the result as follows:

<table>
<thead>
<tr>
<th>Method</th>
<th>df</th>
<th>Value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-test</td>
<td>136</td>
<td>2.095774697</td>
<td>0.037955515</td>
</tr>
<tr>
<td>Satterthwaite-Welch t-test*</td>
<td>59.91555986</td>
<td>1.936553828</td>
<td>0.057520315</td>
</tr>
<tr>
<td>Anova F-test</td>
<td>(1, 136)</td>
<td>4.39227158</td>
<td>0.037955515</td>
</tr>
<tr>
<td>Welch F-test*</td>
<td>(1, 59.9156)</td>
<td>3.750240727</td>
<td>0.057520315</td>
</tr>
</tbody>
</table>

*Test allows for unequal cell variances

<table>
<thead>
<tr>
<th>Category Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Std. Err.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Count</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Std. Dev. of Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONFORMITY_OR_NOT IF PURCHASE</td>
<td>99</td>
<td>0.787878788</td>
<td>0.410890702</td>
<td>0.041296069</td>
</tr>
<tr>
<td>CONFORMITY_OR_NOT IF NON-PURCHASE</td>
<td>39</td>
<td>0.615384615</td>
<td>0.492864058</td>
<td>0.078921412</td>
</tr>
<tr>
<td>All</td>
<td>138</td>
<td>0.739130435</td>
<td>0.440708584</td>
<td>0.037515606</td>
</tr>
</tbody>
</table>

Table 5 Test for Equality of Means Between Series

2.3.3 Binomial test

After we confirm the correlation between herding and purchasing behavior, we need the further analysis on the three factors: A= celebrities’ effects, B= friends and family effects, C= online customer effects. We do pairwise comparison to identify which ones have the most and the least influence on the consumers’ herding behavior.

First, we choose A and B as the two variables, then we have the hypothesis as follows:

H0: B=A, p=0.5

H1: B>A, p>0.5

To simplify the calculation, we assume 0 as the condition of B=A; 1 represents B>A; -1 represents B<A. Finally, we can get 45, 74, 19 units fulfilled each situation correspondently. On the surface, 74 units have overpassed half of 138 units but not so much,
meanwhile, the situation A=B has 45 units. Because B=A is not expected to happen in reality, so we assume half of them will turn into B>A preference and half of them to B<A. So to be more exact in analyzing their relationship, we divide 45 into half: 22.5 belong to the situation of B>A; the other 22.5 samples belong to B<A. Based on this classification, we get p=(74+22.5)/138=0.699. Based on the binominal distribution theory, we assume the data is submitted to p=0.699, \( \sigma = \sqrt{\left[0.699 \times (1-0.699)/138\right]} \) distribution. We can refer to the statistics:

\[
\text{B (statistics)} = \frac{(p-0.5)}{\sigma} = \frac{(p-0.5) \times \sqrt{n}}{\sqrt{p(1-p)}},
\]

In the end, we get B≈5.1049, we can refer that H1 is significant under the 5% confidence level, which means the friends and family has more power in influencing luxury herding purchase than the celebrities.

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Percentage</th>
<th>Tested percentage</th>
<th>Significance (bilateral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>1</td>
<td>96</td>
<td>0.70</td>
<td>0.50</td>
</tr>
<tr>
<td>Group 2</td>
<td>0</td>
<td>42</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td></td>
<td>138</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

Table 6 Binomial Test Between A and B

Second, we need to test A and C.

H0: A=C. p=0.5

H1: A<C. p<0.5

Taking advantage of the same theory and test, we can get the

\( p=0.6522 \) B (statistics) ≈ 3.7533

That's to say, H1 is significant under the 5% significance level and A<C, in other words, the celebrity has less impact on luxury herding behavior than the online consumers. These two variables can be both viewed as weak ties that can reach more people and lead to herding behavior as mentioned by previous researcher. However, even among different weak ties, the influential power can be varied: some of them can be more influential but some of them can be less influential.

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Percentage</th>
<th>Tested percentage</th>
<th>Significance (bilateral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>-1</td>
<td>90</td>
<td>0.65</td>
<td>0.50</td>
</tr>
<tr>
<td>Group 2</td>
<td>0</td>
<td>48</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td></td>
<td>138</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>
Table 7 Binomial Test Between A and C

Third, following is the test between C and B.

H0: B=C, p=0.5
H1: B>C, p>0.5

Under this situation, we can calculate that p≈0.5326

Therefore, it’s unobvious to say B>C under the confidence level of 0.551, which means the online customers and friends and family may have more or less the same strong power in affecting luxury herding behavior based on the existing data.

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Percentage</th>
<th>Tested percentage</th>
<th>Significance (bilateral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>1</td>
<td>73</td>
<td>0.53</td>
<td>0.50</td>
</tr>
<tr>
<td>Group 2</td>
<td>0</td>
<td>65</td>
<td>0.47</td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td></td>
<td>138</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

Table 8 Binomial Test Between B and C

3. Conclusions and implications

3.1 Conclusion on research problem

With its substantial population and developing economy, China is becoming the world’s largest brand-name luxury goods market. Increasingly, luxury industry and customers in this country deserve more researchers’ interests. Therefore, we have put forward two main questions to develop this paper:

Q1: What are the main effects that showed up during the luxury buying caused by interpersonal reasons? Why?

Q2: If one buyer’s decision to purchase luxury goods has relation to do with others, then which groups are the most influential given of celebrities, online customers, and friends and family?

What we approach from those theoretical and statistical analysis in terms of these two questions based on the questionnaire is that herding behavior roots in luxury purchase mainly because of the culture and social based reasons: the Confucianism and collective culture have stimulated the herding, because people tend to behave properly and consume appropriately within their group regardless of individual needs. They also tend to reduce social distance through keeping or mimicking similar consuming behaviors. That is to say, Chinese consumers are more likely to be influenced by their reference groups, who may have persuasive suggestions on luxury purchase. In depth, the group members’ varied characteristics may have different effects on luxury herding purchase. Both the online customers and the parents and family have large impacts on the customers’ herding purchase; however, the celebrities’ effects in China are less affective compared with other reference groups.

3.2 Practical implications

Based on the conclusion we reached from these studies, we have reached some practical implications in terms of the three reference groups:
As to the celebrity group in China, luxury companies should be aware of the fact that the utility of celebrity advertising is mainly to the extent of drawing consumers' attention but not necessarily translate to purchase behavior. It is essential for marketers to be aware of consumer perceptions and the role of cultural dimensions. Even though, there is still a positive impact of celebrity endorsements on brand exposure, which can link positive attitudes to brand image.

In terms of online consumer effect, luxury products that sell mostly through online channels should concern more on the online consumers’ reviews, goods recommendations. In a word, a mix of online and offline WOM information should be well detected to help improving the brand perception and customer purchase.

Taken family and friends effect into consideration, a good customer relationship management (CRM) system may be quite important in China because of the strong effect on luxury herding purchase.

3.3 Limitations

3.3.1 Theoretical aspect

Herding is more studied in the financial market but less research is applied in the consumer behavior aspect especially on luxury consumption. And this is also the same situation with the literature review of reference group. So the literature review is not so comprehensively concentrated. Based on this reality, this dissertation needs more rational and quantitative analysis to compensate.

3.3.2 Statistical aspect

As for the reason we mentioned before, it is especially important to find reasonable statistical tool to certificate this paper. How to approach the data is the key. Even though we choose the survey way to collect the data, questionnaire designing and sampling is crucial to make sure the significance of the survey. Regardless of the sampling error that cannot be erased, lack of previous literature support makes the survey design not so easy, even we can find more or less the same questions proposed by previous researchers.

3.4 Further research

As is known to all, the luxury consumption behavior is more complex than other buying behavior, so the herding may have different features that may vary from the traditional herding analysis on consumer behavior. Especially in China, the culture-based specific characteristic and the interpersonal relationships have given herding more doubts and attractiveness. In this paper, we only analyze the reference group effects on herding behavior but we do not deepen into how each reference group to affect the herding behavior and especially the main factors or reasons that these reference groups can have powerful impacts on luxury herding purchase.
4. References

Ways to Enhance Customer Civility in P2P accommodation platforms

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Abstract

Customer civility represents a country’s image, and will greatly influence the sustainability of peer to peer (P2P) accommodation, but has not been fully captured enough attention. Based on social exchange theory, we are to test how to enhance customization in P2P accommodation platforms. Through collecting 476 individual customer data in P2P accommodation platforms, we found that host trust had the highest impact, followed by property experience, and then platform governance. In addition, we found the effect of host trust on customer civility was more pronounced when they have high economic incentive, while the effect of property experience on customer civility was more pronounced when they have low economic incentive.

Keywords: customer civility; customer experience; economic incentive; P2P accommodation platforms

Introduction

P2P economy, also known as sharing economy, enables customers to pay low fees to get access of under-used products or services, rather than own them through online platforms (Matzler et al., 2015). It has created value for social benefits (e.g., money saving), economic benefits, and environmental benefits (e.g., less waste) (Constantinos-Vasilios et al., 2017). Increasing P2P accommodation platforms (e.g., Airbnb), one of the most representative sharing economy, has spanned more than 191 countries around the world. However, as a result of the difficulty to monitor customers, there are challenges during customer stay which may threaten its sustainability. Some customers may sabotage the goods of the property, and overuse the energy and resource during their stay, which is a great concern for the sustainability of the P2P platform.

Sharing platform should be “not only in charge of finding renters, but also taking care of the apartments” (Cheng, 2016, p 67). It is imperative to explore how to make customers to behave civilly. According to Nambisan and Baron (2009), how customer behave depended on customer interaction experiences that included human context, product context, and platform context. Similarly, in sharing platform, customer interaction experience with hosts, properties, and the platform during their stay has direct influences on customer civil behaviors. These effects are not always the same, and may be influenced by other boundary conditions (e.g., economic incentive).

So our research questions are the following:

1) What factors influence customer civility in P2P accommodation platforms? Do they have equal effects?
2) How these different factors vary on economic incentive?

Based on 476 individual customer data from P2P accommodation platforms in China, it was found that customer civility was most influenced by host trust, followed by property experience, and then by platform governance, which provides insightful practical guidance for managers. We also found that economic incentive positively moderated the relationship between host trust and customer civility. Surprisingly, we find the effect of property experience on customer civility is more pronounced when customers have low economic incentive; the effect of platform experience on customer civility doesn't change at various levels of economic incentive.
This study contributes to existing literature in the following three ways:

First, it informs the sharing accommodation literature. Most literature in accommodation mainly focused on the motivation of engage into sharing behaviors (Ert et al., 2016; Nikolaos, 2017), customer co-creation from customer’s value generation (Jeannette and Barbara, 2017; Zhang et al., 2018) or how to enhance property sales (Xie and Mao, 2017), ignoring the exploration of customer behaviors that may influence the sustainability of the platform and host's motivation to share their property. We investigated the role of customer civility, and how customer experience from views of host, property and platform influenced customer civility.

Second, we also enrich the literature of social exchange theory. Existing literature mainly focused on how relationship facilitates transaction based on the rule of reciprocity and social norm (Constantinos-Vasilios et al., 2017; Cropanzano and Mitchell, 2005), ignoring how economic exchange enables relationship building. We investigated the role of economic incentive (economic exchange) on customer experience during their stay. We found that customers showed reciprocity with the presence of social norm (i.e., economic incentive positively influences the role host trust on customer civility); while customers are more indulging themselves without the presence of social norm (i.e., economic incentive negatively influences the role property experience on customer civility).

Theory

Sharing Economy

Sharing economy is to make good use of under-utilized resource that are not exploited by owners (Matzler et al., 2015). People place high value to the goods once they own them, but they may behave differently once the just have the access to use them (Belk, 2010). Some customers are uncivil and may sabotage the products, and overuse the goods (e.g., car), which will threaten the trust between suppliers and the users (Bardhi and Eckhardt, 2012).

Existing P2P accommodation platforms (shown in Table 1) have mainly focused on how to enhance service provider's performance and customer's co-creation from service provider side and customer side. From service provider side, the listing performance is mainly explored from the role of host's aspects, and the property's price (Liang et al., 2017; Xie and Mao, 2017; Xie et al., 2014). From customer side, co-creation is mainly about customer online reviews, customer perception of service quality, customer experience (Nikolaos, 2017; Zhang et al., 2018). Prior studies have explored trust building, sales performance facilitation, service quality, and customer co-creation outcomes (i.e., emotional value, functional value) (Xie et al., 2014; Zhang et al., 2018), ignoring customer civil behaviors during co-creation process that is vital to the sustainability of the platform.

Social Exchange Theory

Social exchange theory stresses that relationship quality depends on interdependent transactions (Constantinos-Vasilios et al., 2017). Several resources can be exchanged, including information, goods, money, love, status and services. Information, goods, and money belong to functional and economic resources, and the resources of love, status, and services are social that are unique and contingent on their sources (Cropanzano and Mitchell, 2005). As argued by Blau (1964), only social resources generated future obligations, trust, and reciprocity.

Social norm is the most important rule for people to exchange. Reciprocity is the foundation of social exchange theory. Exchange relationship claims the repayment within a timeframe and satisfies the other party's needs. Reciprocity of exchange can produces relational bonds (Cropanzano and Mitchell, 2005). In P2P accommodation platforms context, hosts and customers have shared responsibility to reciprocate
each other, which may produce positive emotional response (Constantinos-Vasilios et al., 2017). Some studies argued that economic exchange also produced reciprocity.

**Hypothesis**

Customer civility is defined as whether customers behave in a civil manner according to social norms (Danielle et al., 2010). In P2P accommodation platforms, customers are more likely to behavior civil, including wasting less resource, and keeping the house clean during the stay. Once the host offers high quality response to make customers trust their benevolence and competence, customers show gratitude, and do some favor back to service providers (Constantinos-Vasilios et al., 2017). They behave civilly, such as taking on more responsibility to clean and maintain the house in a good condition during their stay (c.f., Claudia et al., 2017). Thus, we hypothesize:

H1a: Host trust positively influences customer civility.

P2P accommodation platforms provides customers a "local and authentic" experience during the stay (Abbie-Gayle and Barbara, 2017). Houses are the tangibles that enhance customer experience. For example, staying in a room with clean and tidy kitchen makes customer feel comfortable, customers show positive emotional responses (Zhang et al., 2018). Once customers have special experience of the property, they may live like in home and act like a family member. They place high value on the equipment and maintain the property clean and tidy during the stay. Otherwise, they may sabotage the belongings in the property, and waste as much resources as they can. Thus, we hypothesize:

H1b: Property experience positively influences customer civility.

Platform provides infrastructure and rules for service providers and customers to transact (Eisenmann et al., 2006). The platform value grows once it matched the demand of both sides. Platform governance refers to the rules set for both sides to transact (Hagiu, 2014). Platform may have compliant hotline and rules to ensure the transaction. The rules will force customers to act in the way set by the platform. Otherwise, customers will be punished. For example, Xiaozhu, a P2P platform, has rules to inform customers that they have responsibility to keep the facilities, furniture, and other electronic devices in good condition during the stay. Otherwise, hosts have the rights to handle the deposit. In such as condition, customers have to comply with the rules to behave civilly. Thus, we hypothesize:

H1c: Platform governance positively influences customer civility.

**The Moderating Role of Economic Incentive**

Customers usually pay less fees to get access to the under-utilized goods or services compared with traditional economy (Zhang et al., 2018). Economic incentive alters the nature of the relationship, and enables close interpersonal relationship (Cropanzano and Mitchell, 2005). Once customers pay for the property with a low price than that of the traditional hotel, they feel to acquire an economic incentive from hosts and the platform. According to social exchange theory, customers should do favor back and share responsibility to keep the property in good condition (Constantinos-Vasilios et al., 2017).

Once customers feel to save some money compared to stay in the hotel, they show gratitude to the host and appreciate to stay in the property. High level of gratitude will enhances social influence from others, and facilities more value on the property. They may save resource and energy during the stay. Once customers have high economic incentive, they also attribute to the platform that may enhance the role of platform governance. Thus, we hypothesize:

H2a: Economic incentive has positive moderating effect on the relationship between host trust and customer civility.

H2b: Economic incentive has positive moderating effect on the relationship between property
experience and customer civility.

H2c: Economic incentive has positive moderating effect on the relationship between platform governance and customer civility.

Method

Sample and Data Collection

Questionnaires were distributed online by Sojump, similar to Qualtrics. 1360 samples were collected. We dropped the ones who answered the questionnaire in less than 4 minutes, and we finally got 476 samples.

Among the samples (shown in Table 2), 297 (62.39%) are female; 244 (51.26%) are below 24 years old that accounts for the most, and 34.45% are between 25 and 34 years old; 248 (52.10%) are undergraduate, and 137 (28.78%) are postgraduate and above; The income of 121 (25.42%) is lower than ¥1000 ($158), and the income of 169 (22.90%) is higher than ¥6000 ($953).

We used Harman’s one-factor method to examine common method variance (CMV), and the first factor explained 38% of the total variance, showing that CMV was not an issue here (Harman, 1967; Lau et al., 2011).

Measures and controls

Multi-item scales were used to measure most of the constructs (shown in table 3). Most constructs were adopted from the existing literature using five-point Likert scale.

The dependent variable is customer civility that is defined as the extent to which to comply with social norms of mutual respect (Danielle et al., 2010). In our context, it is courtesy and politeness during the consumption in terms of resource saving, and house cleaning during the stay.

We have three independent variables such as host trust, property experience and platform governance. Host trust is about the trust of reliability and competence to the host (Ert et al., 2016). Property experience is customer experience about the property in terms of during the stay (Xie and Mao, 2017). Platform governance is defined as the way to handle the dispute once there are some conflicts (Eisenmann et al., 2006).

The moderating variable is economic incentive that is about how much incentive the customer acquires in economic aspect (Granovetter, 2005). It is measured by the gap between customer perceived price, and customer actual spending. We measure two questions such as how much do you think to live in a similar hotel, and how much do you pay for this stay.

Control variables such as customer demographic factors, stay-related factor, and property-related factor were included to reduce noise. Customer demographic variables such as gender (female is coded as 1, and male is 0), age, education and income may influence customer civility. Stay-related factor such as when to reserve the property may help to get more discounts, which enhances customer civility. Property-related factor such as convenience of the property will influence customer attitude to the property, which in turn affect customer civility.

Measurement Model

Mplus 6.1 was used to estimate confirmatory factor analysis (CFA) of the measurement properties
of the five multi-item scales used in our analyses and tested the scales for convergent and discriminant validity. The CFA results support the measurement model. The fit of the model is satisfactory: the ratio of chi-square to degrees of freedom (χ²/df = 342.154/109), Absolute fit measures (RMSEA - .07; SRMR - .04), and Incremental fit measures (CFI - .96; TLI-.95). Evidence supports the convergent validity of the measurement model because the standardized factor loadings for all items exceed the .50 rule-of-thumb threshold. AVE is higher than .50, and reliability alphas exceed .70 for scales. The scales demonstrate discriminant validity according to the criteria of Fornell and Larker (1981): the correlation between each pair of constructs was lower than the square root of the AVE for each associated construct (see Table 3).

To test discriminant validity, the AVE of each construct exceeds the squared correlation with other constructs, thereby showing satisfactory discriminant validity. The correlation and descriptive statistics of the constructs are shown in Table 4.

[Insert Table 4 about here]

Results

OLS regression models were used to test the hypotheses (shown in Table 5). First, to test the direct effects of customer experience on customer civility, Models 2 showed that host trust, property experience, and platform governance positively influenced customer civility (β = .24, p < .01; β = .19, p < .01; β = .10, p < .01). Thus, H1a, H1b, and H1c were supported. Through comparing the regression coefficient, it was found that host trust had the highest influence, followed by property experience, and platform governance. Thus, H1d was supported.

In addition, the moderating role of economic incentive was investigated. To reduce multicollinearity, the main variables were mean centered (Aiken and West, 1991). Model 3 entered the interaction effects. Economic incentive positively moderated the effect of host trust on customer civility (β = .16, p < .01) and negatively moderated the effect of property experience on customer civility (β = -.12, p < .05), supporting H2a and H2b. Surprisingly, we did not find a significant moderating effect on the relationship between platform governance and customer civility, failing to support H2c.

[Insert Table 5 about here]

To better capture the moderating effects, we graphed the effects at two levels of the moderators (shown in Figure 2 and Figure 3). From Figure 2, we found that host trust has higher positive effect on customer civility at high level of economic incentive than that at low level of economic incentive. However, from Figure 3, it was shown that property experience has more pronounced effect on customer civility at low level of economic incentive than that at low high of economic incentive.

[Insert Figure 2 and Figure 3 about here]

Conclusion and Discussion

We empirically tested the drivers of customer incivility in sharing economy, and its boundary condition. Among the drivers, host trust is the most important factor to facilitate customer civility, following by property experience, and platform governance. Economic incentive positively influences the relationship between host trust and customer civility, but negatively affects the role of property experience on customer civility. The customer feel rich and noble to contact human.

Surprisingly, it was shown that economic incentive has negative moderating role on the effect of property experience. The possible reason is that once a customer perceives the property is luxury with limited spending, he/she may hope to enjoy the house and use more resource and enjoy to waste all the resource in the “palace”. Here, social norm is out of place, and he can do whatever he/she likes. He/She can feel rich but is un-noble to interact with the property.

In addition, we didn’t find the moderating role of economic incentive on the effect of platform
governance. The possible reason is that P2P accommodation platforms in China is in developing stage, and the governance rule is not mature, which attenuates the role economic incentive on the effect of platform governance.

**Theoretical implication**

We contribute to sharing economy literature by empirically exploring the antecedents of customer civility in P2P accommodation platforms. Prior literature mainly emphasized the role of antecedents of sharing-economy adoption, rather than customer behaviors during the consumption process. Our results present that host trust, property experience and platform governance facilitate customer civility.

Our study also complements social exchange literature by investigating the role of social norm with interaction with human, or nonhuman. Prior studies mainly focused on reciprocity norm during social exchange. Our contingency model identifies the different moderating roles of economic incentive, showing that economic incentive is good for the effect of host trust, while not for property experience.

**Practical Implication**

Our study provides practical implications to the platform managers and the hosts. For platform managers, they should learn how to improve customer civility from platform governance. They can have strict rules to tackle the disputes and have employees to punish customers for uncivil behaviors. For example, customers can be informed the importance of civility and how to be civil through messages.

The platform managers can also inform hosts the necessity to serve customer with high quality, competence or high market reputation to earn customer trust. For example, platform can provide some reputation systems for customers to identify the competence of the hosts.

For hosts, to get customer trust is important to keep customer civil even hosts are not in the house. They can extensively interact with customers or serve customer with high service quality, or get high scores in the platform once there are any reputation scores to show their capability. In addition, hosts need to keep the property clean which enables customers more civil.

Hosts should realize the roles of host trust and property experience on customer civility have their boundaries. Once customers perceive high economic incentive, host trust is more pronounced to influence customer civility. However, once customers perceive the property is much more valuable than the paid price, they may waste more for to indulge themselves once they have good experience in the property.

**Limitation and Future Research**

In order to investigate customer civility in China, we found interesting results that economy incentive had negative moderating role on the effect of property experience. The future study can explore the research framework in US, and compare the results.

Second, we are mainly to test the drivers of customer civility, rather than its consequences. Future research can combine with secondary data to test how customer civility influences future sales of the property.

Finally, we explored the boundary from the sharing economy characteristic, rather than the strategies that host or the platform can adopt. Future research can investigate the boundary from host’s service reliability, host’s interaction, and platform’s service reliability.
References


**Figure 1** Research model  
Note: Bold line indicates higher influencing impact.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Outcomes</th>
<th>Independent variables</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Liang <em>et al.</em>, 2017)</td>
<td>Review volume, rating</td>
<td>Price, superhost badge</td>
<td>Price decreases volume, but increases rating, and such a relationSHIP depends on superhost badge.</td>
</tr>
<tr>
<td>(Ert <em>et al.</em>, 2016)</td>
<td>Guest’s purchasing decision</td>
<td>Host’s attributes (photo and reputation), product’s attributes, attractiveness and trustworthiness</td>
<td>Customer purchasing decision is influenced by host’s and product’s attributes.</td>
</tr>
<tr>
<td>(Jeannette and Barbara, 2017)</td>
<td>Value co-creation or co-destruction practices</td>
<td></td>
<td>This study explores co-creation practices such as host’s welcoming, helping, property evaluation and recommendation, and co-destruction practices such as</td>
</tr>
</tbody>
</table>
misunderstanding, and inappropriate comments through online reviews.

(Nikolaos, 2017) Purchasing intention

Social aspects, economic aspects, trust, benefits, and risk

Various attributes including social and economic aspects influence purchasing intention.

(Zhang et al., 2018) Willingness to pay premium

Functional, emotional, and social value, decision stages

Based on value co-creation perspective, the study explore how functional, emotional, and social value on willingness to pay premium at different decision stages.

(Xie and Mao, 2017) Listing performance

Quality and quantity attributes of hosts

Host's listing performance is enhanced by host's attributes.

<table>
<thead>
<tr>
<th>Profiles</th>
<th>Frequency (percentage %)</th>
</tr>
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<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>179 (37.61)</td>
</tr>
<tr>
<td>Female</td>
<td>297 (62.39)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>24 years old and below</td>
<td>244 (51.26)</td>
</tr>
<tr>
<td>25-34 years old</td>
<td>164 (34.45)</td>
</tr>
<tr>
<td>35-44 years old</td>
<td>50 (10.50)</td>
</tr>
<tr>
<td>45 old and above</td>
<td>18 (3.78)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
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</tr>
<tr>
<td>High school and below</td>
<td>28 (5.88)</td>
</tr>
<tr>
<td>Junior college</td>
<td>63 (13.24)</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>248 (52.10)</td>
</tr>
<tr>
<td>Postgraduate and above</td>
<td>137 (28.78)</td>
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<tr>
<td><strong>Income</strong></td>
<td></td>
</tr>
<tr>
<td>¥1000 ($158) and below</td>
<td>121 (25.42)</td>
</tr>
<tr>
<td>¥1000-3000 ($158-476)</td>
<td>126 (26.47)</td>
</tr>
<tr>
<td>¥3000-6000 ($476-953)</td>
<td>120 (25.21)</td>
</tr>
</tbody>
</table>
¥ 6000 ($953) and above 169 (22.90)

Reservation
One week before the stay 246 (51.68)
One to two weeks before the stay 157 (32.98)
Above two weeks before the stay 73 (15.34)

Total 476

Table 3 Measures

<table>
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<tr>
<th></th>
<th>Loading</th>
<th>AVE</th>
<th>CR</th>
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</thead>
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<tr>
<td>Customer civility</td>
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<tr>
<td>I will keep the room clean during the stay</td>
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<td>.78</td>
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<tr>
<td>I will consume less (e.g., not change the bed sheets, and perishable goods) during the stay</td>
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<td>.83</td>
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</tr>
<tr>
<td>I will save resources (e.g., water and electronics) during the stay</td>
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</tr>
<tr>
<td>Host trust</td>
<td></td>
<td>.77</td>
<td>.91</td>
</tr>
<tr>
<td>The host is reliable</td>
<td></td>
<td>.90</td>
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</tr>
<tr>
<td>To transact with the host make me feel safe</td>
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<td>.87</td>
<td></td>
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<tr>
<td>The service competence and quality of the host is worthy to be trusted</td>
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<tr>
<td>Property experience</td>
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<td>.89</td>
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<tr>
<td>The decoration of the property is special</td>
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<td>.69</td>
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</tr>
<tr>
<td>The facilities in the property are fully equipped</td>
<td></td>
<td>.76</td>
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<tr>
<td>The quality of the goods in the property is high</td>
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<tr>
<td>The equipment in the property is clean and safe to use</td>
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<tr>
<td>The local culture can be experienced in the property</td>
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</tr>
<tr>
<td>The catering equipment in the property is clean and safe</td>
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<tr>
<td>Platform governance</td>
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<td>.75</td>
<td>.90</td>
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<tr>
<td>There are established rules to solve the dispute in the sharing platform.</td>
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<td>.90</td>
<td></td>
</tr>
<tr>
<td>Once I have troubles, there are experts to solve the problems in time in the sharing platform.</td>
<td></td>
<td>.90</td>
<td></td>
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<tr>
<td>The platform has high market reputation</td>
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<td>.79</td>
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</tr>
<tr>
<td>Convenience of the property</td>
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<td>.65</td>
<td>.79</td>
</tr>
<tr>
<td>The location of the property is easy to found</td>
<td></td>
<td>.79</td>
<td></td>
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<tr>
<td>The living process is convenient</td>
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<td>.82</td>
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</table>

Note: AVE is averaged variance extraction, and CR means composite reliability.
Table 4 Descriptive Statistics and Correlations

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<th>4</th>
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<th>7</th>
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Note: Significant at the .05 level (two-tailed test) when correlation >.09 or < -.09. Economic incentive is log transformed.
Table 5 Regression on customer civility

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<th>Model 3</th>
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<td>.24***</td>
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<td>(.05)</td>
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<td>(.04)</td>
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<td><strong>Interaction effects</strong></td>
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<td></td>
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<tr>
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<td>R-squared</td>
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<td>.43</td>
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Note: Standard errors in parentheses, *** p<.01, ** p<.05, * p<.1
Figure 2: The moderating effect of economic incentive on the role of host trust.

Figure 3: The moderating effect of economic incentive on the role of property experience.
Track 5: Entrepreneurship
The Performance of Women Micro-Entrepreneurs in Zambia: exploring antecedents for success

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Abstract

In this paper we develop a conceptual model of antecedents or factors which influence performance in women-owned micro-enterprises in a developing country (i.e. Zambia). A thorough review of the literature forms the basis for an exploratory qualitative study with the resource based view (RBV) of the firm, competency approach and entrepreneurial orientation as theoretical perspectives. Our conceptual model has been developed based on both the qualitative empirical findings and the generally agreed determinants of SME performance including the entrepreneur's personal characteristics, entrepreneurial orientation, entrepreneurial competencies, and factors in the firm's internal and external business environments. Twenty-two in-depth interviews with Zambian women micro-entrepreneurs were conducted. The study indicates that successful Zambian women micro-entrepreneurs show high entrepreneurial orientation, possess the entrepreneurial competencies reported in the literature and have high levels of human capital. The major challenges found in the context of the study include the intense competition as well as structural barriers like access to financial capital.

Keywords: women micro-entrepreneurs, performance determinants, qualitative, entrepreneurial orientation, capital.

Introduction

While Small and Medium Enterprises (SMEs) - including micro-enterprises - are crucial to the development of entrepreneurship and ultimately economic progress, generating employment, innovation, and promoting social cohesion (OECD, 2015), female entrepreneurship represents an important share of the global SME activity, contributing significantly to the global economy especially through employment creation (GEM, 2012). Furthermore, the contribution and engagement of women entrepreneurs have been noted in entrepreneurial activities that were new to their economies. Female entrepreneurship represents a significant share of the global SME activity and contributes substantially to the global economy, especially through employment creation (GEM, 2012). Furthermore, there is evidence that women contribute more to the economic well-being of society or communities than do their male counterparts because women tend to share their gains with many other people (Bardasi et al., 2007; GEM, 2007). Moreover, women tend to invest most of the earnings (about 90%) from their entrepreneurial activities in the crucial sectors of the economy such as health and education and in the welfare of the family (Kuada, 2011). The relevance of the contribution of female entrepreneurship to any economy is therefore hard to dispute.

In spite of this reality, the potential of female entrepreneurship remains considerably unexploited in many countries (Tambunan, 2009). Previous studies have found that businesses owned by women are generally smaller in size and tend to underperform similar businesses owned by men when quantitative financial measures such as sales turnover, jobs created and profitability are considered (Fairlie and Robb, 2009). It is therefore vital to investigate and understand the factors which would affect the success of such
businesses, especially on the African continent where women represent around half the population (Adetayo, 2005). Moreover, theories on women entrepreneurship have predominantly originated from the context of the developed world (Lerner et al., 1997), rendering it crucial to examine to what extent these apply in the context of developing countries such as those in the Sub-Saharan African region.

Female entrepreneurship is important to the development of the SME sector in Zambia, where other sectors with a high participation of women (e.g. agriculture) have also shown high contribution to economic development (Chisala, 2007). Moreover, women represent 52% of Zambia’s population, 47% of which are economically active (National Gender Policy, 2007) and are increasingly seen to take up the role of economic headship in Zambian households (ILO, 2003). Hence, it seems reasonable to assume that if women entrepreneurs become more successful, the entire economy benefits. Yet, very little literature exists on SMEs in Zambia. Phillips and Batia-Panthaki, (2007, p. 2) argue that “although a small number of (limited) studies on SMEs have been undertaken, no aggregate data exist and in reality the number of small and microenterprises operating in Zambia, nor the size and sector in which they operate can be accurately estimated.” Furthermore, little is known about Zambian women entrepreneurs (Konayuma, 2007). Similarly, Dzisi (2008) contends that even though there is evidence that indigenous women entrepreneurs dominate SME activity in African countries such as Zambia, Gambia, South Africa, Kenya, Nigeria, Tanzania and Ghana little is known about them in the literature in terms of their contribution to venture start-up, employment creation and ultimately poverty reduction.

This study will contribute to bridging this knowledge gap by proposing a conceptual model of factors which influence the success of women-owned micro-enterprises in Zambia’s retail industry using the resource based view, competency approach and entrepreneurial orientation as theoretical perspectives. Our main research question is therefore: what factors influence the performance of women-owned micro-enterprises in Zambia’s retail industry?

Zambia is a Sub-Saharan African country located in Central Southern Africa, with a population of approximately 14.58 million people (Zambia Central Statistical Office, 2014). In 2012, it had a GDP of approximately USD 20.68 billion, and its annual GDP growth has been averaging between 5% and 6% (World Bank, 2012). Nevertheless, Zambia’s poverty levels remain high as evidenced from the fact that approximately 60% of its population still lives below the national poverty line (World Bank, 2012). Of the 4.1 million Zambians in employment in the year 2009, approximately 88 percent worked for informal enterprises employing below five employees (Conway and Shah, 2010, p. 14). Despite driving the economy, the small number of large companies in Zambia’s private sector only accounts for around 7% of employment (Conway and Shah, 2010). Zambia’s private sector comprises approximately 94% micro companies (accounting for 68% of total employment and small, medium and large firms accounting for 5%, 0.4% and 0.06% respectively (Phillips and Bhatia-Panthaki, 2007, p.2). Notably, the significance of the small business sector as far as employment creation is concerned in Zambia cannot be overemphasised.

Employment creation has also been a high priority for the Zambian government, which aspires to reach sustained full employment with an unemployment rate of 10% of the total labour force by the year 2030 (ILO, 2012). One of the strategies implemented to achieve this was the creation of Micro, Small and Medium Enterprises (MSMES) and consequently the development of the MSME policy 2009 to provide support to the development of this sector. Zambia’s MSME sector remains largely underdeveloped resulting in a negligible contribution to the economy. To illustrate, SMEs represent 95% of all firms in Zambia yet account for a meagre 5% of the country’s GDP (Chisala, 2007). Part of the reason for this is that little information exists about the MSME sector in Zambia (Conway and Shah, 2010). A publication by the Zambia Chamber of Small and Medium Business Associations (ZCSMBA, 2009) notes that women are an important component of Zambia’s MSME sector.
Literature review

A review of the literature leads us to conclude that three broad categories of factors influence firm performance at SME level and these include the characteristics of the entrepreneur (business owner/manager), the firm's internal business environment and the firm's external business environment. Kiggundu (2002) and Man et al. (2002) refer to these factors as the generally agreed determinants of SME performance. This paper focuses on two of the categories of factors mentioned above namely the business owner (individual level factors) and factors internal to the business (firm level factors), that affect firm performance. Earlier studies in entrepreneurship research mostly considered personality traits to explain variances in entrepreneurial behaviour (Caputo and Dolinsky, 1998), however, entrepreneurship researchers have failed at linking these to performance (Herron and Robinson, 1993). Recent research is anchored in human capital theory (drawing from the Resource Based View of the firm), and the competency approach, with a focus on investigating the business owner’s skills, knowledge and capabilities as individual level factors affecting firm performance. Our study is grounded in three dominant theoretical perspectives in entrepreneurship literature: the Resource Based View (RBV) of the firm, the Competency Approach and Entrepreneurial Orientation (EO).

Firm Performance

There is consensus that performance is a multi-dimensional variable, whose analysis requires the inclusion of numerous factors (Simpson et al., 2012; Watson and Robb, 2012). The most commonly proposed performance measures in the literature have been growth (measured by turnover, number of employees, market share), profitability (measured by profit, return on investment, etc...), and survival and business volume (Simpson et al., 2012). Of the three, growth has been identified as the most appropriate measure of SME performance. Additionally, the use of both financial and non-financial measures has been widely recommended in the literature (Simpson et al. 2012 and Greenbank, 2001). Having said that, measuring SME performance still remains a challenge because there is no consensus on what constitutes SME success or performance. In our model, we propose two sets of subjective measures of firm performance. Subjective measures are particularly useful in researching SME performance due to their closed operation nature, where financial reporting is not an obligation. Chandler and Hanks (1993) recommend the use of subjective performance when only self-reported data are available. This approach has been substantiated by other research (e.g. Brush and Vanderwerf 1992). The first set of subjective measures proposed indicate the business owner’s perception of their firm’s growth and perception of their firm’s growth in relation to that of competitors and the second set of subjective measures indicates the business owner’s satisfaction with the performance on sales level, growth in sales, net profits, number of customers, business owner’s salary and overall business performance.

The Entrepreneur

The vast majority of research in the area of women entrepreneurship has focused on using psychological characteristics to explain differences among entrepreneurs (Caputo and Dolinsky, 1998; Brush, 1992). The studies have mostly considered personality traits relevant to achievement, locus of control and risk-taking propensity (Caputo and Dolinsky, 1998) to explain variances in entrepreneurial behaviour. However, Herron and Robinson (1993) argue that entrepreneurship researchers have not been successful in linking personality traits to performance. In support of this argument, we contend that the influence of an entrepreneur on their business is summed up in a set of personal characteristics which includes but is not limited to psychological characteristics. We argue that when it comes to firm performance, the entrepreneur’s level of entrepreneurial orientation, entrepreneurial competencies and their human capital including level and field of education, previous work and entrepreneurial experience as well as their demographic characteristics are what collectively form the characteristics of the entrepreneur. We propose that these factors influence SME performance.
There is growing recognition that Entrepreneurial Orientation (EO) is essential for the growth and survival of firms. Studies by Merz et al. (1994) and Covin and Slevin (1989) have shown that entrepreneurial orientation is a good predictor of entrepreneurial behaviour. Lee and Peterson (2000, p. 405) define EO as, “the entrepreneurial process, namely how entrepreneurship is undertaken—the methods, practices, and decision-making styles used to act entrepreneurially.” This concept is depicted as having five dimensions namely; autonomy, competitive aggressiveness, risk-taking, proactiveness and innovativeness (Lee and Peterson, 2000; Okhomina, 2010; Runyan et al., 2006). Literature suggests that EO improves performance, nevertheless, empirical findings show mixed results (Wiklund and Shepherd, 2004) hence the need for further research in this area. We propose that EO has a significant influence on SME performance.

Entrepreneurial competencies have been identified as important to business growth and success (Mitchelmore and Rowley, 2010) particularly through contributing to profitability with some (e.g Ahmad et al., 2010) arguing that they are a key driver of success in SMEs. Researchers have defined the concept of entrepreneurial competencies in different yet similar ways (Mitchelmore and Rowley, 2010; Man et al., 2002; Ahmad et al, 2010; Man, 2006). We adopt the definition by Mitchelmore and Rowley (2010) that “for SMEs, competencies mean the capability of the entrepreneur and his or her collaborators in acquiring, using and developing successfully resources for their business purpose, in the specific context in which the firm operates,” (p. 104). Mitchelmore and Rowley (2010) note four important characteristics of entrepreneurial competencies that researchers ought to be aware of: first that entrepreneurial competencies stem from factors in a person’s background including traits, personality, social role and self-image. Second, that relationships among entrepreneurial competencies may overlap. They also note that entrepreneurial competencies are learnable and finally that they tend to vary with context and situation. We adopt the areas of entrepreneurial competencies identified by Man et al., (2002) namely; opportunity, relationship, conceptual, organising, strategic and commitment competencies. These are adopted on the basis that they were established as directly or indirectly impacting the performance of the firm (Mitchelmore and Rowley, 2010). The entrepreneurial competencies will be defined as in Man et al, (2002) as shown in Table 1 below.

Table 1: Definitions of entrepreneurial competencies according to Man et al. 2002

<table>
<thead>
<tr>
<th>Entrepreneurial competence</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Opportunity competencies</td>
<td>Competencies to do with identifying and developing market opportunities through various means</td>
</tr>
<tr>
<td>Relationship competencies</td>
<td>Competencies concerned with person-to-person or individual-to-group relations with both the internal and external stakeholders e.g. customers, suppliers, employees...</td>
</tr>
<tr>
<td>Conceptual competencies</td>
<td>The ability to make decisions and to solve problems using cognitive and analytical thinking</td>
</tr>
<tr>
<td>Organizing competencies</td>
<td>Competencies relating to the organisation of different internal, external, human, physical, financial and technological resources</td>
</tr>
<tr>
<td>Commitment competencies</td>
<td>Competencies that motivate the entrepreneur to advance the business by exercising initiative and willingly undertaking job roles.</td>
</tr>
<tr>
<td>Strategic competencies</td>
<td>Competencies related to setting, evaluating and implementing the strategies of the firm.</td>
</tr>
</tbody>
</table>

**Entrepreneur’s Personal Characteristics**

Every entrepreneur undoubtedly has a unique blend of personal characteristics, which affect the way they manage their business and ultimately impact its performance. Literature (e.g. Bardasi et al., 2011; Simpson et al., 2012) suggests that start-up motivations affect firm performance. The push-pull theory categorizes start-up motivations into “push” or “pull” categories (Kirkwood, 2009). “Push” entrepreneurs
are those who are forced into starting a business as a result of some dissatisfaction with their current position as individuals (e.g. dissatisfaction with current employment). ‘Pull’ entrepreneurs on the contrary are those who are lured into starting a venture by an opportunity they identify on the market or an attractive business idea they possess. Empirical evidence (e.g. Amit and Muller, 1995) suggests that “pull” entrepreneurs are more successful than “push” entrepreneurs. In addition, Brush and Diaz-Garcia (2010) suggest that the accrual of different kinds of capital is vital to achieving a good performance and to compete. They argue that social capital to sustain entrepreneurship can mainly be accrued through paid employment. Supporting this argument, Murphy et al (2007) state that the networks of contacts acquired during previous employment are attracted as customers, suppliers or a channel for enhancing market credibility. Similarly, an entrepreneur’s previous entrepreneurial experience especially in the industry has been found to positively relate with firm performance (Kirschenhofer and Lechner (2012). Wright (2001) argues that this is because through previous entrepreneurial activities, entrepreneurs accumulate and cultivate social networks that help them to attract and gather resources. In support of the former and latter arguments, Aldrich and Martinez (2001) found that a certain amount of prior knowledge is required for success, either through training, experience or formal education (Simpson et al., 2004). Watson (2003) suggests that one explanation for the underperformance of women entrepreneurs may be that they have a lower level of education and experience than their male counterparts. On the contrary, Brush et al., (1997) found that the impact of human capital factors on the performance of Israeli women entrepreneurs had mixed results. In that study, previous entrepreneurial experience was not significant, whereas previous paid employment was highly correlated with profitability and previous experience in the industry with revenues. Furthermore there is empirical evidence that an entrepreneur’s personal goals or ambitions (Simpson et al., 2012), family responsibilities and the presence of role models (Carter and Jones-Evans, 2000) influence the way they approach their business. The arguments referred to above all illustrate the idea that there are various personal characteristics specific to the entrepreneur that influence the running and subsequent performance of their firm.

The internal business environment

Research (e.g Brush et al., 2005; Brush and Changati, 1999) suggests that resources are important for firm performance. The Resource Based View (RBV) of the firm provides a theoretical foundation for the significance of different forms of resources to firm competitiveness and performance (Roxas and Chadee, 2011). It suggests that firms have the potential to attain and sustain their competitive advantage by possessing tangible and intangible resources with the characteristics of being valuable, rare, inimitable and non-substitutable (Wernerfelt, B., 1984). These resources include the different forms of capital required for new venture creation and development in the form of venture capital (Gartner, 1985), social capital (in form of networks) (Brush et al., 2009), and technology (OECD, 2000). Another set of resources encompass what are called firm capabilities. Firm capabilities refer to the tasks and activities meant to transform internal resources (Man et al., 2002). Boonpattarakana (2012, p. 17) suggests that “organizational capabilities can be viewed as the foundation in which organizations utilize their strengths to increase competitiveness, contribute to growth, and enhance organizational performance,” Based on the suggestions by Man et al., 2002 and Boonpattarakana (2012), entrepreneurial or firm capabilities include the following; Financial, human, marketing and technological resources, innovative ability (ability to be innovative in new products, services or processes), quality (the ability to maintain or achieve high quality in products or services), cost effectiveness (the ability to achieve cost effectiveness so as to set a competitive price) and organicity (the ability to create and maintain flexible structures and systems for achieving production speed and responsiveness). Drawing on these theoretical perspectives and an exploratory study, an integrated conceptual model of factors which influence SME performance was developed (see Figure 1).
The Resource Based View (RBV) of the firm

The Resource Based View (RBV) of the firm provides a theoretical foundation for the significance of different forms of resources to firm competitiveness and performance (Roxas and Chadee, 2011). Barney (1991) classified resources in three categories: 1) physical capital resources 2) human capital resources and 3) organisational capital resources. The RBV proposes that the performance of a firm is best explained in terms of the resources, skills and assets it possesses (Lerner and Almor, 2002). Furthermore, it suggests that firms have the potential to attain and sustain their competitive advantage by possessing tangible and intangible resources with the characteristics of being valuable, rare, inimitable and non-substitutable (Lee et al. 2001; Wernerfelt, 1984). The most important assets in the context of a small business are the business owner’s skills (Lerner and Almor, 2002) because in such businesses, the business owner makes and implements all the important decisions. The general belief in entrepreneurship literature is that a small firm is an extension of its founder (Chandler and Jansen, 1992; Dyke, Fischer and Reuber, 1992) and because everything revolves around them, the founder’s human capital may prove critical to the success of the small firm (Segal, Borgia and Schoenfield, 2010). Human capital refers to the skills and knowledge acquired through investment in education, on-the-job training and other types of experience (Davidsson and Honig, 2000). Literature suggests that human capital represents one of the most significant resources for the success of entrepreneurial businesses with some (e.g. Coleman, 1998) describing it as an essential source of competitive advantage. Lerner et al., (1997) posit that human capital elements such as field and level of education, previous entrepreneurial experience and business skills impact performance. In these lines, Aldrich and Martinez (2001) propose that a certain amount of prior knowledge is required for success, either through training, experience or formal education. While previous studies generally support a positive relationship between human capital and firm performance, research on the subject has generally yielded mixed results (Davidsson and Honig, 2003).

Bird (1995) in her proposition “Towards a Theory of Entrepreneurial Competencies”, submits that prior work experience, education and industry experience should be considered as factors which affect the development of entrepreneurial competencies. She further informs that because entrepreneurial
competencies are behavioural, they are learnable and can change over time through the intervention of training and development. This view is supported in various other studies (e.g. Segal, Borgia and Schoenfeld, 2010; Chandler and Jansen, 1992). Similarly, Unger (2011) contends that human capital improves the business owners’ ability to identify and exploit business opportunities, acquire resources such as financial capital as well as accumulate new knowledge and skills. In these lines, Krueger and Brazeal (1994) argue that prior work experience has the potential to advance one’s skills and abilities especially opportunity recognition. Man and Lau (2005) identified theoretical and practical learning, and work i.e. knowledge, skills and experience as one source of entrepreneurial competencies. It is noteworthy that empirical research examining the antecedents of entrepreneurial competencies remains rare.

Drawing on these arguments, we propose that the human capital variables level of education, entrepreneurship training, previous work experience in the industry and previous entrepreneurship experience serve as antecedents of entrepreneurial competencies and ultimately influence firm performance.

Entrepreneurial Competencies

Entrepreneurship research has over the recent past seen a dramatic shift in research focus to competency theories in examining entrepreneurial success. Man and Lau (2005) inform that the study of entrepreneurial competencies represents the most recent approach to investigating the influence of the entrepreneur’s behaviour on firm success outcomes. This comes in response to the limitations associated with trait approaches and related theory evidenced in the failure of entrepreneurial traits and motives e.g. internal locus of control and need for achievement, to produce strong support for their impact on entrepreneurial success (Baum et al., 2001). Brinckmann (2008) note that despite its purported importance, the discussion on entrepreneurial competencies is still in its infancy in entrepreneurship literature. Mitchelmore and Rowley (2013) also observe that studies investigating skills and competences of entrepreneurs not only remain few in number but also to some extent dependent on context, with only one or two focusing on women-owned businesses.

Entrepreneurial competencies have been identified as important for business growth and success particularly through contributing to profitability, with some (e.g Ahmad et al. 2010) arguing that they are a key driver of success in SMEs. While various categorisations of entrepreneurial competencies exist (Mitchelmore and Rowley, 2010) the competency approach proposed by Man et al. (2002) has been adopted for this paper based on its emphasis on the behavioural or process approach and its comprehensiveness in that it includes most of the competencies suggested by other researchers. They define entrepreneurial competencies as “higher-level characteristics encompassing personality traits, skills and knowledge, and therefore can be seen as the total ability of the entrepreneur to perform a job successfully,” (p.124). We adopt the areas of entrepreneurial competencies identified by Man et al. (2002) namely; opportunity, relationship, conceptual, organising, strategic and commitment competencies. These are adopted on the basis that they were established as directly or indirectly impacting the performance of the firm (Mitchelmore and Rowley, 2010). The entrepreneurial competencies will be defined as in Man et al. (2002) as shown in Table 1;

Previous studies have generally reported significant relationships between entrepreneurial competencies and firm performance, with some (e.g Ahmad et al., 2010) arguing that entrepreneurial competencies are strong predictors of business success. Empirical evidence particularly exists in relation to a positive relationship with firm growth (e.g. Sony and Iman, 2005; Chandler and Hanks, 1994; Chandler and Jansen, 1992). Similarly, Baum et al. (2001) found that while industry and technical skills had a significant direct effect on firm performance, the general competencies i.e. organisational skills and opportunity skills had significant indirect effects. Ahmad et al. (2010) reported a direct relationship between entrepreneurial competencies and business success.

Recognising that entrepreneurs in different contexts may possess different sets of competencies, this study further sought to identify and explore competencies specific to the context in question. To achieve
Based on the arguments above, we propose that there is a positive relationship between entrepreneurial competencies and firm performance.

**Entrepreneurial Orientation**

The relationship between entrepreneurial orientation (EO) and firm performance has achieved broad scholarly acceptance in entrepreneurship literature, with a growing recognition that EO is essential for the growth and survival of firms. Some (e.g. Lumpkin and Dess, 1996; Covin and Slevin, 1991) have argued that it represents one of the most critical resources for venture performance. EO represents the strategic orientation or strategy-making process of a firm (Lechner and Gudmundsson, 2014; Rauch and Frese, 2000). It encompasses the organisational processes, methods, practices and decision-making styles used to implement a firm’s strategy (Lee and Peterson, 2000; Lumpkin and Dess, 1996; Miller). Miller (1983) argues that EO can be viewed as the way in which firms act upon opportunities. He further depicts this concept as having three dimensions namely risk taking, innovativeness and proactiveness. Some studies including Lumpkin and Dess (1996) and Covin and Slevin (1989) have extended the EO concept to include two other dimensions i.e. autonomy and competitive aggressiveness.

EO has been found to be a good predictor of entrepreneurial behaviour (Merz et al. 1994; Covin and Slevin, 1989). Several studies (e.g. Covin and Slevin, 1991; Lumpkin and Dess, 1996; Lee, Lee and Pennings, 2001) suggest a positive relationship between EO and firm performance, signifying that EO improves performance. Nonetheless, empirical findings show mixed results (Wiklund and Shepherd, 2004). The influence of EO on firm performance is contingent upon the strategic acquisition, development and leveraging of resources to exploit opportunities and ultimately achieve a competitive edge (Ireland et al. 2003). Lechner and Gudmundsson (2014) inform that in order for any competitive strategy to be implemented, a variety of resources and competencies is required. Drawing on these arguments, we adopt the position that EO mediates the relationship between entrepreneurial competencies and firm performance. Our paper therefore attempts to integrate two literature streams (competency approach and entrepreneurial orientation) which up to now have tended to evolve on separate tracks, signifying an important research gap. Few studies have considered both theoretical perspectives in a single study. For example, Wickramaratne, Kiminami, and Yagi, (2014) examined the effect of entrepreneurial competencies on entrepreneurial orientation and found support for a positive relationship.

2. **Methodology**

A qualitative approach was adopted for this study because very little is known about female entrepreneurship in Zambia. Qualitative research is suitable when the objective of the study is to explore or understand underlying phenomena (Creswell and Plano Clark, 2007). It generates rich, in-depth information about the sample, resulting in a deeper understanding of phenomena (Molina-Azorín et al. 2012). This approach therefore makes it possible to identify and investigate variables specific to the context. Based on the literature, an interview schedule was developed covering the generally agreed determinants of SME performance. An exploratory qualitative study was then conducted in Zambia’s Lusaka and Copperbelt Provinces, covering three major cities of Lusaka, Ndola and Kitwe. The two provinces were selected on the basis that they house approximately 65% of all businesses in Zambia (MCTI, 2007). The definition of SME varies from country to country, nevertheless, the most commonly used basis for defining SMEs is employment (OECD, 2004) with many sources taking 250 employees as the cut-off number (Ayyagari et al, 2007). Similarly, definitions of micro-enterprises vary. In this paper, a micro-enterprise is defined as having a maximum of ten employees and turnover less than Euro 2 million (European Commission, 2015) whereas an SME refers to a business with not more than 250 employees (European Commission, 2005). A woman SME owner is in this paper defined as a woman who owns and runs an SME. In case of a partnership, a woman who is co-owner and main decision-maker in an SME.
A total of twenty-two (22) in-depth interviews were conducted with women SME owners in a face-to-face fashion. The participants were purposively sampled from an SME register from a government agency called the Zambia Development Agency (ZDA). As a result of the considerable challenge of an official comprehensive SME register not being available, we employed a pragmatic approach to finding respondents by asking the women entrepreneurs to identify others like them. Therefore, referrals from entrepreneurs themselves as well as business associations were also used to target potential respondents. Each interview lasted 1 hour 15 minutes on average, was tape-recorded and subsequently transcribed. Data analysis was done using Nvivo and the results were used to further the development of a conceptual model (see Figure 2).

3. Results

Profile of respondents

The majority of the business owners sampled were aged between 46 and 55 years. This may be attributed to the fact that the majority of the respondents (more than 75%) were previously employed, with most of them starting a business after leaving formal employment. Another argument could be that these women only seized the opportunity to start their own business after raising a family, as the findings indicate that most of the respondents were married at the time of the study. This is consistent with the strong family orientation that characterises the Zambian culture, which has also been reported in other contexts (e.g. Prasad et al. 2013; Lerner, Brush and Hisrich, 1997). However, Zambia represents a somewhat unique case, where women’s involvement in entrepreneurship is increasingly motivated by the shift in their role in the family over the recent past. Whereas “the burden of family responsibilities in Zambia falls disproportionately more on women than on men, and women are seen as caregivers of the family who continue to be primarily responsible for household chores, caring for children and the elderly members of the family” (ILO, 2012, p. 25), they are increasingly also seen as providers in the home.

The sample generally exhibited a high level of human capital in terms of education level and previous work experience. The majority of the respondents had a College Diploma (9 respondents), eight (8) had a College Certificate, two (2) had a University Degree, two (2) went up to secondary school and one (1) had a Master’s Degree. This appears to indicate that small business owners in Zambia are generally formally educated, with a significant number acquiring tertiary education. This finding is consistent with studies by Hisrich and Brush, 1985; Birley et al. 1987 and Morris et al. 2006, which found that women entrepreneurs were highly educated up to degree level. Contrary to these findings however, Mauchi et al. (2014) found that women entrepreneurs in Zimbabwe’s Mashonaland Central Province did not attain a higher education.

Four (4) respondents stated that their field of education was related to their current business signifying that involvement in this type of business does not require technical expertise. Rather, what is at play is that the retail industry and other industries considered to be fragmented e.g. services, are characterised by minimal requirements in terms of initial financial investment, human resources, and assets, thereby resulting in low barriers to entry (Brush, Edelman and Manolova, 2004; Brush et al., 2005).

Another interesting finding was that half of the respondents stated that they had previous entrepreneurship experience, with some having started running their own business alongside formal employment.

Entrepreneurial competencies and entrepreneurial orientation

Six sets of entrepreneurial competencies were identified in the literature namely conceptual, strategic, relationship, commitment, opportunity and organising competencies. Of the six, conceptual and strategic competencies did not appear to characterise the sample. The lack of evidence for strategic competencies is potentially linked to the size of the firms under investigation as well as their ultimate
objective. Strategic competencies are concerned with the long-term performance of the firm, particularly through planning. However, formal planning is not conventionally a feature of small businesses. Moreover, the business owners sampled were mostly necessity entrepreneurs whose ultimate goal was to maintain a business for survival and therefore are unlikely to think and plan long-term. Conceptual competencies on the other hand are concerned with the use of analytical skills to systematically develop solutions to complex problems. Lack of evidence for this category of competencies could be associated with the nature of the industry, which is non high-tech and therefore is not characterised by a high degree of complexity/ambiguity.

In relation to all the other competencies, relationship competencies appeared to be the most cardinal to the respondents. Establishing good relationships with customers and employees was particularly highlighted. Table 2 shows some of the statements made by respondents which demonstrated this competency.

Table 2: Statements on how to build relationships with customers and employees

<table>
<thead>
<tr>
<th>Building relationships with customers</th>
<th>Building relationships with employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Satisfying customers by stocking what they want.</td>
<td>1. Paying employees a salary above industry average.</td>
</tr>
<tr>
<td>2. Being friendly to customers</td>
<td>2. Paying employees lunch allowance or offering them meals at work</td>
</tr>
<tr>
<td>3. Getting customer feedback</td>
<td>3. Awarding bonuses tied to sales</td>
</tr>
<tr>
<td>4. Interacting with customers</td>
<td>4. Maintaining constant communication with employees</td>
</tr>
<tr>
<td>5. Listening to customers</td>
<td>5. Training or guiding employees on day-to-day business etiquette e.g. how to welcome customers, being presentable</td>
</tr>
<tr>
<td>7. Understanding the different types of customers you have and catering for their different needs</td>
<td></td>
</tr>
<tr>
<td>8. Staying up-to-date with fashion trends</td>
<td></td>
</tr>
<tr>
<td>9. Phoning the loyal customers when you have new stock</td>
<td></td>
</tr>
<tr>
<td>10. Selling products on credit to loyal customers</td>
<td></td>
</tr>
</tbody>
</table>

The findings also appeared to suggest that the business owners sampled were highly committed to the success of their businesses. It was evident from the interviews that these businesses were operating under very challenging conditions, particularly those to do with access to finance and competition, yet they continued to be in operation. Commitment competencies were further demonstrated in that most of the respondents stated that they spent long hours at their business and ensured that the business was open even on days when they should ideally be closed such as Sundays. Organising competencies in this sample were particularly linked to the challenge of access to finance in that only one respondent obtained formal credit to establish their business while the rest used their savings. The latter therefore organised their start-up capital as well as other resources required to start the business and keep it in operation. Similarly, opportunity competencies were evidenced in that the respondents appeared to be generally alert to business opportunities in their environment and to take the necessary steps to utilise them. Opportunities cited included importing merchandise from cheaper sources, building networks with government institutions for purposes of supplying them with goods, and supplying occasion wear to the corporate world for such occasions as Labour Day celebrations.

In order to capture competencies not identified in the literature and potentially specific to the research context, the respondents were asked to identify qualities which they felt supported the success of their business. Varied responses were given, including having an outgoing personality (being able to interact with different people), determination, being hard working, patience and enthusiasm (to keep one going during the times when business is particularly tough), good leadership and administration skills, and
financial discipline (ability to separate business finances from personal finances). These qualities represent
a new set of competencies which we have termed “personal competencies”. Furthermore, the sample
appeared to have high entrepreneurial orientation, with respondents generally considering themselves to
be risk-takers (in line with the finding in Phillips and Bhatia-Panthaki, 2007), innovative and proactive.
However, there was no evidence of autonomy and competitive aggressiveness which represent other
dimensions of entrepreneurial orientation found in literature. Lumpkin and Dess (1996) argue that
autonomy may vary as a function of firm size, management style or ownership i.e. where the business
owner is the principal decision-maker, autonomy is implicit in the ownership rights. They further propose
that the five dimensions of EO may vary depending on environmental and organisational contexts.

Firm level factors

The respondents were asked to identify attributes that they felt helped their business perform
better than those of their counterparts and the challenges they were facing in terms of running their
businesses successfully. It was found that offering better quality products at lower prices than competitors,
offering unique products and advertising the business resulted in a competitive edge.

On the other hand, a number of challenges associated with the operation of the businesses also
emerged from the discussion. One of the major challenges highlighted was the lack of or insufficient
financial capital. This resulted in failure by the businesses in question to fulfil customer orders and/or
replenish stock as required. Lack of financial capital was largely attributed to two factors: difficulties
associated with access to formal credit and intense competition in the industry.

The study found that female small business owners generally had difficulty accessing formal credit
due to collateral requirements, high interest rates, cumbersome loan application procedures or ignorance
about the loan application process and the banks’ negative attitude toward lending to them. This finding is
consistent with studies conducted in different contexts. For example, Habar and Reichel, (2007) note that
private investors generally find small new ventures less attractive, hence owner/managers are faced with
everseous challenges associated with accessing financial capital from external sources such as banks.
Verheul (2005) attributes these challenges to high risks, low expected profits and distorted information.
The banks would further argue that start-ups lack an established track record which to refer to in arriving
at decisions relating to loan assessments. The finding is also substantiated in Phillips and Bhatia-Panthaki
(2007), who argue that accessing start-up as well as working capital is difficult for Zambian firms generally
because of the high interest rates. Also, a study by the ZCSMBA (2006) found that the three most cited
reasons by Zambian entrepreneurs in the trading sector for not applying for formal credit were high interest
rates, lack of collateral and ignorance about the application process. University of Amsterdam and IAIS
(2009) submit that these difficulties force most of the Zambian women to depend on informal sources of
borrowing. They further inform that the challenges (e.g. lack of collateral) experienced by Zambian women
in accessing formal credit are linked to their lack of ownership rights. Historically, Zambian women
experienced discrimination in terms of ownership rights and while strides have been made in this area,
traces of discrimination are still evident today with most of the land in Zambia being owned by men and
women still having limited rights in relation to family matters. Another challenge linked to this is the
perceived negative attitude of lending institutions toward lending to female small business owners. It
emerged in the current study that some lending institutions require spouse approval before lending to
women, signifying a lack of confidence in female business owners. Another interesting finding was that the
not-so-educated female business owners did not feel welcome at banks and were of the view that banks
favoured the highly educated. On the contrary, one respondent argued that rather than the problem being
the bank, women lacked the self-confidence required to clearly articulate their business proposals and to
convince the bank to grant them loans. Nevertheless, a study by ZCSMBA (2009) found that lending
institutions particularly commercial banks were hesitant to lend to small business owners because they
considered it a high risk. The study further notes that lack of or poor access to finance represents the
paramount impediment to the growth and development of the small business sector in Zambia.
The lack of financial capital can also be attributed to the high levels of competition in the industry, which results in thin profit margins. The retail (apparel) industry in Zambia appeared to be characterised by high levels of competition, and to be potentially saturated. To illustrate, Phillips and Bhatia-Panthaki (2007) found that almost all micro business owners did not undertake any kind of market research before entering the market, with over half of them believing there was an opportunity in that market merely by seeing others in it. One source of competition identified in the industry in question was the street vendors or informal traders that had been allowed by the Zambian government to trade freely on the streets as an attempt to bring down unemployment levels in the country. The respondents felt strongly that they were competing unfairly with the street vendors because the latter did not pay taxes, or incur other costs associated with formally established businesses such as rent and overheads. In their study, Phillips and Bhatia-Panthaki (2007) found that some business owners were resorting to tax avoidance because the informal traders were pushing them out of business. Another source of perceived unfair competition identified were foreign retailers especially the Chinese and South African retailers. Apart from being generally bigger in size these retailers were also benefitting from government incentives (e.g. tax incentives) meant to promote foreign investment. Unfortunately, similar incentives did not exist for the smaller local businesses. It was argued that much as an initiative called the Citizen’s Economic Empowerment Commission had been implemented to help support the local small business sector, very few people had benefitted from it due to high levels of corruption and poor management of the programme.

4. Conclusions

This paper has made four theoretical contributions; first, it proposes a conceptual model for understanding factors that influence the success of women-owned SMEs in Zambia. The model was developed based on a review of literature and using the resource based view (RBV) of the firm, competency approach and entrepreneurial orientation as theoretical perspectives. It was further refined using the findings of an exploratory qualitative study conducted in Zambia (Figure 2 represents the refined conceptual model).

**Figure 2: Refined Conceptual Model**

- **Education and experience:**
  1. Level of education
  2. Entrepreneurship training
  3. Previous work experience in the industry
  4. Previous entrepreneurship experience

- **Competencies:**
  1. Opportunity
  2. Commitment
  3. Organising
  4. Relationship
  5. Personal

- **Other variables:**
  1. Firm age
  2. Firm size
  3. Business owner’s age
  4. Operating capital

- **Entrepreneurial orientation:**
  1. Risk taking
  2. Proactiveness
  3. Innovativeness

- **Firm performance**
Second, the conceptual model makes the following propositions:

P1. Education, entrepreneurship training and previous work experience in the industry serve as antecedents of entrepreneurial competencies.

P2. There is a direct relationship between entrepreneurial competencies and firm performance.

P3. Entrepreneurial orientation mediates the relationship between entrepreneurial competencies and firm performance.

P4. There is a direct relationship between firm age, firm size, business owner’s age and operating capital and firm performance respectively.

Through the above propositions, this paper attempts to integrate two literature streams i.e. the competency approach and entrepreneurial orientation, which have historically tended to evolve on separate tracks. Few studies have considered both theoretical perspectives in one study, signifying an important research gap. Additionally, while human capital and entrepreneurial competencies have been extensively studied in entrepreneurship research, few studies have examined whether human capital variables serve as antecedents of entrepreneurial competencies.

Third, this paper proposes a new category of competencies (named personal competencies), which captures competencies not identified in the literature but identified by the respondents as qualities that support the success of their businesses. This category of competencies includes having an outgoing personality, determination, being hard working, patience and enthusiasm, good leadership and administration skills, and financial discipline (i.e. ability to separate business finances from personal finances).

Finally, while strategic competencies and conceptual competencies have been found to be important in some contexts, this paper finds that they do not appear to characterise the sample under investigation. Similarly, competitive aggressiveness and autonomy have been included as dimensions of entrepreneurial orientation in other studies but did not appear to characterise the current sample.

As with all social science research, this study has its limitations. First, the sample is small, and the study was limited to one industry. Also, due to geographic and financial constraints, the study only focused on the major cities of Zambia. Additional research covering multiple industries and other research locations e.g. other countries in the region would enhance the generalisability of these findings. A longitudinal study would provide more insights into the relationships among the main constructs under investigation. Finally, there is a possibility of cultural biases concerning entrepreneurial competencies and entrepreneurial orientation influencing the results of the study.

Support for the propositions made would have several implications for theory and practice. First, it would suggest to both owner/managers and policy makers that skill development is a crucial initial step towards business success. Also, the study would offer insights to owner/managers on which competencies are most relevant to the success of their business. Furthermore, it would help practitioners, educators and policy makers design educational systems and training programmes that are tailored toward the development of behaviours and skills relevant to specific competencies. In terms of theoretical implications, the study contributes to integrating the domains of the competency approach and contingency perspective.

According to Lumpkin and Dess (1996), entrepreneurial orientation developed from the contingency perspective.

REFERENCES


[44] Zambia Chamber of Small and Medium Business Associations (2009), Unlocking the Zambian MSME Sector: Constraints and Challenges, [Report], ZCSMBA: Lusaka

[45] Zambia Chamber of Small and Medium Business Associations (2006), Sector Based Performance Monitoring of MSMEs, [Report], ZCSMBA: Lusaka
Gender Differences in Entrepreneurial Attitude and Intentions: A Case of Dubai

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Abstract

Gender specific differences can potentially influence the entrepreneurial attitudes and intentions, with consequential organizational outcomes. Hence, the ability to understand and predict the attitude and intentions of entrepreneurs is of much interest to scholar and practitioners alike. Drawing on widely used attitude and intentional models and the theory of planned behavior, this study explores the attitudes and intentions of 476 people with an express interest in business and entrepreneurship from the province of Dubai in the United Arab Emirates. The empirical findings suggest that there is no specific difference in entrepreneurial attitude and intentions between the genders, suggesting entrepreneurship is gender neutral, which has significant policy implications for entrepreneurship promotion, that women are as good at entrepreneurship as men.

Keywords: Entrepreneurial intent, desirability, attitudes, TPB, Dubai

Paper Type: Research Paper

Introduction

What moves the entrepreneurs, the makers of businesses, which produce the goods and services for consumption and welfare? Are there any gender differences in this? In recent years, the attention of the practitioners, management and the academic community has been focused on investigating this problem in terms of the attitudes and intentions of entrepreneurs, of both females and males, thought of as a well-planned behaviour (Krueger, et al., 2000), in view of the surge of entrepreneurship especially of women particularly in developing world, of which the UAE (1971) is a good case study.

Historically, researchers have investigated the possible reasons underpinning the entrepreneurial behaviours from the point of view of entrepreneurs, as well as economic and other factors within a given business. However, recent literature has focused on the utility derived from choosing self-employment or entrepreneurship over traditional career opportunities and options open to individuals and self-employment as a career option if the utility derived from this choice exceeds the utility derived from ‘wage’ employment (Ahmed, 2014; Douglas and Shepherd, 2000; Eisenhauer, 1995). There may be other factors of entrepreneurship which may come to light in new explorations of the problem.

Meanwhile, there is a rise in the number of women entrepreneurs (The Center for Women’s Business Research, 2004). For example, companies founded by women accounted for over $3 trillion of the United States’ GDP (Chamorro-Premuzic, 2012), giving momentum to the States’ growth, as well as to research on women’s entrepreneurship in all its dimensions, including motives, attitudes, and intentions and comparing them, among other things, with that of men.
In the Entrepreneurship history of more than one hundred years, gender dimensional studies, though flagged-off in 1961 (McClelland, 1961) had mostly picked up in the 1990s (Blau, 1998; Hurley, 1999; Snyder, 1995), explaining how female entrepreneurship is linked to variables such as the allocation of family resources, childbearing decisions, opportunities, opportunity perceptions, self-confidence and poverty (Minniti, 2010). Yet, the identity, belief and value system of female entrepreneurs remained unknown, and there are calls from researchers like de Bruin et al., (2006) and Greene et al., (2007) for a vibrant enquiry into the phenomenon of female entrepreneurship factors and intentions, as there are still discrepancies between men and women in economic participations, opportunities and entrepreneurial activities (Boz and Ergeneli, 2014; Ergeneli and Boz, 2013), in particular when it comes to their attitudes and intentions, which matter much.

The Arab world which is on the upsurge, calls for full attention regarding entrepreneurship from the entrepreneurship scholars, especially, it is interesting and important to know whether the Arab women are on par with their men in respect of every aspect of entrepreneurship, starting with the motives, attitudes and intentions. In this respect, Dubai, an international business and entrepreneurship hub, can be regarded as holding a mirror not only to the vast and business surging Arab world of which the Emirate of Dubai is a good example, with reference to which the study is held.

Emirate of Dubai

The Emirate of Dubai is 4,114 Sq. km in area, combined borders with Abu Dhabi in the South, Sharjah in the North West, and the Sultanate of Oman in the Southeast and is one of the 7 Emirates which constitute the new Arab State of the United Arab Emirate (UAE) (1971), which has made exemplary economic development since its founding Dubai holding a good testimony to it. Dubai with a per capita income of $67,616 (2015), is a very prosperous state and still advancing principality- World Economic Forum (WEF, 2015), Heritage Foundation (2015). It is all not due to oil, but mostly to non-oil resources in expectation that oil will not lasting long.

Table -1

<table>
<thead>
<tr>
<th></th>
<th>Emirate of Dubai Demography &amp; Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Area</td>
</tr>
<tr>
<td>2</td>
<td>GDP Current Prices</td>
</tr>
<tr>
<td>3</td>
<td>Growth Rate</td>
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<tr>
<td>4</td>
<td>Per capita income</td>
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<td>5</td>
<td>Direct Foreign Trade</td>
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<td></td>
<td>(Value in millions AED)</td>
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<td></td>
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<tr>
<td>6</td>
<td>Free Zone Trade</td>
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<tr>
<td></td>
<td>(Value in millions AED)</td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>SMEs Export Orientation*</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>SMEs Productivity per person</td>
</tr>
<tr>
<td></td>
<td>(in AED)</td>
</tr>
<tr>
<td>9</td>
<td>Total Population</td>
</tr>
<tr>
<td>10</td>
<td>Female Population</td>
</tr>
<tr>
<td>11</td>
<td>Male Population</td>
</tr>
<tr>
<td>12</td>
<td>Gender Gap =</td>
</tr>
<tr>
<td></td>
<td>% Males - % Females</td>
</tr>
<tr>
<td></td>
<td>(Age Groups in %)</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
13 Percentage distribution of Population aged 15+ by Educational level & Gender Equity Index

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Female</th>
<th>Male</th>
<th>GEI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>2.4%</td>
<td>2.9%</td>
<td>0.8</td>
</tr>
<tr>
<td>Literate &lt; Intermediate Degree</td>
<td>3.7%</td>
<td>7.2%</td>
<td>0.5</td>
</tr>
<tr>
<td>Secondary</td>
<td>21.3%</td>
<td>21.0%</td>
<td>1.0</td>
</tr>
<tr>
<td>Under University Degree</td>
<td>7.1%</td>
<td>4.7%</td>
<td>1.5</td>
</tr>
<tr>
<td>University Degree and above</td>
<td>43.0%</td>
<td>22.0%</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Total = 38.6%

14 Life Expectancy at Birth

Male 81.5 Years, Female 81.7 Years

15 Percentage distribution of employed aged 15+ by monthly AED currency and Gender, Emirate of Dubai

<table>
<thead>
<tr>
<th>Monthly AED Currency</th>
<th>Female</th>
<th>Male</th>
<th>GEI</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1000</td>
<td>12.3%</td>
<td>11.8%</td>
<td></td>
</tr>
<tr>
<td>(1000-4999)</td>
<td>41.4%</td>
<td>59.6%</td>
<td>0.5</td>
</tr>
<tr>
<td>(5000-9999)</td>
<td>41.4%</td>
<td>59.6%</td>
<td></td>
</tr>
<tr>
<td>(10000-19999)</td>
<td>32.3%</td>
<td>19.5%</td>
<td></td>
</tr>
<tr>
<td>(20000-34999)</td>
<td>14.9%</td>
<td>14.1%</td>
<td></td>
</tr>
<tr>
<td>(35000+)</td>
<td>2.5%</td>
<td>8.3%</td>
<td></td>
</tr>
</tbody>
</table>

(accessed on 30 December, 2016, 15 April 2018)

Dubai has changed dramatically over the last three decades, becoming a major global business centre with a dynamic and diversified economy made-up of trade, transport, tourism, industry and finance, enjoying a strategic location and serves as the biggest re-exporting centre in the Middle East which can be seen from the (Table 1). Its low logistical and operational costs and excellent infrastructure, projects relating to Dubai hosting the activities of the 2020 World Expo, expansion of the Dubai network of airports and the Etihad Rail network, air and maritime transport means, in addition to roads, transportation, tourism facilities, e-infrastructure and e-logistics, real estate, financial services, industry and support existing activities built on the knowledge-based economy relying on research and innovation, beside of creating new sectors such as Islamic economy capital, all of which and liberal government policies attracts entrepreneurs in a big way.

Table -2 Overview of Dubai SMEs

<table>
<thead>
<tr>
<th>Dubai SME Definition</th>
<th>Trading (Max. turnover in AED)</th>
<th>Service (Max. turnover in AED)</th>
<th>Manufacturing (Max. turnover in AED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>9 (9mn)</td>
<td>20 (3mn)</td>
<td>20 (10mn)</td>
</tr>
<tr>
<td>Small</td>
<td>35 (50mn)</td>
<td>100 (25mn)</td>
<td>100 (100mn)</td>
</tr>
<tr>
<td>Medium</td>
<td>75 (250mn)</td>
<td>250 (150mn)</td>
<td>250 (150mn)</td>
</tr>
</tbody>
</table>

Breakdown of Dubai SMEs by Size

<table>
<thead>
<tr>
<th>Size</th>
<th>SMEs %</th>
<th>Workforce %</th>
<th>GDP %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>72</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>Small</td>
<td>18</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Medium</td>
<td>5</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>42</td>
<td>40</td>
</tr>
</tbody>
</table>

Breakdown of Dubai SMEs by Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>% SMEs</th>
<th>% GDP</th>
<th>% SME Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading</td>
<td>57</td>
<td>47</td>
<td>51</td>
</tr>
<tr>
<td>Services</td>
<td>35</td>
<td>41</td>
<td>33</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>8</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
As can be seen from the overview of Dubai SMEs from (Table 2), 95 Per cent of the Dubai SMEs covers 42 per cent of workforce and 40 per cent of the GDP, led by the trading with highest 57 per cent followed with services 35 per cent and manufacturing with only 8 per cent. Dubai is known for international business hub.

### Table -3
Global Entrepreneurship Index Score Comparison (Year 2017)

<table>
<thead>
<tr>
<th>Global Rank</th>
<th>Country</th>
<th>Per Capita GDP International $ (WB)</th>
<th>GEI Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>USA</td>
<td>52,676</td>
<td>83.4</td>
</tr>
<tr>
<td>2</td>
<td>Israel</td>
<td>31,092</td>
<td>59.1</td>
</tr>
<tr>
<td>3</td>
<td>UAE</td>
<td>64,604</td>
<td>58.8</td>
</tr>
<tr>
<td>4</td>
<td>Qatar</td>
<td>128,734</td>
<td>58</td>
</tr>
<tr>
<td>5</td>
<td>Singapore</td>
<td>56,264</td>
<td>52.2</td>
</tr>
<tr>
<td>6</td>
<td>South Korea</td>
<td>33,891</td>
<td>50.5</td>
</tr>
<tr>
<td>7</td>
<td>Saudi Arabia</td>
<td>53,890</td>
<td>47.2</td>
</tr>
<tr>
<td>8</td>
<td>Hong Kong</td>
<td>53,959</td>
<td>46.4</td>
</tr>
<tr>
<td>9</td>
<td>China</td>
<td>12,559</td>
<td>36.3</td>
</tr>
<tr>
<td>10</td>
<td>India</td>
<td>5372</td>
<td>25.8</td>
</tr>
</tbody>
</table>

Compiled from Global Entrepreneurship Index Data (2017) Global Entrepreneurship Development Institute

The (Table 3) provides the Global Entrepreneurship Index Score (GEI) comparison of UAE with other countries in which UAE stand tall with 19th Rank, surpassing its major trading partners China, India and many other OECD countries.

On its own, Dubai is a ‘Star’ and forward economic state, well known for its entrepreneurial activities and mega projects and many super brands. ‘Brand Dubai’ is a global business brand, which is a Middle East home to many of the Fortune 500 companies. Emirate of Dubai has a population of 2.44 million (Government of Dubai, 2015), according to United Nations (2016) immigrant makeup almost 85 per cent expatriates population mainly from India, Pakistan, Bangladesh, the Philippines, Iran, Egypt, Nepal and China and fewer from countries such as US, Canada, Australia, South Africa & France and others. The gender gap of 38.6 per cent as shown in (Table 1) is due to large number of foreign male workers which do not relocate with their families, due to socio-economic factors, many of them are construction workers living in labour camps. But, when the Non-immigrant Dubai population is taken into account the sex ratio is more or less likely to be quite balanced ±50 percent, And, the women are employed in administration as well as business.

Entrepreneurship is an oft-repeated focus of both federal and emirate-level government agencies which have developed laws and established fund such as Khalifa Fund, and a dedicated division of the Department of Economic Development to help support SMEs (UAE Ministry of Economy, 2014). These efforts are at variance with many governments of developing economies which do not do enough to stimulate entrepreneurship (Mehrez, 2014; Tong et al. 2012) especially of women. With the ultimate goal of SMEs contributing 70 per cent to the country’s Gross Domestic Product (GDP) by 2021 and an increase in youth-founded enterprises (UAE Ministry of Economy, 2014), the hosting of Expo 2020 by Dubai, and the UAE Vision 2021 National Agenda, the promotion of entrepreneurship and innovation (Dubai SME, 2013; Expo 2020 Dubai; Prime Minister’s Office, 2010), which are all conducive for flourishing of enterprises and entrepreneurship. Dubai is more inclined to the development of women in all respects, including entrepreneurship.
For entrepreneurial probes and the male and female dimensions of entrepreneurship, the Arab world being on an economic upsurge, and Dubai apart from being important in itself, is taken to hold a mirror to the Arab world. The Global Entrepreneurship Monitor Report (2015/16), in 69-78 per cent cases, ‘opportunity’ is the prime entrepreneurial factor, which is found in abundance in Dubai (GEI, 2016; GEM, 2016). A sample study of male and female entrepreneurial intentions and the factors of entrepreneurship are made in the Emirate of Dubai with the help of a sample of aspiring entrepreneurs.

The Emirate of Dubai turns out to be very favourable for women entrepreneurship, because of the policy of the Government of Dubai which gives a good fillip to women entrepreneurs. Far more, with women turning out to be good entrepreneurs, women entrepreneurship may lend much needed stability to the business sector, apart from drawing women into the expanding business sector. In fact, there appears to be a need for all-women business enterprises.

The matter to be investigating in the Emirates of Dubai is whether women stand on with men in respect of entrepreneurial intentions, which occupy a pivotal place in entrepreneurship literature gone through below.

LITERATURE REVIEW

Entrepreneurship derives from human ingenuity. Kirzner and Sautet (2006), assert that entrepreneurship comprises human creativity and the ability to explore profitable ideas that enable market actors to take advantage of new and socially beneficial gains from trade. Schumpeter (1934) curve out an important niche of entrepreneurship by asserting that innovation is the essence of entrepreneurship.

Entrepreneurship is believed to be an important mechanism of economic growth and development (Schumpeter, 1934). Their role is to promote prosperity by creating new jobs (van Stel and Storey, 2004), reducing unemployment (Evans and Leighton, 1989), and increase economic development and growth of a region (Acs et al., 2008). It also increases productivity by bringing new innovation and speed up structural changes by forcing existing business to reform and increasing competition.

Entrepreneurship is held to be outcomes of a number of entrepreneurial factors such as profits, service, and desire to accomplish something, and the general socio-economic environment, as government encouragement, which is conducive for people to establish their own ventures (Acs et al., 1994; Hofstede and McCrae, 2004; Hofstede et al., 2004).

Entrepreneurship is self-employment and giving employment to others, which has its own attraction, especially to women which is held to be a strong drive for entrepreneurs over wage employment or jobs (Ahmed, 2014; Douglas and Shepherd, 2002; Eisenhauer, 1995).

Literature on factors influencing the intent to start a new venture has concentrated on different approaches. In the functional approach (Baumol, 1993) the entrepreneur is described as an innovator and in the psychological approach (McClelland, 1961) the entrepreneur is defined by his or her personality, motivations and behavior. Entrepreneurship involves a long process, from intentions to establishing ventures to running them successfully to making profits, which, among others, has been gone through by Vij and Bedi (2012). The word entrepreneur originates from the French word, ‘entrepreed’ which means to ‘undertake’ and according to Akanni (2010), entrepreneurship is undertaking businesses, which by their very nature are risky undertaking with uncertainties of many kinds, overcoming which is the essence of entrepreneurship.

The structure of the population and labor market made the Emirati population a minority in their own country and needed to define their own roles (Heard-Bey, 2005). The most important factor in selecting Emirate of Dubai is that there have been relatively few studies on entrepreneurs in the UAE.
Self-employment Vs Wage employment

The self-employed are usually classified formally as individuals who earn no regular wage or salary but who derive their income by exercising their profession or business on their own account and at their own risk (Parker, 2009: p11.). The self-employed are a very disparate and diverse group. They are likely to include farmers, craftsmen, shopkeepers, lawyers, doctors, architects, entertainers, sportsmen and women, computer programmers and analysts amongst others (Blanchflower, 2000; Meager and Bates, 2004; Zi-cheng and Wei-guo). The choice of self-employment over wage employment by women in which the two have their debit and credit sides or plus and minus points, people flock to government jobs because of security, dependable income and ‘power’ and facilities. According to Blanchflower (2000), 63 per cent of Americans, 48 per cent of Britons and 49 per cent of Germans declared a preference for self-employment over paid employment.

In Dubai too, government services are greatly manned by women. Yet, self-employment or entrepreneurship has its own charms and multi advantages, notwithstanding many risks and uncertainties for women. Entrepreneurship is no more an exclusive men’s domain. There is a rising and welcome tide of women joining the entrepreneurial stream in view of its many advantages, namely independence, family business, sense of achievement, flexible working hours, providing employment, life-time employment, social and economic contribution, social service and others. The sample is expected to give first-hand information regarding the entrepreneurial intentions, apprehensions, expectations, rewards, problems and prospects of the people in Dubai, which may hold good for the UAE, and the Arab world in general, which is in a renaissance mode.

Entrepreneurial Development

Historically, the concept of entrepreneurship has been associated with economic development with its roots to the industrial revolution (1776 – 1830) following the Adam Smith’s book on development and classic economics, “The Wealth of Nations” (Smith, 1776). However, the credit for advances in entrepreneurial and entrepreneurship as the center of economy and economic development goes to the work of Joseph Schumpeter on ‘creative destruction’ and technological change which was again listed as the pre-eminent driver of the process of sustainable economic growth “which incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one. The process of Creative Destruction is the essential fact about capitalism.” (Schumpeter, 1942: 82). Hence, entrepreneurial development initiative is one of the main ways to drive technological change and catalyze and accelerate sustainable growth.

Literature witnessed that without entrepreneurship development, economy cannot be developed (Johansen et al., 2012; Mohar et al., 2007) because it brings prosperity and economic growth (Hindle and Rushworth, 2000), job creation (Kuip and Verheul, 2004), income, ownership and work effort (Fitzsimmons and Douglas, 2005). From this perspective, entrepreneurial development generates growth, serves as a vehicle for innovation.

Knowledge has become one of the key input and output factors of economic activity. In addition, new technologies are facilitating the process of globalization of economies and societies. In such a context, technological learning (Carayannis, 2003; Carayannis et al., 2006) and knowledge have become crucial factors of economic, social and especially entrepreneurial development, which empowers people and entrepreneurs across the world in taking advantage of opportunities and chances unknown and unexplored until recently.

Gender and Entrepreneurial Development

In the past, entrepreneurship was considered to be a male-dominated sector (Brush,
Women entrepreneurship was traditionally neglected both in society in general and in the social sciences, considering that mainstream research, policies and programmes tend to be ‘men streamed’ (Baker et al., 1997; OECD, 2004).

Evidence of literature from the Western, industrialized countries suggest that male and female entrepreneurs tend to share more similarities than differences (Brush, 1992; Gatewood et al., 2003). Fagenson (1993) found that both males and females had a high value for self-respect, freedom, and accomplishments. Cooper and Artz (1995) found high levels of optimistic expectations regarding their ventures amongst both genders. On similar lines, no statistical differences between male and female rates of entrepreneurship were reported in countries like Thailand, China, and South Africa (Minniti et al., 2005).

In entrepreneurial literature women entrepreneurs are held not only as means of women advancement but also of economic development (Vossenberg, 2013). A part from the natural gender dimensions to any socio-economic problem, anywhere, in the context of development of the developing world, gender oriented entrepreneurial probes are held imperative by Broadbridge (2010), Erogul & McCrohan, (2008), Gallant et al. (2010), Hughes et al. (2012), Kargwell (2012), and Kelley et al. (2011). Gender is important in entrepreneurship in respect of economic development, equity, empowerment, and creativity and self and wage employment, pertaining to women.

According to Minniti and Naudé (2010), the interest in women entrepreneurs goes hand in hand with a general interest in the role of entrepreneurship in economic growth and development by way of adding more entrepreneurial numbers to the business sector. As such, women are often assigned a special role as facilitators of development due to their cautious expenditure patterns (Horrell and Krishnan, 2007). For entrepreneurial development of women to be achieved, a lot of organizations including civil society organizations and NGO’s, charities, religious organizations, knowledge institutes, private companies, social entrepreneurs and public-private partnerships have been involved with vibrant programs to engage women in entrepreneurship promotion. It is a good tiding for general and women economic development.

The debate whether we can actually teach individuals to be entrepreneurs is still very much unsettled. Some argue for the need to distinguish between the ‘art of entrepreneurship’ and the ‘skill of entrepreneurship’, suggesting that some aspects of entrepreneurship can successfully be taught. What of business education? It is to make a successful entrepreneur per se whereas other variables are at play. (Henry and Hill, 2005). More promising in this regard appears to be awareness raising efforts aimed at perceptual variables e.g. empowering the perception of possessing skills (Minniti, 2010). On that note, findings presented by Acs and Szerb (2007) point at the importance of starting enterprise development policies early because the main drivers are ‘perceptual variables’ that take a long time to change.

Entrepreneurial attitudes and intentions

Entrepreneurial attitudes and intentions have been explored from various perspectives. In particular, entrepreneurial intentions among the students in higher education have been studied all over the world. Such works are evident in the seminal contribution of scholars such as Indarti et al. (2010). There has also been geographically related research of Asian countries (Zain et al., 2010), European nations (Linan and Chen, 2009; Turk and Sercuk, 2008), some Middle Eastern States (Zarafshani, 2011), and the Caribbeans (Devonish et al. 2010), and Australia (Schwarz et al., 2009), from the Emirati perspective (El-Sokari et al., 2013; Tipu and Ryan, 2016). These suggest that there are many factors determining entrepreneurial intentions such as demographic profile including gender, age, education and working experience (Indarti et al. 2010; Schwarz et al., 2009), attitudes including attitude towards money and change attitude towards start-ups (Linan and Chen, 2009) and personality traits such as extraversion and conscientiousness (Engle et al., 2010 and Joyce et al., 2010), need for achievement, self-efficacy (Douglas and Shepherd, 2002; Linan et al. 2005; Ryan et al., 2011; Zeffane, 2013a) national culture and economic development, (Linan and Fernandez-Serrano, 2014).
In addition, researchers have expanded examination of entrepreneurial intentions to include investigating business environmental factors such as structural support, capital access, information access, and social networks (Indarti et al., 2010) and contextual factors such as perceived support, perceived barriers and close support (Devonish et al., 2009). These findings are separated into psychological and behavioural approaches of entrepreneurial intentions.

According to Ajzen (1991), intention is identified to have the ability to predict both individual behaviour and organizational outcomes such as survival, development and growth. As asserted by Krueger and Brazeal (1994), intentions prove to be the best predictors of individual behaviours, particularly when the behaviour is rare, hard to observe or involves unpredictable time lags. Consistent with these observations, Bird (1988) identifies the establishment of new ventures and the creation of new value in existing ones to the outcomes of entrepreneurial intentions. She defines entrepreneurial intention as a state of mind directing a person’s attention (and therefore experience and action) toward a specific object (goal), or a path, in order to achieve something (mean). Tubbs and Ekeberg (1991) state that an intention can be described as a cognitive representation of both the objective (and goal) one is striving for and the action plan one intends to use to reach that objective. At the center of both definitions is the role of the objectives (or goals) and their ability to foster and influence intentions. Shane and Venkataraman (2000) support the view that the two objectives (or goals) that mainly characterize entrepreneurship are the establishment of new independent firms, and the creation of new value in existing ones. In line with this view, entrepreneurial intention can be defined as a cognitive representation of the actions to be implemented by individuals to either establish new independent ventures or to create new value within existing companies.

It is certainly true that entrepreneurial ideas begin with inspiration; though intentions are needed in order for them to get manifest consistent with this approach, Krueger et al. (2000) argue that individuals do not start a business as a reflex, but they do it intentionally. Shane & Venkataraman (2000), posit that the presence and accessibility of an apparently lucrative opportunity is a necessary precursor for the creation of a new organization, and an important consideration in the entrepreneurial process, the ability to raise capital, expand a business and so on, and the attitudes to independent decision-making, risk, and hard work constitute the bedrock of entrepreneurial intentions.

A number of studies dealing with environmental aspects have increased since the early 1990s. Ahl (2002), for instance, shows that the intention of starting up and running a business can be influenced by environmental factors, technological advancements, E-Commerce and World Wide Web, international opportunities and government supportive for new businesses.

Eisenhauer (1995) noted that the motivation to behave entrepreneurially is explained by the utility-maximizing theory of entrepreneurial behaviour. The notion that the “individual is motivated to become self-employed (or otherwise behave entrepreneurially) because that course of action promises the greatest psychic utility” (Douglas and Shepherd, 2002: 83). Underlying this motivation is the strength of the individual’s abilities (human capital) and his/her attitudes to elements provided by entrepreneurship, which include autonomy, risk, work effort, income, and net perquisites and his/her intentions such as desires and risk taking (Miller, 1983). In general, individuals desiring more income, more independence, and more net perquisites are more likely to want to engage in entrepreneurial behaviour. Likewise, Douglas and Shepherd (2000) elucidate that an individual with a higher tolerance for risk and less aversion to work effort should be expected to be more likely to want to engage in entrepreneurial pursuits. The means to pursue an opportunity is that combination of resources required to successfully create a new organization, and includes financial and human capital.

Following the above, our concern here is confined to the individual’s human capital. Specifically, we are concerned with the human capital required to pursue an entrepreneurial venture and we consider entrepreneurial human capital in terms of an individual’s entrepreneurial abilities and entrepreneurial attitudes. Entrepreneurial human capital is composed of general human capital (for example, age or
business experience), social capital, and entrepreneurship-specific human capital such as the abilities to perceive opportunities, raise capital, expand a business and so on, and the attitudes to independent decision-making, risk, and hard work.

Once we have acknowledged the relevance of entrepreneurial intention, we might ask, what are the factors that trigger and enact individual attitude and intention?

**Factors influencing entrepreneurial attitudes and intentions**

Using the theory of planned behaviour, which is widely accepted theoretical approach with strong emphasize on attitude and intentional behavioural relation, the factors identified in the literature review are decomposed for this study. The theory comprises of five specific domains: attitude towards behaviour, subjective norms, perceived behavioural control, intention to behave, and behaviour. Whereas attitude towards behaviour relates to perceptions of personal desirability of performing the behaviour, subjective norms are concerned with the approval (or disapproval) that important referent individuals (or groups) in relation to the enactment of a given behaviour. The perceived behavioural component posits that control can be seen as the person’s belief related to how easy (or difficult) the enactment of the behaviour is likely to be. Intentions, however, indicates how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behaviour (Ajzen, 1991).

Attitude towards entrepreneurial behaviour involves individuals’ desire to create value through the engagement in innovative, proactive and risky actions (Miller, 1983). Consideration is therefore given to uncertainty of income until the business gets established, risk of losing entire investment, high levels of stress and discouragement until the business established (Douglas and Shepherd, 2002). With regards to subjective norms, prudently, we look at entrepreneurs’ perception of approval by important referent individuals in relation to their involvement in the creation of new value through the engagement in innovative, proactive and risky actions. Therefore, consideration if given to the creation of one’s own destiny, making a difference in society (Ritsila and Tervo, 2002) opportunity to reach the full potential, the joy of having fun doing work and desire to lead an independent life style. In terms of perceived behaviour, contemplation is given to contribute to society and be recognized for your efforts, the role of parents/family members influence on career choice and self-employment, the role of peers believe in that the candidate could be successful entrepreneur, previous perception for advisor/teaching faculty think that I should pursue a career in self-employment, qualification tailored to be an entrepreneur, tacit knowledge and skills about entrepreneurship and the entrepreneur’s personality. Lastly, the intended behavioural relation to reap impressive profits, avoidance of long hours and hard work, the desire to lead a lower quality of life until the business gets established and to be completely responsibility for one’s own life. A guiding work for research in the area of entrepreneurial intentions appears to be one by van Gelderen et al. (2008).

**Arab, UAE and Dubai Studies**

The Global Entrepreneurship Monitor (2009) report categorized the UAE as an innovation-driven economy, where the focus of growth “lies more on dynamics and simulating new combinations of products and market”. Even among the 20 innovation-driven economies in the world (Germany, Japan, UK, USA etc.), the entrepreneurial capability, and intention was the highest in the UAE, coupled with the lowest fear of failure. In this context, the significance and importance of individual entrepreneurial activity become very crucial in UAE.

Gallant et al. (2010) investigated the attitudes of students in Dubai towards entrepreneurship and their opinions about the role that Universities could play in fostering their interest towards entrepreneurship. In one of our previous studies (Varadarajan et al., 2010), the young female students in UAE showed more positive attitude and motivation towards entrepreneurship than their counterparts across the globe. Ryan et al. (2011) found that motivation was an important factor in explaining the entrepreneurial success, especially among Emirati women. Madichie and Gallant (2012) found that encouraging changes in the
government policies and the socio cultural environment has resulted in an increase of Emirati women entrepreneurs.

The Arab world has been witnessing a dramatic growth of interest in women entrepreneurs, given their growing numbers. It is being increasingly considered, though not uniformly accepted, that women’s economic security is vital for the sustainability of their own lives, that of their families, and their empowerment (Itani et al. 2011), and family is felt to play a key role in the success of an entrepreneurial business operated by an Emirati businesswoman (Jabeen et al., 2015). Cautious optimism (Sidani, 2016), cultural identity and convergence on western attitudes and beliefs in the United Arab Emirates (Amponsah et al., 2016; Hills & Atkins, 2013), Zeffane (2013b) are said to facilitate the entrepreneurial prospects for the young men and women in the UAE.

According to Shaikha Lubna Al Qasimi, UAE Minister of State for Tolerance, gender equality has become a reality in the country, as UAE is going beyond from empowering women to empowering society through women. UAE women currently account for two-thirds of the labour force with around 21,000 women controlling wealth amounting to over Dh12billion (US$ 3.26 billion) in the country. In addition, Emirati women are on the path of financial independence and prosperity because of the way they have exploited the full potential of entrepreneurship to their advantage by creating jobs for themselves and others (Al Qasimi, 2016).

Ahmed’s works (2014, 2015a, 2015b) regarding the UAE and Dubai are noteworthy for bringing out the flourishing of entrepreneurship in the United Arab Emirates, because of all-out encouragement to young men and women entrepreneurs, especially the latter, In Dubai, he has found so many encouraging and facilitating of factors of entrepreneurship, such as world-class or even more than world-class infrastructure facilities, top banking etc., and a large expatriate population.

The UAE is lucky in having an excellent political leadership which is visionary, enterprise promoting and very considerate of interests of women and their entry into-entrepreneurship. This is being taken by no less than His Excellency, Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of UAE and Supreme Ruler of Dubai (Al-Maktoum, 2013). It is no exaggeration to call Dubai an entrepreneurial emirate or state. In contrast to the above, the present study is an exploration of gender differences in the entrepreneurial intentions in the Emirate of Dubai, extending the frontiers of gender differences in entrepreneurial intentions. It is a sample study of the problem regarding the global business hub of Dubai, in the dynamic Arab world amidst the extensive Arab lands.

METHODOLOGY

Despite the increasing attention towards entrepreneurship from both managers and policy makers, there is scant availability of data sources on the foundation of entrepreneurship especially in the emerging markets. Aside census data, Government of Dubai, Dubai Statistics Centre, Government of Dubai, Gender Statistics, UAE Ministry of Economy Annual Reports, Global Entrepreneurship Monitor Reports, that target entrepreneurship specifically, especially outside the US, either at firm or individual levels.

As against the above, this study is a grass-roots study of the problem through primary data collected from a sample of entrepreneurial aspirations in the Emirate of Dubai during year 2013-14 with the help of a questionnaire made and carries out the statistical exercises.

Sample

The research employs a survey-based methodology in which 476 people with an interest or current motives in business and entrepreneurship from the Emirate of Dubai in the United Arab Emirates were selected in order to shed some light on the entrepreneurial intentions. Data was collected using a structured questionnaire from the respondents over a period of ten months in the year 2013-14. A total of 550
questionnaires were distributed, 500 were received and after a scrutiny only 476 questionnaires were found complete in all respects.

The respondents were chosen using the ‘convenience’ sampling method to get the respondents easily; they were selected on the basis of their availability and readiness to participate in the study. A combination of face-to-face interviews and self-administration technique was adopted for the data collection. The convenience sampling is used because it meets the goals of the study of having a sample of aspiring entrepreneurs, besides being economical and less time consuming for the individual researchers.

The five point Likert scale was used in the questionnaire and the respondents were asked to record their answers by marking from 1 (Strongly Disagree) to 5 (Strongly Agree). In the first part of the questionnaire, questions related to the background information were asked, while in the second part 25 questions pertaining to the entrepreneurial factors and intention were listed. All the factors were further classified into various factors along the lines of opportunity, profitability, risk taking, responsibility and supportive, personal and environmental, entrepreneurial intentions. The Cronbach’s alpha widely used to test the internal consistency of a scale. Hence, it was applied in this study and the alpha was found 0.848 for all the variables. Any value of this measure above 0.75 indicates a good reliability of the instruments.

Data Analysis and Results

As per the background information of the respondents from (Table 4), the percentage of respondents in range from <21 to > 31 years (476, 100%), with 31 and above (158, 33.2%) as the modal age group, followed by 21 to 25 (142, 29.8%), 26 to 30 (120, 25.2%) and <21 (56, 11.8%). Catch them young appears to be the right entrepreneurship policy, the right age being 21 plus years.

Gender-wise, males and females are 302 and 174, respectively, accounting for 63.4% and 36.6%, females greatly lagging behind the males by about 27% as great majority of Dubai population comprises of expatriates, a majority of whom left their families in their home countries and works in Dubai and live in labour camps. When however, only the native population is taken, there is not likely to such a gender gap. Entrepreneurship appears to be a predominantly a male destination and greatly a male domain.

<table>
<thead>
<tr>
<th>Characteristic of the respondents</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (in years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 21</td>
<td>56</td>
<td>11.8</td>
</tr>
<tr>
<td>21 - 25</td>
<td>142</td>
<td>29.8</td>
</tr>
<tr>
<td>26 - 30</td>
<td>120</td>
<td>25.2</td>
</tr>
<tr>
<td>31 and above</td>
<td>158</td>
<td>33.2</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>302</td>
<td>63.4</td>
</tr>
<tr>
<td>Female</td>
<td>174</td>
<td>36.6</td>
</tr>
<tr>
<td><strong>Nationality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emirati</td>
<td>287</td>
<td>60.3</td>
</tr>
<tr>
<td>Arab Expatriate</td>
<td>101</td>
<td>21.2</td>
</tr>
<tr>
<td>Other Expatriate</td>
<td>88</td>
<td>18.5</td>
</tr>
<tr>
<td><strong>Total number of respondents</strong></td>
<td>476</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Nationality-wise, Emirate of Dubai account for (287, 60.3%), Arab expatriates (101, 21.2%), and other expatriates (88, 18.5%), bringing to light the cosmopolitan nature of entrepreneurship in Dubai, famous as a liberal, cosmopolitan state, yet, the Dubai is predominate the entrepreneurship field by (6:4), ratio will rise with more Dubai women aspiring to join the entrepreneurial field.
Variables

From the variables’ means and standard deviations (Table 5), “Opportunity” is found as the most important entrepreneurial determinant with a high mean value (4.22) and a low standard deviation value (0.509), with mean values of “Social” (4.17) and “Profitability” (4.14) respectively.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td>Opportunity</td>
<td>4.22</td>
</tr>
<tr>
<td>b)</td>
<td>Profitability</td>
<td>4.14</td>
</tr>
<tr>
<td>c)</td>
<td>Social</td>
<td>4.17</td>
</tr>
<tr>
<td>d)</td>
<td>Risk taking</td>
<td>3.82</td>
</tr>
<tr>
<td>e)</td>
<td>Responsibility</td>
<td>3.89</td>
</tr>
<tr>
<td>f)</td>
<td>Supportive</td>
<td>3.94</td>
</tr>
<tr>
<td>g)</td>
<td>Personal</td>
<td>4.05</td>
</tr>
<tr>
<td>h)</td>
<td>Environmental</td>
<td>4.06</td>
</tr>
<tr>
<td>i)</td>
<td>Entrepreneurial Intention</td>
<td>2.11</td>
</tr>
</tbody>
</table>

“Personal” and “Environmental” factors are also found to be significant with respect to means (4.05) and (4.06) respectively. The mean value for the remaining factors, “Risk taking”, “Responsibility”, and “Supportive” were in the range of (3.82 to 3.94). Entrepreneurial intention score low in Mean (2.11), and high in SD (0.829). The need is for intention to get backed by entrepreneurial factors.

No wonder, it is the overall economic and business environment that is promotive of ‘will’ or ‘intention’ for entrepreneurship, the environment which is made of a number of factors, as shown in (Table 5) or even more.

Correlation Analysis

It is apparent from (Table 6) of all the variables, Opportunity, Profitability, Social, Risk taking, Responsibility, Supportive, Personal, and Environmental factors have a significant relationship with each other. However, entrepreneurial intention is found to be associated with only risk taking and supportive factors, enforcing the age-old apprehensions in entrepreneurial ambitions, aspirations and intentions.

Entrepreneurship is a risky work, which keeps many people quick away from it, people who prefers secure wage salary employment. Again, men have no higher intention levels. Thus a set of factors go into intentions and entrepreneurship.
The implication of it is that entrepreneurship is a multi-factor function, which has a significant policy implication of providing an entrepreneurial friendly business, environment and ease of doing business, in which respects Dubai is a model Entrepreneurship Emirate, owing to a proactive and promotional government and enlightened and visionary leadership at the head of it. It’s among other things an entrepreneurial age. The Emirate of Dubai is a big and grand entrepreneur itself, owing, for example, a world class Airlines, which appear to be ever in the air.

**Gender Values and Variations**

The mean value of each variable in (Table 7) by gender is observed to be almost same for the male and female respondents or only marginally different. Even then, in 7 out of the 10 variables, through marginally, females specially have higher aspirational and intentional levels; gender values indicate an upsurge in women’s entrepreneurship. Entrepreneurship, in other words, appears to be gender neutral or slightly in favour of women, young educated and upward mobile women inclined towards ‘independent free’, achieving entrepreneurship.

**Table 7**

<table>
<thead>
<tr>
<th></th>
<th>Gender Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Opportunity</td>
<td>4.22</td>
<td>4.23</td>
<td>4.22</td>
</tr>
<tr>
<td>b) Profitability</td>
<td>4.16</td>
<td>4.11</td>
<td>4.14</td>
</tr>
<tr>
<td>c) Social</td>
<td>4.13</td>
<td>4.25</td>
<td>4.17</td>
</tr>
<tr>
<td>d) Risk taking</td>
<td>3.81</td>
<td>3.83</td>
<td>3.82</td>
</tr>
<tr>
<td>e) Responsibility</td>
<td>3.88</td>
<td>3.91</td>
<td>3.89</td>
</tr>
<tr>
<td>f) Supportive</td>
<td>3.91</td>
<td>3.99</td>
<td>3.94</td>
</tr>
<tr>
<td>g) Personal</td>
<td>4.09</td>
<td>3.98</td>
<td>4.05</td>
</tr>
<tr>
<td>h) Environmental</td>
<td>4.04</td>
<td>4.09</td>
<td>4.06</td>
</tr>
<tr>
<td>i) Entrepreneurial Intention</td>
<td>2.09</td>
<td>2.13</td>
<td>2.11</td>
</tr>
<tr>
<td>Total number of respondents</td>
<td>302</td>
<td>174</td>
<td>476</td>
</tr>
</tbody>
</table>

On the whole, gender-wise aspirational levels bring out higher aspirational level of the aspiring women entrepreneurs in Dubai, which has an inspiring entrepreneurial environment for women.
Independent t-test

It is evident from (Table 8) that Sig. value is greater than 0.05 for all the factors except the social factor, which indicates that the variability by gender does not vary much or it is almost the same for both males and females. On the other side of the table it can be observed that p-value is more than 0.05 for all the factors, by which it can be concluded that there is no statistically significant difference in the mean value by gender for any factor.

Table 8

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for equality of means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t-test for Equality of Means</td>
<td>Lower</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Opportunity</td>
<td>1.009</td>
<td>.316</td>
</tr>
<tr>
<td>Profitability</td>
<td>.348</td>
<td>.556</td>
</tr>
<tr>
<td>Social</td>
<td>5.918</td>
<td>.015</td>
</tr>
<tr>
<td>Risk taking</td>
<td>1.144</td>
<td>.285</td>
</tr>
<tr>
<td>Responsibility</td>
<td>1.867</td>
<td>.172</td>
</tr>
<tr>
<td>Supportive</td>
<td>.064</td>
<td>.800</td>
</tr>
<tr>
<td>Personal</td>
<td>.101</td>
<td>.751</td>
</tr>
<tr>
<td>Environmental</td>
<td>.919</td>
<td>.338</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>2.622</td>
<td>.106</td>
</tr>
</tbody>
</table>

In sum, the sample data, which is well tested for reliability, estimates a factor entrepreneurial function for the business Emirates of Dubai, for women and men, with similar intentions. Thus, the women in Dubai appear not to face any 'glass ceiling' in entrepreneurial aspirations and facilities, which is a credit to the small, dynamic and progressive, and liberal Emirate of Dubai. It's no exaggeration that the Emirate of Dubai comes in as 'fair to women' Emirate, which is a good standard to judge any Emirate.

Further Research and Limitations

This exercise is not the ultimate in entrepreneurship studies even in Dubai, as it is limited by the limitations of its 'sample size' (476) entrepreneurial intentions, which should be an opening for studies, region, and the transformation of intentions into the reality of ventures.

A policy of translating 'intentions' into ventures, a good deal of socio-economic transformation, and social welfare and public good, in the Emirate of Dubai can be expected lines of research in Dubai, as well as in other Emirate of UAE, and the UAE itself.

CONCLUSIONS AND IMPLICATIONS

This study draws up on the extant literature on entrepreneurial intentions and adopts the theory of planned behaviour and explores with the help of a sample entrepreneurial behaviour of entrepreneurs in the Emirates of Dubai, UAE made up of women (174) and men (302). First, entrepreneurship is found to extend to different age-groups of women and men from less than 20 years to greater than 30 years.
Entrepreneurship mostly pertains to young men and women in the Emirate of Dubai. The study finds there is no gender specific difference between men and women entrepreneurial factors, numbering (9), opportunity, profitability, social, risk taking, responsibility, supportive, personal environmental and entrepreneurial intentions in entrepreneurial moves. Women appear having more entrepreneurial intentions even though below in entrepreneurship numbers. It is a good tiding to the future of young men and women in the Emirate, who are emerging as good as good drivers of the economic development of their small principality, which stands quite tall globally.

Women entrepreneurship in Dubai owes a great deal to the supportive role of the Government of Dubai, especially, His Highness Sheikh Mohammed bin Rashid al Maktoum, the Supreme Ruler of Dubai and also the Prime Minister and Vice-President of the United Arab Emirates (UAE). He is an exceptional and visionary leader who had made Dubai the World’s entrepreneurship capital and a home for the nationals of 198 nations. Dubai status as an emerging market also makes it an ideal place for entrepreneurship, with a constant influx of new residents from every corner of the world. It is fairy-tale city state, surpasses all entrepreneurship imaginations for women and men entrepreneurs. There is gender neutrality of entrepreneurship in Dubai. Still, entrepreneurship has its proverbial association with risk, the apprehensions of it being somewhat more in women entrepreneur.

The study contributes to the body of literature in three ways, first, in terms of adding to the paucity of literature on entrepreneurial intentions in the emerging Dubai market economy, which is found to be a model of entrepreneurship, public and private. Second, in identifying factors that influence venture creations, and third, delimiting the factors of promotions in creating and promoting entrepreneurship in Dubai, which has a 'holistic' approach to entrepreneurship as a model of development. The Arab Nations can learn a lesson or two from this modest exercise for opening and widening the winded of Entrepreneurship their pace of economic development, and drawing upon their women power.

The policy implication of the study is that it is for government and other agencies like banks to provide entrepreneurial facilities for more men and women to take-up the entrepreneurship route of self-employment, wealth and employment creation and self and national and international development. That, entrepreneurship is a multipurpose tool a means of business and economic development, creativity, self-employment, women’s advancement, and poverty alleviation. In Dubai, it is all this and more, women empowerment.

Not the least, in the study, the Emirate of Dubai and its young women and men emerge as entrepreneurship captains.

Reference


[38] Expo 2020 Dubai UAE (2016), Opportunity | Theme | Expo 2020 Dubai, UAE.
   a) Available at: http://expo2020dubai.ae/content/expo2020.aspx [Accessed April 16, 2016].


Bridging the Gender Inequalities with the concept of Social Entrepreneurship: A Comprehensive Study of SADHNA ORGANISATION

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Abstract

Since Globalization and Liberalization, the world has been witnessing rapid growth and a very high level of competition. In this race, the developing nations are striking hardest to prove their stand. Unfortunately, the competitive spirit deprived them from the rational understanding of what is extreme essential for their all round growth.

Globally, women are denied their basic human rights. The article, at its length, focuses on importance of gender equality especially for developing nations and narrates the benefits of women taking part in the process of development. It further focuses upon importance of SOCIAL ENTERPRISES and how they play a crucial role in bringing gender equality. For the purpose of gaining more facts about how social enterprises play a crucial role in bringing equality and contributes also to economic growth, the article discusses about a social enterprise named SADHNA ORGANISATION which is from one amongst the very traditional states of India i.e., Rajasthan. Rajasthan which is known for its magnificent palaces, flourishing tourism, rich culture, velour stories and natural beauty, unfortunately also reveals a culture of female feticide, female infanticide, high dowry prevalence, honor killing etc.

The article analyses the fact that development of such areas which are so deeply soaked in social problems cannot take place until such problems are solved socially. The author, by this study, tried to conclude whether really the concept of social entrepreneurship helpful for developing nations and especially the nations with a rigid traditional background.

Keywords: Gender Inequality, Sustainable Development, Social Enterprises, Change Agents, Social Entrepreneurship, Women Empowerment.

Introduction

"Where men and women have equal rights, societies prosper.
Equality for women is progress for all”.

-UN SECRETARY- GENERAL BAN KI-MOON

Gender equality is understood to mean that the “rights, responsibilities and opportunities of individual will not depend on whether they are born male or female”, opines Lisa and Malinka (2012). Similarly, Brigitte (2010) defines it as a situation where “... all human beings are free to develop their personal abilities and make choices without any limitation set by strict gender roles; that the different aspirations and needs women and men are considered, valued and favoured equally”. Alvarez and Michelle (2013) revealed that there are number of studies which convey that sustainable development, which is need of the hour, is impossible without gender equality. It is also asserted that gender equality is both a human rights issue and a precondition for, and indicator of, sustainable development. A report to the United Nations Commission on Sustainable Development (2008) provided that women account for 70% of the world’s poor because of unequal economic opportunities. Endalchew Bayeh (2016) provided that if one seeks sustainable people- cultured development within a country, there is a need to have a fair

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representation of women across different levels of decision-making. Their equal representation is indispensable to obtaining all-inclusive decisions. Various studies suggest that to bring about sustainable development in any country, the people should fully utilize the women labour force for economic growth, educate and train them to enhance their productivity and contribution. According to Shamshad Akhtar (2017) specifically, Social Enterprises can be used to empower women through creating jobs, through offering opportunities for propelling women’s entrepreneurship and leadership, and through the delivery of affordable products and services to address constraints women and girls. Through transformative measures, social enterprises can be used as a model for the empowerment of women. A gender responsive entrepreneurial ecosystem needs to be created-an eco system that enables women entrepreneurs to access the resources and support needed to develop their businesses, scale up and make them sustainable. This must include improving access to finance, technology, innovation and good governance. Social enterprises harness trade, investment and business activity towards social and environmental objectives, and are being recognized as critical drivers of innovation for sustainable development. Furthermore, by setting up and managing a business, women can achieve economic independence, overcome poverty though asset building and improve their well being as well as for their families and communities. Gender equality also plays a crucial role in economic growth of a nation as whole. However, many developing countries over look this due to various factors like prevalence of male dominance, male-oriented development projects and exclusion of women from policy making and planning. Women even lack access to proper training, financial support and awareness about technology. Hence, it can be drawn out that without equal inclusion of women in the activities of development no fruitful benefits can be derived.

**United Nations Perspective**

The Sustainable Development Goals (SDGs) provided by United Nations are a collection of 17 global goals. They are also known as “Transforming our world: The 2030 agenda for Sustainable Development” or 2030 Agenda. The goals were developed to replace the Millennium Development Goals (MDGs) which came to an end in 2015. The 5th goal under the above mentioned 17 goals is Gender Equality. According to United Nations, “gender equality is not only a fundamental right, but a necessary foundation for a peaceful, prosperous and sustainable world”. Globally, women are at greater risk of poverty, exploitation, violence etc. They are not treated equally and hence are deprived of education and employment. It is the prospective of United Nations that providing women and girls with equal access to education, health care, decent work, and representation in political and economic decision making processes will fuel sustainable economies and positively benefit society. No development could actually result unless equal efforts are devoted from everyone. Women constitute almost half of the portion of population and if their potential remains unused and not contributed towards growth, the nation can never succeed. The UN people are of opinion that even though Sustainable Development Goals 5th Goal is a standalone goal but other Sustainable Development goals can only be achieved if the needs of women receive the same attention as the needs of men. Females should be viewed not only as beneficiaries of change, but as agents of change.

**Gender Inequality and India**

"Yatra naryastu pujyante ramante tatra devta.....” is a famous shloka from Manusmriti, an ancient legal text, which means where women are honored, divinity blossoms there.

This shloka depicts picture of a country where women are worshipped as goddesses. The land which gave birth to Indira Nehru Gandhi, Sarojini Naidu, Kalpana Chawla and many more like them still the population census of 2011 reveals that there are only 940 females per 1000 males. Forbes considered Indian among ‘the five most dangerous countries to be a women’, for reasons like female feticide, female infanticide, human trafficking. The present study laid its emphasis on Rajasthan, the largest state by area. The state which is known for its magnificent palaces, flourishing tourism, rich culture, velour stories and natural beauty, unfortunately also reveals a culture of female feticide, female infanticide, high dowry prevalence, honor killing etc. the state counts only 888 females per 1000 males according to Indian Population Census 2011. Although India stands firm among the list of developing nations but the question
is whether development is possible despite terrorizing half of a nation's population. Even after sending a space probe (Mangalyan) in a very first attempt, the country still need its government to feed into people's mind to save daughters and educate daughters (Beti Bachao Beti Padhao). Under such circumstances, social enterprises can be relied to ease the problem. By recognizing the need, the government of India has initiated and instituted various policy measures to promote social enterprises. A few of India’s efforts at promoting entrepreneurship and innovation are Start Up India, Atal Innovation Mission (AIM), Support to Training And Employment Programme for Women (STEP), Jan- Dhan- Adhar- Mobile (JAM), Digital India, Stand- Up India, National Skill Development Mission etc. According to Tripda Rawal (2018) in recent times, some start ups/new ventures has developed keeping social interest in mind and providing sustainable solutions to social issues and earning their profits as well. Social entrepreneurship takes cares of the deprived section of market. In Indian context, social enterprises have played an extraordinary role even in history. They addressed particular social problem and majority of them achieved victory over that. Wherever the societal gaps are wide and societal inequalities are persistent, social entrepreneurship becomes very relevant. One of the most important needs of social enterprises is towards bottom of the pyramid. This bottom of the pyramid referred to the people who have minimalistic income, but high acceptance for social innovations. Social entrepreneurship is the only way to fulfill the needs and demands for bottom of the pyramid.

**History of Social Enterprises in India**

The Indian history has witnessed the miracles when people took social issues on equal priority as of profit making. Following are few examples which prove that social entrepreneurship is something best suitable for traditional culture and development.

**Land Gift Movement and Amul Dairy Cooperative (1950):**

the seeds of social entrepreneurship were first sown by shri Vinoba Bhave who facilitated the redistribution of over seven million acres of land to India’s poor and landless. He founded and led the Land Gift Movement in South India. The motive behind this was to create a moral ambience that put pressure on the rich to assist the deprived. Similarly, Dr. Verghese Kurien spurred ‘the white revolution’ by transforming the Amul Dairy Cooperation. Amul became the first business model which comprised of low income farmers. The farmers formed a professionally managed and privately owned supply chain which lifted them out of poverty and provided a stand in world market.

**Fabindia’s Community Owned Business Model (1960):**

John Bissell founded Fabindia and provided a direct connectivity to more than 80,000 artisans to the urban market. Fabindia made its artisans as their shareholders which benefited them with a regular income along with dividends from the company’s growth.

**Sustainable Business Models (1995-96):**

during that period, two sustainable business models grabbed attention of all. First was SELCO Solar, established by Harish Hande. It was a social enterprise which provided low-cost products, servicing, and finance through Grameen Banks and Cooperative Societies. Second was BASIX, conceptualized by Vijay Mahajan. It was an institution devoted to promoting livelihood for the poor on a sustainable basis. Realizing the need of social solutions, SELCO and BASIX both provided sustainable business models for bringing rural services to poor households.

**India’s First Social Venture Capital Firm (1997):**

Grassroots Innovations Augmentation Network was India’s first non-profit social venture capital fund. It initiated the extensive network of social enterprise enablers. It provided a helping hand which joined many further.
India’s First Impact Investment (2001):

India saw its first impact investment when Acumen Fund invested in Arvind Eye Hospital. In the same year Vineet Rai established AAVISHKAR- India’s first for-profit impact fund. The presence of the Acumen Fund and Aavishkar in India spurred the demand for early-stage investments in for-profit organizations with a social impact.

India’s First Social Enterprise Related Academic Course (2007):

with the growing interest of people towards the concept of Social Enterprises, Tata Institute of Social Sciences (Mumbai) introduced the first course with social business focus. The course titled ‘Masters in Social Entrepreneurship’ addressed the need appropriately. This move created a viable and sanctioned pathway for a new generation of socially-motivated entrepreneurs and leaders.

Sankalp Summit (2009):

it was the motive of sankalp summit to bring together all different players in the social sector. It was Sankalp Forum which hosted the first social enterprise-focused gathering in Mumbai. Including social entrepreneurs, investors, funders and enablers, this community in India has now evolved into a network of over 400 stakeholders.

Companies Act, 2013 (2013):

the companies act enforced a mandatory obligation on corporate to spend at least 2% of their net profits on Corporate Social Responsibility activities. This enhanced the ideology to pay back to society from where such corporate derive their progress.

The social impact space in India has evolved considerably in the past decades and continues to evolve still.

SADHNA Organisation

Introduction

SADHNA a unit of Seva mandir was started in 1988 under income augmentation project with women groups in rural, tribal and urban slums belts of Udaipur region, and enduring through various stages of non-viability, functional effectiveness and finally impressive growth both in terms of production and sales, it has today grown into a self sufficient and independent organization. This program started with a small group of 15 women who were trained in the skill of appliqué (embroidery), Sadhna’s total artisan membership has increased to 639. The challenge, therefore, was to find kind of something that could be mass based and yet provide adequate returns. So they have chosen Appliqué and Tanka Embroidery, with the idea of building the basic stitching traditions. Major fact to chose it was something women could do while staying at home, and time being. The journey, in the starting years was very difficult but in spite of it, they continue doing this program, and after that this program managed to overcome with problems and turn into a self sustaining unit. Sadhna was registered as a Mutual Benefit Trust on December, 2004 and the year 2005-2006 was the first full year of working. All the artisans are also member owners of Sadhna. Sadhna’s main aim lies in being able to create cluster of artisans, to enable more and more women attain socio-economic empowerment. Sadhna has made a lot of headway on social dimension, and has certainly learnt a lot about the challenges of strengthening & empowering women, using a commercial enterprise as a medium.

Design is the most vital part of any producer group’s identity and success. In its approach to design, Sadhna has attempted to blend innovation with continuity. Sadhna has been developing new designs from last two decades which helped in brand building and creating an identity for Sadhna products. Under this
activity, Sadhna do organize design development workshop every year. Designers from different parts of
country take part in this workshop and trained to artisans. This year design intervention and product
development was carried out across all the categories i.e. Home Furnishing, Garments, Accessories, and
Thread Jewelry. The focus was on developing more complex design. Sadhna’s product can be found at Feb
India which is India’s largest private platform for products that are made from traditional techniques, skills
and hand-based processes, not only in Feb India but at so many larger groups Sadhna’s artisans product
can be seen. Sadhna has partnership with Olsen group, Germany. Sadhna is getting its identity in European
markets too. TRIFED (Tribal Cooperative Marketing Development Federation on India Ltd.) sponsored
workshop with Sadhna, Focus of this workshop was on improving skill levels and design development
especially for tribal women.

The most encouraging aspects, of course, are the changes in women’s lives, their growing
involvement and influence in their local communities. There are stories a plenty of women now being able
to help their families move out of vulnerability, investing in their children’s education, and gaining the
respect of their husband and relatives they also play an active role in decision making bodies of Sadhna,
through their representation in management committee and Board of Trustees. Women are also breaking
caste and religious boundaries, and building string horizontal solidarities. One of the earliest locations,
Delwara, the women are now leading the efforts towards improving their neighborhoods (sanitation, water,
solid waste management, etc.) as also becoming active and articulate participants in panchayat processes.
Sadhna has exceeded most expectations, and they credit wholly to women’s energy & commitment, and
hard work and dedication of each and every staff member. All women connected with this program got
encouragement and inspiration through the chief executive Ms. Leela Vijayvergia to make these dream
reality. Many women members are also part of community level activities, such as setting up local self
governance systems for the betterment of their area and villages. These women hold important positions
at such forums and the community attributes this holistic empowerment to their learning and confidence
building within Sadhna.

Sadhna is looking for strengthen its export market. This year Sadhna did well in the international
sales. During the coming year, Sadhna will work on establishing more contacts with overseas buyers, as
also developing product ranges which will appeal to foreign markets.their main effort will be to maintain a
professional attitude toward the orders especially in terms of quality & time.

On social perspective Sadhna has increased its work areas, increased numbers of artisan too.
Sadhna has put its great effort for women welfare, through which women got inspired and connected with
it, and self dependency developed in them.

Transition to a Social Enterprise

SADHNA has its roots in Seva Mandir, a leading development organization based in Udaipur
(Rajasthan). It was registered as an independent Mutual Benefit Trust in 2004 to ensure SADHNA’s
transformation into a self sufficient, small- scale unit for production of handicrafted products owned by its
artisan members. Having started with 15 women, sadhna today prides itself being a 714 member family.
Sadhna's artisans create exquisite and exceptional textile products with their signature handwork and all
products sold by them hold the authentic ‘CraftMark’ certification.

Impact of SADHNA’s Work

SADHNA’s work has catalyzed a noticeable change in the lives of its artisans. Who once were not
even exposed to their own village, today, are confident enough to make their own decisions within the
family as well as in different socio- political groups. Economic empowerment has also created a market
difference in their awareness towards education, health care, social status and family life.

Conclusion and Suggestions

The onset of globalization and liberalization has paved the routes of success and development
internationally but unfortunately some social problems remained unaddressed. In the era where the world
leaders have a common urge towards adoption of sustainable development and upliftment of human rights, we are ignoring that Mother Earth has created us all equal.

Developing nations are entering world market by breaking trade barriers and it is no doubt resulting in increased GDP but on the contrary the same nations possess data of gender discrimination, illiteracy, unemployment on a high scale. Female population is often less represented in entrepreneurial activities. Various studies revealed that women in leadership position are more likely to point to a need to address inequality because they are more likely to have experienced it themselves. Many researchers also emphasized that "due to women's biology, their social and cultural gender roles, and culturally constructed subordination, they face disadvantageous conditions which accumulate and intensify the already numerous effects of poverty.

In such situation we need more social solutions like Social Enterprises. The already existing enterprises must be encouraged and the following few suggestions may also help to achieve growth with equality:

i. The government policies of developing nations should focus on providing power to institutions devoted in finding affordable social solutions to most prevalent social problems,

ii. More encouragement should be provided to Social Enterprises to concentrate on providing trainings at higher education level and access to students regarding working of such institutions,

iii. While keeping the globalised model of business, the country must try some international collaborations for their existing social enterprises,

iv. Some rewards and other benefits must be conferred towards organizations working in or for any particular section of society,

v. The public-private collaboration may also prove to be beneficiary. The government’s policies and corporate strategies may also help in building a strong room for organizations like SADHNA.

References


Religious Entrepreneurs’ Innovative Attitudes in Chinese Private Enterprises after 2008 Financial Crisis

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Abstract
Many innovative entrepreneurs practice religious beliefs. However, previous studies find a negative relation between religion and innovation. Based on Chinese private enterprise survey in 2009 and 2007, we find that the firms with religious entrepreneurs invest more in R&D in 2009, because the firms with irreligious entrepreneurs invest less in R&D in the risk/uncertain environments. It is still robust after controlling for endogenous entrepreneurs’ belief choices. Our findings suggest religious entrepreneurs have more stable attitudes toward innovation due to their strong religious beliefs and psychological powers, especially in risk/uncertain environments. We also find that the composition structure of Chinese company has changed after 2008 financial crisis makes. It suggests those firms with innovative religious entrepreneurs more likely survive the crisis.

Keywords: Religious Entrepreneurs, Innovation, R&D, Financial Crisis, Religious Beliefs

Many innovative entrepreneurs practice religious beliefs, such as Bill Gates, Mark Zuckerberg, Steve Jobs, Jack Ma. Bill Gates once said: “it makes sense to believe in God, but exactly what decision in your life you make differently because of it, I don't know.” However, in theory, little is known about why there are so many innovative entrepreneurs have religious beliefs, for individual's religiosity can be associated with less favorable views of innovation (Bénabou, Ticchi and Vindigni 2015). Is the combination of innovative spirit and religion beliefs a coincidence? This article will examine the relation between religious entrepreneurs and corporate innovation.

Here, we define “religious entrepreneurs” as an entrepreneur who claims she or he believes in a certain religion, such as Christianity, Catholicism, Islam, Buddhism, Taoism, etc. The atheism is taken as the irreligious entrepreneurs in this paper. Additionally, we also try to explore religious entrepreneurs’ real motivations behind their attitudes toward corporate innovation.

Prior literature shows a negative relation between religiosity and corporate R&D due to risk aversion (Hilary and Hui, 2009; Jiang, Jiang, and Kim, 2015), we argue that religious entrepreneurs may have distinctive behavioral traits in high-risk/uncertain environments, because only the individuals with higher ability and risk-taking would become an entrepreneur (Van Praag and Cramer, 2001); hence, those religious entrepreneurs are more likely to be religious because of the recognition of religious philosophy (Stark, Iannaccone, and Finke, 1996) or the goodness of psychological powers (Emmons, 1999). For example, Bill Gates regards reducing world inequity as a kind of religious belief; Jack Ma gets psychological powers from Tai'chi. Accordingly, we expect relatively religious entrepreneurs to have stable attitudes toward corporate innovation in high-risk/uncertain environments due to their higher risk tolerances.

To test this conjecture, we examine the relation between religious entrepreneurs and the levels of R&D investment intensity based on Chinese private enterprises survey in 2010 and 2008 which reflect the status at the end of last year. The survey obtains a large sample of entrepreneurs and ask entrepreneurs’...
religion beliefs directly. Most of the respondents in the survey are enterprises’ founders. Their personal values have more profound impacts on corporate culture (Schein 1995). Moreover, in 2009, the firms not only face higher risks and uncertainty, but also hold more cash in order to survive the crisis. Therefore, we also have a suitable opportunity to predict religious entrepreneurs’ innovative attitudes in the future, for high-risks/uncertain environments and holding more cash are to be normal in the future (Bates, Kahle and Stulz 2009).

Further, in order to compare religious entrepreneurs’ innovative attitudes in high-risk/uncertain environments to those in medium-risk situations, we test the relation between religious entrepreneurs and the levels of R&D investments in 2007. Owing to the limitation of the data, we have no opportunity to do the tests for a longer time.

In particular, we choose R&D investment levels as the insight on entrepreneurs’ attitudes toward corporate innovation, because R&D investments are more in line with entrepreneurs’ inner demands and the most important innovation expenditures (Hall 2010); they are the potential drivers of combining internal and external innovation activities (Cassiman and Veugelers 2006), and also different from the external innovation which usually reflects entrepreneurs’ reactions to the outside pressure (Sevilir and Tian 2012; He and Tian 2013).

On the other hand, taking religious entrepreneurs as the perspective on corporate innovation has some advantages of avoiding alternative explanations. First, religious believers usually with conservative characteristic in their psychologies tend to have risk averse behaviors (Miller and Hoffmann 1995; Hilary and Hui 2009), so the effect of “overconfidence” (Bernardo and Welch 2001; Goel and Thakor 2008; Galasso and Simcoe 2011; Hirshleifer, Low and Teoh 2012; Tang, Li and Yang 2015) may be controlled at the most extent. Second, we have no needs to consider corporate over-investments in innovation (Bebchuk and Stole 1993; Seybert 2010) because religious beliefs, as a set of social norms, reduce entrepreneurs’ opportunistic behaviors and deter undesirable corporate behaviors (Angelidis and Ibrahim 2004; Conory and Emerson 2004; Parboteeha, Hoegl and Cullen 2008; McGuire, Omer and Sharp 2011; Du 2013, 2014; Du, Jian, Lai, Du and Pei, 2014; Gao, Hsu and Li, 2014).

In addition, taking private enterprises as our research subject also has some advantages. Firstly, private enterprises are less transparent to outsiders, they have more time to do the things they want to do (Ferreira, Manso and Silva 2014), they have no monitoring pressures of the institutional investors (Aghion, Van Reenen and Zingales 2013) or the attention of analysts (Benner and Ranganathan 2012). Secondly, since the majority of the private enterprises are manipulated by founders or owners, we have no need to consider the influence of top managers’ incentive arrangements on innovative investments (Ryan and Wiggins 2002; Cheng 2004; Manso 2011; Ederer and Manso 2013; Baranchuk, Kieschnick and Moussawi 2014; Chen, Cheng and Wang 2015). At last, the private enterprises are not affected by the state ownership, they have no need to pursue conservative investments due to government policies, such as maximize social stability or employment (Boubakri, Cosset and Saffar 2013); or support corporate innovation as a result of accepting public R&D subsidies (Branstetter and Sakakibara 2002; Jaffe and Le 2015; Wei, Xie, and Zhang 2017).

We find that in 2009, the levels of R&D investment in the firms with religious entrepreneurs are significantly higher; but there is a negative relation between religious entrepreneurs and the levels of R&D investment in 2007. They are still robust after controlling for the selection bias by using the number of religious sites in each province as an instrument for religion beliefs in two-stage regression.

In our sample, the characteristics of the firms in 2009 and 2007 are distinct from one another. The firms in the survey are selected randomly across China. Accordingly, the composition structure of Chinese companies is changed after 2008 financial crisis. For example, the profitability of the firms in 2009 is higher; more entrepreneurs claim they believe in a religion in 2009.
We conjecture that after 2008 financial crisis, in the face of risks and uncertainty, the entrepreneurs with religion beliefs have more stable innovative behaviors, they may regard innovation as taking responsibility, instead of taking risks. Our evidences also coordinate the conflicts between the positive functions of religion on economic growth (Weber 2002; Guiso, Sapienza and Zingales 2003; Becker and Woessmann 2009) and the negative relation between religion and corporate innovation (Hilary and Hui 2009; Jiang et al. 2015). It indicates that in highly uncertain era of information economy, religious entrepreneurs may be more positive toward innovation due to their strong beliefs and psychological powers. This effect can be related to higher cognitive abilities. It is more valuable for corporate innovation with the developments of science and technology.

This paper is organized as follows. We describe the theoretical underpinnings of our work and the hypothesis development in Section II, and then our research design in Section III. In Section IV, we present our sample selection and data description. In Section V we discuss the regression results and our findings. Section VI concludes.

Theory and Hypothesis Development

Upper Echelons Theory

According to upper echelons theory, entrepreneurs’ characteristics affect information dissemination via their personalities, experiences, and values; and then impact corporate culture and strategic choices; furthermore, those effects are affected by managerial discretion, executive job demands (Hambrick and Mason, 1984; Hambrick, 2007) and environmental conditions (Tang, Li and Yang, 2015). Many studies examine that theory from the perspectives of personalities and experiences. For example, Hirshleifer et al. (2012) find that overconfident managers are better innovators; and this effect may be strengthened by managerial discretion (Li and Tang, 2010). Some studies provide the evidences that negative experiences of the entrepreneurs, such as economic depression and famine, can reduce entrepreneurs’ risk taking (Malmendier, Tate and Yan, 2011; Dittmar and Duchin, 2015; Feng and Johansson, 2016). However, Bernile, Bhagwat, and Rau (2017) argues that the experiences of the natural disasters without extremely negative consequences may lead the firms to behave more aggressively.

To our knowledge, existing literature scarcely examines upper echelon theory from the perspective of entrepreneurs’ values, only several studies provide the evidences of a negative relation between religion and corporate innovation (Hilary and Hui 2009; Jiang et al. 2015). However, those evidences either have their limitation, such as Hilary and Hui (2009) do not identify the decision maker directly, or contradicts the prior findings that religion is a driver to economic growth (Weber 2002; Barro and McCleary, 2003; Guiso, Sapienza and Zingales 2003; Becker and Woessmann 2009).

Religion Beliefs

Considering the diverse definitions of religion (Zinnbauer, Pargament and Scott 1999), in this paper, we define “religion belief“ as the philosophy written or contained in religious documents, especially those that determine what are valuable. For example, Buddhism, eastern religion, not only stresses “five skandhas are empty”, but also advocates “saving all sentient beings from suffering”; Catholicism or Calvinism, western religion, think “this world was evil...the prescribed solution for the one was retirement from the world into the spiritual calm of the monastery, it was incumbent on the other to conquer the temptations of this world by remarking it through ceaseless, unflinching toil” (Merton, 1938). All of these philosophies have two opposing worldviews.

In our paper, we mainly focus on the positive aspect of religion beliefs. Just as Weber (2002) mention that a pietistic person generally has “the ability of mental concentration, the absolutely essential feeling of obligation to one’s job”, as well as “a cool self-control”, which may enormously increase corporate performance.
Our concept of “religion belief” does not include the constructs of “superstition” or “theology”, since with societies acquiring a more rational comprehension of the world, religion may be displaced by philosophy from the primitive stage which described as “theology” (Stark et al. 1996); and the continuous improvement of education also leads to individuals’ rational comprehension to religious philosophy and reduce individuals’ superstitions (Mocan and Pogorelova 2014). More importantly, “superstition” and “theology” have close connections with lower cognitive ability and are more related to individual greater risk aversions (Cassio, Ruth, Huffman & Sunde 2010; Saroglou, Delpierre and Dernelle, 2004; Bénabou et al. 2015).

Religion Beliefs and Innovation

As an important expression of cultural values (Guiso, Sapienza, and Zingales 2006; Becker and Woessmann 2009), religion has a natural connection with innovation, since innovation is driven by science, and roots deeply in culture (Merton 1938). At the firm level, higher ability to recognize and assimilate the value of information, combine and exchange knowledge, is critical to corporate innovation (Cohen and Levinthal 1990; Smith, Collins and Clark 2005). And that ability is also essential for the comprehension to religious philosophy. Based on this intrinsic link, we conjecture that religious entrepreneurs would impact corporate innovation positively due to their rational comprehension to religious philosophy. After all, innovation means “leap into the unknown”, it is full of uncertainty, it implies an acceptance of human responsibility (Drucker 2011).

Further, innovation is more and more an important determinant of corporate growth (Franko 1989). Either capital or labor more likely flow away from the non-innovative firms towards the innovative firms (Kogan, Papanikolaou, Seru & Stoffman 2017). These trends of the economic developments also push the religious entrepreneurs to take on the innovative responsibilities due to their religion beliefs, such as “saving all sentient beings from suffering”, in order to maintain their firms to survive in the uncertain environments.

Psychological Powers and Innovation

Religion has positive impact on psychological capacities (Emmons 1999), and the entrepreneurs who have psychological resources are more innovative due to their higher ability to integrate thoughts and ideas (Luthans, Youssef and Rawski 2011). We think that religion beliefs/philosophy may be the backbones for the entrepreneurs in the face of risks and uncertainty. They more likely undertake risky innovative activities because of their higher efficacy, strong will power, or better resilience in dealing with difficult challenges (Sweetman, Luthans, Avey & Luthans 2011).

Furthermore, religion can improve individual's ability to withstand major social stressors (Stark, et al., 1996), which should include the perceived environmental uncertainty in innovation (Bodensteiner, Gerloff, and Quick 1989). Moreover, believing in religion can reduce individual perceptions of the likelihood of risky behaviors' potential negative outcomes which in turn may increase religious people's willingness to take risks (Chan, Tong and Tan 2014), though that effect stronger only exists at the first time of being reminded of God (Kupor, Laurin and Levav 2015).

In summary, it is reasonable to expect the entrepreneurs with religion beliefs are associated with innovative corporate culture in uncertain environments.

RESEARCH DESIGN

Sample Selection

To test whether religious entrepreneurs affect corporate innovative investments, especially in uncertain environments, we choose Chinese private enterprise survey in 2008 and 2010 as our data bases,
which reflect the status at the end of last year. The surveys are conducted by four Chinese government sectors. The 2008 financial crisis makes the risk environment in 2009 has more risks and uncertainty than that in 2007. We delete observations with negative entrepreneur’s share holdings and with negative equities. The financial firms are excluded for their special operating rules. We also drop the observations with financial losses or missing values because the mechanisms of R&D investments are different between the profitable firms and the firms with losses. The final sample consists of 3,736 firms from 31 provinces in three regions of China, including eastern, western, and central regions.

Regression Model

To test the relations between religious entrepreneurs and the levels of corporate R&D investments, we use the Tobit estimates of the following specification, which control for previously identified determinants of corporate R&D investments and the factors related to whether an entrepreneur believes in a religion. We use the following equation (1) to test our hypothesis:

\[
R&D_{\text{SALE}} = \alpha + \beta_1 \text{RELIGION} + \beta_2 \text{LNAGE} + \beta_3 \text{FEMALE} + \beta_4 \text{EDUATIO} + \beta_5 \text{LARGEOWNR} + \beta_6 \text{CASH} + \beta_7 \text{LNFIRMAGE} + \beta_8 \text{LNSALES} + \beta_9 \text{ROE} + \beta_{10} \cdot \text{HIGHTECH} + \sum \eta_i \cdot \text{REGION} + \varepsilon
\]

where R&D\_SALE is the measure of corporate R&D investments scaled by sales. RELIGION takes a value 1 if an entrepreneur claims she or he believes in religion, and 0 otherwise. We include the proxies for entrepreneurs’ personal characteristics and firm characteristics. These variables are defined in Appendix A. The personal characteristics include age, gender, and entrepreneur’s educational attainments. Those demographic characteristics, as the proxies for the individual cognition, can be used as indicators of the entrepreneurs’ propensity to adopt innovations (Hambrick and Mason 1984; Young, Charns and Shortell 2001). With advancing age, entrepreneurs become less flexible in adapting to new ideas and practices (Young et al. 2001), while religion become more important for the older adults, for example, maintaining their health (Agli, Baiily and Ferrand 2015). As for gender, women prefer less risk (Croson and Gneezy 2009), they are more religious than men (Hoffmann 2009). Differences in educational attainments have a complicated relation with entrepreneurs’ innovative creativity (Baumol 2005), and education has a negative effect on fervent religion (Glaeser and Sacerdote 2008) and a positive effect on understanding religious philosophy (Stark, et al. 1996).

The firm characteristics include firm age, firm size (LNSALES), the profitability (ROE) and so on. LNFIRMAGE (the natural logarithm of the year number of the company that has become the private enterprises) is included because firms may experience organizational inertia; the entrepreneurs have less possible to adopt change as they age (Hannan and Freeman, 1984; Tushman, Virany and Romanelli, 1985). The innovation activities of small and large corporations respond to considerably different technological and economic environments (Acs and Audretsch, 1988). Therefore, we include LNSALES as a proxy variable for firm size to be controlled. Moreover, firm size is another determinant of organizational inertia (Hambrick and Mason, 1984; Young, et al., 2001; Audia and Greve, 2006), and innovation diminishes with increasing resource slack (Nohria and Gulati 1996). ROE is included because profitability declines may lead to R&D intensity increased (Hundley, Jacobson and Park 1996) and low performance is a motivation to innovation (Greve 1998). Ownership is closely linked with innovation (Tribo, Berrone and Surroca 2007), so we also

---

5 The government sectors include: (1) the United Front Work Department of the Communist Party of China Central Committee, (2) the All-China Federation of Industry and Commerce, (3) the State Administration for Industry and Commerce of the People’s Republic of China, and (4) the Private Economy Research Institute of China. The survey is conducted once every two years. The questionnaires are sent to the entrepreneurs in Chinese private enterprises, such as large shareholders, top managers and the actual controllers.
include a measure of the percentage of shares held by the entrepreneurs (LARGEOWNR), the measure equal 1 if entrepreneurs’ shareholding is larger than 50%, 0 otherwise. Innovation in private enterprise more depends on internal funds (Ferreira et al. 2014), we therefore utilize corporate cash holding (CASH) as a proxy for corporate financial constraints (Kaplan and Zingales 1997).

We include “HIGHTECH” as another proxy for the risky environments of the firms (Bodensteiner, et al. 1989; Olausson and Berggren 2010) in base model. HIGHTECH equals 1 if a firm is in high tech industries and 0 otherwise. We also include the proxy variables for the regions; the classification of the regions is based on China’s National Bureau of Statistics. Each region dummy variable equals 1 if a firm is in that region and 0 otherwise. They are represented by “REGION” in the tables of regression results.

All continuous variables are winsorized at the 1% level in both tails. The standard errors are clustered at the industry level6 to obtain robust variance estimates, for the impact of 2008 financial crisis on the enterprises has obvious industry characteristics. This cluster is necessary to observe the relation between religious entrepreneurs and corporate innovation in 2009. Besides, we believe that cross-sectional analysis is suitable, as corporate R&D investments are often smoothed so as to retain corporate valuable employees and their knowledge (Hall 2010).

Further, in order to identify the effect of religion beliefs on corporate innovation, we use the number of religious sites in each province as the instrument variable (IV) for religion beliefs of the entrepreneurs of the firms in each province to calculate the inverse Mills ratio (INVMR) and include it in all our tests in order to control for the possible endogeneity in the estimations7, because whether an entrepreneur believes in a religion may be an endogenous decision for their corporate actual situations and the factors that determine the entrepreneurs’ choices can also influence corporate innovation. The information of the religious sites is from Chinese Research Data Services Platform (CNRDS).

Because Eastern religions are the dominant religion in China, we also do the same tests to compare the innovative behaviors in the firms managed by Eastern religious entrepreneurs with those managed by nonreligious entrepreneurs and use the number of eastern religious sites in each province as the instrument variable (IV) for eastern religion beliefs.

Descriptive Statistics

Table 1 shows the descriptive statistics of the variables used in our main analysis. The average level of R&D_SALE is 0.012. There are less than half of the samples with R&D_SALE above this level. About 16.19% entrepreneurs in our sample claim they are religious. The entrepreneurs’ average age is more than 45 years old, and 13.81% entrepreneurs are female. The average education level is 3.433, which means a stage between high school/special secondary education and Junior College. The ownership structure of our sample firms is concentrated. More than 69.43% entrepreneurs have absolute control over their business. Most of Chinese private enterprises are young. Our sample firms’ average age is only more than seven years. The mean cash holding level is 0.535. That is the ratio between cash to equity. The main reasons of the higher level of CASH include that the operating risk in Chinese private enterprises is higher than that of Chinese state owner enterprises. Moreover, 2009 is a year with more risks, many firms hold more cash to survive.

\[ \text{RELIGION} = \beta_0 + \beta_1 \text{LNRELIGION_SITES} + \beta_2 \text{LNAGE} + \beta_3 \text{FEMALE} + \beta_4 \text{EDUCATION} + \beta_5 \text{LARGEOWNR} + \beta_6 \text{CASH} + \beta_7 \text{LNFIRMAGE} + \beta_8 \text{LNSALES} + \beta_9 \text{ROE} + \beta_{10} \text{HIGHTECH} + \beta_{11} \text{REGION} + \varepsilon \]

In this regression, LNRELIGION_SITES is the natural logarithm of the amounts of religion sites in each province. Using the results of this first-stage regression, we compute the inverse Mills ratio.

---

6 Based on the classification of National Bureau of Statistics of China, the sample firms are divided into 18 industries, specific information in APPENDIX C.

7 For this purpose, we first run a Probit regression for predicting whether an entrepreneur believes in a religion. The model is: RELIGION = \( \beta_0 + \beta_1 \text{LNRELIGION_SITES} + \beta_2 \text{LNAGE} + \beta_3 \text{FEMALE} + \beta_4 \text{EDUCATION} + \beta_5 \text{LARGEOWNR} + \beta_6 \text{CASH} + \beta_7 \text{LNFIRMAGE} + \beta_8 \text{LNSALES} + \beta_9 \text{ROE} + \beta_{10} \text{HIGHTECH} + \beta_{11} \text{REGION} + \varepsilon \). In this regression, LNRELIGION_SITES is the natural logarithm of the amounts of religion sites in each province. Using the results of this first-stage regression, we compute the inverse Mills ratio.
**TABLE 1 Descriptive Statistics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std</th>
<th>Min</th>
<th>P25</th>
<th>Median</th>
<th>P75</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D_SALE</td>
<td>0.012</td>
<td>0.038</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.006</td>
<td>0.296</td>
</tr>
<tr>
<td>RELIGION</td>
<td>0.162</td>
<td>0.368</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>LNAGE</td>
<td>3.795</td>
<td>0.189</td>
<td>3.258</td>
<td>3.664</td>
<td>3.807</td>
<td>3.932</td>
<td>4.190</td>
</tr>
<tr>
<td>FEMALE</td>
<td>0.138</td>
<td>0.345</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>3.433</td>
<td>1.205</td>
<td>1.000</td>
<td>3.000</td>
<td>4.000</td>
<td>4.000</td>
<td>6.000</td>
</tr>
<tr>
<td>LARGEOWNR</td>
<td>0.694</td>
<td>0.461</td>
<td>0.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>CASH</td>
<td>0.535</td>
<td>0.348</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>LNFIRMAGE</td>
<td>1.798</td>
<td>0.745</td>
<td>0.000</td>
<td>1.386</td>
<td>1.946</td>
<td>2.398</td>
<td>2.996</td>
</tr>
<tr>
<td>ROE</td>
<td>0.312</td>
<td>0.704</td>
<td>-0.453</td>
<td>0.028</td>
<td>0.100</td>
<td>0.290</td>
<td>5.000</td>
</tr>
</tbody>
</table>

Table 2 shows the univariate comparison between 2007 and 2009. The characteristics of the firms in these two years are different in many aspects. The firms in 2009 have lower levels of R&D investment intensity, more cash holdings and higher profitability. More entrepreneurs claim they believe in religion in 2009. Further, the differences in firm characteristics are distinct in the firms with religious entrepreneurs and those with nonreligious entrepreneurs. In the firms with religious entrepreneurs, the median levels of R&D investment intensity in 2009 are higher than those in 2007; in contrast, in the firms with nonreligious entrepreneurs, they are lower. Female religious entrepreneurs in 2009 are fewer than those in 2007. In the firms with nonreligious entrepreneurs, the average sales are relatively smaller and the profitability are relatively higher in 2009; and these statuses do not exist in the firms with religious entrepreneurs.

**TABLE 2 Univariate Comparison between 2007 and 2009**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>Median</td>
<td>Std</td>
<td>Mean</td>
</tr>
<tr>
<td>Panel A. Final Sample</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D_SALE</td>
<td>0.013</td>
<td>0.000</td>
<td>0.041</td>
</tr>
<tr>
<td>RELIGION</td>
<td>0.145</td>
<td>0.000</td>
<td>0.353</td>
</tr>
<tr>
<td>LNAGE</td>
<td>3.781</td>
<td>3.784</td>
<td>0.190</td>
</tr>
<tr>
<td>FEMALE</td>
<td>0.145</td>
<td>0.000</td>
<td>0.353</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>3.043</td>
<td>3.000</td>
<td>1.197</td>
</tr>
<tr>
<td>LARGEOWNR</td>
<td>0.702</td>
<td>1.000</td>
<td>0.458</td>
</tr>
<tr>
<td>CASH</td>
<td>0.487</td>
<td>0.400</td>
<td>0.335</td>
</tr>
<tr>
<td>LNFIRMAGE</td>
<td>1.766</td>
<td>1.946</td>
<td>0.758</td>
</tr>
<tr>
<td>LNSALES</td>
<td>15.910</td>
<td>15.890</td>
<td>2.133</td>
</tr>
<tr>
<td>ROE</td>
<td>0.296</td>
<td>0.100</td>
<td>0.705</td>
</tr>
<tr>
<td>Panel B. Firms with Religious Entrepreneurs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D_SALE</td>
<td>0.009</td>
<td>0.000</td>
<td>0.029</td>
</tr>
<tr>
<td>LNAGE</td>
<td>3.773</td>
<td>3.807</td>
<td>0.193</td>
</tr>
<tr>
<td>FEMALE</td>
<td>0.179</td>
<td>0.000</td>
<td>0.384</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>3.187</td>
<td>3.000</td>
<td>1.228</td>
</tr>
<tr>
<td>LARGEOWNR</td>
<td>0.713</td>
<td>1.000</td>
<td>0.453</td>
</tr>
<tr>
<td>CASH</td>
<td>0.471</td>
<td>0.400</td>
<td>0.342</td>
</tr>
<tr>
<td>LNFIRMAGE</td>
<td>1.824</td>
<td>1.946</td>
<td>0.733</td>
</tr>
<tr>
<td>LNSALES</td>
<td>16.060</td>
<td>15.990</td>
<td>2.228</td>
</tr>
<tr>
<td>ROE</td>
<td>0.326</td>
<td>0.100</td>
<td>0.756</td>
</tr>
<tr>
<td>Panel C. Firms with Non-Religious Entrepreneurs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D_SALE</td>
<td>0.014</td>
<td>0.000</td>
<td>0.042</td>
</tr>
<tr>
<td>LNAGE</td>
<td>3.782</td>
<td>3.784</td>
<td>0.190</td>
</tr>
<tr>
<td>FEMALE</td>
<td>0.140</td>
<td>0.000</td>
<td>0.347</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>3.019</td>
<td>3.000</td>
<td>1.191</td>
</tr>
</tbody>
</table>
Empirical Analysis

Religious Entrepreneurs and R&D Investment Intensity in Uncertain Environments

Our first goal is to assess the relationship between religious entrepreneurs and corporate R&D investment intensity in the environment with high risks and uncertainty. Toward that end, we use Tobit estimated regression of equation (1) to test that relation in 2009, because 2009 is a year after the outbreak of the financial crisis and full of risks and uncertainty. Further, in order to control select bias, we use Heckman (1979) two-stage approach to estimate choice model in the first stage and add the bias correction variable in the form of inverse Mill ratio (INVMR) in the second stage. The statistical results are presented in Table 5.

We find that, in 2009, the levels of R&D investment intensity related to (eastern) religious entrepreneurs are higher across different specifications, as indicated by the significantly positive estimated coefficient of RELIGION. Combined with the descript statistics in Table 3 that, in 2009, the firms with religious entrepreneurs have higher levels of R&D investment intensity and the firms with nonreligious entrepreneurs have lower levels of R&D investment intensity than those in 2007, we conjecture that in the face of uncertainty, the surviving religious entrepreneurs are more willing to innovate, but the willingness of the surviving nonreligious entrepreneurs to innovate is greatly diminished. It is in line with the effect of religion beliefs that religious entrepreneurs have the spiritual backbones to innovate due to their beliefs and/or psychological powers.

In addition, in 2009, the estimated coefficients of EDUCATION and LNAGE are significantly positive, suggesting that high educational or older entrepreneurs are more active in the face of high risks and uncertainty. These evidences may relate to high educational entrepreneurs' higher cognitive ability (Falch and Sandgren Massih 2011), and the effect of older entrepreneurs' experiences (Barker and Mueller 2002; Bernile, et al., 2017). Consistent with prior evidence (Shefer and Frenkel 2005), large firms tend to invest more in R&D, as indicated by the significantly positive estimated coefficient of LNSALES. The significantly positive coefficient of ROE reveals a positive relation between corporate profitability and corporate innovation (Golec and Vernon 2006). The estimated coefficient of HIGHTECH is significantly positive, consistent with the view that high-tech firms tend to be more innovative.

TABLE 5 Religious Entrepreneurs and R&D investments in Uncertain Environments

<table>
<thead>
<tr>
<th>Dependent Variable=R&amp;D_SALES</th>
<th>RELIGION</th>
<th>EASTERN RELIGION</th>
</tr>
</thead>
<tbody>
<tr>
<td>RISKYEAR=1 (2009)</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>RELIGION</td>
<td>0.006**</td>
<td>0.186**</td>
</tr>
<tr>
<td>(2.04)</td>
<td>(2.14)</td>
<td>(1.67)</td>
</tr>
<tr>
<td>LNAGE</td>
<td>0.046***</td>
<td>0.053***</td>
</tr>
<tr>
<td>(4.03)</td>
<td>(4.04)</td>
<td>(3.84)</td>
</tr>
<tr>
<td>FEMALE</td>
<td>0.003</td>
<td>0.001</td>
</tr>
<tr>
<td>(0.52)</td>
<td>(0.15)</td>
<td>(0.83)</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>0.010***</td>
<td>0.010***</td>
</tr>
<tr>
<td>(6.19)</td>
<td>(6.33)</td>
<td>(5.46)</td>
</tr>
<tr>
<td>LARGEOWNR</td>
<td>0.002</td>
<td>-0.001</td>
</tr>
<tr>
<td>(0.56)</td>
<td>(-0.14)</td>
<td>(0.61)</td>
</tr>
<tr>
<td>CASH</td>
<td>-0.006</td>
<td>-0.005</td>
</tr>
<tr>
<td>(-1.09)</td>
<td>(-0.91)</td>
<td>(-1.06)</td>
</tr>
</tbody>
</table>
Our second goal is to identify whether religious entrepreneurs’ innovative attitudes change with uncertain environments. Toward that goal, we include an additional interrelation between RELIGION and the proxy RISKYEAR for the uncertain environment in our base model. RISKYEAR is a dummy variable of 2009. It is a year after the outbreak of 2008 financial crisis, and full of risks and uncertainty. The statistical results are presented in Table 6.

The results in Table 6 show that the estimated coefficients of RELIGION×RISKYEAR are positive, and statistically significant at the 1% level. Combined with the estimated coefficients of RELIGION, these results show that religious entrepreneurs’ innovative attitudes would change from negative to positive in the uncertain environments. It is also robust after including the inverse Mill ratio (INVMR) for endogenous entrepreneurs’ religion choice as an additional control variable. These evidences are also consistent with the effect of religion beliefs and/or psychological capital effect.

TABLE 6 Religious Entrepreneurs, Uncertain Environments, and R&D Investments

<table>
<thead>
<tr>
<th>Dependent Variable=R&amp;D_SALES</th>
<th>RELIGION</th>
<th>EASTERN RELIGION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>RELIGION</td>
<td>-0.015***</td>
<td>0.125**</td>
</tr>
<tr>
<td></td>
<td>(-4.25)</td>
<td>(2.21)</td>
</tr>
<tr>
<td>RELIGION×RISKYEAR</td>
<td><strong>0.019</strong>*</td>
<td><strong>0.018</strong>*</td>
</tr>
<tr>
<td></td>
<td>(3.45)</td>
<td>(3.38)</td>
</tr>
<tr>
<td>LNAGE</td>
<td>0.025</td>
<td>0.029</td>
</tr>
<tr>
<td></td>
<td>(1.39)</td>
<td>(1.56)</td>
</tr>
<tr>
<td>FEMALE</td>
<td>-0.004</td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td>(-0.69)</td>
<td>(-0.79)</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>-0.002</td>
<td>-0.002</td>
</tr>
<tr>
<td></td>
<td>(-1.09)</td>
<td>(-1.26)</td>
</tr>
<tr>
<td>LARGEOWNR</td>
<td>-0.001</td>
<td>-0.003</td>
</tr>
<tr>
<td></td>
<td>(-0.67)</td>
<td>(-1.38)</td>
</tr>
<tr>
<td>CASH</td>
<td>-0.004</td>
<td>-0.003</td>
</tr>
<tr>
<td></td>
<td>(-0.72)</td>
<td>(-0.58)</td>
</tr>
<tr>
<td>LNFIRMAGE</td>
<td>0.007***</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>(6.39)</td>
<td>(1.32)</td>
</tr>
<tr>
<td>LNSALES</td>
<td>0.004***</td>
<td>0.004***</td>
</tr>
<tr>
<td></td>
<td>(3.23)</td>
<td>(3.12)</td>
</tr>
</tbody>
</table>
Because innovation makes more sense for the high-tech industries, we further do the same tests in the high-tech industries in 2009. The statistical results are presented in Table 7 and Table 8.

The results in Table 7 show that in high-tech industries in 2009, the levels of R&D investment intensity related to religious entrepreneurs are higher across different specifications, as indicated by the significantly positive estimated coefficient of RELIGION in column (1) and (2). It is consistent with the results in Table 5 (the uncertain year of 2009), but the significance of the coefficient of RELIGION decreases after controlling for the endogenous entrepreneurs’ beliefs. Combining with the evidences that in high-tech industries, the R&D investment intensity in the firms with nonreligious entrepreneurs in 2009 is significant lower than that in 2007, but the R&D investment intensity has no significant difference between 2009 and 2007 in the firms with religious entrepreneurs (the statistic results not listed in our paper), we think that the effect of religion beliefs may be not the main reason for the innovation attitudes of religious entrepreneurs in high-tech industries in an uncertain environment; perhaps it is psychological power keep religious entrepreneurs’ innovative willingness stable, while the innovative willingness of nonreligious entrepreneurs is more volatility.

In Table 7, the coefficient on our proxy for eastern religious entrepreneurs is significant (see column (3)), but not significant after controlling for the endogenous entrepreneurs’ beliefs (see column (4)). These results further confirm our conjecture: in high-tech industries, when religious entrepreneurs (especially eastern religious entrepreneurs) face uncertainty, religion beliefs are not a necessary support for their innovative willingness.

### Table 7 Religious Entrepreneurs and R&D Investments in High-Tech Industries in Uncertain Environments

<table>
<thead>
<tr>
<th>Dependent Variable=R&amp;D_SALES</th>
<th>RELIGION</th>
<th>EASTERN RELIGION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ROE</strong></td>
<td>0.005***</td>
<td>0.004***</td>
</tr>
<tr>
<td>(3.26)</td>
<td>(2.92)</td>
<td>(3.73)</td>
</tr>
<tr>
<td><strong>HIGHTECH</strong></td>
<td>0.031***</td>
<td>0.031***</td>
</tr>
<tr>
<td>(3.76)</td>
<td>(3.72)</td>
<td>(3.80)</td>
</tr>
<tr>
<td><strong>REGION</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>RISKYEAR</strong></td>
<td>-0.016***</td>
<td>-0.017***</td>
</tr>
<tr>
<td>(-4.36)</td>
<td>(-4.44)</td>
<td>(-4.17)</td>
</tr>
<tr>
<td><strong>INVMR</strong></td>
<td>-0.079**</td>
<td>-0.067**</td>
</tr>
<tr>
<td>(-2.42)</td>
<td>(-2.16)</td>
<td>(-2.16)</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>-0.210**</td>
<td>-0.230**</td>
</tr>
<tr>
<td>(-2.13)</td>
<td>(-2.24)</td>
<td>(-2.10)</td>
</tr>
<tr>
<td><strong>Sigma</strong></td>
<td>0.068***</td>
<td>0.069***</td>
</tr>
<tr>
<td>(7.72)</td>
<td>(7.81)</td>
<td>(7.82)</td>
</tr>
<tr>
<td>N</td>
<td>3736</td>
<td>3640</td>
</tr>
<tr>
<td>Pseudo $R^2$</td>
<td>-0.212</td>
<td>-0.213</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent Variable=R&amp;D_SALES</th>
<th>RELIGION</th>
<th>EASTERN RELIGION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ROE</strong></td>
<td>0.004***</td>
<td>0.004***</td>
</tr>
<tr>
<td>(3.54)</td>
<td>(3.54)</td>
<td>(3.54)</td>
</tr>
<tr>
<td><strong>HIGHTECH</strong></td>
<td>0.030***</td>
<td>0.030***</td>
</tr>
<tr>
<td>(3.53)</td>
<td>(3.53)</td>
<td>(3.53)</td>
</tr>
<tr>
<td><strong>REGION</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>RISKYEAR</strong></td>
<td>-0.017***</td>
<td>-0.017***</td>
</tr>
<tr>
<td>(-4.25)</td>
<td>(-4.25)</td>
<td>(-4.25)</td>
</tr>
<tr>
<td><strong>INVMR</strong></td>
<td>-0.067**</td>
<td>-0.067**</td>
</tr>
<tr>
<td>(-2.16)</td>
<td>(-2.16)</td>
<td>(-2.16)</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>-0.230**</td>
<td>-0.230**</td>
</tr>
<tr>
<td>(-2.19)</td>
<td>(-2.19)</td>
<td>(-2.19)</td>
</tr>
<tr>
<td><strong>Sigma</strong></td>
<td>0.069***</td>
<td>0.069***</td>
</tr>
<tr>
<td>(7.82)</td>
<td>(7.82)</td>
<td>(7.82)</td>
</tr>
<tr>
<td>N</td>
<td>3736</td>
<td>3736</td>
</tr>
<tr>
<td>Pseudo $R^2$</td>
<td>-0.220</td>
<td>-0.220</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent Variable=R&amp;D_SALES</th>
<th>RELIGION</th>
<th>EASTERN RELIGION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ROE</strong></td>
<td>0.005***</td>
<td>0.004***</td>
</tr>
<tr>
<td>(3.26)</td>
<td>(2.92)</td>
<td>(3.73)</td>
</tr>
<tr>
<td><strong>HIGHTECH</strong></td>
<td>0.031***</td>
<td>0.031***</td>
</tr>
<tr>
<td>(3.76)</td>
<td>(3.72)</td>
<td>(3.80)</td>
</tr>
<tr>
<td><strong>REGION</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>RISKYEAR</strong></td>
<td>-0.016***</td>
<td>-0.016***</td>
</tr>
<tr>
<td>(-4.25)</td>
<td>(-4.25)</td>
<td>(-4.25)</td>
</tr>
<tr>
<td><strong>INVMR</strong></td>
<td>-0.067**</td>
<td>-0.067**</td>
</tr>
<tr>
<td>(-2.16)</td>
<td>(-2.16)</td>
<td>(-2.16)</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>-0.230**</td>
<td>-0.230**</td>
</tr>
<tr>
<td>(-2.19)</td>
<td>(-2.19)</td>
<td>(-2.19)</td>
</tr>
<tr>
<td><strong>Sigma</strong></td>
<td>0.069***</td>
<td>0.069***</td>
</tr>
<tr>
<td>(7.82)</td>
<td>(7.82)</td>
<td>(7.82)</td>
</tr>
<tr>
<td>N</td>
<td>3736</td>
<td>3736</td>
</tr>
<tr>
<td>Pseudo $R^2$</td>
<td>-0.220</td>
<td>-0.220</td>
</tr>
</tbody>
</table>
The results in Table 8 show that the estimated coefficients of RELIGION×HIGHTECH are positive, and statistically significant at the 10% level; and still robust after controlling for the endogenous entrepreneurs’ beliefs. They are also robust for eastern religious entrepreneurs. Combined with the estimated positive coefficients of RELIGION, these evidences suggest that positive innovative attitudes of religious entrepreneurs in uncertain environments are stronger in high-tech industries.

### TABLE 8 Environments Religious Entrepreneurs, High-Tech Industries, and R&D Investments in Uncertain

<table>
<thead>
<tr>
<th>RISKYEAR=1</th>
<th>RELIGION</th>
<th>EASTERN RELIGION</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2009)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RELIGION</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>-0.000</td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(-0.05)</td>
</tr>
<tr>
<td>RELIGION×HIGHTECH</td>
<td>0.009*</td>
<td>0.009*</td>
</tr>
<tr>
<td></td>
<td>(1.75)</td>
<td>(1.89)</td>
</tr>
<tr>
<td>LNAGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.046***</td>
<td>0.053***</td>
</tr>
<tr>
<td></td>
<td>(4.08)</td>
<td>(4.08)</td>
</tr>
<tr>
<td>FEMALE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.003</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>(0.52)</td>
<td>(0.84)</td>
</tr>
<tr>
<td>EDUCATION</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.010***</td>
<td>0.010***</td>
</tr>
<tr>
<td></td>
<td>(6.21)</td>
<td>(6.34)</td>
</tr>
<tr>
<td>LARGEOWNR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.002</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>(0.58)</td>
<td>(-0.13)</td>
</tr>
<tr>
<td>CASH</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.006</td>
<td>-0.006</td>
</tr>
<tr>
<td></td>
<td>(-1.12)</td>
<td>(-0.94)</td>
</tr>
<tr>
<td>LNFIRMAGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.008***</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>(2.44)</td>
<td>(0.51)</td>
</tr>
<tr>
<td>LNSALES</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.004***</td>
<td>0.002***</td>
</tr>
<tr>
<td></td>
<td>(3.60)</td>
<td>(3.05)</td>
</tr>
<tr>
<td>ROE</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.007**</td>
<td>0.005*</td>
</tr>
<tr>
<td></td>
<td>(2.30)</td>
<td>(1.95)</td>
</tr>
<tr>
<td>HIGHTECH</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.030***</td>
<td>0.029***</td>
</tr>
<tr>
<td></td>
<td>(3.63)</td>
<td>(3.53)</td>
</tr>
<tr>
<td>INVMR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.102**</td>
<td>-0.083*</td>
</tr>
<tr>
<td></td>
<td>(-2.11)</td>
<td>(-1.91)</td>
</tr>
</tbody>
</table>
In order to compare religious entrepreneurs’ innovative attitudes in high-risk/uncertain environments to those attitudes in medium-risk situations, we further test the relation between religious entrepreneurs and the levels of R&D investment intensity in 2007, we take 2007 as an ordinary environment with medium risk levels. The result shows that consistent with risk aversion effect (Hilary and Hui 2009; Jiang et al. 2015), the levels of R&D investment intensity in the firms with religious entrepreneurs are lower in 2007. Unexpectedly, we find an opposite result of a significantly positive estimated coefficient of RELIGION in the second stage, which suggests religion beliefs have a positive effect on the levels of R&D investment intensity and support our conjecture that the negative relation do not reflect the effect of religion beliefs.

Conclusion

A deep understanding of the decision mechanism of corporate R&D investments help firms to build core capabilities better (David, O’Brien and Yoshikawa 2008; Ho et al. 2016). In this paper, we investigate corporate innovation from a perspective of religious entrepreneurs. Based on the survey data of Chinese private enterprises of 2007 and 2009, we find a positive relation between religious entrepreneurs and corporate R&D investments in 2009, a risk/uncertain environment; and a negative relation between religious entrepreneurs and corporate R&D investments in 2007, an ordinary environment with medium level of risks. Because 2008 financial crisis makes the composition structure of Chinese company changed, we conjecture that those entrepreneurs with religion beliefs and then positive attitudes toward innovation more likely survive the crisis.

References


[38] Ferreira, D., Manso, G., Silva, A. C., 2014, "Incentives to innovate and the decision to go public or private", Review of Financial Studies, 27(1), 256-300.


### Appendix A

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D_SALE</td>
<td>Corporate research and development investments scaled by sales.</td>
</tr>
<tr>
<td>RELIGION</td>
<td>Coded “1” if an entrepreneur claims she/he believes in religion, “0” else.</td>
</tr>
<tr>
<td>LNAGE</td>
<td>The natural logarithm of age of entrepreneur's age.</td>
</tr>
<tr>
<td>FEMALE</td>
<td>Coded “1” for female entrepreneurs, “0” for male entrepreneurs.</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>The entrepreneurs’ education degree. An ordinal variable with six codes.</td>
</tr>
<tr>
<td></td>
<td>Coded “1” if the entrepreneur is primary and below educational level, coded</td>
</tr>
<tr>
<td></td>
<td>“2” if the entrepreneur is junior high school education level, coded “3” if</td>
</tr>
<tr>
<td></td>
<td>the entrepreneur is high school or special secondary education, coded “4” if</td>
</tr>
<tr>
<td></td>
<td>the entrepreneur is junior college education, coded “5” if the entrepreneur</td>
</tr>
<tr>
<td></td>
<td>is university degree, and coded “6” if the entrepreneur is postgraduate.</td>
</tr>
<tr>
<td>LNFIRMAGE</td>
<td>The natural logarithm of firm age.</td>
</tr>
<tr>
<td>LARGEOWNR</td>
<td>Coded “1” if the percentage of shares held by the entrepreneurs is larger</td>
</tr>
<tr>
<td></td>
<td>than 50%, “0” else.</td>
</tr>
<tr>
<td>LNSALES</td>
<td>The natural logarithm of firm sales.</td>
</tr>
<tr>
<td>ROE</td>
<td>Ratio of net income to equities.</td>
</tr>
<tr>
<td>CASH</td>
<td>Ratio of cash holdings to equities.</td>
</tr>
<tr>
<td>RISKYEAR</td>
<td>Coded “1” if the year is 2009, “0” if 2007. It is a proxy for a more risky</td>
</tr>
<tr>
<td></td>
<td>environment from a time perspective, as 2009 is after the financial crisis</td>
</tr>
<tr>
<td></td>
<td>breakout and full of uncertainty and risks.</td>
</tr>
<tr>
<td>HIGHTECH</td>
<td>Coded “1” if a firm is in high tech industries, “0” else.</td>
</tr>
<tr>
<td>REGION</td>
<td>Region dummy variable, include three regions; specific information in Table</td>
</tr>
<tr>
<td></td>
<td>1.</td>
</tr>
</tbody>
</table>
Understanding Ethical Challenges In Entrepreneurial Marketing: An UAE Perspective

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Abstract

Entrepreneurial marketing (EM) is often used to represent the marketing activities undertaken by small start-up entrepreneurial organisations. There are unavoidable ethical challenges in each profession and industry; however, ethical challenges that entrepreneurial marketers confront are more considerable and harder to manage. Entrepreneurial start-ups, often, are unable to address their moral difficulties and have no time to check their own behaviour. This article tends to address the ethical challenges faced by entrepreneurial marketers in marketing their business under various circumstances.

Keywords: Entrepreneurial Marketing, Administrative Marketing, Ethics, Ethical Challenges.

I. Introduction

There are unavoidable ethical challenges in each business and industry; yet the challenges that entrepreneurs confront are more difficult and harder to deal with. A few entrepreneurs remain on an ethical course. However, they appear to be occasional and are to be viewed as special cases. Entrepreneurs, especially new start-ups, are unable to address the ethical challenges that they face in the course of marketing their products and services in the marketplace. Often, they have no time to check their own behaviour. The increasing need for entrepreneurial marketing makes entrepreneurial start-ups to think about how small firms, predominantly with constrained resources, can adequately undertake their marketing activities (Scarborough and Norman, 2013).

Various studies demonstrate that entrepreneurial marketing is dynamic, adaptable, immersive, easy and development orientated. Entrepreneurial marketing seems to provide a quick focal point to consider the marketing activities of entrepreneurial organizations and further, it demands insightful thinking and actions.

II. Review of Literature

II.1 Entrepreneurial Marketing

Entrepreneurial marketing is often used to depict the marketing activities undertaken by small entrepreneurs, especially new start-ups during their early development stage (Morris et al., 2002). Entrepreneurial marketing activities are not only applied in small and beginner firms, but the term can also be connected to established firms which accept creative ways to deal with their marketing. Firm in various stages of development, regularly develop exceptionally organized ways to deal with marketing, often termed as Administrative Marketing (AM).

Though it is hard to prove, entrepreneurial marketing has been depicted as informal, dynamic, receptive to client needs and frequently simple in its outline and execution (Bjerke and Hultman, 2002). In start-up firms, marketing activities are regularly undertaken by the proprietor of the business, who is probably going to market, even if he is not an expert in marketing. He ordinarily undertakes the marketing activities between his other exercises but it is often a more consistent and coordinated approach than AM.
In this paper, we address entrepreneurial marketing to be a wider area than advertising and promotion. It incorporates exercises, such as new product development, as well as decisions on pricing and suitable distribution channels. While earlier investigations have proposed 4Ps of entrepreneurial marketing (Practices, Process, Purpose and People), this does not repeal the requirement of entrepreneurial issues like Product, Pricing and distribution channels. Since the proprietor of the business will normally address the majority of the differed and expansive scope of marketing exercises, these are probably addressed repetitively and hence are exceptionally coordinated and synergistic.

Marketing (Morris et al., 2001) needs access to various resources in the enterprise; hence entrepreneurial marketing is specifically viewed as “in light of the resources accessible”. Subsequently, since making use of certain resources might be troublesome, entrepreneurial marketers would therefore shape their marketing techniques according to the available recourses. At the same moment, unlike business and marketing systems’ view of exclusively catering to client needs (as proposed in AM), entrepreneurial marketers try to meet the needs and wants of both entrepreneur and customer. Entrepreneurial marketing is very useful, especially for start-ups, and subsequently very apt for our investigation. Compared to regular marketing the cost involved in entrepreneurial marketing is very low and it brings desired results.

II.2 Ethical Challenges

An entrepreneur commences a business and exploits opportunities. Even if it involves risk, he offers different solutions with the resource at hand so as to earn a decent profit. Entrepreneurs use special initiatives to change a business idea into a business venture or to develop and differentiate current businesses that have high potential for development (Longenecker et al., 1989). In this situation, entrepreneurial marketers recognize an opportunity and prepare capital, and explore administration abilities to offer new goods and services. Entrepreneurial marketers confront various limitations to accomplish their objectives, and some of these hindrances are strong to the point that they keep entrepreneurs from marketing their goods / services and new pursuits. Situations could arise that can drive them out of a business.

II.3 The Greater Good

The "Greater Good" concept is common in the development of specific innovative ventures (Hicks and Stephen, 2009). This kind of ethical issues arise whenever an entrepreneur comes across certain ethically risky conduct like testing of living beings (animals, birds, etc. or stem cell research) that may prompt the advancement of products but cannot guarantee benefits to members of the society. Thus, while ethically risky events are bound to happen, it is uncertain whether the endeavour will be fruitful in terms of advantageous impacts. For instance, an entrepreneur may have a thought for a specific cure to a deadly disease and in this way, he may possibly save numerous human lives. The way towards developing such medicine requires testing on living and feeling animals. There is a strong probability that sometimes death would occur. It will, likewise, require the use of human control groups that exclusively get test treatments and those individuals might sometimes die as well. However, if an entrepreneur chooses to abstain from his invention, he will not be able to add curative medicines for any evil disease whatsoever. This issue touches various distinctive perspectives. First and foremost, the entrepreneur's morale gets affected; he needs to choose which ethical guidelines he values more. At that point, subjects as those specified above are of profound social concern. The entrepreneur, in some cases, will conform to the greater part of society in all aspects. Whichever way he decides he is probably going to lose one or more group's social acceptance. Particularly in view of the unforeseeable result, more prominent 'greater good' come close to what has been described as "genuine issues" as there is no right or wrong solutions and each option appears to have its own pros and cons, every one of them being genuine and ethically difficult.
II.4 Individual Lifestyle issues

A second issue looked after by entrepreneurial marketers are the use of their own resources, particularly, time. Entrepreneurial marketing is frequently and exceptionally tedious, particularly in the initial stages. This defies an entrepreneur with an issue of assigning time, deliberation, and so forth between marketing viewpoints and other works, life, family and friends (Aldrich and Cliff, 2003). This can be termed as individual lifestyle issue. Here an entrepreneur is set between divergence but there is a genuine demand for his behaviour and lifestyle in his own circle. The choice arises between possibly supporting (or disregarding) his venture or his partner, kids, and others. He needs to settle on an ethical choice on effective distribution of time and resources without sacrificing his venture and family. A father in a family, for instance, may be preoccupied with establishing an organization which is relatively new. This would necessitate a tremendous measure of his time. For example, an important client might have offered a deal that would significantly sustain the organization for no less than a year. The offer, however, will require that the entrepreneur works long hours and the same may continue even after a year. During this time, the entrepreneur may not be able to take his family on a vacation, might not be able to go attend important occasions in his kids' lives, and so forth.

Acceptance of the offer would ensure that his family will be financially safe for an impressive time. However, his private life may have to endure enormously. In the event that he rejects the offer and focuses on his private life, he will have the capacity to be associated with his kids' and spouse's life more seriously. However, this may be a hazard his family's and his workers' welfare.

Business persons must not only be capable of being pioneers and financial guardians, they also need to perform family duties. The two sides are social and substantial. Such issues with respect to an entrepreneur's personal life and work-life balance are experienced by numerous entrepreneurial marketers throughout their business life, and most often, in their entrepreneurial life (Humbert and Lewis, 2008). They are probably a significant risk to the prosperity of the business, the family, private life and to the business person himself.

II.5 The Time-Horizon Issue

The third kind of issue may present itself in the planning of entrepreneurial marketing activities, strategy creation and exploitation of opportunities. Simply put, an entrepreneur frequently plans for his transient needs as well as his long-term goals. So, this issue can be termed as the time-horizon issue. Particularly young entrepreneurs working alone or in a small group are regularly up against serious resource constraints. This could create obstacles to enjoying short-and long-term advantages (Timmons and Spinelli, 2003). While the transient events are frequently those that keep the business venture by giving immediate income and liquidity, they tend to provide great knowledge on distinguishing, following and utilizing long-term opportunities. Thus, if the entrepreneur chooses to grab the transient opportunity, he may risk his organization's suitability on the mid-to-long run. Once again, the entrepreneur will face the issue of distribution of time and resources. While this is by all accounts a simple issue of administration at the initial stage, it is also an issue concerning ethics. Under strong resource constraints, the entrepreneur may set to pay his employees and investors, and in addition the payoffs to his partners if he decides to combat unbeneﬁcial operations. Considering the above scenario, short-term solution may appear to be more ethical at any given moment.

II.6 The Cultural Issue

As Schramm (2010) noted, globalization may challenge entrepreneurial marketers with ethical convictions through intercultural contrasts – a condition we can term as intercultural issue. This sort of issue may arise at the point an entrepreneur takes part in international business activities. The reason behind the development of such an issue may stem from intercultural difference in mind set and the way of conducting business operations. Particularly, matters of imitation and property rights, management styles, employee treatment and so forth can be subsumed under this class. For instance, while corruption is a serious offence in many countries, it is a typical propensity around the world. In few nations, bribes
are even fundamental for employees in government offices to run their regular family life. Entrepreneurs are in this manner confronting issues of either paying corrupt money or of missing out on business contracts. The former demonstrates a breach of law, and the latter may intend to acknowledge genuine weaknesses for the organization. Not only entrepreneur's business is less effective, abstaining from standard bribe may reinforce those contenders who possess fewer second thoughts and raise their incomes. It must be additionally said that bribe isn't generally as evident as offering cash to a man. It may be gifts/presents, or arrangement of occasions.

An entrepreneur's assignment does not end when a team has been settled; at the same time the entrepreneur must transfer his or her vision and energy to the team. Social divergence and other challenges in the Emirati society fill in as a critical test for the entrepreneurs. One must comprehend the social measurements and societal powers influencing the work markets and employees’ inspirations. Entrepreneurs (El-Sokari et al., 2013) in the UAE deal with their group more proficiently and maintain a strategic distance from traitorousness and from sudden abdication.

II.7 The Social Legitimacy Issue

Schumpeter's (1950) thought of “creative destruction” through advancement does not just infer the substitution of old blend of ideas by new ones. This sort of phenomenon additionally passes on to existing financial and social structures evident in organizations, business connections and employment. While the scope of effect will differ based on the type of advancement, it is reasonable to expect that development will make impacts, some of which can be hurtful to different players in the economy. The innovative entrepreneur (Clarke and Holt, 2010), in this sense, is thus in a position to judge the potential damaging tendency of his actions and is left to choose whether to continue with the endeavour or not. The basic analytics, may, however, take distinctive forms. The first is that of the entrepreneur's own particular utility in seeking his thought. The basic test for new entrepreneurs is to explore government directions to get a business permit and work openly in numerous nations. Since control can fluctuate across borders, entrepreneurs must apply to various organizations to acquire their permit. Entrepreneurs can frequently seek the help of experts to deal with this.

II.8 The Operational issues

Competitors empower entrepreneurs by continuously stimulating them to be creative in their thoughts. They also help to foster innovations to the society that are economically affordable. Hence, entrepreneurial marketers need to centre around quality and continuous advancement to guarantee better proficiency in satisfying customers so as to create brand loyalty; this focus will eventually obtain the desirable upper hand in the market (Berthon et al., 2008). Many entrepreneurs need to manage obligations, and customers who default on payments, even when the accumulated amounts are small. Many entrepreneurs appoint legal advisors who have practical experience in debtor’s collection issues. It is imperative to set up a decent record of loan repayment in the UAE; this process will help leasers to characterize their customers by financial assessment and will help them to settle on better credit choices. New start-ups demand existing market opportunities with conceivable outcomes. Opportunity can be characterized as the seed that may later develop into advancement, and advancement can be characterized as a match between a need and a solution.

III. Methodology

The purpose behind this examination is to investigate the most basic unexpected challenges confronting entrepreneurial marketing in the UAE and to investigate thoughts and techniques to conquer these issues. The author has utilized the self-administrated structured survey to collect data from the respondents. The populace was drawn from 1820 organizations recorded in the Etisalat Yellow Pages. Random Sampling method was utilized to choose 673 organizations from various kinds of enterprises, with a reaction rate of 37 percent. A sizeable number of respondents answered the survey online while others
were administered a physical copy. The respondents for this investigation comprised CEOs or proprietors. The hopefuls who were reached and responded were from various enterprises and nationalities. A few unstructured interviews were also undertaken as a follow up measure for more clarity. The conceptual model is depicted in Figure 1.

**Figure 1: Conceptual Model**

![Conceptual Model Diagram]

**IV. Results and Discussion**

Structural equation modelling (Figure 2 and Table 1) resulted in the following revelations.

**Table 1: Path Analysis**

<table>
<thead>
<tr>
<th>Structural Model Path</th>
<th>Unstandardised Estimate</th>
<th>Standardised Estimate</th>
<th>C.R.</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Marketing &lt;--- Social and Legal</td>
<td>0.239</td>
<td>0.135</td>
<td>3.485</td>
<td>***</td>
</tr>
<tr>
<td>Entrepreneurial Marketing &lt;--- Greater Good</td>
<td>0.458</td>
<td>0.312</td>
<td>9.257</td>
<td>***</td>
</tr>
<tr>
<td>Entrepreneurial Marketing &lt;--- Lifestyle and Time</td>
<td>0.485</td>
<td>0.206</td>
<td>5.285</td>
<td>***</td>
</tr>
<tr>
<td>Entrepreneurial Marketing &lt;--- Culture</td>
<td>0.576</td>
<td>0.163</td>
<td>5.237</td>
<td>***</td>
</tr>
<tr>
<td>Entrepreneurial Marketing &lt;--- Operational</td>
<td>0.196</td>
<td>0.090</td>
<td>2.884</td>
<td>0.004**</td>
</tr>
<tr>
<td>Business Performance &lt;--- Entrepreneurial Marketing</td>
<td>0.512</td>
<td>0.834</td>
<td>13.739</td>
<td>***</td>
</tr>
</tbody>
</table>

** Significant at p<0.01; *** Significant at p<0.001
CMIN/df value was observed to be 2.54, RMSEA was observed to be 0.048, GFI, AGFI, CFI, NFI were observed to be greater than 0.9, Hence, the structural model exhibited good fit.

It can be inferred from Table 1 that all paths were observed to be significant and hence in every path, the concerned variables had a positive impact. For every 0.239-unit increase in Social and Legal, 0.458-unit increase in Greater Good, 0.485-unit increase in Lifestyle and Time, 0.576-unit increase in Culture, and 0.196-unit increase in Operational, there will be 1-unit increase in Entrepreneurial marketing. Also for every 0.512-unit increase in Entrepreneurial marketing, there will be 1-unit increase in Business performance.

V. Conclusion

Social and Legal, Greater Good, Lifestyle and Time, Culture, and Operational variables all have a positive impact of Entrepreneurial marketing. Entrepreneurial marketing had a substantial positive impact on Business performance. Greater effort and attention is required in the domain of cultural issues when it comes to entrepreneurial marketing. Operational issues were observed to have the least impact. Lifestyles issues, time-horizon issues, and greater good also require better focus and practice. Entrepreneurial marketing is still evolving and business persons have a tough time negotiating its nuances and consequences. But its benefits are aplenty and could help foster the business towards profitable pastures.

References


Track 6: Multinational Enterprises (MNEs) and Foreign Direct Investment (FDI)
An Examination of the Salient Features of the Giant Multinationals in the Age of Globalization

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Abstract

The current study relies on both academic and professional resources to identify, analyze, and discuss the salient features of giant multinational corporations in the age of globalization. The study shows that in the age of globalization, the giant corporations are marked by 1) an incredible concentration of power and wealth, 2) higher revenues despite fewer employees, 3) increasing competitiveness to the detriment of small and medium-sized businesses, 4) corrosive effects on the State sovereignty and nationhood, and 5) development and growth in the emerging markets. The paper synthesizes the literature, bridges theory and practice, and discusses the managerial and social implications.

Keywords: Globalization, Global Business Environment, Global Competitiveness, Large Corporations, Multinationals
3M: A new perspective on international expansion of emerging market enterprises

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Abstract

Based on 202 cases for M&As of Chinese listed enterprises in OECD countries, 3M perspective, i.e., market exploitation, market exploration and market expansion, is proposed to explaining the international expansion of both emerging market enterprises and developed country enterprises in a unified framework. The market expansion of emerging market enterprises is in line with the behaviors of developed country enterprises and can be explained by existing theories studying developed country enterprises. The market exploitation and market exploration of emerging market enterprises is at the initial stage to be enterprises, with the intention to accumulate ownership advantages for future internationalization, and can be explained by the existing theories studying emerging market enterprises.

Keywords: International expansion; developed country enterprises; emerging market enterprises; market exploitation; market exploration; market expansion

1 Introduction

As a typical emerging market country, foreign direct investment outflows from China reached 183 billion dollars in 2016, which ranked the second largest investing country in the world (UNCTAD, 2017). China has become a major investor in some developed countries, especially through cross-border mergers and acquisitions. From January to April 2016, the value of announced mergers and acquisitions by Chinese multinational enterprises in developed countries was worth 93 billion dollars, representing 32 percent of the total deals targeting assets in developed countries (UNCTAD, 2016).

Corresponding to the substantial growing of outward foreign direct investment from emerging market, the international expansion of enterprises from emerging market has given rise to extensive debate. The focus of debate is how to explain the behavior of emerging market multinational enterprises (MNEs). Do we need new theories or use the existing ones which study the behavior of developed country MNEs? The answer is ambiguous until now. Some researchers argue that it is enough to explain the behavior of emerging market MNEs with existing theories (Dunning, Kim, Park, 2008; Rugman, 2010;). Other researchers devise new theories to explore the specificity of emerging market MNEs (Mathews, 2006; Luo and Tung, 2007). Just as Cuervo-Cazurra (2012) says, a good theory that can explain the behavior of emerging market MNEs as MNEs should also explain the behavior of developed country MNEs as MNEs. The greatest reward from studying emerging market MNEs is the chance to develop more comprehensive theories of internationalization process, not investigating if and how they differ from developed country MNEs (Ramamurti, 2012).

In this article, we propose a new perspective, defined as 3M perspective, i.e., market exploitation, market exploration and market expansion, to explain the international expansion of emerging market enterprises. The main contributions of this study to the literature of international business are twofold. First, we classify international expansion of emerging market enterprises in a new perspective. The 3M perspective is market oriented and result oriented, which helps to discern whether the emerging market enterprises own the capacity to expand internationally, and explain why so many emerging market enterprises engaging in international expansion in such a radical way, i.e. mergers and acquisitions (M&As),
without traditional ownership advantage. Since the traditional wisdom argue that developed country MNEs exploit ownership advantage abroad and in a gradually evolutionary way (Rui and Yip, 2008; Narula, 2012).

Second, the existing literature argues that theory development should differentiate the evolution stages of emerging market MNEs, and theory found through the study of emerging market MNEs are mostly generated when analyzing the early stages of the international expansion of emerging market MNEs (Cuervo-Cazurra, 2012). Different behaviors between emerging market MNEs and developed country MNEs, as well as the potential contribution to theory by studying emerging market MNEs as a distinct phenomenon, diminish in later stages of internationalization (Cuervo-Cazurra, 2012). The 3M perspective just provides a concise framework to distinguish the evolution stages of emerging market MNEs. The market expansion of emerging market MNEs is in line with the behaviors of mature MNEs and can be explained by existing theories studying developed country MNEs. The market exploitation and market exploration of emerging market MNEs is at the initial stage to be MNEs, with the intention to accumulate ownership advantages for future internationalization, and can be explained by the existing theories studying emerging market MNEs. Hence, the 3M perspective describes different evolution stages of MNEs and helps to explain both the behavior of emerging market MNEs and developed country MNEs in a unified framework.

The rest of the paper is organized as follows. The next section provides literature review and theoretical background. Section 3 develops the 3M perspective based on empirical analysis. Section 4 gives a discussion of 3M perspective. Section 5 concludes the paper with reference to the limitations and future research.

2 Theoretical background

The theories analyzing the behavior of developed country MNEs have long been established, such as resource-based view (Penrose, 1959; Dierickx and Cool, 1989; Teece, Pisano, and Shuen, 1997), product life cycle theory (Vernon, 1966, 1979; Wells, 1972), internalization theory (Buckley and Casson, 1976; Hennart, 1982; Anderson and Gatignon, 1986), eclectic paradigm (Dunning, 1977,1988,1995,2000), Uppsala process model (Johanson and Vahlne, 1977, 2009; Vahlne, Ivarsson and Johanson, 2011). A basic principle of these theories is that developed country MNEs exploit ownership advantages, such as superior technology and well-known brand, abroad, and in a gradually evolutionary way (Rui and Yip, 2008; Narula, 2012).

The existing literature also well explained the expansion of emerging market MNEs in the least developed countries and other developing countries. Like developed-country MNEs, the emerging market MNEs have ownership advantages in these markets, such as the ability developed in domestic country, which makes them successfully operate in environments with weak institutions, poor regulatory and legal systems (Del Sol and Kogan, 2007; Cuervo-Cazurra and Genc, 2008; Jormanainen and Koveshnikov, 2012).

But how to explain emerging market MNEs venture in developed countries without traditional ownership advantages and expand in a radical way, i.e., mergers and acquisitions (M&As)? To answer this question, some researchers ascribe to home country advantages, i.e., the local firms in developing countries have preferential access to land, natural resource, labor and distribution assets, which provide them with profits necessary to acquire strategic assets through foreign direct investment (Hennart, 2012). This may guarantee the initial expansion in foreign market, but can not be foundations of long run success in developed countries (Luo and Zhang, 2016; Ramamurti, 2012). A typical view, known as "springboard perspective", argues that emerging market enterprises acquire strategic resources through aggressively acquiring and buying critical assets from developed country companies to compensate for their competitive weakness (Luo and Tung, 2007). The springboard perspective admits that emerging market MNEs is less competitive than their developed country counterparts, and provide a critical explanations for motivations for international expansion of emerging market enterprises, but how the less competitive emerging market MNEs operate more successfully than acquired enterprises after mergers and acquisitions. Thus, a puzzling question ensues, whether the behavior of aggressive M&As itself means the capacity for supplying foreign
market before owning cutting-edge technologies and global brands?

Some researchers have realized this question, and proposed that emerging market MNEs and developed country MNEs are in different stages in their evolution to be MNEs (Cuervo-Cazurra, 2012; Ramamurti, 2012). The existing theories of international business focus on mature MNEs, but emerging market MNEs are infant MNEs. Some emerging market enterprises expand internationally to obtain technologies and brands primarily for exploitation in their home markets, not abroad (Ramamurti, 2012). But these papers do not further provide an explicit model, and the present paper develops this idea in a detail framework with solid empirical foundation.

We define this framework as 3M perspective, i.e., market exploitation, market exploration, and market expansion, refined from the cross-border M&As of Chinese listed companies from year 2007 to 2016. The market exploitation means that the enterprises uses the existing technologies and brands acquired abroad primarily for domestic market competition. The market exploration means that the enterprises buy emerging technologies and intend to explore the potential domestic market in the future. The market expansion means that the enterprises accelerate international expansion with their own technologies or brands by acquiring foreign distribution resources.

The 3M perspective is market orientation. It is vital for companies to successfully sell their products and earn profit. The market competitive capacity in domestic and foreign markets reflects firm-specific advantages built in business operations. However, not all enterprises have the ability to sell products in foreign market. They are heterogeneous, only those most productive ones invest in foreign production facility that is designed to serve customers in foreign markets, and less productive ones serve only domestic markets (Helpman, Melitz, Yeaple, 2004; Helpman, 2006). Internationalization is not the only strategic goal of some emerging market MNEs, it is just a means through which the enterprises develop competitive advantage (Luo and Zhang, 2016).

The market orientation of 3M perspective implies that it is result-oriented. The existing literature argues that the emerging market enterprises engage in international expansion in developed countries pushed by domestic institutions and pulled by foreign institutions (Buckley, Clegg, Cross, Liu, Voss, Zheng, 2007; Luo and Tung, 2007; Buckley, Cross, Tan, Xin, Voss, 2008; Luo, Xue, Han, 2010), select suitable entry strategy (Ang and Michailova, 2008; Cui and Jiang, 2009; Deng, 2009), acquire strategic resources (Luo and Tung, 2007; Rui and Yip, 2008; Deng, 2009; Cui, Meyer, Hu, 2014;), eventually reach the aim of fostering competition edge, and successfully sell the products in the market. Even if these enterprises conduct transnational business operations, it is not easy to identify whether they have developed the ability to supply the foreign market, which gives us the impression that all enterprises seems owning this ability. The emerging market MNEs conducting market exploitation and market exploration appear to be engaging in market seeking internationalization, in fact, they are engaging in strategic asset seeking (Ramamurti, 2012). The 3M perspective provides a succinct framework to discern the result of these activities according to market orientation of transnational business operations.

3 Development of 3M perspective based on empirical analysis

We use Chinese enterprises to study the international expansion of emerging market MNEs. China has undergone significant structural transformation in past forty years, and continuing to undergo dramatic structural changes, which accord with the definition of emerging market (Luo and Tung, 2007; Jormanainen and Koveshnikov, 2012). The enterprises from emerging market offer an unprecedented opportunity to study how firms become MNEs since the birth of the international business (Ramamurti, 2012). As one of the most influential players in the world acquisition market, China is often selected as a prominent example of emerging economics for its distinctive institutional developments (Deng, 2013; Liu & Deng, 2014; Yang & Deng, 2015). The literature review from 11 leading international business and management journals during the period of 1990-2014 shows that 32.2% of total research focus on mainland China (Luo and Zhang, 2016).
We focus on M&As of Chinese MNEs, since it is a more radical, high-risk and high control entry strategy than traditional MNEs (Luo and Zhang, 2016; Rui and Yip, 2008), and existing research falls far short in specifying when emerging market MNEs are apt to be more radical and when they become more gradual in their evolution (Luo and Zhang, 2016). Moreover, in order to find out why emerging market enterprises conduct international expansion in such a radical way without traditional ownership advantages, we study the M&As in OECD countries, since the enterprises in these countries have technology and brand advantages over emerging market MNEs.

3.1 Construction and description of dataset

We collected 202 cases of M&As of Chinese listed manufacturing enterprises from year 2007 to 2016. All the cases come from the website of Shanghai Stock Exchange and Shenzhen Stock Exchange. We look through all the announcements of all listed manufacturing enterprises to find out the cases of M&As by hand. The identification of manufacturing enterprise is according to the database CSMAR (China Stock Market Accounting Research), a widely used database for business studies in previous literature (e.g., Du and Boateng, 2015; Huang, Xie, Li, and Reddy, 2017). Table 1 (Appendix 1) gives a summarization of basic characteristics for cases of M&As. A notable feature of the Chinese economy is that a large amount of state-owned enterprises co-exist with private-owned ones. In our sample, 26 or 12.9 percent of acquiring companies are state-owned, and 176 or 87.1 of acquiring companies are private-owned. The ownership is identified as the actual controller of the enterprise, which is come from the annual report of the year the M&As happening. The statistics of Chinese State-owned Assets Supervision and Administration Commission in 2012 shows that 38.5 percent of listed enterprises in Chinese mainland stock market are state-owned ones. It is obvious that the state-owned enterprises do not actively engage in overseas M&As as private-owned enterprises.

Twenty-four OECD countries in our sample received investment from Chinese enterprises, of which United States receives the most investment, 60 or 29.7 percent of M&As occur in the United States. Germany and Italy rank the second and third largest countries to receive the investment. The number of M&As in the three countries constitute a proportion as high as 60.9 percent of total number of M&As in our sample.

Since the capacity to supply foreign market is closed related to technology owned by enterprises, we want to investigate whether there is difference existing in the strategies of mergers and acquisition in different technology level industries. Hence, we classify the industry in which the acquiring enterprises operate according to OECD classification of manufacturing industries based on R&D intensities (Appendix 2). The manufacturing industries are sorted into four categories: High-technology industries, medium-high-technology industries, medium-low-technology industries and low-technology industries. From table 1, we can see that Chinese enterprises prefer to invest in advanced technology industries, 89.1 percent of M&As exists in high-technology and medium-high-technology industries. This number reflects that Chinese enterprises are universally lack of ownership advantage, especially superior technology. They are eager to intensify their competition edge by acquiring technology from external sources rather than internal technology accumulation.

Chinese enterprises appear to prefer majority equity shareholding. 76.2 percent or 154 acquirers obtain the majority shares, moreover, of them 101 enterprises completely takeover the target. As less as 23.8 percent M&As involves minority shares. Full ownership allows complete control over operations, but exposes to greater risks. In contrast, partial ownership offer access to complementary resource and opportunity to share investments and risks, but lack of complete control over the acquired firm, and inability to fully integrate the operations (Inkpen, 2001; Chari & Chang, 2009).

3.2 The procedure to classify market orientation

To decide the market orientation of M&As, we carefully read every announcement of M&As, which describes the profiles of trading parties, the profile of transaction target, the terms of contract, the purpose and influence of transactions in detail. To ensure the accuracy of classification, we download the annual
report of each enterprise in the year the merger and acquisition happens, and read the sections of business description, management discussion and analysis in the annual report, which also includes the enterprise operation strategies, the purpose and influence of M&As. Most enterprises explicitly mention the market orientation of using the acquired assets and technology.

In their M&As announcement and annual report, the enterprises for market exploitation usually write the following typical sentences: The aim of M&As is not to develop the foreign market in a short time, but to shorten the distance with the leading firms in domestic market by introducing the technology from the acquired target; The acquiring firm will introduce the world class technology to China, and endeavor to exploit the domestic market by cooperating with acquiring target; The acquiring firm will utilize the cost advantage and distribution advantage to rapidly acquire the dominant position in domestic market. Some M&As contracts explicitly stipulated that both the acquiring and acquired enterprises will build a new joint venture in China to supply Chinese domestic market.

The contracts of mergers and acquisitions for market exploration usually stipulated that the acquiring firm will enjoy the exclusive right for sales of products manufactured by the emerging technology in domestic market. The following statements usually appear in announcements: The investment is not likely to bring revenue in a short period, but can establish long-term strategic cooperation with target, and learn the cutting-edge technology and development of the industry; The investment is beneficial to enterprises for intensifying the exchange and cooperation of technology development, and providing valuable information to development high-end products.

Many target firms in the case of market expansion are the sales agent of Chinese enterprises in foreign market before transactions of M&As. The acquiring enterprises often state in their announcement that they obtain the local brands to increase corporate reputation in foreign market; They can successfully and swiftly pass the foreign certification of their products; They can utilize the local distribution channel rapidly to enter into the foreign market; They will use foreign targets for market researching, local market development, and consumer relationships maintenance.

For those enterprises which list almost all the potential revenue from M&As, and do not clearly refer to the market orientation, we look through three year’s annual report before transaction and all the year’s annual report after transaction. If the overseas sales have a substantial growth after transaction, we are apt to ascribe this kind of transaction to market expansion. If the overseas sales remain almost the equal to the transaction year, but the domestic sales grow fast, we would like to ascribe this kind transaction to market exploitation.

Besides referring to the announcements and annual report of acquiring firms, we also summarize the characteristics of strategies of market exploitation, market exploration and market expansion after studying the transactions of mergers and transactions. In the case of market exploitation, the business operations of many target firms are in a state of stagnation, or suffering from loss. The volume of sales of target firm occupy a small part of all sales of acquiring enterprise, and its sales and revenues remain almost equal to the transaction year, even decreases after transaction. The technology of acquired firm is superior to the acquiring enterprise, or the acquiring enterprise does not own the technology at all, and the acquired technology is mainly used in the exploitation of domestic market. In the case of market exploration, the technology owned by acquired firm is emerging technology, and has not been put forward to both overseas and domestic markets. The acquiring enterprise intends to explore the potential domestic market in the future. In the case of market expansion, the product of acquired firm is similar to the acquiring enterprise, and technology of acquiring enterprise is at the same level as, or even superior to, the acquired firm. The acquired firm usually owns well-known brands and extensive distribution channel, which can quickly promote the sales of products of acquiring enterprises.
3.3 The competition advantage embodied in each strategy

Each 3M strategy should have distinctive pattern to improve competition advantages of acquiring enterprises. Firstly we demonstrate the weakness of acquiring firm, next we point out how each strategy offsets the weakness and promote the growth of acquiring firm. Although the acquiring enterprises for *market exploitation* are first-class among domestic enterprises, their technology is inferior to foreign competitors. They face fierce competition with foreign enterprise in domestic market, and always in the lower level of value chain. The apparent weakness of these enterprises is that they universally lack of technology for manufacturing core components of the product. It is impossible for them to develop the technology in the near future. The inferior technology limits the firm's capacity to develop high quality products and ability to earn excess profits, which in turn deteriorates the resource to invest in R&D. The low quality products make them difficult to be the top suppliers of world class manufacturers. The M&As provide the acquiring firms advanced technology in a short time and enormously improve the quality of their products, which gives them a chance to compete with foreign counterparts in high-end products, or help them integrate into the high-end value chain of world-class enterprises by using the existing supply chain of acquired firms.

The acquiring enterprises for *market exploration* established extensive distribution channel in domestic market, and own some extent market power. However, they are lack of the capacity to develop emerging technology, even lack of the information about the industry and product development. If they could not keep up with the development of cutting-edge technology, they may be eliminated in the next generation product competition. The enterprises are in fact investing an unrealized technology, which brings the enterprise latent revenue. When the emerging technology becomes mature, they will introduce the cutting-edge technology into domestic market and utilize their extensive distribution channels, which gives them first-mover advantage and super profit from exploring the huge domestic market.

The acquiring enterprises for *market expansion* own first-class technology in domestic market, and the technology is equal to, or even superior to competitors in overseas market. Many of them also sell their products in overseas market through sales agents. However, they are lack of well-known brands and accepted in a limit scope of customers in overseas market. Because of unfamiliar to customer preference and product demand, and inaccessible to extensive distribution channel, it is difficult to expand foreign market in large scale. The transactions of M&As provides these firms with well-known brands and extensive sales channels in foreign local market, which enable them easily entering into the supply chain of customer maintained by the acquired targets. Moreover, they can produce the goods with lower costs in China, and sell in overseas market with a lower price with almost the same quality as foreign competitors. They also can hire local employees to devise the products suitable to local market, and provide better service for local customers. Another gain from market expansion is to achieve economics of scale with the growing volumes of products.

3.4 Empirical test for 3M perspective

We insist on the traditional wisdom that the ownership advantage, such as superior technology, essentially determines whether the acquiring enterprise owns the capacity to supply the foreign markets. Hence, we present the strategies for M&As in Table 2 (appendix 3) classified by the technology level. The entry in Table 2 represents the number of enterprises in the specific industry chooses the corresponding strategy of M&As. For example, the number 41 (51.9%) represents that 41 (51.9%) enterprises in high-technology industries engage in M&As for market exploitation. Since there are only 6 cases of mergers and acquisitions happened in low-technology (L) industries, we concentrate in other three industries in the following analysis. From table 2, we can see that the *market exploration* is more likely to happen in high-technology industry, 29.1 percent of M&As involving in market exploration is located in high-technology (H) industries, compared 6 percent in medium-high-technology (M-H) industries, 12.5 percent in medium-low-technology (M-L) industries. *Market exploitation* is more likely to happen in medium-high-technology industry, 76.2 percent of M&As involving in market exploitation is located in medium-high-technology industries, compared 51.9 percent in high-technology industries, and 25 percent in medium-low-technology industries. *Market expansion* is more likely to happen in medium-low-technology industry, 62.5 percent
of M&As involving in market expansion is located in medium-low-technology industries, compared 19 percent in high-technology industries, and 17.8 percent in medium-high-technology industries. In a word, different technology level industries show different preference for M&As strategies.

To testify this judgment, we first conduct a two-dimensional contingency table analysis on the relationship between industry and strategy (Table 2) by using SPSS. Liu and Deng (2014) suggest that methodological plurality should be used to study Chinese cross-border merger and acquisition, since most previous papers use regression analysis on this theme. In this paper, we extend the analysis tool to contingency table analysis, which is a statistical method to describe the relationship between categorical variables. When the observed attributes in a study are presented as categorical, then it is a common way to use a contingency table for representing the data, produced by cross-classifying these attributes. Due to the fact that contingency table analysis is not always readily provided as model option in use, though very powerful and of great interpreting value, it is not very popular in practice (Kateri 2014).

Since some cells in Table 2 have expected count less than 5 and small sample size, we use Fisher's exact test. The $P$-value of Fisher's exact test is 0.000, which indicates that we should reject the hypothesis that the two variables, industry and strategy, are independent. In other words, the strategies for M&As differ across industries. To verify the accuracy of the test, we introduce the third factor: the ownership of enterprises. We divide Table 2 into two tables, Table 3 (appendix 4) and table 4 (appendix 5), by ownership structure of acquiring enterprises, and conduct a hierarchical loglinear analysis with model selection. The result of model selection shows that industry and strategy are dependent, but ownership is independent of industry and strategies, which further shows that the difference is existing in strategies in different industries, but the ownership have no statistically significant influence on strategies in the process of M&As.

From empirical analysis we can see that strategies of M&As is closely related to their ownership advantage, such as superior technology. So we see that a high percent of Chinese enterprises in high-technology and medium-high-technology industries are engaging in market exploration and market exploitation in domestic market, only a high percent of enterprises in medium-low-technology with ownership advantage engage in market expansion in foreign market. In addition, we can see this fact in absolute number, 158 enterprises engage in market exploration and market exploitation in domestic market in all industries, only 44 enterprises engage in market expansion in all industries. This fact shows that international M&As can be useful in helping acquiring technology from target firms, but no enterprise can survive in the long run by merely depending on external acquisitions for technology development (Luo and Tung, 2007). The overseas production and expansion need internal knowledge development capacity, weaker product innovation will continue to hinder successful overseas market expansion of emerging country enterprises. Based on these facts, we developed 3M perspective on international expansion of emerging market enterprise. The enterprises with market exploitation and market exploration is actually in the early stage in the process to be a multinational, the technology obtained from external resources by these enterprises is not enough to sustain them to engaging in large-scale overseas expansion. Many existing papers studying international expansion of emerging market enterprises in fact investigate how they foster internal ability to develop superior technology. The enterprises with market expansion have this initial capacity to expand internationally with their own superior technology. These enterprises begin to step into the mature stage in the process to be a multinational, and their behavior can be largely explained by the existing theory explaining the developed country enterprises.

4 Discussion

The development of 3M perspective is deeply rooted in the facts of Chinese and developed countries economy. The first fact is that although China made great progress in economic development, the technology level of Chinese enterprises in general is still fall behind developed country counterparts. The fierce market competition leaves little time and room for Chinese firms to develop advanced technology. Hence, Chinese enterprises use a radical, but a quick way, i.e. M&As, to acquire core technology. In fact, most M&As in our sample happen after 2012, the time that many developed country enterprises suffer from stagnation or loss because of financial crisis, which creates an excellent chance for cooperation between Chinese and developed country enterprises. The M&As is not only beneficial for Chinese firms, developed
country enterprise can enter previously inaccessible lower-end market segments (Knoerich, 2010), which corresponds to market exploitation and market exploration of Chinese domestic market. At the same time, the excess production capacity and economic structure transformation mutually push firms go abroad to engage in market expansion.

The second fact is that China owns huge product and capital markets, which produces two effects on the motivations for Chinese enterprises to engage in M&As. The first effect is that the huge market brings more revenues for acquisitions than small market, which encourages enterprises actively conducting overseas M&As. Chinese huge capital market can easily finance enough funds for transactions in a short time, which makes foreign M&As feasible, even with a high premium over the actual value of the acquired target. The second effect is that the huge domestic market attracts foreign enterprises with superior technology to invest, which leads to fierce competition and compel domestic enterprises obtain advanced technology through M&As (Luo and Tung, 2007; Cuervo-Cazurra, 2012).

The third fact is the lower production cost in China. Although the wage rate of Chinese employees grows rapidly in recent years, it is still far behind the wage rate in developed countries. In addition, benefit from the position as world manufacturing center, China has well-established manufacturing facilities and a large number of technology workers. Both factors make producing in China with a lower production cost, which is essential for Chinese enterprises engaging in market expansion in foreign countries, which gives Chinese enterprises cost advantages over overseas competitors.

5 Conclusion

Based on 202 cases for M&As of Chinese listed enterprises in OECD countries, we attempt to explain both the behavior of emerging market enterprises and developed country enterprises in a unified framework, and investigate why emerging market enterprises without traditional ownership advantages engage in international expansion in a radical way, i.e., M&As. 3M perspective on international expansion of emerging market enterprises explicitly divides the strategies of them into three categories, and argues that they are located in the different stage in the process to be a multinational. Hence, we should not think that the international expansion of emerging market enterprises is an exception of general behavior of multinationals, and we do not need to construct a completely new theory to explain the behavior of emerging market enterprises. We should regard the market exploitation and market exploration as the early stage of the multinationals, and study how these enterprises evolve to be mature multinationals.

5.1 Limitations

Almost all the M&As fall one of categories of 3M strategies, few exceptions possess the characteristics of market exploitation, but the sales and revenues of acquired target is several times of acquiring enterprise. While this kind of M&As utilize the acquired technology to exploit domestic market, overseas market is too large to be neglected by acquiring firms. It is not easy to explicitly to classify this kind of M&As. We are apt to identify them as market exploitation, because the technology level of acquiring firm is obviously inferior to acquired target, and domestic market exploitation is a major intention. The large overseas market is the natural result of M&As. It is essential for acquiring enterprise to successfully synergize the resources of both parties, only then the acquiring enterprises own the capacity to compete with world-class multinationals in overseas market.

Our research is confined to manufacturing industries, so the conclusion of this study may not be used to explain the international activities of other industries, such as service industries. Moreover, our research is studying how a domestic company evolves to be a multinational, which is different from the research on international new ventures or international start-ups (Oviatt and McDougall, 1994; 1995; Zahra, 2005).

5.2 Further research

The large scale of international expansion of Chinese enterprises just started in recent years. What
we can say is that they have made some success in acquiring strategic assets in overseas market, and attempt to expand foreign market with ownership advantage. Whether they can integrate the technology acquired with their past experience to develop their internal capacity of technology development, and compete internationally with foreign market leaders, is yet unclear, which needs to be paid much attention to their operations after M&As. Hence, one direction of future research is to measure the performance of acquiring enterprises in R&D, sales both in domestic market and in overseas market, earning and profits. The research could be based on the 3M perspective to measure more accurately according different strategies, instead of regard all enterprises as one category.

The present literature mainly focus on theories separately explaining behavior of developed country multinationals and emerging market multinationals, few research study how emerging market multinationals evolves as developed country multinationals. Now that we treat market exploitation and market explorations as the early stage as a multinational, the process of enterprises transforming from the early stage to mature stage could be another future research direction. Whether the enterprises engaging in overseas M&As for market exploitation and market exploration have the motivations and ambitions to further expand internationally should be paid close attention. We should investigate the reasons why some enterprise will continues to expand overseas markets and some ones will cease to do it. The studying of the process transforming from the early stage to mature stage will contribute to the theory of evolution of multinationals.
Table 1  Sample characteristics

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percentage</th>
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<tbody>
<tr>
<td><strong>Ownership of acquiring company</strong></td>
<td></td>
<td></td>
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<tr>
<td>Private-owned company</td>
<td>176</td>
<td>87.1</td>
</tr>
<tr>
<td>State-owned company</td>
<td>26</td>
<td>12.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>202</td>
<td>100</td>
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| **Country of acquired company** |       |            |
| Australia                      | 6      | 2.9        |
| Austria                        | 2      | 1.0        |
| Belgium                        | 1      | 0.5        |
| Canada                         | 8      | 4.0        |
| Chile                          | 1      | 0.5        |
| Czech Republic                 | 1      | 0.5        |
| Denmark                        | 5      | 2.5        |
| Finland                        | 1      | 0.5        |
| France                         | 8      | 4.0        |
| Germany                        | 41     | 20.3       |
| Israel                         | 6      | 3.0        |
| Italy                          | 22     | 10.9       |
| Japan                          | 6      | 2.9        |
| Korea                          | 4      | 2.0        |
| Netherlands                    | 6      | 2.9        |
| Norway                         | 1      | 0.5        |
| Poland                         | 2      | 1.0        |
| Slovenia                       | 1      | 0.5        |
| Spain                          | 5      | 2.5        |
| Sweden                         | 4      | 2.0        |
| Switzerland                    | 4      | 2.0        |
| Turkey                         | 1      | 0.5        |
| United Kingdom                 | 6      | 2.9        |
| United States                  | 60     | 29.7       |
| **Total**                      | 202    | 100        |

| **Industry of acquired company** |       |            |
| High-technology industries      | 79     | 39.1       |
| Medium-high-technology industries | 101   | 50.0     |
| Medium-low-technology industries | 16    | 7.9        |
| Low-technology industries       | 6      | 3.0        |
| **Total**                      | 202    | 100        |

| **Foreign equity sharehoding**  |       |            |
| Minority shares (≤50%)          | 48     | 23.8       |
| Majority shares (>50%)          | 154    | 76.2       |
| **Total**                      | 202    | 100        |
Appendix 1:

Appendix 2: Classification of manufacturing industries into categories based on R&D intensities

<table>
<thead>
<tr>
<th>High-technology industries</th>
<th>Medium-high-technology industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft and spacecraft</td>
<td>Electrical machinery and apparatus, n.e.c.</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>Motor vehicles, trailers and semi-trailers</td>
</tr>
<tr>
<td>Office, accounting and computing machinery</td>
<td>Chemicals excluding pharmaceuticals</td>
</tr>
<tr>
<td>Radio, TV and communications equipment</td>
<td>Railroad equipment and transport equipment, n.e.c.</td>
</tr>
<tr>
<td>Medical, precision and optical instruments</td>
<td>Machinery and equipment, n.e.c.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medium-low-technology industries</th>
<th>Low-technology industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building and repairing of ships and boats</td>
<td>Manufacturing, n.e.c.; Recycling</td>
</tr>
<tr>
<td>Rubber and plastics products</td>
<td>Wood, pulp, paper products, printing and publishing</td>
</tr>
<tr>
<td>Coke, refined petroleum products and nuclear fuel</td>
<td>Food products, beverages and tobacco</td>
</tr>
<tr>
<td>Other non-metallic mineral products</td>
<td>Textiles, textile products, leather and footwear</td>
</tr>
<tr>
<td>Basic metals and fabricated metal products</td>
<td></td>
</tr>
</tbody>
</table>

Appendix 3

Table 2 Strategies for acquiring firms

<table>
<thead>
<tr>
<th>Industry</th>
<th>Strategy</th>
<th>Market Exploitation (%)</th>
<th>Market Exploration (%)</th>
<th>Market expansion (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>41 (51.9)</td>
<td>23 (29.1)</td>
<td>15 (19.0)</td>
<td>79 (100)</td>
<td></td>
</tr>
<tr>
<td>M-H</td>
<td>77 (76.2)</td>
<td>6 (6.0)</td>
<td>18 (17.8)</td>
<td>101(100)</td>
<td></td>
</tr>
<tr>
<td>M-L</td>
<td>4 (25.0)</td>
<td>2 (12.5)</td>
<td>10 (62.5)</td>
<td>16 (100)</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>5 (83.3)</td>
<td>0 (0.00)</td>
<td>1 (16.7)</td>
<td>6 (100)</td>
<td></td>
</tr>
</tbody>
</table>

Total 127 31 44 202
Appendix 4

Table 3  Strategies for private-owned acquiring firms

<table>
<thead>
<tr>
<th>Industry</th>
<th>Strategy</th>
<th>Market Exploration</th>
<th>Market Exploration</th>
<th>Market expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>38</td>
<td>23</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>M-H</td>
<td>58</td>
<td>6</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>M-L</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>104</strong></td>
<td><strong>31</strong></td>
<td><strong>41</strong></td>
<td></td>
</tr>
</tbody>
</table>

Appendix 5

Table 4  Strategies for state-owned acquiring firms

<table>
<thead>
<tr>
<th>Industry</th>
<th>Strategy</th>
<th>Market Exploration</th>
<th>Market Exploration</th>
<th>Market expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>M-H</td>
<td>19</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>M-L</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23</strong></td>
<td><strong>0</strong></td>
<td><strong>3</strong></td>
<td></td>
</tr>
</tbody>
</table>

References


The impact of institutional distance and experiential knowledge on the MNE’s internationalization speed

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Abstract

Internationalization speed is a topic in the academic literature that presents distinct approaches in its definition and way of measurement. This study aims to analyze the influence of institutional distances related to regulative, normative and cultural-cognitive pillars, and regional and global experiential knowledge, into the commitment and dispersion speed of internationalization of a MNE through its foreign subsidiaries. The results based on 492 subsidiaries of 10 MNEs in the electronic industry presented in 46 countries demonstrate three main contributions to be highlighted: (i) the importance to differentiate internationalization speed considering commitment and dispersion; (ii) the moderation of experiential knowledge that positively influence the relationship between commitment and dispersion speeds and institutional distance and (iii) the positive effect on the commitment speed of an MNE with little international experience considering high regulative and normative distances. Implications of these contributions are discussed.

Keywords: internationalization speed; commitment speed; dispersion speed; institutional distance; experiential knowledge; multinational enterprises

Introduction

Despite its relevance in the academic literature, internationalization speed is a subject little debated regarding standardization of its conceptualization and measurement (Casillas & Acedo, 2013; Chetty et al., 2014; Jiang, Beamish, & Makino, 2014; Jones & Coviello, 2005; Lee, Abosag, & Kwak, 2012; Oviatt & McDougall, 2005). It is, therefore, a prominent item to be investigated in the decision-making process of internationally operating organizations (Chetty et al., 2014; Yang, Lu, & Jiang, 2016). Generally speaking, internationalization speed is defined as the international expansion of an organization through its subsidiaries (Vermeulen & Barkema, 2002).

The present work intents to explain MNE’s internationalization speed through its foreign subsidiaries and influenced by extrinsic and intrinsic aspects. As extrinsic aspects it can be highlighted the institutions in the host country, based on Scott’s classification in regulative, normative and cultural-cognitive pillars (Moore, Payne, Bell, & Davis, 2015; Scott, 2014; Swoboda, Elsner, & Olejnik, 2015). On the other side, intrinsic aspects correspond on the experiential knowledge, i.e., how much an MNE is able to learn by the experience of operating abroad through its subsidiaries (Alcantara & Hoshino, 2012; Barkema, Bell, & Pennings, 1996; Kim, Lu, & Rhee, 2012; Ogasavara, 2010).

Based on international business literature, two models of internationalization speed stand out: (i) the difference between the MNE’s first international experience year and its year of foundation in the home country (Chang & Rhee, 2011; Cieslik & Kaciak, 2009; Oviatt & McDougall, 1994; Vermeulen & Barkema, 2002) and (ii) how fast the MNE develops in a given international market once established abroad (Autio et al., 2000; Jiang et al., 2014; Yang, Jiang, Kang, & Ke, 2009). The first model covers only the time that a company takes to internationalize itself from its conception, what brings a one-dimensional vision to the internationalization speed (Chetty et al., 2014; Hilmersson & Johanson, 2016). Therefore, for a broader and multidimensional definition of internationalization speed, the pace of expansion once a MNE is established in a given country can be considered (Casillas & Acedo, 2013; Chetty et al., 2014; Jones &
This study adopts a multidimensional vision, dealing with first and subsequent entries of subsidiaries in a given country or region.

Internationalization speed can also be measured by other aspects related to the achievement of certain milestones of the internationalization process. For instance, (i) the level of increased commitment of resources, which can be represented as the number of subsidiaries in a specific country or region and (ii) the level of dispersion, i.e., in how many countries a given company conducts its operations abroad. Both aspects collaborate to increase the accumulated experience in international activities (Casillas & Moreno-Menéndez, 2014). In this way, two types of speed are derived: (i) speed of commitment of resources in international markets, which is measured by the number of new subsidiaries of a MNE established abroad, and (ii) speed of dispersion in international markets, based on the quantity of countries in which subsidiaries of a MNE are established (Casillas & Acedo, 2013).

Among internal or intrinsic aspects of the organization, experiential knowledge deserves to be highlighted in favor of the internationalization process (Blomstermo, Eriksson, Lindstrand, & Sharma, 2004; Eriksson, Johanson, Majkgård, & Sharma, 1997). Its definition consists of all types of knowledge that a company accumulates because by being active in foreign markets, which implies its ability to search, analyze and act within an international context with local markets (Blomstermo et al., 2004). It is important to emphasize that experiential knowledge is only acquired through experience; conquering it is a task that requires effort and time. In foreign operations, experiential knowledge occurs through successive establishment of operations in new countries, which allow experience accumulation of operating abroad (Johanson & Vahlne, 1977).

External or extrinsic aspects of the organizational environment, which are related to the host country environment, are related to understand how the decision-making process of a company, is influenced by the institutional scope (Kostova & Roth, 2002). The institutional environment will be approached in this study from the theoretical perspective of Scott (2014), considering its regulative, normative and cultural-cognitive pillars.

**Theory and Hypothesis**

**Internationalization speed of MNEs**

The concept of internationalization speed is considered relatively recent as it was first addressed in academic literature by the mid-1990s. Until then, studies related to internationalization focused mainly on the explanation of sequential investments, entry modes and market choices (Casillas & Acedo, 2013). In recent years, there has been an increase in the use of internationalization concept, especially in studies regarding the internationalization of companies through the opening of subsidiaries abroad (Casillas & Acedo, 2013; Chetty et al., 2014). However, its definition still presents relevant conceptual differences between the different authors (Chetty et al., 2014). For example, internationalization speed can be estimated considering the time between the year of company's foundation and its first operation abroad (Chang & Rhee, 2011; Hilmersson & Johanson, 2016). However, this one-dimensional view has a limited perspective, since it does not consider and distinguish the subsequent entries after the establishment of the first operation in the host country (Autio et al., 2000; Casillas & Acedo, 2013; Chetty et al., 2014).

A high internationalization speed is not necessarily positive for organizations. Companies are involved in very quick international expansions are often impacted by the process of time compression diseconomies, a concept initially widespread in capital investment theory (Dierickx & Cool, 1989). Time compression diseconomies imply that the accumulation of assets cannot be obtained in an accelerated way. Furthermore, an investor will obtain a better result by applying his or her resources in the long term than the total amount at one time (Knott, Bryce, & Posen, 2003).
**Institutional environment and institutional distances**

The institutional environment may exert direct institutional pressures on the foreign subsidiary, independent on the headquarters’ initiatives. In highly regulated countries, established subsidiaries tend to play a more autonomous role and are managed in a decentralized manner. In contrast, subsidiaries in more open economies are managed in an integrated and interdependent way by the MNE (Bartlett & Ghoshal, 2002).

Thus, institutional distance is defined as the difference or dissimilarity comparing institutional environments between country of origin and host country (Kostova, 1997). Institutions can be classified into regulative, normative and cultural-cognitive pillars (Scott, 2014), and each of them can be measured by distances between home and host countries (Moore et al., 2015).

Regulative distance consists on the perceived differences between legal environments of host and home countries (Xu et al., 2004). A high regulative distance environment promotes the increase of uncertainty and projected cost incorporated by risk analysts into internationalization investment assessments (Moore et al., 2015). In addition, it is understood that this increase in uncertainty and costs is incurred to repress internationalization speed both in the establishment of new subsidiaries and in the regional performance.

Normative distance is associated with perceived differences between host and home countries regarding social norms, values, beliefs, and premises related to human nature and behavior (Kostova, 1997). They incorporate informal norms, procedures and codes of conduct, often unwritten and therefore difficult to learn (Moore et al., 2015). It is understood that the greater is the uncertainty arising from normative issues, the lesser will be the internationalization speed related to the establishment of new subsidiaries in relation to the regional performance, since normative and cultural elements tend to be similar given a lower psychic distance (Johanson & Vahlne, 2009).

Cultural-cognitive distance is related to differences of perception regarding symbolic aspects of culture between host and home countries, like their specific shared beliefs, linked to cognitive schemas and frames, as patterns of thinking, feeling and acting (Scott, 2012). Moreover, it encompasses the differences arising from the set of knowledge and understandings shared among individuals from different localities (Busenitz & Barney, 1997). Feelings of "being different" or "being foreign" can be caused by a large cultural-cognitive distance (Kogut & Singh, 1988). For Barkema et al. (1996), cultural-cognitive distances become more pronounced when a double layered acculturation is required, what consists of an adaptation of the subsidiary to local cultures and the country of origin. However, the greater the cultural difference between host and home countries, the smaller is the ability of a multinational to operate efficiently through subsidiaries (Tihanyi, Griffith, & Russell, 2005).

The hypotheses H1 and H2, related to regulative, normative and cultural-cognitive aspects, are defined as following:

**H1:** Institutional distance (H1a - regulative, H1b - normative, H1c - cultural-cognitive) has a negative relationship with commitment speed of MNEs through foreign subsidiaries.

**H2:** Institutional distance (H2a - regulative, H2b - normative, H2c - cultural-cognitive) has a negative relationship with dispersion speed of MNEs through foreign subsidiaries.

**Experiential knowledge**

The term experiential knowledge refers to all types of knowledge that companies accumulate when working in foreign markets. It implies the ability to research, analyze and act on international business issues, identifying errors and taking corrective actions (Blomstermo et al., 2004). The concept to be worked on in this study will be the one defined by Johanson and Vahlne (1977), which establishes that experiential knowledge of a specific market is only possible to be acquired in a practical way (learning-by-doing).
The longer the international experience, the greater is the diversity of countries in which an organization starts operations (Eriksson et al., 1997). Moreover, it will be verified in this study whether this applies to a continuous process of international expansion, measuring the speed of dispersion of a company through its subsidiaries, verifying in how many countries subsidiaries are established in a given period of time.

A global experience brings to the MNE a greater tacit knowledge due to the diversity of knowledge acquired, favoring entry into foreign markets via direct investments, which can be encouraged in a country or region through local tax incentives (Yang et al., 2016).

On the other side, according to Delios and Beamish (2005), a regional strategy of internationalization considering operations in the same region of the headquarters may be the easiest way to initially expand. Rugman and Verbeke (2004) reinforce the preference of organizations for a strategy of a regional rather than a global internationalization. A regional approach promotes not only the optimization of a company’s operational costs due to the scalability and operational standardization, but also to the use of strategies aligned with several countries, as a consequence of a smaller psychic distance among them (Rugman, Oh, & Lim, 2012). It is expected that a regional company does not differentiate its marketing strategies when entering a country of the same region, due to market homogeneity and regional economy integration, which does not occur when acting globally (Rugman & Verbeke, 2004). It is expected that a regional solution is more manageable than a global strategy (Morrison, Ricks, & Roth, 1991). Consequently, a regional performance tends to favor a greater internationalization speed of a MNE.

Based on the previous statements, hypotheses H3 and H4, related to regional and global experiences, are broken down as following:

**H3:** (Regional - H3a; Global - H3b) experience has a positive relationship with commitment speed of MNEs through foreign subsidiaries.

**H4:** (Regional – H4a; Global – H4b) experience has a positive relationship with dispersion speed of MNEs through foreign subsidiaries.

**Regional and global experience moderating institutional distance and speed of internationalization**

To the extent that the subsidiary is active in a host country, it acquires greater local experience, in order to reduce liability of newness (Xu & Shenkar, 2002) and also the liability of foreignness (Johanson & Vahlne, 2009). Experience in the host country improves the subsidiary’s performance by reducing and promoting international collaboration among companies. Nonetheless, because of the difficulty in learning from experience in the host country, it is not always possible to benefit from the MNE’s performance abroad (Blomstermo et al., 2004). On the other hand, when companies reduce cultural barriers over time as a result of their previous experiences of international expansion, a considerable increase in the longevity of their operations abroad is expected, requiring “double layered acculturation” (Barkema et al., 1996). Then, accordingly, it is understood that both global and regional experience has a moderating function in institutional distances. Hypotheses H5, H6, H7 and H8 are represented as described:

**H5:** Regional experience has a moderating effect between institutional distance (H5a - regulative, H5b - normative, H5c - cultural-cognitive) and the commitment speed of foreign subsidiaries.

**H6:** Regional experience has a moderating effect between institutional distance (H6a - regulative, H6b - normative, H6c - cultural-cognitive) and the dispersion speed of foreign subsidiaries.

**H7:** Global experience has a moderating effect between institutional distance (H7a - regulative, H7b - normative, H7c - cultural-cognitive) and the commitment speed of foreign subsidiaries.

**H8:** Global experience has a moderating effect between institutional distance (H8a - regulative, H8b - normative, H8c - cultural-cognitive) and the dispersion speed of foreign subsidiaries.

The theoretical model of this study is represented in the Figure 1, as following.
Methodology

Data and sample

The initial sample included 924 observations concerning data from 10 Japanese organizations in the electronics industry and their respective subsidiaries established in 59 countries. The organizations selected to compose the data sample from this study are presented as the 10 biggest companies in the electronics sector listed in the annual Global Fortune 500 in 2016. Data were extracted from *Kaigai Shinshutsu Kygyou Souran* directory: *Kaisha Betsu* (Japanese Overseas Investment: By Firm), Toyo Keizai's publication in 2016, data were extracted regarding: (i) company name, (ii) subsidiary name, (ii) initial investment (amount and type of currency), (iii) host country / subsidiary region, (iv) subsidiary's year of entry into the host country. The use of a database containing Japanese companies in the electronics sector is justified as Japan has a history of decades in operation abroad through direct investments and establishment of subsidiaries abroad (Ogasavara, 2013). After the initial tabulating, occurrences with missing values were eliminated in relation to (i) initial investment (amount and type of currency) and (ii) month and year of subsidiary entry in the host country. After these adjustments, the final sample for the study is summarized in 492 observations of 10 MNEs operating in 46 countries.

From the Global Competitiveness Report, historical data available on the World Economic Forum’s website for the period from 2006 to 2015 were used. From this base, we extracted data from countries on the following pillars (i) institutions, (ii) higher education and training, (iii) product and service market efficiency, (iv) labor market efficiency and (v) business sophistication. Cultural-cognitive variable was based on Geert Hofstede's studies, available on the Hofstede Insights website for the year 2015 and considers the following national culture dimensions (i) power distance, (ii) individualism versus collectivism, (iii) masculinity versus femininity, (iv) uncertainty avoidance, (v) long-term versus short-term orientation, and (vi) indulgence versus constraint (Hofstede, 2017a, 2017b).
Variables

Dependent, independent and control variables of this study are summarized in Table 1. In addition to that, with the use of the moderating variables, we intend to verify if previous experiences with internationalization attenuate the effects resulting from a greater institutional distance in the internationalization speed of MNEs. The 6 moderating variables adopted in this study are: (i) Regional experience x Regulative distance, (ii) Regional experience x Normative distance, (iii) Regulative distance, (iv) Regional experience and regulative distance, (v) Regional experience x Cultural-cognitive distance, (vi) Global experience x Regulative distance, (v) Global experience x Normative distance and (vi) Global experience x Cultural-cognitive distance.

**TABLE 1: SUMMARY OF VARIABLES.**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description</th>
<th>Measurement</th>
<th>Source(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical model</td>
<td>The methodological approach adopted contemplates a quantitative analysis of the variables previously explained in this study. The correlations among independent, dependent and control variables will be analyzed. In addition, the data will be analyzed by adopting multiple linear regression, with a 95% confidence interval. After the regressions, in order to identify the influence of regional and global experiences on the relationship between institutional distances and internationalization speeds, we adopt moderating variables.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Statistical model**

The methodological approach adopted contemplates a quantitative analysis of the variables previously explained in this study. The correlations among independent, dependent and control variables will be analyzed. In addition, the data will be analyzed by adopting multiple linear regression, with a 95% confidence interval. After the regressions, in order to identify the influence of regional and global experiences on the relationship between institutional distances and internationalization speeds, we adopt moderating variables.
Correlations

We perform the correlation between dependent and independent variables of the models. Considering the commitment speed, it is observed that all independent variables present a strong correlation (p-value <0.01). VIF values are below 10, indicating that there is no multicollinearity (Hair, Black, Babin, Anderson, & Tatham, 2009). Additionally, it is observed that the correlation coefficients of the regulative and normative distances are positive, while the cultural-cognitive distance is negative. Moreover, a positive linear relationship is presented between (i) regulative distance and commitment speed (ii) normative distance and commitment speed. In contrast, there is a negative linear relationship between (iii) cultural-cognitive distance and commitment speed.

Correlations between dispersion speed and independent variables show that only the cultural-cognitive distance has a moderate correlation with dispersion speed (p-value <0.05), and its linear relationship is negative. Other variables presented no correlation with dispersion speed. VIFs of these variables also do not show multicollinearity. The results of the coefficients considering independent and dependent variables are presented in a correlation matrix in Table 2.

**TABLE 2: CORRELATION MATRIX OF COMMITMENT AND DISPERSION SPEEDS, INDEPENDENT AND CONTROL VARIABLES.**

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Commitment speed</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Dispersion speed</td>
<td>0.582**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Regulative distance</td>
<td>0.204**</td>
<td>0.069</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Normative distance</td>
<td>0.156**</td>
<td>0.048</td>
<td>0.765**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cultural-cognitive distance</td>
<td>-0.143**</td>
<td>-0.090*</td>
<td>-0.298**</td>
<td>-0.290**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Regional experience</td>
<td>0.364**</td>
<td>0.002</td>
<td>0.251**</td>
<td>0.146**</td>
<td>-0.100*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Global experience</td>
<td>0.371**</td>
<td>0.034</td>
<td>0.312**</td>
<td>0.311**</td>
<td>-0.139**</td>
<td>0.661**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8. Subsidiary size (log)</td>
<td>0.099*</td>
<td>0.055</td>
<td>0.306**</td>
<td>0.312**</td>
<td>-0.151**</td>
<td>-0.004</td>
<td>0.059</td>
<td>1</td>
</tr>
</tbody>
</table>

Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Commitment speed</td>
<td>1.147</td>
<td>0.821</td>
<td>0.000</td>
<td>4.702</td>
</tr>
<tr>
<td>2. Dispersion speed</td>
<td>0.540</td>
<td>0.222</td>
<td>0.000</td>
<td>1.500</td>
</tr>
<tr>
<td>3. Regulative distance</td>
<td>2.713</td>
<td>1.599</td>
<td>0.638</td>
<td>7.022</td>
</tr>
<tr>
<td>4. Normative distance</td>
<td>2.007</td>
<td>0.947</td>
<td>0.827</td>
<td>4.560</td>
</tr>
<tr>
<td>5. Cultural-cognitive distance</td>
<td>2.573</td>
<td>0.840</td>
<td>0.720</td>
<td>5.993</td>
</tr>
<tr>
<td>6. Regional experience</td>
<td>24.850</td>
<td>15.440</td>
<td>0</td>
<td>68</td>
</tr>
<tr>
<td>7. Global experience</td>
<td>34.430</td>
<td>14.046</td>
<td>0</td>
<td>71</td>
</tr>
<tr>
<td>8. Subsidiary size (log)</td>
<td>8.164</td>
<td>2.294</td>
<td>0</td>
<td>15</td>
</tr>
</tbody>
</table>

Regressions for commitment speed without effect of moderating variables

According to Table 3, models 1A to 7A address commitment speed. Regressions presented statistical significance (p<0.01) for the independent variables when analyzed individually (Models 1A, 2A, 3A, 4A and 5A). The VIF analysis does not demonstrate existence of multicollinearity (VIF <3).

Models 1A (regulative distance) and 2A (normative distance) presented positive coefficients and a significant relation, not supporting hypotheses H1a and H1b. Regression results indicate that the greater the institutional and regulative distances between the country of origin and the host, the greater is the speed
of commitment of foreign subsidiaries. The results of this study partially contradict the concept that MNE prefer to internationalize themselves in institutionally close environments (Kiss & Danis, 2008) and that other factors may explain this behavior. This positive relationship between distances and speed will be re-evaluated later in this study, with incorporation of moderating variables.

Cultural-cognitive distance presents a negative and significant relationship with commitment speed, which leads to accept the hypothesis H1c. Smaller cultural distances stimulate a greater commitment in the host country, resulting from a greater investment in new subsidiaries abroad (Delios & Henisz, 2003; Jiang et al., 2014).

Regional and global experiences have positive and significant coefficients (Models 4A and 5A, with p<0.01), which lead us to accept hypotheses H3a and H3b. The significance of the experiences with the commitment speed is also maintained when both are evaluated with all institutional distance variables (regulative, normative and cultural-cognitive, represented in Models 6A and 7A). However, these models lose significance with institutional distance. Results demonstrate that the longer the time spent in the region or at a global level, the greater is the commitment speed of a MNE through the opening of new subsidiaries.

**TABLE 3: REGRRESSIONS OF COMMITMENT SPEED, INDEPENDENT AND CONTROL VARIABLES.**

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Model 1A</th>
<th>Model 2A</th>
<th>Model 3A</th>
<th>Model 4A</th>
<th>Model 5A</th>
<th>Model 6A</th>
<th>Model 7A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.763***</td>
<td>0.744***</td>
<td>1.247***</td>
<td>0.373***</td>
<td>0.183</td>
<td>0.598***</td>
<td>0.451***</td>
</tr>
<tr>
<td></td>
<td>(5.596)</td>
<td>(5.278)</td>
<td>(6.553)</td>
<td>(2.687)</td>
<td>(1.231)</td>
<td>(2.930)</td>
<td>(2.188)</td>
</tr>
<tr>
<td>Institutional distance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulative distance</td>
<td>0.099***</td>
<td>0.094</td>
<td>0.062*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.137)</td>
<td>(1.003)</td>
<td>(1.823)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normative distance</td>
<td>0.120***</td>
<td></td>
<td></td>
<td>0.011</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.951)</td>
<td></td>
<td></td>
<td>(0.200)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural-cognitive distance</td>
<td>0.128***</td>
<td></td>
<td></td>
<td>-0.074*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-2.905)</td>
<td></td>
<td></td>
<td>(-1.718)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Experiential knowledge**

| Regional experience | 0.019***          | 0.018***          |                   |                   |                   |
|                     | (8.697)           | (7.789)           |                   |                   |                   |
| Global experience   | 0.021***          | 0.020***          |                   |                   |                   |
|                     | (8.753)           | -7.814            |                   |                   |                   |

**Control variable**

| Subsidiary size (log) | 0.014             | 0.020             | 0.028*            | 0.036**           | 0.028*            | 0.023***          | 0.020             |
|                       | (0.860)           | (1.182)           | (1.748)           | (2.390)           | (1.841)           | (1.441)           | (1.269)           |
| R-squared             | 0.043             | 0.027             | 0.027             | 0.142             | 0.144             | 0.156             | 0.156             |
| R-squared adjusted    | 0.039             | 0.023             | 0.023             | 0.139             | 0.140             | 0.147             | 0.148             |
| F Statistic           | 11.049            | 6.806             | 6.667             | 40.603            | 41.096            | 17.939            | 18.021            |
| Significant F         | 0.000             | 0.001             | 0.001             | 0.000             | 0.000             | 0.000             | 0.000             |
| Sample size           | 492               | 492               | 492               | 492               | 492               | 492               | 492               |

* p<0.10.
** p<0.05.
*** p<0.01.
Regressions for commitment speed with effect of moderating variables

Models 8A to 15A (Table 4) were proposed in order to understand the moderating effect of regional and global experiences on institutional distances on commitment speed. Both present a positive and highly significant relation (p<0.01) for regulative and normative distances and regional experience. There is moderate significance for the moderation of regional experience with regulative distance and high for the moderation with the normative distance. Model 13A presents high and negative significance (p<0.01) for cultural-cognitive distance. Complementarily, there is a high and positive significance for global experience and the moderation of this experience with cultural-cognitive distance. Models 10A, 11A and 12A showed no significance (p>0.10). Due to these results, hypotheses H5c, H7a and H7b are not supported.

**TABLE 4: REGRESSIONS OF COMMITMENT SPEED, INDEPENDENT AND CONTROL VARIABLES, WITH MODERATION.**

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Model 8A</th>
<th>Model 9A</th>
<th>Model 10A</th>
<th>Model 11A</th>
<th>Model 12A</th>
<th>Model 13A</th>
<th>Model 14A</th>
<th>Model 15A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.137</td>
<td>-0.041</td>
<td>0.842***</td>
<td>-0.007</td>
<td>-0.031</td>
<td>0.707***</td>
<td>0.626***</td>
<td>0.459**</td>
</tr>
<tr>
<td></td>
<td>(0.834)</td>
<td>(-0.233)</td>
<td>(3.067)</td>
<td>(-0.033)</td>
<td>(-0.135)</td>
<td>(3.215)</td>
<td>(3.128)</td>
<td>(2.221)</td>
</tr>
<tr>
<td>Institutional distance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulative distance</td>
<td>0.139***</td>
<td>0.129**</td>
<td>0.053</td>
<td>0.068*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.213)</td>
<td>(1.900)</td>
<td>(1.545)</td>
<td>(1.933)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normative distance</td>
<td>0.250***</td>
<td>0.138</td>
<td>-0.026</td>
<td>-0.075</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.791)</td>
<td>(1.293)</td>
<td>(0.445)</td>
<td>(1.273)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural-cognitive distance</td>
<td>-0.158*</td>
<td>-0.144***</td>
<td>-0.076*</td>
<td>-0.066</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.873)</td>
<td>(-3.062)</td>
<td>(-1.767)</td>
<td>(-1.518)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiential knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional experience</td>
<td>0.028***</td>
<td>0.035***</td>
<td>0.013*</td>
<td>0.019***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(6.093)</td>
<td>(6.549)</td>
<td>(1.719)</td>
<td>(8.133)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global experience</td>
<td>0.026***</td>
<td>0.027***</td>
<td>0.014***</td>
<td>0.020***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5.292)</td>
<td>(4.717)</td>
<td>(3.789)</td>
<td>(7.686)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control variable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subsidiary size (log)</td>
<td>0.025</td>
<td>0.027*</td>
<td>0.030**</td>
<td>0.017</td>
<td>0.025</td>
<td>0.023</td>
<td>0.021</td>
<td>0.018</td>
</tr>
<tr>
<td></td>
<td>(1.583)</td>
<td>(1.698)</td>
<td>(1.969)</td>
<td>(1.991)</td>
<td>(1.567)</td>
<td>(1.518)</td>
<td>(1.353)</td>
<td>(1.144)</td>
</tr>
<tr>
<td>Moderating variables (interactions)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional experience x Regulative distance</td>
<td>-0.003**</td>
<td></td>
<td></td>
<td>0.016</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>(-2.436)</td>
<td></td>
<td></td>
<td>(0.318)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional experience x Normative distance</td>
<td>-0.008***</td>
<td></td>
<td></td>
<td>-0.131***</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(-3.343)</td>
<td></td>
<td></td>
<td>(-2.645)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regional experience x Cultural-cognitive distance</td>
<td>0.002</td>
<td></td>
<td></td>
<td>0.007</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.894)</td>
<td></td>
<td></td>
<td>(1.190)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global experience x Regulative distance</td>
<td>-0.002</td>
<td></td>
<td></td>
<td>-0.046</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.448)</td>
<td></td>
<td></td>
<td>(-4.763)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global experience x Normative distance</td>
<td>-0.003</td>
<td></td>
<td></td>
<td>-0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-1.203)</td>
<td></td>
<td></td>
<td>(-4.026)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global experience x Cultural-cognitive distance</td>
<td>0.000***</td>
<td></td>
<td></td>
<td>0.018</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.793)</td>
<td></td>
<td></td>
<td>(0.505)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.161</td>
<td>0.167</td>
<td>0.152</td>
<td>0.153</td>
<td>0.147</td>
<td>0.164</td>
<td>0.178</td>
<td>0.169</td>
</tr>
<tr>
<td>R-squared adjusted</td>
<td>0.154</td>
<td>0.160</td>
<td>0.146</td>
<td>0.146</td>
<td>0.140</td>
<td>0.157</td>
<td>0.164</td>
<td>0.147</td>
</tr>
<tr>
<td>Significant F</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Sample size</td>
<td>492</td>
<td>492</td>
<td>492</td>
<td>492</td>
<td>492</td>
<td>492</td>
<td>492</td>
<td>492</td>
</tr>
</tbody>
</table>

* p<0.10.
** p<0.05.
*** p<0.01.
Moreover, figure 2 visually presented the moderation effects of regional experience and regulative/normative distances on commitment speed. These interaction plots and the subsequent are based on mean-centered coefficients and used tools provided by Professor Jeremy Dawson\(^1\), based on Aiken & West’s (1991) recommendations. Specifically, plotting interactions should consider both main effects (x, z) and interaction terms (x*z) with mean-centered scores to facilitate interpretation process. Regression lines below the mean of both graphs present that in a low regulative or normative distance standpoint between host and home countries, high regional experienced subsidiaries face a greater commitment speed. As long as regulative and normative distances are increasing, subsidiaries with a less regional experience faces a lower commitment speed but increasing in a higher rate than ones with higher regional experience. Commitment speed difference regarding high and low experienced subsidiaries in a region decreases with higher regulative distances. It means that less experienced subsidiaries faces a more favorable scenario with higher regulative and normative distances than high experienced ones. Thus, this observation partially supports H5a and H5b.

![Graph 2](image1)

**FIG. 2: THE INTERACTION EFFECT BETWEEN REGIONAL AND REGULATIVE/NORMATIVE DISTANCES ON COMMITMENT SPEED.**

On the other hand, figure 3 shows a distinct behavior to the previous moderations. Greater global experiences imply higher commitment speeds. On the other hand, for any level of global experience, internationalization speed decreases as the cultural-cognitive distance increases. It is observed, then, that global experience presents a moderating effect on the cultural-cognitive distance, that positively impacts the commitment speed. Hence, hypothesis H7c is supported.

![Graph 3](image2)
Regressions for dispersion speed without effect of moderating variables

Models 1B to 7B (Table 5) related to dispersion speed do not present correlation between variables. Cultural-cognitive distance (Model 3B), despite having a p-value lower than 0.1, has a significant F greater than 0.05. Thus, hypotheses H2a, H2b, H2c, H4a and H5b are not supported. The increase in the number of new countries, in which a MNE establishes itself through its subsidiaries, and its geographic dispersion (Casillas & Acedo, 2013), are not correlated with the institutional distance from the host country or the experiential knowledge. Consequently, there may be other factors that explain the motivation of a MNE in diversification through the establishment of subsidiaries in different countries. Model 4B, which represents influence of regional experience and subsidiary size at the dispersion speed, presents a negative R-squared adjusted (-0.001). This negative value means that variation in the values around model predictions (SSE, or sum of squared errors) is greater than the total variance (SSTO, or variation around the mean value). This means that the variables considered in this model does not explain it and should be better define in future studies.
A moderating effect of regional and global experiences on institutional distances was adopted. For this purpose, models 8B to 15B were established (Table 6). Model 8B presented a positive and high significance relationship (p<0.01) for regulative distance and for moderate (p<0.05) for regional experience. 9B model obtained a positive and highly significant relation (p<0.01) for normative distance and regional experience. Models 10B and 13B are not significant (p>0.10). Due to these results, hypotheses H6c and H8c are not supported. Models 11B and 12B, however, have VIF>10. Therefore, the hypotheses H8a and H8b are also not supported.
The effect of moderation on the independent variables influencing dispersion speed treated in models 8B and 9B are graphically represented in Figure 4. Similarly to the commitment speed, dispersion speed also shows a negative and highly significant relation for 9B and 10B models (p<0.01). On the other hand, models 12B and 13B show negative relation and high significance (p<0.01).
Based on Figure 4, dispersion speed is higher for multinationals with greater regional experience. However, as regulative distance increases, dispersion speed decreases for MNEs with high regional experience and grows for those with low regional experience. Consequently, hypotheses H6a and H6b are partially supported.

Discussion

According to the analysis of the observed results, we highlighted the importance of the moderating variables in the models of commitment and dispersion speeds. It is suggested that companies with low regional experience tend to present a higher commitment speed when compared to those with greater experience. Additionally, this speed is increased the greater the regulative and normative distances between home and host countries. These results suggest the existence of other factors that significantly influence the commitment speed of MNEs through foreign subsidiaries, in addition to those presented in this study.

A possible explanation for the non-significance of regulative and normative distances in relation to the internationalization speed may arise from the type of sector considered. This study was based on a database of multinationals in the electronics sector, which present a global value chain structure. In this kind of industry, a single product may contain components from companies located in different countries. Due to this, this sector tends to present a dispersed location, but concentrates the production of basic components in low-cost locations, such as Asia (Aoyama, 2000; Sturgeon, 2007; Sturgeon & Kawakami, 2011). Acting through global value chains can diminishes or softens local institutional effects as their products are perceived as "drivers" for other types of industry and the risks of a particular country or region are minimized by the supply from elsewhere (Sturgeon, 2007; Sturgeon & Kawakami, 2011).

A quick internationalization through foreign subsidiaries can also be related to networks (addressed in the Networks Theory) with the host country (De Clercq, Sapienza, Yavuz, & Zhou, 2012). Networks are highlighted in internationalization strategies, allowing accelerated internationalization strategies adoption (Mais, Castro de Carvalho, Amal, & Gaia Hoffmann, 2010). One of the factors that can contribute to a rapid
internationalization in environments with lower levels of institutional development is the establishment of strong ties of companies already established and mature in their countries of origin with local institutions when established abroad (Kiss & Danis, 2008).

The results also suggest that MNEs with little experience in the international market can adopt through subsidiaries the same behavior as born-global companies. These organizations are start-up ventures that seek to obtain a substantial proportion of their revenues from the sale of products on international markets. They emphasize the development of specific markets and present a high level of specialization and benefit from advances in information, production and communication technologies to reduce their international transaction costs (Knight & Cavusgil, 2015). Thus, like born-globals, subsidiaries can gain competitive advantages based on the market in the host country and access to technologies that favor R&D development.

Taking into account the regression between experiential knowledge and commitment and dispersion speeds, regressions results do not show a greater significance for regional-to-global strategy, contrary to studies by Delios and Beamish (2005) and Rugman et al (2004). Additionally, the regional and global experiences are only significant for commitment speed.

Final Consideration

Based on the results presented by this study, it is possible to establish three fundamental contributions to the internationalization speed literature. (i) It is important to differentiate the concept of internationalization speed from the commitment and dispersion perspectives. We concluded, therefore, that institutional distances have a significant impact in relation to commitment speed of MNEs. (ii) It is observed that experiential knowledge moderates in a positive way the internationalization speed (commitment or dispersion speeds) and institutional distance (regulative, normative and cultural-cognitive distances). (iii) The influence of global experiential knowledge on cultural-cognitive distance did not impact the behavior of this variable in relation to the commitment speed. This implies that a high cultural-cognitive distance negatively impacts the commitment speed. Nonetheless, increasing normative and regulative distances promote an increase in the internationalization speed for subsidiaries with low experience in operating abroad. In other words, in spite of the low regulative and normative distances between host and host countries to promote a higher internationalization speed, it increases more rapidly when distances are greater. This phenomenon implies the existence of other variables that may explain this increase in internationalization speed and which were not presented in this study.

As managerial implications, this study contributes to (i) providing inputs for analyzing investments in international markets through subsidiaries, (ii) directing effective efforts that contribute to a sustainable presence in international markets, (iii) facilitating the understanding of institutional environments (iv) assisting the process of defining strategies related to the international expansion speed, establishing the optimal commitment and dispersion speeds, (v) determining the challenges arising from the establishment of new subsidiaries in locations with high institutional distance, (vi) identifying the impact of the multinational's regional or global experience in the international expansion speed through subsidiaries, (vii) collaborating in the process of strategic choice of locations for international expansion (viii) minimizing the
risks of internationalization in the understanding the institutional environment of the host country and the previous experience of the multinational in new markets. The analysis of these aspects aims to leverage the competitive advantages of organizations through subsidiaries establishment abroad based on their international experience at an internationalization speed that covers the aspects of commitment (number of new subsidiaries), dispersion (countries to be established) in order to maximize a positive performance concerning the internationalization process.

The limitations of this study are discussed in six main issues. (i) Results related to the proposed models suggest the existence of other variables, which explain internationalization speed, were not considered in the statistical models evaluated. (ii) Feasibility of using other control variables, in addition to the initial capital, which could help explain the models presented. For example, as discussed earlier, the subsidiary control could help in understanding the internationalization speed, since the subsidiary’s control level may vary according to the regulative system of the host and home countries (Xu & Shenkar, 2002). (iii) The existence of a high number of missing values. From a total of 924 observations from Japanese subsidiaries, 432 of them, representing a total of 47%, had missing data regarding year of establishment and / or invested initial capital. (iv) Data for this study was collected from one year of the directory published by Toyo Keizai in 2016, which considered information from active subsidiaries in 2015. (v) Non-presentation of an optimal level of internationalization speed according to strategic organizational objectives. This study was limited in the understanding of how institutional aspects and international experience influence internationalization speed. (vii) Database refers only to Japanese companies, what could bias the results presented since this study aims to promote a general explanation related to the impacts of institutional distance and experiential knowledge on the internationalization speed.

As future research opportunities based on this study, we can list a sort of them, as following. (i) Internationalization speed could be measured by commercial growth. This perspective constitutes the third approach by Casillas and Acedo (2013) related to internationalization speed, which was not addressed in this study. (ii) Internationalization speed could be analyzed considering institutional distance aspects through non-linear relationships (inverted "U" shaped) and improving the fit and quality of sample (Wang & Schaan, 2008). (iii) In order to improve R-squared and adjusted R-squared of the sample considered in a future research, including control variables to observe variance within parent firms and subsidiaries. (iv) Transparency level regarding host countries can be considered in future studies, as it can positive or negatively impact the will of a Japanese MNE in investing abroad (Drabek & Payne, 2002; Zhao, Kim & Du, 2003). (v) The cultural-cognitive pillar approached in this study is derived from Kogut & Singh’s (1988) formula and Hofstede’s database (2017a, 2017b). (vi) Investigating global value chains (Sturgeon, 2007; Sturgeon & Kawakami, 2011), the role of social networks (De Clercq et al., 2012), the establishment of alliances in the host country (Casillas & Acedo, 2013). (vii) Understanding of motivators that collaborates to increase internationalization with low regional or global experience, and to investigate if this a greater speed is related to an increase in financial performance (Chetty et al., 2014).

Despite the evaluation of other cultural databases as Globe Project (2017) and World Values Survey (2017), the choice by Hofstede’s was made mainly due to the greater availability of information from the
countrieA moderating effect of regional and global experiences on institutional distances was adopted. For this purpose, models 8B to 15B were established (Table 6). Model 8B presented a positive and high significance relationship (p<0.01) for regulative distance and for moderate (p<0.05) for regional experience. 9B model obtained a positive and highly significant relation (p<0.01) for normative distance and regional experience. Models 10B and 13B are not significant (p>0.10). Due to these results, hypotheses H6c and H8c are not supported. Models 11B and 12B, however, have VIF>10. Therefore, the hypotheses H6a and H8b are also not supported.

The effect of moderation on the independent variables influencing dispersion speed treated in models 8B and 9B are graphically represented in Figure 4. Similarly to the commitment speed, dispersion speed also shows a negative and highly significant relation for 9B and 10B models (p<0.01). On the other hand, models 12B and 13B show negative relation and high significance (p<0.01).

Based on Figure 4, dispersion speed is higher for multinationals with greater regional experience. However, as regulative distance increases, dispersion speed decreases for MNEs with high regional experience and grows for those with low regional experience. Consequently, hypotheses H6a and H6b are partially supported.

Based on the results presented by this study, it is possible to establish three fundamental contributions to the internationalization speed literature. (i) It is important to differentiate the concept of internationalization speed from the commitment and dispersion perspectives. We concluded, therefore, that institutional distances have a significant impact in relation to commitment speed of MNEs. (ii) It is observed that experiential knowledge moderates in a positive way the internationalization speed (commitment or dispersion speeds) and institutional distance (regulative, normative and cultural-cognitive distances). (iii) The influence of global experiential knowledge on cultural-cognitive distance did not impact the behavior of this variable in relation to the commitment speed. This implies that a high cultural-cognitive distance negatively impacts the commitment speed. Nonetheless, increasing normative and regulative distances promote an increase in the internationalization speed for subsidiaries with low experience in operating abroad. In other words, in spite of the low regulative and normative distances between host and host countries to promote a higher internationalization speed, it increases more rapidly when distances are greater. This phenomenon implies the existence of other variables that may explain this increase in internationalization speed and which were not presented in this study.

As managerial implications, this study contributes to (i) providing inputs for analyzing investments in international markets through subsidiaries, (ii) directing effective efforts that contribute to a sustainable presence in international markets, (iii) facilitating the understanding of institutional environments (iv) assisting the process of defining strategies related to the international expansion speed, establishing the optimal commitment and dispersion speeds, (v) determining the challenges arising from the establishment of new subsidiaries in locations with high institutional distance, (vi) identifying the impact of the multinational's regional or global experience in the international expansion speed through subsidiaries, (vii) collaborating in the process of strategic choice of locations for international expansion (viii) minimizing the
risks of internationalization in the understanding the institutional environment of the host country and the previous experience of the multinational in new markets. The analysis of these aspects aims to leverage the competitive advantages of organizations through subsidiaries establishment abroad based on their international experience at an internationalization speed that covers the aspects of commitment (number of new subsidiaries), dispersion (countries to be established) in order to maximize a positive performance concerning the internationalization process.

The limitations of this study are discussed in six main issues. (i) Results related to the proposed models suggest the existence of other variables, which explain internationalization speed, were not considered in the statistical models evaluated. (ii) Feasibility of using other control variables, in addition to the initial capital, which could help explain the models presented. For example, as discussed earlier, the subsidiary control could help in understanding the internationalization speed, since the subsidiary's control level may vary according to the regulative system of the host and home countries (Xu & Shenkar, 2002). (iii) The existence of a high number of missing values. From a total of 924 observations from Japanese subsidiaries, 432 of them, representing a total of 47%, had missing data regarding year of establishment and / or invested initial capital. (iv) Data for this study was collected from one year of the directory published by Toyo Keizai in 2016, which considered information from active subsidiaries in 2015. (v) Non-presentation of an optimal level of internationalization speed according to strategic organizational objectives. This study was limited in the understanding of how institutional aspects and international experience influence internationalization speed. (vii) Database refers only to Japanese companies, what could bias the results presented since this study aims to promote a general explanation related to the impacts of institutional distance and experiential knowledge on the internationalization speed.

As future research opportunities based on this study, we can list a sort of them, as following. (i) Internationalization speed could be measured by commercial growth. This perspective constitutes the third approach by Casillas and Acedo (2013) related to internationalization speed, which was not addressed in this study. (ii) Internationalization speed could be analyzed considering institutional distance aspects through non-linear relationships (inverted "U" shaped) and improving the fit and quality of sample (Wang & Schaan, 2008). (iii) In order to improve R-squared and adjusted R-squared of the sample considered in a future research, including control variables to observe variance within parent firms and subsidiaries. (iv) Transparency level regarding host countries can be considered in future studies, as it can positive or negatively impact the will of a Japanese MNE in investing abroad (Drabeck & Payne, 2002; Zhao, Kim & Du, 2003). (v) The cultural-cognitive pillar approached in this study is derived from Kogut & Singh’s (1988) formula and Hofstede’s database (2017a, 2017b). (vi) Investigating global value chains (Sturgeon, 2007; Sturgeon & Kawakami, 2011), the role of social networks (De Clercq et al., 2012), the establishment of alliances in the host country (Casillas & Acedo, 2013). (vii) Understanding of motivators that collaborates to increase internationalization with low regional or global experience, and to investigate if this a greater speed is related to an increase in financial performance (Chetty et al., 2014).

Despite the evaluation of other cultural databases as Globe Project (2017) and World Values Survey (2017), the choice by Hofstede’s was made mainly due to the greater availability of information from the
countries covered. Nonetheless, Hofstede (2017a, 2017b) database and Kogut and Singh’s (1988) cultural index are both criticized by a range of factors, as the simplification of culture distance in one index and the possibility that Hofstede’s studies are outdated. Future research can consider other cultural dimensions, as the Mahalanobis composite cultural distance data, based on the six-dimensional Hofstede’s framework, Schwartz’s seven-dimensional values framework and GLOBE’s nine-dimensional system of national cultural values (Beugelsdijk, Kostova & Roth, 2016).

The contributions mentioned here are not exhaustive. Internationalization speed is a theme that provides to the researcher a wide range of studies that can much contribute to the academic literature. Besides, in the managerial scope, it assists the organizations to establish strategies of international expansion based on the internationalization rhythm and pace that promotes optimization in resources allocation and greater return of the investments in new markets.
References

228


End Notes

1 This is a two-way unstandardized interaction plot downloadable tool from the following website: Http://www.jeremydawson.co.uk/slopes.htm.
Abstract

This paper examines the relationship among R&D investment, firm performance, foreign direct investment and enterprise nature. Using the data of Chinese listed companies from 2003 to 2014, we find that the higher firms’ R&D investment is, the better firms’ performance will be. Based on the signal theory, foreign investment will promote the improvement of enterprise performance. Besides, the existence of foreign investment will make the relationship between R&D and firm performance less efficient. Compared with non-state-owned enterprises, the conversion effect of R&D on firm performance is stronger in state-owned companies. Under the background of economic globalization, the research will help enterprises recognize the importance of R&D in improving enterprises competitiveness, develop a rational view of foreign investment and find a better solution during the reform of mixed systems.

Keywords: R&D investment; Foreign direct investment; State-owned enterprises; Mixed ownership reform

The core of modern enterprise competitiveness is independent innovation capability. With the development of science and technology, the product cycle is becoming shorter and shorter, which impels firms to develop new products and innovate in technical management to obtain the driving force for sustainable development. This suggests that theoretically the increase in R&D investment brings firms creativity and promotes firms’ value. To prove this, we use empirical evidence to investigate whether the increase in R&D investment will improve competitiveness of enterprises and further improve the firm performance.

At present stage, Chinese state-owned companies are faced with revolution. Building property rights systems that adapt to enterprises is an important way to improve the competitiveness of enterprises as well as a breakthrough to solve corporate governance issues. The mixed ownership reform has been put forward as early as 1980s. However, after 30 years of reform, the problem of the backward property rights system has not been completely solved. At present the reform focuses on realizing the privatization strategy by introducing private capital or foreign investment. Table 1 and Table 2 show the number of foreign investment enterprises and their total investment in China in the last few years respectively. From the tables we can see that the number of foreign investment enterprises and their total investment have been increasing year by year, which indicates that in China foreign investments are now becoming a force that we cannot ignore. What’s more, in 2018, premier Li of the Chinese State Council stated in the report on the work of the government that “we should continue to promote the steady growth of foreign investment this year” (the State Council, 2018). Given these conditions, there is an urgent need to investigate how foreign investment affects firm performance. Due to the strict regulation of foreign investment, the proportion of foreign direct investment is relatively low, which may weaken the governance effect of FDI. Therefore in this paper we will also discuss whether foreign investment plays an instructive or a governing role.

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Telephone: 13904317255
TABLE 1 THE NUMBER OF FOREIGN INVESTMENT ENTERPRISES IN CHINA

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<tr>
<td>Total number of foreign investment enterprises</td>
<td>434248</td>
<td>445244</td>
<td>446487</td>
<td>440609</td>
<td>445962</td>
<td>460699</td>
<td>481179</td>
<td>505151</td>
</tr>
<tr>
<td>Number of manufacturing foreign investment enterprises</td>
<td>191671</td>
<td>187547</td>
<td>181017</td>
<td>-</td>
<td>166195</td>
<td>161168</td>
<td>158256</td>
<td>154158</td>
</tr>
</tbody>
</table>

Note: We collect data from State Statistics Bureau and the number of manufacturing foreign investment enterprises in 2012 was not disclosed.

TABLE 2 THE AMOUNT OF FOREIGN INVESTMENT IN FOREIGN INVESTMENT ENTERPRISES (FIE, million USD)

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<tbody>
<tr>
<td>Total amount of foreign investment in FIE</td>
<td>2500000</td>
<td>270590</td>
<td>2993124</td>
<td>3261047</td>
<td>3517608</td>
<td>3797729</td>
<td>4539020</td>
<td>5124007</td>
</tr>
<tr>
<td>Amount of foreign investment in manufacturing FIE</td>
<td>1388522</td>
<td>143060</td>
<td>1559487</td>
<td>-</td>
<td>1734205</td>
<td>1832860</td>
<td>1990428</td>
<td>2022281</td>
</tr>
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Note: We collect data from State Statistics Bureau and the number of foreign investment in manufacturing foreign investment enterprises in 2012 was not disclosed.

Innovation capacity of state-owned enterprises is different from that of non-state-owed enterprises. There have always been researchers who think that state-owned enterprises should withdraw from the competitive field and retain only those parts relevant to the national economy and the people's livelihood due to their lower technical efficiency, especially in industry. However, the existence of both state-owned and non-state-owned enterprises in most countries proves that state-owned enterprises have their unique functions which cannot be replaced by non-state-owned enterprises. In China, state-owned enterprises also take both social and political goals into account (Lin et al. 2004) resulting in less attention on firm performance (Yao and Zhang, 2001). With the reform of state-owned enterprises technical efficiency of these enterprises has improved remarkably. However, has the difference between the performance of state-owned and non-state-owned enterprises been completely eliminated? How does enterprise property affects the relationship of R&D into firm performance? In its economic infancy, both technical level and management level of Chinese enterprises lagged behind. Chinese government made policies to attract foreign investments. Foreign investors used to build co-packers in China due to cheap labor costs. However, with a booming economy, an increase in labor costs and fewer incentive policies of foreign investment, what are the effects of introducing foreign investment on Chinese enterprises? Will it improve enterprises’ innovation capacity? Hence, by using data for Chinese listed companies from 2003 to 2014, this paper...
examines the connection between R&D and firm performance and how FDI (foreign direct investment) and property rights affect this relationship.

This paper contributes in two important ways. First we extend the literature on the relation of R&D, FDI and firm performance. The extant research in this field goes at the country or province level. Our study enriches the related literature by focusing on the enterprise perspective instead of macro perspective. Secondly, under the background of economic globalization, our study is also helpful to identify the effect of foreign investment on Chinese listed firm and to seek the proper way in the state owned enterprises reform. By improving the system of introducing foreign investment and further improve the operational efficiency of state-owned enterprises, the competitiveness of state-owned enterprises can be further improved. The remainder of this paper is organized as follows. Section 2 discusses the literature. Section 3 develops hypotheses based on theoretical analysis. Section 4 explains the research design. Section 5 presents the main results and analyzes the results. Section 6 concludes and puts forward some suggestions.

Literature Review

Effects of R&D on Firm Performance

Since the 1950s, researchers have found that there is a positive residual in the production function which is called Solow Residual, resulting from R&D (Abramovitz, 1956; Solow, 1957).

Rosenberg (1990) shows that large enterprises perform basic research mainly to seek monopoly power while small enterprises do so to get the first-mover advantage, both of which can be concluded as to increase firm value. Cohen and Levinthal (1990) find evidence that R&D investment helps the firm apply knowledge to operate. These researches show that R&D investment increases firm value and is beneficial to both enterprises and the society.

Internal R&D and external knowledge acquisition are two main ways of enterprises’ innovation. Cassiman and Veugelers (2006) document that internal R&D and external knowledge acquisition are complementary innovation activities. Researches show that the best way to create technological innovations is the combination of internal R&D and external knowledge acquisition (Lane and Lubatkin, 1998). Internal R&D is associated with an increase in exploitative innovations built on existing firm knowledge but it can also lead to problems like local search, innovation traps, resistance to external knowledge and lack of successful innovations after a long period (Benner and Tushman, 2002). Besides, routinization increase work efficiency but on the other hand results in resistance to changes and inadaptation to new things (Lavie and Rosenkopf, 2006). These researches show that R&D brings enterprises benefits as well as some problems. Internal R&D does improve enterprises’ competitiveness in some areas but it also leads to higher costs and may result in resistance to external knowledge. Hence, whether R&D can improve firm performance depends on the comparison of its costs and benefits.

In China, Dou and Shi (2006) show that before the 1990s, the output of Chinese enterprises’ R&D investment had a poor performance but situation has improved after that. Hou and Zhang (2006) document that the positive effect of R&D mainly reflects on three aspects, firm productivity, firm value and output. Cheng, Zhang and Chang (2006) find that there is a significantly positive connection between R&D investment and operating profit. They also find that the influence of R&D on firm performance has declined. Luo, Zhu and Li (2009) show that generally speaking there is a positive connection between R&D and enterprise’ future profit.

Effects of FDI on Firm Performance

Previous researches show that there is information asymmetry between local and foreign investors. Local investors know local environment better while foreign investors may posses better technology, finance, experts and resources, which is more advantageous in emerging markets.
The existing literature can be divided into two categories, that is, local or foreign investors have information priority. Using daily transaction data, Grinblatt and Keloharju (2000) show that comparing to local investors, foreign investors can find better stocks. On the contract, using Korean transaction data of two years, Choe, Kho and Stulz (2005) find the exactly opposite result. Dvorak (2005) finds evidence that the situation in Indonesia is more complicated. Although local investors have certain information priority, however, in the long run, foreign institutional investors have more strategic information advantages. As time goes by, foreign investors gradually know more about local environment making the advantage of local investors gradually disappear. From these researches, we can conclude that in the long run foreign institutional investors have more advantages.

Using data from 1970 to 1980, Feldstein (1995) finds that the overseas investment from America will reduce its domestic investment and overseas investment to America help increase the same amount of its domestic capital. However, when it comes to transnational corporations, things are different. Higher proportion of foreign investment is associated with higher local investment, which indicates that foreign and local investment are complementary rather than alternative. This complementarity shows that by using both domestic and foreign productivity companies can produce at a lower cost, making the production more profitable. Consequently, foreign investment can improve firm performance. Xie (2007) find that it is critical for the host country to ensure market competition order. After that, proper introduction of foreign capital will be helpful to learn advanced technologies. In addition to foreign investments, the country also hopes to introduce advanced technology and management experience. Technology Spillover Effect refers to the promotion effect of product development technology, production technology, management technology and marketing technology of enterprises in the host country brought by foreign investments. Research shows that the extent of this effect highly depends on absorption capacity of domestic enterprises (Zahra and George, 2002). Lai et al. indicate that absorption capacity determines the result of technology spillover effect. Chen (2003) points that a small gap between foreign investment enterprises and domestic enterprises contributes to the spillover effect.

R&D and FDI

Attracting foreign direct investment (FDI) is one of the economical strategies in developing countries. The influence of FDI on economic growth has been attached great concern. In most researches, it is assumed that FDI will bring many benefits for a country's economic (DeMello, 1997). However, as a source of capital, FDI depends on different factors like its form, its kind, the level of human resources, the characteristics, size, duration and location of the country being invested.

There is not an agreement about whether FDI brings enterprises technology spillover effect. Researches show that the introduction of FDI will bring technology spillover effect (Sadiks and Bolbol, 2001; Barrell and Pain, 1999). On the contrary, there is also evidence which proves that FDI only brings limited technology spillover effect sometimes even negative. (Aitken and Harrison, 1999; Veugelers and Cassiman, 2004). In China, Xie et al. (2006) point that it is the introduction of FDI that brings China technology spillover effect. Zhao and Zhang (2006) consider the technology spillover effect brought by FDI to be not so helpful. There are researchers who find that FDI even has a negative effect on technical innovation of Chinese enterprises. (Chen and Lin, 2009; Ma and Zhang, 2008).

Researches have been made on whether FDI will encourage Chinese enterprises to invest in technical innovation and further improve performance but there has not been an agreement yet. On one hand, by using panel data Jiang and Xia (2005) study the innovation capacity of Chinese high-technology enterprises. They find that FDI encourage Chinese enterprises to invest in technical innovation by demonstration effect and personnel exchanges. Lei and Chen (2012) document that the rate of technological progress, the rate of relative technical efficiency and the increase in R&D investment in various regions of China all help to attract more foreign direct investment. To attract more FDI, the central and
western regions of China should increase investment in R&D and promote technological progress. On the other hand, Ma and Lin (2007) document that the role of foreign direct investment in improving China's knowledge and skills and productivity is limited. Based on provincial data, Zhang and Zhao (2012) find that FDI not only does not improve technical innovation of state-owned enterprise but also discourages it, which is not obvious on “three-funded enterprises”.

Based on the researches above we can draw the conclusion that FDI may not lead to an increase in R&D investment. This uncertainty is highly associated with the investors' position in the enterprises. Duet to the current restrictions on foreign investors in our country, foreign investors have not played an effective role. Therefore, in this paper we will discuss whether foreign investment plays an instructive or a governing role.

**Effects of Property Rights on Firm Performance**

Theoretical studies show that controlling shareholders can influence firm value by creating shared and private benefits. On the one hand, their control of the company promises them internal decisions which can decide firm value and make it possible for them to create shared benefits (Shleifer and Vishny, 1986). On the other hand, their control of the company can also be used to create private benefits, only relevant to controlling shareholders (Grossman and Hart, 1988). Researches find that transfer of control can improve firm performance. When the supplier maintains its control over a period of time, the buyer's motivation for restructuring will become extremely strong.

Sun et al. document that the relationship between firm value and the largest shareholder's shareholding ratio is quadratic function. Before the largest shareholder's shareholding ratio reaches a point, it has a positive connection with Tobin's q and after that point the relation becomes negative. Besides, Xu and Chen (2003) find that inside controllers of state-owned listed enterprises have a stronger control over the enterprise. Duality of CEO and chairman occurs more frequently in state-owned enterprises and Tobin's q of state-owned enterprises is significantly lower than that of non-state-owned enterprises. In China, state-owned enterprises take both social and political goals into account (Lin et al., 2004) resulting in less attention on firm performance (Yao and Zhang, 2001). Meanwhile, state-owned enterprises are in a better environment receiving more economic resources and preferential policies. Wei and Rong (2012) find that from 2002 to 2009 the technical efficiency of state-owned enterprises has been significantly improved, even exceeding state-owned enterprises.

The extant study on this field focuses on the relation between R&D and firm performance only and is mainly form macro perspective. In this paper we extend the literature by focusing on the enterprise perspective and considering the effects of FDI and property rights on this relation.

**Theoretical Analysis and Hypothesis Proposed**

**Relationship Between R&D and Firm Performance**

Firm performance is affected by various of factors like firm size and leverage. Enterprises are always making progress because if they do not they will be eliminated. It is critical for enterprises to have core competence. At the beginning, enterprises can reduce costs by scale operation. However with time goes by this kind of advantage will quickly disappear because it can be easily imitated. Hence, it is necessary for enterprises to have their unique core competence. To achieve goal R&D is indispensable.

Researchers have found that there is a positive residual in the production function which is called Solow Residual, resulting from R&D (Abramowitz, 1956; Solow, 1957). A positive residual denotes that with an increase in R&D investment the productivity of enterprises is gradually increasing. Cohen and Levinthal (1990) find evidence that R&D investment helps the firm apply knowledge to operate. These researches show that R&D investment can increase firm performance.
On the other hand, there are researched which prove that R&D investment may not lead to better performance. Benner and Tushman(2002) document that internal R&D may enable enterprises to be more competitive in some aspects but it can also result in problems like local search, innovation traps, resistance to external knowledge and lack of successful innovations after a long period. Consequently, R&D investment my not be a good thing to firm performance.

Based on the researches above we find that R&D can improve firm performance but it can also lead to higher costs. When enterprises makes an R&D investment, current cost increases but the benefits will be gradually realized in the future. So the initial stage may see a loss but things will get better when the benefits of R&D are gradually realized. That is, enterprises will come to make profits without an increase in R&D investment. Besides, Chinese government has made a policy which allows enterprises to deduct 50% more R&D costs before tax to encourage R&D. This policy further reduces the cost of enterprises and increases firm performance. What’s more, enterprises have more pricing rights to their newly developed products, which also contributes to firm performance. According to the above analysis, our first hypothesis is as follows:

**H1:** Firm performance will be improved with an increase in R&D investment.

**Relationship between FDI and Firm Performance**

Introduction of FDI has two results. The first one is that introduction of FDI is a very powerful indicator. Based on the signal theory, when making overseas investments, foreign investors will choose the enterprises which are worth investing and have a brighter future. For example, foreign investors always invest in large enterprises (Aggarwal et al, 2005; Edison and Warnock 2004). The other one is that enterprises have to consider problems like enterprise image and benefits of foreign investor to attract foreign investments. This will encourage local enterprises to optimize the governance structure, which will eventually lead to an increase in firm value.

In the mixed ownership reform, by introducing foreign investment local enterprises can learn more advanced knowledge and management styles to improve their own, finally improving firm performance and competitiveness. Thus, we hypothesize:

**H2:** Firm performance will be improved with an increase in FDI.

**Effect of FDI on the Relationship between R&D and Firm Performance**

The introduction of foreign direct investment is both an opportunity and a challenge for Chinese companies. On one hand, introduction of FDI brings enterprises fund and management styles as well as advanced technology. To some extent ,technology transfer reduces local enterprises’ pressure of innovation . If the advanced technology brought by foreign investors makes a great contribution to local enterprises’ improving margin profit, it’s possible for them to give up performing R&D on their own, resulting in less R&D investment and more idle cash. On the other hand, if local enterprises continue investing in R&D, what they develop may not consist with foreign technology, reducing the conversion efficiency of R&D investment to performance. This lead to the third hypothesis:

**H3 : The existence of foreign investment will make the relationship between R&D and firm performance less efficient.**

**Effect of Enterprise Property on The Relationship between R&D and Firm Performance**

Enterprises can be divided in to state-owned enterprises and non-state-owned enterprises. These two different categories differ in operating purpose, external surroundings and corporate governance. It is generally accepted that non-state-owned enterprises perform better than state-owned enterprises because state-owned enterprises have to be responsible for society too. With more resources and preferential policies or sometimes maybe governmental subsidies, state-owned enterprises have their own unique advantages in R&D. That is, less current costs. Besides, possibly resulting from the necessity to meet certain
requirements, R&D is always the focus of current work when state-owned enterprises invest in R&D. Taking these reasons into consideration, we assume that when state-owned enterprises make an investment in R&D, this investment is more likely to have an immediate improvement on firm performance. According to the analysis above, we hypothesize:

H4: Compared with non-state-owned enterprises, the conversion effect of R&D on firm performance is stronger in state-owned companies.

**Research Design**

**Model**

We use the following regression models to test hypothesis above:

\[
\text{Performance}_{it} = \alpha_0 + \alpha_1 RD_{it} + \alpha_2 FDI_{it} + \alpha_3 RD_{it} \times FDI_{it} + \alpha_4 \text{Lev}_{it} \\
+ \alpha_5 \text{Growth}_{it} + \alpha_6 \text{Share}_{it} + \alpha_7 \text{Comp}_{it} + \alpha_8 \text{ChairDual}_{it} \\
+ \alpha_9 \text{Assets}_{it} + \alpha_{10} \text{CR}_{it} + \alpha_{11} \text{BSize} + \sum \text{Year} + \sum \text{Ind} + \varepsilon_{it} \]  

(1)

\[
\text{Performance}_{it} = \beta_0 + \beta_1 RD_{it} + \beta_2 \text{FOR}_{it} + \beta_3 RD_{it} \times \text{FOR}_{it} + \beta_4 \text{SOE}_{it} \\
+ \beta_5 \text{RD}_{it} \times \text{SOE}_{it} + \beta_6 \text{Lev}_{it} + \beta_7 \text{Growth}_{it} + \beta_8 \text{Share}_{it} \\
+ \beta_9 \text{Comp}_{it} + \beta_{10} \text{ChairDual}_{it} + \beta_{11} \text{Assets}_{it} + \beta_{12} \text{CR}_{it} \\
+ \beta_{13} \text{BSize} + \sum \text{Year} + \sum \text{Ind} + \nu_{it} \]  

(2)

\[
\text{Performance}_{it} = \gamma_0 + \gamma_1 RD_{it} + \gamma_2 \text{FOR}_{it} + \gamma_3 RD_{it} \times \text{FOR}_{it} + \gamma_4 \text{SOE}_{it} \\
+ \gamma_5 \text{RD}_{it} \times \text{SOE}_{it} + \gamma_6 \text{SOE}_{it} \times \text{FOR}_{it} + \gamma_7 \text{SOE}_{it} \times \text{RD}_{it} \times \text{FOR}_{it} \\
+ \gamma_8 \text{Lev}_{it} + \gamma_9 \text{Growth}_{it} + \gamma_{10} \text{Share}_{it} + \gamma_{11} \text{Comp}_{it} \\
+ \gamma_{12} \text{ChairDual}_{it} + \gamma_{13} \text{Assets}_{it} + \gamma_{14} \text{CR}_{it} + \gamma_{15} \text{BSize} \\
+ \sum \text{Year} + \sum \text{Ind} + \zeta_{it} \]  

(3)

**Variables**

**Key variables.**

**Firm future performance (Performance)it).**

We design two indicators to measure firm future performance. The first proxy is the future return on assets (ROAi_{t+1}, ROAi_{t+2}), which equals the two-year average ROA after investing in R&D(ROAi_{t+1} includes the year of investment and ROAi_{t+2} excludes the year of investment). This indicator measures the profit created by per unit of assets. The second proxy is earnings per share (EPSi_{t+1}, EPSi_{t+2}), which equals the two-year average EPS after investing in R&D(EPSi_{t+1} includes the year of investment and EPSi_{t+2} excludes the year of investment). This proxy measures profits created by per unit of capital.

**R&D investment (RDit).**

R&D investment can be divided into two parts, one is capitalized part which means development expenditures and the other is costly part, which is research costs. Development expenditures come from
balance sheets and research costs can be found in foot-notes to financial statements. In this paper we collect the data of R&D investment form 2009 to 2014, including development expenditures, research costs, technology development costs, new product development costs and other costs related to R&D.

**Proportion of foreign direct investors (FDI	extsubscript{it}).**

The company’s share capital is divided into non-tradable shares and tradable shares. Non-tradable shares include overseas promoter shares and tradable shares include other overseas tradable shares. Proportion of foreign direct investors equals to the summation of overseas sponsor shares and other overseas tradable shares divided by number of shares issued. Due to the small proportion, we will introduce a dummy variable for further analysis.

**Foreign Investment Enterprises (FOR	extsubscript{it}).**

$FOR_{it}$ equals 1 if the company is invested by foreign investors and equals 0 if it is not.

**Enterprise property (SOE	extsubscript{it}).**

$SOE_{it}$ equals 1 if the actual controller is a wholly state-owned company, administrative organs, institutions, local agencies, state-owned enterprises and central agencies otherwise $SOE = 0$.

**Control variables.**

We control for the following variables:

1. Financial leverage ($Levi_t$) equals the long-term liabilities divided by shareholders’ equity.
2. We control for growth rate of total asset ($Growth_{it}$) because Gedajlovic and Shapiro (2002) document that growth rate of total assets has a positive influence on ROA. $Growth_{it}$ equals change amount of total assets in current year divided by total assets in last year.
3. We also control for market share ($Share_{it}$) because Szymanski, Bharadwaj and Varadarajan (1993) find that representing enterprises’ bargaining power, market share has a complicated relationship with firm performance.
4. Executive compensation ($Comp_{it}$) can bring the benefits of management and shareholders in line, and it also reflects the level of executives in the company. According to Ho, Wu and Xu (2011), $Comp_{it}$ equals total executive compensation divide by shareholders’ equity and could be positive or negative.
5. Duality ($ChairDual_{it}$) indicates whether the CEO and chairman is the same person. When a CEO is also chairman his position in the company is more stable and he is more influential.
6. Total assets ($Assets_{it}$) is used to measure the size of enterprises, representing available resources of enterprises. With the growth in asset, management will become more difficult and hence firm performance may be affected. According to Ho, Wu and Xu (2011), $Assets_{it}$ equals the natural logarithm of total asset.
7. Market share of the top four enterprises ($CR4_{it}$) measures the extent of competition and monopoly in the industry. The higher monopoly of a industry is, the stronger pricing power enterprises in this industry have and the more profits enterprises are able to make. $CR4_{it}$ equals the sales of top four enterprises divided by total sales of the industry.
8. Board size ($BSize_{it}$) is an important part of modern corporate governance. The fact that board size has influences on corporate performance is beyond question.
### TABLE 3 VARIABLE DEFINITIONS

<table>
<thead>
<tr>
<th>Variable types</th>
<th>Symbol</th>
<th>Expected sign</th>
<th>Variable Definition</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable</td>
<td>$ROA_{it+1}$</td>
<td>+</td>
<td>Firm performance</td>
<td>The two-year average ROA after investing in R&amp;D (including the year of investment)</td>
</tr>
<tr>
<td></td>
<td>$ROA_{it+2}$</td>
<td>+</td>
<td>Firm performance</td>
<td>The two-year average ROA after investing in R&amp;D (excluding the year of investment)</td>
</tr>
<tr>
<td></td>
<td>$EPS_{it+1}$</td>
<td>+</td>
<td>Firm performance</td>
<td>The two-year average EPS after investing in R&amp;D (including the year of investment)</td>
</tr>
<tr>
<td></td>
<td>$EPS_{it+2}$</td>
<td>+</td>
<td>Firm performance</td>
<td>The two-year average EPS after investing in R&amp;D (excluding the year of investment)</td>
</tr>
<tr>
<td>Independent variable</td>
<td>$RD_{it}$</td>
<td>+</td>
<td>R&amp;D investment</td>
<td>(Development expenditures + research costs) / sales revenue</td>
</tr>
<tr>
<td></td>
<td>$FOR_{it}$</td>
<td>+</td>
<td>Dummy variable of foreign investment</td>
<td>$FOR_{it}$ equals 1 if the company is invested by foreign investors and equals 0 if it is not. (Overseas sponsor shares + other overseas tradable shares) / shares issued</td>
</tr>
<tr>
<td></td>
<td>$FDI_{it}$</td>
<td>+</td>
<td>Proportion of foreign direct investors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$SOE_{it}$</td>
<td>-</td>
<td>Dummy variable of state-owned enterprises</td>
<td>$SOE_{it}$ equals 1 if it is a state-owned company, otherwise SOE equals 0.</td>
</tr>
<tr>
<td>Controlled variable</td>
<td>$Lev_{it}$</td>
<td>+</td>
<td>Financial leverage</td>
<td>Long-term liabilities / shareholders' equity (Total assets at the end of the year – Total assets at the beginning of the year) / Total assets at the beginning of the year</td>
</tr>
<tr>
<td></td>
<td>$Growth_{it}$</td>
<td>+</td>
<td>Growth rate of total assets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$Share_{it}$</td>
<td>?</td>
<td>Market share</td>
<td>Company sales / Industry sales</td>
</tr>
<tr>
<td></td>
<td>$Comp_{it}$</td>
<td>?</td>
<td>Executive pay and equity ratio</td>
<td>Total executive compensation / shareholders' equity</td>
</tr>
<tr>
<td></td>
<td>$ChairDual_{it}$</td>
<td>?</td>
<td>Duality</td>
<td>$ChairDual_{it}$ equals 1 if the CEO is also the chairman otherwise it equals 0.</td>
</tr>
<tr>
<td></td>
<td>$Asset_{it}$</td>
<td>?</td>
<td>Total asset</td>
<td>Ln(Total assets)</td>
</tr>
<tr>
<td></td>
<td>$CR4_{it}$</td>
<td>+</td>
<td>Market share of the top four enterprises</td>
<td>Sales of top four enterprises / industry sales</td>
</tr>
<tr>
<td></td>
<td>$Bsize_{it}$</td>
<td>+</td>
<td>Board Size</td>
<td>Number of directors.</td>
</tr>
<tr>
<td></td>
<td>$\Sigma Year_{it}$</td>
<td></td>
<td>Dummy variable of year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\Sigma Industry_{it}$</td>
<td></td>
<td>Dummy variable of industry</td>
<td></td>
</tr>
</tbody>
</table>

**Sample selection**

Our sample consists of Chinese listed firms and the sample period is 2003–2014. We collect all the data from the CSMAR database except the data of research costs which is manually collected from financial statement footnotes. We use Excel 2010, Spss 18.0 and Stata 14.0 to process the data. To remove outliers,
all continuous variables are winsorized at 1% and 99%. Initially we obtain 24310 observations and the selection of sample is shown in Table 4.

**TABLE 4 SAMPLE SCREENING PROCESS**

<table>
<thead>
<tr>
<th>Initial observations from 2003-2014</th>
<th>24310</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minus: firms without current R&amp;D investment</td>
<td>16100</td>
</tr>
<tr>
<td>firms with a null foreign investment</td>
<td>3</td>
</tr>
<tr>
<td>firms in financial industry</td>
<td>37</td>
</tr>
<tr>
<td>firms with null control variables</td>
<td>49</td>
</tr>
<tr>
<td>Final observations</td>
<td>8121</td>
</tr>
</tbody>
</table>

**Empirical Result**

**Descriptive Statistics**

**TABLE 5 DESCRIPTIVE STATISTICS**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Quartile 25%</th>
<th>Quartile 50%</th>
<th>Quartile 75%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA&lt;sub&gt;t+1&lt;/sub&gt;</td>
<td>0.0477</td>
<td>0.0536</td>
<td>-0.1091</td>
<td>0.2187</td>
<td>0.0164</td>
<td>0.0430</td>
<td>0.0768</td>
</tr>
<tr>
<td>ROA&lt;sub&gt;t+2&lt;/sub&gt;</td>
<td>0.0418</td>
<td>0.0523</td>
<td>-0.1157</td>
<td>0.2049</td>
<td>0.0126</td>
<td>0.0370</td>
<td>0.0694</td>
</tr>
<tr>
<td>EPS&lt;sub&gt;t+1&lt;/sub&gt;</td>
<td>0.3702</td>
<td>0.4409</td>
<td>-0.7121</td>
<td>2.0448</td>
<td>0.1034</td>
<td>0.3002</td>
<td>0.5635</td>
</tr>
<tr>
<td>EPS&lt;sub&gt;t+2&lt;/sub&gt;</td>
<td>0.3565</td>
<td>0.4267</td>
<td>-0.7394</td>
<td>2.0229</td>
<td>0.1075</td>
<td>0.2881</td>
<td>0.5341</td>
</tr>
<tr>
<td>RD&lt;sub&gt;t&lt;/sub&gt;</td>
<td>0.0572</td>
<td>0.0704</td>
<td>0</td>
<td>0.4101</td>
<td>0.0084</td>
<td>0.0382</td>
<td>0.0768</td>
</tr>
<tr>
<td>FOR&lt;sub&gt;t&lt;/sub&gt;</td>
<td>0.0576</td>
<td>0.2329</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>FDI&lt;sub&gt;t&lt;/sub&gt;</td>
<td>0.0143</td>
<td>0.0671</td>
<td>0</td>
<td>0.4801</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SOE&lt;sub&gt;t&lt;/sub&gt;</td>
<td>0.3431</td>
<td>0.4748</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Lev&lt;sub&gt;t&lt;/sub&gt;</td>
<td>0.1739</td>
<td>0.3084</td>
<td>0</td>
<td>1.9051</td>
<td>0.0089</td>
<td>0.0459</td>
<td>0.2005</td>
</tr>
<tr>
<td>Growth&lt;sub&gt;t&lt;/sub&gt;</td>
<td>0.2700</td>
<td>0.5069</td>
<td>-0.2516</td>
<td>2.9364</td>
<td>0.0313</td>
<td>0.1220</td>
<td>0.2750</td>
</tr>
<tr>
<td>Share&lt;sub&gt;t&lt;/sub&gt;</td>
<td>0.0034</td>
<td>0.0116</td>
<td>0</td>
<td>0.0881</td>
<td>0.0001</td>
<td>0.0003</td>
<td>0.0012</td>
</tr>
<tr>
<td>Comstock&lt;sub&gt;t&lt;/sub&gt;</td>
<td>0.0031</td>
<td>0.0028</td>
<td>0.0001</td>
<td>0.0170</td>
<td>0.0012</td>
<td>0.0023</td>
<td>0.0039</td>
</tr>
<tr>
<td>ChairDual&lt;sub&gt;t&lt;/sub&gt;</td>
<td>0.2913</td>
<td>0.4544</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 5 provides descriptive statistics about key variables. From this table, we can conclude as follows: (1) The mean ROA<sub>t+1</sub> is 0.0477 and the maximum (minimum) is 0.2187 (-0.1091); the mean ROA<sub>t+2</sub> is 0.0572 and the maximum (minimum) is 0.2049 (-0.1157), indicating that firm performance one year after R&D is better than firm performance two years after R&D. (2) The mean RD<sub>t</sub> is 0.0560, the maximum (minimum) is 0.4101 (0) and the standard deviation is small, indicating that general development capacity is relatively weak. (3) The mean FDI<sub>t</sub> is 0.0143, the maximum is 0.4801 and the quartile is also 0 which denotes a small foreign investment proportion. Due to this, foreign investment is unlikely to play a governing role in management. Thus, we design a dummy variable called FOR<sub>t</sub> to analyze the effect of foreign investment. (4) The mean FOR<sub>t</sub> is 0.0576, the 25th percentile, median and the 75th percentile are all 0. In accordance with the descriptive statistics of FDI<sub>t</sub>, such result indicates that the small proportion of foreign investment possibly reduces the effect of foreign investment on local enterprises and that foreign investment is likely to act as an indicator. (5) The average SOE<sub>t</sub> is mere 0.3431 which means that state-owned enterprises invest less in R&D.

**Correlation Analysis**

Table 6 provides correlation analysis about key variables. From the table we can find that there is a strong connection between ROA<sub>t+1</sub>, ROA<sub>t+2</sub>, EPS<sub>t+1</sub>, EPS<sub>t+2</sub> and RD<sub>t</sub>. The positive correlation coefficient between them preliminary proves our first hypothesis.
TABLE 6 CORRELATION ANALYSIS

<table>
<thead>
<tr>
<th></th>
<th>OA(_{it+1})</th>
<th>OA(_{it+2})</th>
<th>EPS(_{it+1})</th>
<th>EPS(_{it+2})</th>
<th>RD(_t)</th>
<th>DI(_t)</th>
<th>OR(_t)</th>
<th>OE(_t)</th>
<th>ev(_t)</th>
<th>growth</th>
<th>hare(_t)</th>
<th>ChairDual</th>
<th>omp(_t)</th>
<th>sset(_t)</th>
<th>R4(_t)</th>
<th>Size(_t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OA(_{it+1})</td>
<td>1.0000</td>
<td>0.8689</td>
<td>0.42</td>
<td>0.38</td>
<td>6.0</td>
<td>1032**</td>
<td>0.1029</td>
<td>0.2497</td>
<td>0.3503</td>
<td>0.3955**</td>
<td>0.0401*</td>
<td>0.62</td>
<td>0.7479**</td>
<td>0.8428</td>
<td>0.0858</td>
<td>0.1336</td>
</tr>
<tr>
<td>OA(_{it+2})</td>
<td>0.8428</td>
<td>0.7479</td>
<td>0.1000</td>
<td>0.0916</td>
<td>0.0909</td>
<td>0.088***</td>
<td>0.0882*</td>
<td>0.1277</td>
<td>0.1854</td>
<td>0.4151**</td>
<td>0.1231</td>
<td>0.0649</td>
<td>0.0945</td>
<td>0.0953**</td>
<td>0.0586</td>
<td>0.1480</td>
</tr>
<tr>
<td>EPS(_{it+1})</td>
<td>0.7935*</td>
<td>0.6804*</td>
<td>0.0912</td>
<td>0.0850</td>
<td>0.0853*</td>
<td>0.1243</td>
<td>0.1732</td>
<td>0.3854*</td>
<td>0.1302*</td>
<td>0.0586*</td>
<td>0.0926*</td>
<td>0.0586</td>
<td>0.0945</td>
<td>0.0953**</td>
<td>0.0586</td>
<td>0.1480</td>
</tr>
<tr>
<td>EPS(_{it+2})</td>
<td>0.7106*</td>
<td>0.7056*</td>
<td>1.0000</td>
<td>0.0355*</td>
<td>0.0350*</td>
<td>0.2847</td>
<td>0.2852</td>
<td>0.0533*</td>
<td>0.3931*</td>
<td>0.1600*</td>
<td>0.2693</td>
<td>0.3433</td>
<td>0.1010</td>
<td>0.1451</td>
<td>0.1600</td>
<td>0.2693</td>
</tr>
<tr>
<td>RD(_t)</td>
<td>0.1262*</td>
<td>0.1278*</td>
<td>0.2342</td>
<td>0.0350*</td>
<td>0.0350*</td>
<td>0.2847</td>
<td>0.2852</td>
<td>0.0533*</td>
<td>0.3931*</td>
<td>0.1600*</td>
<td>0.2693</td>
<td>0.3433</td>
<td>0.1010</td>
<td>0.1451</td>
<td>0.1600</td>
<td>0.2693</td>
</tr>
<tr>
<td>FDI(_t)</td>
<td>0.0864*</td>
<td>0.0656*</td>
<td>0.0598*</td>
<td>0.0555*</td>
<td>0.0181*</td>
<td>0.0000</td>
<td>0.1206</td>
<td>0.0972</td>
<td>0.0822*</td>
<td>0.0520*</td>
<td>0.0461**</td>
<td>0.0123</td>
<td>0.0408</td>
<td>0.0312</td>
<td>0.0310</td>
<td></td>
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<tr>
<td>FOR(_t)</td>
<td>0.0923*</td>
<td>0.0717*</td>
<td>0.0716*</td>
<td>0.0695*</td>
<td>0.0142*</td>
<td>0.8593*</td>
<td>0.1194</td>
<td>0.0956</td>
<td>0.0825*</td>
<td>0.0511*</td>
<td>0.0466**</td>
<td>0.0111</td>
<td>0.0392</td>
<td>0.0305</td>
<td>0.0304</td>
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</tr>
<tr>
<td></td>
<td>SOE&lt;sub&gt;it&lt;/sub&gt;</td>
<td>Lev&lt;sub&gt;it&lt;/sub&gt;</td>
<td>Growth&lt;sub&gt;it&lt;/sub&gt;</td>
<td>Share&lt;sub&gt;it&lt;/sub&gt;</td>
<td>ChairDual&lt;sub&gt;it&lt;/sub&gt;</td>
<td>Comp&lt;sub&gt;it&lt;/sub&gt;</td>
<td>Asset&lt;sub&gt;it&lt;/sub&gt;</td>
<td>CR4&lt;sub&gt;it&lt;/sub&gt;</td>
<td>BSize&lt;sub&gt;it&lt;/sub&gt;</td>
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<td>0.2120 0.2015 0.071* 0.0695 0.218* 0.1225 0.1202</td>
<td>0.2039 0.1792 0.1711 0.2051 0.0679 0.0656 0.3107*</td>
<td>0.2812* 0.1694* 0.2243* 0.0735* 0.0922* 0.1114* 0.1873 0.1026</td>
<td>0.0391 0.0244 0.0286* 0.0357* 0.0475 0.0448 0.1225* 0.1643* 0.0378</td>
<td>0.0034 0.0049 0.0137</td>
<td>0.0351* 0.0159 0.1587 0.1745 0.1834</td>
<td>0.0105 0.1146 0.2675 0.0596 0.0412 0.4206* 0.4584* 0.1155 0.2813* 0.5023 0.2076 1.0000</td>
<td>0.0246* 0.0148* 0.0229* 0.0221* 0.0787* 0.0486 0.0446* 0.0778* 0.0511* 0.793** 0.044* 0.0265** 0.0453*</td>
<td>0.0381 0.0444 0.0351* 0.1152 0.0329 0.0224 0.2894* 0.1908* 0.0523 0.1133* 0.0921 0.177* 0.574*</td>
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<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

Besides, there is also a strong connection between ROA<sub>it</sub>, ROA<sub>it+1</sub>, EPS<sub>it</sub>, EPS<sub>it+1</sub> and FDI<sub>it</sub> with a positive correlation coefficient, which preliminary proves our second hypothesis that firm performance will improve with an increase in FDI. According to the collinearity test, all variables have a VIF less than 2, so there is no significant multicollinearity problem.
### T Test

**Table 7 T-Test**

<table>
<thead>
<tr>
<th>Variable</th>
<th>SOEit</th>
<th>Observations</th>
<th>Mean</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>1</td>
<td>277</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>OAIt+1</td>
<td>0</td>
<td>534</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>558</td>
<td>237***</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>1</td>
<td>277</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>OAIt+2</td>
<td>0</td>
<td>534</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>490</td>
<td>220***</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>277</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>PSIt+1</td>
<td>0</td>
<td>534</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>277</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>PSIt+2</td>
<td>0</td>
<td>534</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>1</td>
<td>277</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Diit</td>
<td>0</td>
<td>534</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>1</td>
<td>277</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Diit</td>
<td>0</td>
<td>534</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>F</td>
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<td>0.0</td>
<td></td>
</tr>
<tr>
<td>ORit</td>
<td>0</td>
<td>534</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>779</td>
<td>591***</td>
<td></td>
</tr>
</tbody>
</table>

Note: ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

Table 7 reports the result of T test for key variables. Consider that we investigate the difference of state-owned enterprises and non-stat-owned enterprises, we use T test to see if these two groups of samples are different. According to Table 6, there is a significant difference in firm performance, R&D investment and foreign investment between state-owned enterprises and non-state-owned enterprises.

**Regression Results**

Table 8 presents the regression results of R&D, foreign investment proportion and firm performance. Model 1 and 2 report the results for the model with ROAit+1 and ROAit+2 as the dependent variable respectively. In Model 1 and Model 3, the coefficients of RDit are 0.0908 and 0.0837, statistically significant at the 1% level. These results document that a higher R&D investment results in a better firm performance and firm performance one year after R&D investment is better than firm performance two years after R&D investment, supporting our H1. In Model 1 and Model 3, coefficients of FDIit are 0.0616, 0.0458, statistically significant at the 1% level. This reveals that a higher foreign investment proportion results in a better firm performance especially the short performance, supporting our H2. In Model 2 and Model 4, the item FDIit × RDit is negative but not significant, implying that FDI does not have an influence on the relationship...
between R&D and firm performance, rejecting our H3. The reason may be that the proportion of foreign investment is too small to be effective.

### TABLE 8 REGRESSION RESULTS OF R&D, FOREIGN INVESTMENT PROPORTION AND FIRM PERFORMANCE

<table>
<thead>
<tr>
<th>Variable</th>
<th>$ROA_{it+1}$</th>
<th>$ROA_{it+2}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.0448***</td>
<td>-0.1426***</td>
</tr>
<tr>
<td></td>
<td>(7.61)</td>
<td>(-6.68)</td>
</tr>
<tr>
<td>$RD_{it}$</td>
<td>0.0908***</td>
<td>0.0535***</td>
</tr>
<tr>
<td></td>
<td>(10.11)</td>
<td>(6.06)</td>
</tr>
<tr>
<td>$FDI_{it}$</td>
<td>0.0616***</td>
<td>0.0410***</td>
</tr>
<tr>
<td></td>
<td>(7.24)</td>
<td>(3.80)</td>
</tr>
<tr>
<td>$RD_{it} \times FDI_{it}$</td>
<td>-0.0700</td>
<td>-0.1250</td>
</tr>
<tr>
<td></td>
<td>(-0.61)</td>
<td>(-1.08)</td>
</tr>
<tr>
<td>$Lev_{it}$</td>
<td>-0.0580***</td>
<td>-0.0489***</td>
</tr>
<tr>
<td></td>
<td>(-26.9)</td>
<td>(-22.30)</td>
</tr>
<tr>
<td>$Growth_{it}$</td>
<td>0.0239***</td>
<td>0.0139***</td>
</tr>
<tr>
<td></td>
<td>(21.47)</td>
<td>(12.25)</td>
</tr>
<tr>
<td>$Share_{it}$</td>
<td>0.0190</td>
<td>0.0480</td>
</tr>
<tr>
<td></td>
<td>(0.27)</td>
<td>(0.69)</td>
</tr>
<tr>
<td>$Comp_{it}$</td>
<td>2.4902***</td>
<td>1.9765***</td>
</tr>
<tr>
<td></td>
<td>(10.77)</td>
<td>(8.41)</td>
</tr>
<tr>
<td>$ChairDual_{it}$</td>
<td>0.0036***</td>
<td>0.0020</td>
</tr>
<tr>
<td></td>
<td>(3.00)</td>
<td>(1.49)</td>
</tr>
<tr>
<td>$Assets_{it}$</td>
<td>0.0083***</td>
<td>0.0057***</td>
</tr>
<tr>
<td></td>
<td>(11.86)</td>
<td>(8.05)</td>
</tr>
<tr>
<td>$CR4_{it}$</td>
<td>0.0073</td>
<td>0.0105</td>
</tr>
<tr>
<td></td>
<td>(0.23)</td>
<td>(0.32)</td>
</tr>
<tr>
<td>$BSize_{it}$</td>
<td>-0.0002</td>
<td>-0.0001</td>
</tr>
<tr>
<td></td>
<td>(-0.57)</td>
<td>(-0.73)</td>
</tr>
<tr>
<td>$\Sigma Year$</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>$\Sigma Industry$</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>F-value</td>
<td>21.94</td>
<td>58.11</td>
</tr>
<tr>
<td>Adj. R$^2$</td>
<td>0.0587</td>
<td>0.1869</td>
</tr>
<tr>
<td>N</td>
<td>8121</td>
<td>8121</td>
</tr>
</tbody>
</table>

Note: ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

Table 9 reports the regression results of R&D, the existence of foreign investment (with $FOR_{it}$ as the proxy variable) and firm performance one year after investment (with $EPS_{it+1}$ as the proxy variable). Model 5 and 9 reveal a significant positive relationship between $RD_{it}$ and $EPS_{it+1}$, supporting our H1 in accordance with the result of Table 8. Besides, from Model5,6,8 and 9 we can infer that there is also a significant positive relationship between $FOR_{it}$ and performance, indicating that foreign investors tend to invest in enterprises which are more potential and have a brighter future. This suggests that foreign investment plays an instructive role, supporting hour H2. In Model 6, Model 8 and Model 9, coefficients of $RD_{it} \times FOR_{it}$ are -0.9155, -0.7305 and -0.5541 respectively, statistically significant at no more than the 5% level, suggesting that introduction of foreign investment will negatively affect improvement on firm performance brought by R&D which supports H3. In Model7 and Model 8, coefficients of $RD_{it} \times SOE_{it}$ are 0.7699, 0.723 and 0.3620 respectively, indicating that state-owned enterprises perform worse and the conversion effect of R&D on firm performance is stronger in state-owned enterprises. This result is consistent with our H4.
### TABLE 9 REGRESSION RESULTS OF \( EPS_{it+1} \)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
<th>Model 8</th>
<th>Model 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.2772***</td>
<td>0.2746***</td>
<td>0.3315***</td>
<td>0.3231***</td>
<td>-3.1008***</td>
</tr>
<tr>
<td>( RD_{it} )</td>
<td>0.2348***</td>
<td>0.2905***</td>
<td>0.0010</td>
<td>0.0560</td>
<td>0.1760**</td>
</tr>
<tr>
<td>( FOR_{it} )</td>
<td>0.1247***</td>
<td>0.1824***</td>
<td>0.1558***</td>
<td>0.0881***</td>
<td></td>
</tr>
<tr>
<td>( RD_{it} \times FOR_{it} )</td>
<td>-0.9155***</td>
<td>-0.7305**</td>
<td>-0.5541**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( SOE_{it} )</td>
<td>-0.1087***</td>
<td>-0.0994***</td>
<td>-0.0935***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( Lev_{it} )</td>
<td>-0.4682***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( Growth_{it} )</td>
<td>0.1900***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( Share_{it} )</td>
<td>0.0630</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( Comp_{it} )</td>
<td>21.7017***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( ChairDual_{it} )</td>
<td>0.0196*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( Assets_{it} )</td>
<td>0.1637***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( CR4_{it} )</td>
<td>-0.2700</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( BSize_{it} )</td>
<td>-0.0020</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \Sigma Year )</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>( \Sigma Industry )</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>F-value</td>
<td>10.66</td>
<td>10.62</td>
<td>11.54</td>
<td>11.99</td>
<td>57.38</td>
</tr>
<tr>
<td>Adj. ( R^2 )</td>
<td>0.0294</td>
<td>0.0305</td>
<td>0.0302</td>
<td>0.0340</td>
<td>0.1910</td>
</tr>
<tr>
<td>N</td>
<td>8121</td>
<td>8121</td>
<td>8121</td>
<td>8121</td>
<td>8121</td>
</tr>
</tbody>
</table>

Note: ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

Table 10 reports the regression results of R&D, the existence of foreign investment (with \( FOR_{it} \) as the proxy variable) and firm performance two year after investment (with \( EPS_{it+2} \) as the proxy variable). Model 10, 11 and 14 show that \( RD_{it} \) is positively related to \( EPS_{it+2} \), supporting our H1. In Model 10, 11, 13 and 14, \( FOR_{it} \) is positively related to firm performance, supporting our H2. In Model 11, 13 and 14, coefficients of the item \( RD_{it} \times FOR_{it} \) are -0.9603, -0.7830 and -0.6141, statistically significant at the 1% or 5% level. This suggests that introduction of foreign investment will negatively affect improvement on firm performance brought by R&D supporting H3. In Model 13 and 14, the coefficients of the item \( RD_{it} \times SOE_{it} \) are 0.7148 and 0.3748, statistically significant at the 1% or 5% level, supporting our H4.
## TABLE 10 REGRESSION RESULTS OF $EPS_{IT+2}$

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 10</th>
<th>Model 11</th>
<th>Model 12</th>
<th>Model 13</th>
<th>Model 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.2500***</td>
<td>0.2472***</td>
<td>0.3001***</td>
<td>0.2915***</td>
<td>-2.9317***</td>
</tr>
<tr>
<td></td>
<td>(5.16)</td>
<td>(5.11)</td>
<td>(6.16)</td>
<td>(5.99)</td>
<td>(-16.75)</td>
</tr>
<tr>
<td>$RD_{it}$</td>
<td>0.2226***</td>
<td>0.2811***</td>
<td>0.0010</td>
<td>0.0590</td>
<td>0.1732**</td>
</tr>
<tr>
<td></td>
<td>(3.02)</td>
<td>(3.71)</td>
<td>(0.01)</td>
<td>(0.69)</td>
<td>(2.17)</td>
</tr>
<tr>
<td>$FOR_{it}$</td>
<td>0.1217***</td>
<td>0.1821***</td>
<td>0.1580***</td>
<td>0.0965***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(6.04)</td>
<td>(6.69)</td>
<td>(5.77)</td>
<td>(3.80)</td>
<td></td>
</tr>
<tr>
<td>$RD_{it}\times FOR_{it}$</td>
<td>-0.9603***</td>
<td>-0.7830***</td>
<td>-0.6141**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-3.30)</td>
<td>(-2.68)</td>
<td>(-2.27)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$SOE_{it}$</td>
<td>-0.1001***</td>
<td>-0.0907***</td>
<td>-0.0872***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-7.73)</td>
<td>(-6.97)</td>
<td>(-6.64)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$RD_{it}\times SOE_{it}$</td>
<td>0.7647***</td>
<td>0.7148***</td>
<td>0.3748**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.43)</td>
<td>(4.12)</td>
<td>(2.32)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$Lev_{it}$</td>
<td>0.4403***</td>
<td>(-24.81)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$Growth_{it}$</td>
<td>0.1669***</td>
<td>(18.16)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$Share_{it}$</td>
<td>0.095</td>
<td>(0.17)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$Comp_{it}$</td>
<td>19.3724***</td>
<td>(10.30)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$ChairDual_{it}$</td>
<td>0.014</td>
<td>(1.42)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$Assets_{it}$</td>
<td>0.1499***</td>
<td>(25.75)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$CR4_{it}$</td>
<td>-0.0714</td>
<td>(-0.27)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$BSize_{it}$</td>
<td>-0.0001</td>
<td>(-0.01)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\Sigma Year$</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>$\Sigma Industry$</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>F-value</td>
<td>8.11</td>
<td>8.24</td>
<td>8.77</td>
<td>9.51</td>
<td>48.92</td>
</tr>
<tr>
<td>Adj. $R^2$</td>
<td>0.0197</td>
<td>0.0209</td>
<td>0.0224</td>
<td>0.0265</td>
<td>0.1671</td>
</tr>
<tr>
<td>N</td>
<td>8121</td>
<td>8121</td>
<td>8121</td>
<td>8121</td>
<td>8121</td>
</tr>
</tbody>
</table>

Note: ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

### Conclusion and Suggestions

#### Conclusion

Using data for Chinese listed companies from 2003 to 2014, this paper examines the relationship between R&D and firm performance and how FDI (foreign direct investment) and property rights affect this relationship. Conclusions are as follows:

Firstly, R&D plays an important role in improving enterprises competitiveness. Enterprises can improve their core competitiveness and gain competitive advantages by R&D. With an increase in R&D investment, there will be an improvement in performance.
Secondly, local enterprises can learn advanced technology and management styles by introducing foreign investment. That is, foreign investment can improve firm performance. However in China, proportion of foreign investment is so small that it barely has influences on corporate governance. In spite of this, it is true that when making investment decisions, foreign investors will choose enterprises with a brighter future. Based on the signal theory, the fact that introduction of foreign investment will improve enterprise performance suggests that foreign investment does play an instructive role.

Thirdly, foreign investment is usually accompanied with advanced technology, which is likely to influence current R&D plan of enterprises. If the new technology is likely to bring more profits, local enterprises are possible to give up their original R&D investment, making this investment idle. If local enterprises insist on their original R&D plans, resources may be wasted. Hence, the existence of foreign investment will make the relationship between R&D and firm performance less efficient.

Lastly, R&D of state-owned enterprises is largely affected by preferential policies. State-owned companies shoulder more social responsibilities and are more likely to get government subsidies when doing R&D. Therefore, compared with non-state-owned enterprises, the conversion effect of R&D on firm performance is stronger in state-owned companies.

Suggestions

Based on the conclusions above, we have following policy suggestions.

First, it is necessary to optimize the innovation business environment for enterprises. We advise that enterprises should pay more attention to R&D when they have idle funds. We also suggest that the government provide equal protection and policies for non-state-owned enterprises to encourage innovation and realize development.

Besides, it is critical to understand the role of foreign investors and to improve access mechanisms and restrictions. The existence of foreign investment indicates a potential enterprise. However, due to current restrictions, proportion of foreign investment is so small that it barely has influences on corporate governance. Thus, to enhance the attractiveness of these regions to foreign capital, preferential policies should be made for the central and western regions where the economic development is relatively backward. In addition, the government should introduce more foreign investment to emerging industries to promote its rapid development.

Last, there is a necessity to deepen the reform of mixed ownership in state-owned enterprises. Considering the relatively lower innovation investment in state-owned countries, the reform of state-owned enterprises is a key step to improve innovation capacity. When making R&D investment, enterprises should consider the benefits and costs of both independent research and development and introduction of foreign technology, selecting the best one. In the reform of mixed ownership, enterprises should consider introducing whether foreign or private capital to make management more efficient and to promote firm value to the utmost extent.

References


Track 7: Leadership and Human Resource Management
Cultural Intelligence Effects on Expatriates’ Adjustment and Turnover Intentions in China-mainland

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Abstract

Expatriates’ cross-cultural adjustment is one of the crucial factors for MNCs global success, which if neglected can lead to poor performance or even the termination of the international assignment. On the other hand, cultural intelligence theory (CQ) is an important perspective for international business success. Following the validation of a measurement scale in 2007, several empirical studies investigated the relationship between CQ and expatriates’ cross-cultural adjustment. However, this segment of literature had a degree of disparity in findings, did not investigate the issue of turnover adequately and most importantly was limited in its geographical scope. To date, despite the importance of China-mainland as a lucrative market for global MNCs, yet a challenge for expatriates’ adjustment, it has been poorly presented in CQ research. Utilizing a relatively large sample (n = 402) of professionals from a wide variety of countries around the world who are currently working in China-mainland, this research aims at testing the effects of cultural intelligence on expatriates’ cross-cultural adjustment and turnover intentions.

Keywords: Expatriates; Cultural Intelligence; Cross-cultural Adjustment; Turnover Intentions; Previous International Experience; China-mainland.

Introduction

Global mobility of rare talents is constantly increasing due to increasing trends of globalizations (Bashir 2012:63; Moon et al. 2012: 286; Lee et al. 2013: 378 Huff 2013: 151). These rare talents, hereafter called expatriates, are the product of the separation process between ownership and management of MNCs across borders (Collings et al 2007: 199). Yet a significant number of them find it difficult to adjust in the host country due to cultural differences (Black and Stephens 1989: 530; Johnson et al. 2006: 521; Moon et al. 2012: 286). Not only does this lack of cross-cultural adjustment affect performance (Rose et al. 2010; Chen et al. 2011; Sahin et al. 2013) but it can also lead to the returning of expatriates to their home countries before the end of the assignment, ‘turnover’ (Feng and Pearson 1999; Froese et al. 2016). Thus the issues of expatriates’ cross-cultural adjustment and their turnover intentions are very significant to MNCs global success (Black and Stephens 1989; Malek and Budhwar 2013; Konanahalli et al. 2014; Huff et al. 2014).

However for a long time, expatriates’ cross-cultural adjustment research remained unorganized (Ramalu et al. 2010) and at best introduced an integrative list of personal attributes, skills and cultural knowledge (Johnson et al. 2006). At the dawn of the new millennium and in an attempt to integrate the exhaustive list of cross-cultural competencies in one model, Earley and Ang (2003) introduced a cultural quotient (CQ) construct, hereafter called cultural intelligence. The CQ construct was then based on three dimensions of capabilities: cognitive, motivational and behavioral. Later, Ang et al. (2007) added a fourth dimension, metacognitive. Soon enough in a bid to uncover the platinum key for expatriates’ cross-cultural adjustment, several scholars investigated the relationship between CQ and expatriates’ adjustment (i.e. Ang et al. 2007; Lee and Sukoco 2010; Ramalu et al. 2010; Moon et al. 2012). Unfortunately, this segment of CQ literature had a degree of disparity in findings (Moon et al. 2012: 298); did not investigate the issue of turnover adequately (Froese et al. 2016: 286); and most importantly it was limited in its geographical scope. For example, China-mainland as a lucrative market for global MNCs (Wang and Nayir 2006; Collings et al. 2007) yet a challenge for western expatriates (Selmer 1999; Selmer 2006; Cheema 2012) has so far been underrepresented in CQ research. According to the latest statistics, China is the single largest home county of 18% of all state-owned multinational enterprises in the world (UNCTAD 2017: 31).
Literature Review

Cross Cultural Adjustment

Expatriates cross-cultural adjustment which is the core of this research, is defined as “the degree of psychological comfort an expatriate has with various aspects of the host country” (Ramalu et al. 2010: 82). Digging into the international business management literature, an early theoretical conceptualization of work adjustment, however, appeared in Dawis et al. (1964) paper entitled “A Theory of Work Adjustment”. They defined the concept as “the process by which the individual acts, reacts, and comes to terms with his environment” (Dawis et al. 1964: 8). It is worth noting that while the “environment” broadened the concept, “coming in terms” dichotomized it and the usage of the pronoun “his” limited its generalizability. Yet the purpose of citing this definition here is not to further clarify the generally accepted earlier one, rather than to highlight the rooted history and the perpetual significance of expatriates’ cross-cultural adjustment as a vital aspect of MNCs success. Further, a widely accepted theoretical conceptualization along with a multi-dimensional measurement of expatriates’ cross-cultural adjustment were introduced by the seminal work of Black and Stephens (1989) who identified three facets of expatriates’ cross-cultural adjustment: General Adjustment which refers to the overall comfort with the living conditions, Interaction Adjustment, which refers to the overall comfort with interacting with the locals in the host country nationals, and Work Adjustment, which refers to the overall comfort with the new tasks and work environment (Black and Stephens 1989: 534-5).

Investigating the antecedents of cross-cultural adjustment, several scholars embarked on studying the effects of organizational support (Bashir 2013; Li and Jackson 2015), social support and networking (Wang and Nayir 2006; Lee et al. 2013 Wang and Kanungo 2007), cultural training (Selmer 2002; Hutchings 2003; Cheema 2012; Waxin and Panaccio 2005), language proficiency of the host country (Selmer 2006; Huff. 2013; Froese et al. 2016), and personal attributes (Black 1988; Black and Stephens 1989; Selmer 1999; Selmer 2001; Shaffer et al. 2006; Johnson et al. 2006; Ramalu et al. 2010). Unsurprisingly due to its specific focus on effective adaptation and functioning in contexts marked with cultural diversity, some scholars investigated the effects of cultural intelligence (CQ) on the three forms of expatriates’ cross-cultural adjustment (Ang et al. 2007; Ramalu et al. 2010; Moon et al. 2012; Huff 2013; Guomundsottir 2015). In their scale (CQS) validation article, Ang et al. (2007) included the results of three studies with a large collective sample (n = 794). Six out of their eight hypotheses supported positive effects of CQ's four dimensions on the three dimensions of adjustment. However the participants were only from the USA and Singapore which limited the geographical validity. In addition, the research compilation suffered from inconsistency in research design because their three different studies used different modified versions of the CQS (Ang et al. 2007: 364). Another serious issue that negatively affected the generalizability of the results was the background of the respondents who were mostly university students (Ang et al. 2007: 364).

The subsequent studies, except in the cases of Ramalu et al. (2010) and Guomundsottir (2015), either used young students or over simplified the relationship between CQ and cross-cultural adjustment by ignoring the dimensionality of both constructs. In these studies CQ was mostly treated as one whole variable rather than four dimensions, i.e. metacognitive, cognitive, motivational, and behavioral (Lee and Sukoco 2010; Malek and Budhwar 2013; Lee et al. 2013; Konanahalli et al. 2014; Jyoti and Kour 2015). These studies also used relatively small samples, an issue that had direct effect on the rigor of their findings (Malek and Budhwar 2013: 229). Finally, in the sole study on China-mainland by Lee et al. (2013) all respondents were from Taiwan (Lee et al. 2013: 398), which undermined the importance of CQ as a predictor of cross-cultural adjustment due to the close similarity of both cultures. Accordingly, it is evident that there is a significant need not only to extend the geographical generalizability of CQ to China-mainland, but also to take into account the dimensionality of the predictor and the criterion.

H1: CQ-Metacognitive will have positive effects on expatriates’ General Adjustment (a), Interaction Adjustment (b), and Work Adjustment (c).
H2: CQ-Cognitive will have positive effects on expatriates’ General Adjustment (a), Interaction Adjustment (b), and Work Adjustment (c).

H3: CQ-Motivational will have positive effects on expatriates’ General Adjustment (a), Interaction Adjustment (b), and Work Adjustment (c).

H4: CQ-Behavioral will have positive effects on expatriates’ General Adjustment (a), Interaction Adjustment (b), and Work Adjustment (c).

**Expatriates’ Turnover Intentions**

Turnover is defined as the returning of expatriates to their home countries before the agreed end of the international assignment (Black and Stephens 1989: 530). Although the expressions: ‘expatriates’ turnover’ and ‘expatriates’ failure’, “the inability of the expatriate to perform according to the expectations of the organization” (Harzing and Christensen 2004: 622) were used interchangeably by some scholars (Birdseye and Hill 1995: 787; Feng and Pearson 1999: 309), it is important to note, this research is concerned only with expatriates’ turnover and thus adopts the first generally accepted definition.

Despite some skepticism (i.e. Harzing and Christensen 2004; Forster 2011), early literature on expatriates’ turnover provided estimates of the problem at the global level ranging from 4–15% (Tung 1981), 16–40% (Black et al. 1991) and even 25–40% (Ralston et al. 1995). Furthermore, some contemporary research started developing computation approaches to determine the return on investment from expatriates (eROI) (Doherty and Dickmann, 2012; McNulty and Inkson, 2013; Nowak Linder 2016). While figuring out a precise estimation or a fixed computation can be tricky, it is widely agreed that the problem is highly significant to MNCs. Traditionally, this inter-paradigm consensus lead scholars to investigate a straightforward linear relationship between expatriates’ cross-cultural adjustment and turnover intentions (i.e. Black and Stephens 1989; Naumann 1992; Lueke and Svyantek 2000; and Lee and Liu (2007). However, given the presumed relationship between cross-cultural adjustment and cultural intelligence, this research aims at investigating the later not only as a predictor of turnover intentions but also as a potential mediator in the relationship between cultural intelligence and turnover intentions. So far, Froese et al. (2016) partially investigated a direct relationship rather than mediation between organizational CQ and inpatients’ rather expatriates’ turnover.

H5: CQ-Metacognitive (a), CQ-Cognitive (b), CQ-Motivational (c) and CQ-Behavioral (d) will have negative effects on expatriates’ Turnover Intentions.

H6: Expatriates’ General Adjustment (a), Interaction Adjustment (b) and Work Adjustment (c) will have negative effects on expatriates’ Turnover Intentions.

H7: Expatriates’ General Adjustment (a), Interaction Adjustment (b) and Work Adjustment (c) will mediate the relationship between Cultural Intelligence and Turnover Intentions.

**Methodology**

**Research Design**

Because this research is meant to test a set of proposed hypotheses, it should follow a deductive rather than an inductive approach (Neuman 2003:145; Saunders et al. 2016: 181) that “implies the subordination of personal interests and prejudices to public standards” (Porter 1995: 74). Accordingly, the quantitative design was deemed suitable and among different techniques, the hierarchical multiple regression analysis was chosen for it is a commonly used statistical technique in business management and social sciences which yields two important results, the first tells how well a set of variables can explain a dependent variable and the second measures the direction and the effect size of each predictor on the criterion (Neuman 2003: 355).
Further, due to situational constrains surrounding the time and location of this study and in order to have a larger sample, a cross-sectional research design was followed. While it was very difficult to have a fully representative (probability) sample in a large country like China that has 20K+ foreign professionals (National Census 2011), the aim was to have a diverse sample of foreign professionals employed in China with full time jobs. Accordingly, data was collected using both the snowball and self-selection sampling techniques. In implementing the first technique the guidelines sat by Cooper and Schindler (2001: 360-361) were followed where few cases were initially contacted in the targeted population asking them to fill in the questionnaire while identifying further cases who were also asked to identify further cases and so on till no considerable number of further cases was identified and a satisfactory sample number has been reached. On the other hand, in implementing the self-selection sampling technique, the guidelines described by Saunders et al. (2016: 303) were followed where the questionnaire was publicized through expatriates-related platforms asking potential respondents to take part.

Precisely in applying the snowball technique, the official representatives of ‘Shanghai Expats Association’, ‘InterNations China’, and ‘Expatriates Association of Suzhou’ were contacted directly. In applying self-selection sampling technique, a number of expatriates-specific social networks were utilized at ‘LinkedIn.com’, ‘Internations.org’, ‘Tencent’s Wechat’ platform and ‘thebeijingers.com’. It is worth mentioned that due to the exceptional support from ‘InterNations’ representatives in China, it was estimated that half of the responses came from its members.

Sample

After three months of pilot testing and data collection, the total number of responses was satisfactory (n = 542) and no considerable number of new responses was possible to acquire anymore. After discarding 140 incomplete responses (26%) the final sample size was (n = 402) with a mean age of 35 years. As it was hoped for, the sample was very diverse being composed of 52% males and 48% females, both from wide range of nationalities: USA = 21%, UK = 7%, Italy = 5%, Germany = 5%, France = 5%, Romania = 4%, Russia = 3%, Spain = 3%, Canada = 3%, Pakistan = 3%, Australia = 2%, India = 2%, Uzbekistan = 2%, Mexico = 1%, Belgium = 1% and the remaining 34% were from other different countries. At the time of the survey, the respondents had stayed relatively long time in China, 4.96 years on average (SD = 2.009). They also had stayed another 4.77 and 3.29 years on average (SD = 2.282 / 2.248) in other countries for work and non-work purposes respectively, which could indicate that most of them were serial expatriates (Akhal and Liu 2018).

Measures

Unless otherwise mentioned, the questionnaire items were measured using a 1-7 Likert scale ranging from ‘strongly disagree’ to ‘strongly agree’. To measure CQ level of respondents, the 20-item cultural intelligence scale (CQS) developed and validated by Ang et al. (2007) was used. The scale inventory includes 4 items for the Metacognitive dimension (α = .76), 6 items for the Cognitive dimension (α = .84), 5 items for the Motivational dimension (α = .76), and 5 items for the Behavioral dimension (α = .83) (Ang et al 2007: 347). To measure respondents’ cross-cultural adjustment, a 14-item scale developed and validated by Black and Stephens (1989) was used. The scale inventory includes 7 items for General Adjustment (α = .91), 4 items for Interaction Adjustment (α = .82) and 3 items for Work Adjustment (α = .86) (Black and Stephens 1989: 534-5). To measure respondents’ turnover intentions, a 5-item scale developed and validated by Wayne et al. (1997) was used (α = .89).

Control Variables

Other scholars indicated possible relationships between expatriates’ cross-cultural adjustment and previous international experience, length of stay in the host country, language proficiency of the host country, age, gender, marital status, and level of education (i.e. Black and Stephens 1989; Selmer 2006; Ang et al. 2007; Ramalu et al. 2010; Moon et al. 2012). Thus all of the above demographic variables were measured and controlled for in this study. Please note, Chinese language proficiency was measured using a 5-item scale developed and
validated by Selmer (2006: 356). Finally, while some studies measured expatriates’ international experience by only one item concerning the number of visited countries, (Crowne 2008; MacNab and Worthley 2012; Crowne 2013; Engle and Crowne 2014) or focused on one specific type of experience i.e. education, training or even military deployment (Eisenberg et al. 2013; Şahin et al. 2014; Wood and Peters 2014; Varela and Watts 2014), this research used four items to measure expatriates’ previous international work as well as non-work experiences in terms of length and frequency, which comes in line with the comprehensive framework on international experience developed by Takeuchi et al. (2005: 91).

Results

Scales Reliabilities

Although all scales used in this study were reported to have good psychometric properties by several previous studies, the reliability of each scale was re-tested with the research sample. The total Cronbach’s Alpha values for CQ-Metacognitive that has 4 items was (α = .832); CQ-Cognitive that has 6 items was (α = .847); CQ-Motivational that has 5 items was (α = .803); and CQ-Behavioral that also has 5 items was (α = .839). Please note these values were higher than those reported earlier, i.e. (α = .76) for CQ-Metacognitive and (α = .76) for CQ Motivational, but just about those reported earlier for CQ-Cognitive (α = .84) and CQ-Behavioral (α = .83) by Ang et al (2007: 347). As for the expatriates’ cross-cultural adjustment scale, the total Cronbach’s Alpha values for the general facet that has 7 items was (α = .788); the interaction facet that has 4 items was (α = .895); and the work facet that has only 3 items was (α = .860). Please note the value for the general facet was lower than what was reported earlier, i.e. (α = .91), but higher for interaction facet (α = .82) and just exactly what was reported earlier for the work facet (α = .86) by (Black and Stephens 1989: 534-5). As for the expatriates’ turnover intentions scale, the Cronbach’s Alpha value for this 5-item scale was (α = .853), which was slightly lower than what was reported earlier, i.e. (α = .89) by Wayne et al (1997). Finally, the Cronbach’s Alpha value for the Chinese language proficiency scale that has 5 items was (α = .859), which was a bit lower than what was reported earlier, i.e. (α = .92) by Selmer (2006: 356). Despite these minor differences, the psychometric properties of all scales used in this study were satisfactory and well above the threshold of (α = .750).

Descriptive Statistics

Please see table 1 below for the mean and standard deviation values of all measured variables in this study (Akhal and Liu 2018).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
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<td>Age</td>
<td>34.549</td>
<td>10.3257</td>
<td>CQ-MC</td>
<td>5.614</td>
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<tr>
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<td>CQ-CO</td>
<td>5.233</td>
<td>.9662</td>
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<td>Mart-S</td>
<td>1.970</td>
<td>1.0156</td>
<td>CQ-MO</td>
<td>6.039</td>
<td>.7846</td>
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<td>Edu-Lvl</td>
<td>4.321</td>
<td>1.1027</td>
<td>CQ-BE</td>
<td>5.494</td>
<td>.9901</td>
</tr>
<tr>
<td>CN-Lang</td>
<td>4.476</td>
<td>1.5602</td>
<td>G-Adj</td>
<td>4.745</td>
<td>1.0843</td>
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<tr>
<td>CN-Stay</td>
<td>4.963</td>
<td>2.0090</td>
<td>I-Adj</td>
<td>5.619</td>
<td>1.0799</td>
</tr>
<tr>
<td>Int’l Exp</td>
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<td>W-Adj</td>
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<td>1.3280</td>
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</tr>
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</table>


Because the ‘Pearson’s product moment correlation coefficient (r)’ or for short, ‘Pearson’s (r)’ “quantifies the strength of a linear relationship between two ranked or numeric variables” (Neuman 2003:445), it has become
one of the classical statistical methods used in social sciences that gives an initial indication of covariance between two variables. Please see table 2 below for the correlation values of all measured variables in this study.

Please note that the control variables had several statistically significant correlations with other tested variables such as those between previous international experience and all four dimensions of cultural intelligence, CQ-MC (r = .203**), CQ-CO (r = .270**), CQ-MO (r = .144**), and CQ-BE (r = .134**) as well as work adjustment (r = .143**) indicating that those with more intense international experience tend to have higher levels of CQ, especially more knowledge about different cultures which allows them to adapt better to the general living conditions in different countries. As expected, the length of stay in China also correlated positively with CQ-MC (r = .147**) and CQ-MO (r = .159**), but unexpectedly, it had negative correlations with general adjustment (r = -.135**) which is worth investigating in future research. It could mean that the more expatriates stay abroad in one country the more they notice the cultural differences shaping the general living conditions in the host country and consequently feeling less satisfied with them.

Interestingly enough, where age had statistically significant negative correlation with turnover intentions (r = -.124*), the educational level had a positive relationship with the same variable (r = .167**) indicating that the older people become, the less likely they intend to leave their jobs. But, the higher the level of education they have, the more likely they will tend to frequently change their jobs. Once again, while these correlations confirm the need to control for the above variables, they also open the door for further scientific inquiries to uncover more details. On the other hand, in terms of the main variables, it can be seen that all CQ dimensions positively correlated with all facets of adjustment with the exception of CQ-behavioral, which only correlated with interaction adjustment (r = .160**). Further, all facets of cross-cultural adjustment were negatively correlated with turnover intentions, GA (r = -.361**) IA (r = -.234) WA (r = -.471), but only CQ-MO had statistically significant correlations with turnover intentions (r = -.188**) indicating that while cross-cultural adjustment is a strong predictor of turnover intentions, cultural intelligence is not, hence a mediation analysis is very helpful in this case.

### Table 2: Correlations Matrix (n = 402)

<table>
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<th>Variables</th>
<th>1</th>
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<th>3</th>
<th>4</th>
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<th>10</th>
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<td>.394**</td>
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<td>.083</td>
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<td>.147**</td>
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<td>-.020</td>
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<td>.092</td>
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<td>-.361**</td>
<td>-.234**</td>
<td>-.471**</td>
<td>1</td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.05 level (2-tailed) **. Correlation is significant at the 0.01 level (2-tailed).

**Hypotheses Testing**

As stated earlier to test all proposed hypotheses, the hierarchical multiple regression analysis was conducted where the control variables: age, gender, marital status, level of education, Chinese Language proficiency, length of stay in China, and previous international experience were entered in the first regression model. As expected, the control variables had several statistically significant relationships with other tested
variables. Chinese language proficiency was positively related to expatriates’ interaction adjustment \((\beta = .179, p < .001)\) indicating that those who can communicate in Chinese were better adjusted while interacting with Chinese people outside the workplace. Previous international experience was also positively related to work adjustment \((\beta = .139, p < .05)\) indicating that those who have traveled for work or non-work purposes and had visited several countries or stayed for longer times abroad were better adjusted at their workplaces in China-mainland. On the other hand, age had a very slightly negative effect on turnover intentions \((\beta = -.023, p < .01)\) indicating that the older expatriates become, the less likely they tend to change jobs. On the contrary, education had obvious positive effects on turnover intentions indicating that those with higher education levels had higher intentions to leave their current posts in China. A similar unexpected result was the negative effects of expatriates’ length of stay in China over their general adjustment \((\beta = -.103, p < .01)\) indicating that expatriates tend to feel less adjusted as they stay longer in China. Not only does this finding need to be retested with other samples from China-mainland, but also with samples from other expatriation-attractive destinations while taking into account the cultural distance between expatriates’ native culture and that of the host country. Unfortunately due to the scope and the high diversity of the sample in this research, it was difficult to carry out further analysis regarding this issue.

**Hypothesis 1** states that: CQ-Metacognitive will have positive effects on expatriates’ General Adjustment (a), Interaction Adjustment (b), and Work Adjustment (c). When the predictor was entered in the second step, CQ-Metacognitive was positively related to General Adjustment \((\beta = .190, p < .001)\), Interaction Adjustment \((\beta = .320, p < .001)\), and Work Adjustment \((\beta = .248, p < .001)\). Accordingly H1a, H1b and H1c were all supported. This indicates that those who have higher CQ-Metacognitive tend to better adjust in the host country in all aspects.

**Hypothesis 2** states that: CQ-Cognitive will have positive effects on expatriates’ General Adjustment (a), Interaction Adjustment (b), and Work Adjustment (c). When the predictor was entered in the second step, CQ-Cognitive was positively related to General Adjustment \((\beta = .146, p < .05)\), Interaction Adjustment \((\beta = .325, p < .001)\), and Work Adjustment \((\beta = .192, p < .01)\). Accordingly H2a, H2b and H2c were all supported. This indicates that those who have higher CQ-Cognitive tend to better adjust in the host country in all aspects.

**Hypothesis 3** states that: CQ-Motivational will have positive effects on expatriates’ General Adjustment (a), Interaction Adjustment (b), and Work Adjustment (c). When the predictor was entered in the second step, CQ-Motivational was positively related to General Adjustment \((\beta = .486, p < .001)\), Interaction Adjustment \((\beta = .558, p < .001)\), and Work Adjustment \((\beta = .393, p < .001)\). Accordingly H3a, H3b and H3c were all supported. This indicates that those who have higher CQ-Motivational tend to better adjust in the host country in all aspects.

**Hypothesis 4** states that: CQ-Behavioral will have positive effects on expatriates’ General Adjustment (a), Interaction Adjustment (b), and Work Adjustment (c). When the predictor was entered in the second step, CQ-Behavioral was only positively related to Interaction Adjustment \((\beta = .154, p < .01)\), but not General Adjustment \((\beta = .067, p = .234)\) or Work Adjustment \((\beta = .063, p = .358)\). Accordingly only H4b was supported. This indicates that those who have higher CQ-Behavioral tend to adjust better in terms of interacting with locals in the host country but might find it difficult to adjust to the general living and work conditions.

In terms of expatriates’ cultural intelligence effects on their turnover intentions, **Hypothesis 5** states that CQ-Metacognitive (a), CQ-Cognitive (b), CQ-Motivational (c) and CQ-Behavioral (d) will have negative effects on expatriates’ Turnover Intentions. When the predictors were entered in the second step, only CQ-Motivational was statistically related to Turnover Intentions \((\beta = -.356, p < .001)\), but not CQ-Metacognitive \((\beta = -.074, p = .365)\), CQ-Cognitive \((\beta = .079, p = .345)\), or CQ-Behavioral \((\beta = -.033, p = .662)\). Accordingly only H5c was supported. This indicates that only those with higher CQ-Motivational were expected to stay longer in an overseas assignment-in this case in China-mainland. In terms of expatriates’ cross-cultural adjustment effects on their turnover intentions, **Hypothesis 6** states that expatriates’ General Adjustment (a), Interaction Adjustment (b) and Work Adjustment (c) will have negative effects on expatriates’ Turnover Intentions. When the predictors were entered in the second step, all cross-cultural adjustment facets were statistically and negatively related to turnover intentions, expatriates’ General Adjustment \((\beta = -.484, p < .001)\), Interaction Adjustment \((\beta = -.318, p < .001)\) and Work Adjustment \((\beta = -.526, p < .001)\). Accordingly H6a, H6b and H6c were all supported. Finally, **Hypothesis 7** states that expatriates’ General Adjustment (a), Interaction Adjustment (b), and Work Adjustment
(c) will mediate the relationship between Cultural Intelligence and Turnover Intentions. Since only CQ-motivational was statistically related to the criterion, the mediation relationship will be tested only in relation to CQ-Motivational. To test the mediation hypothesis, the method of Baron and Kenny (1986: 1176) was followed. Please see figure 2 below.

**Figure 1: Cross-cultural Adjustment Mediation**

In testing the mediation effect of General Adjustment, the relationship (a) was statistically significant at \( \beta = .486, p < .001 \); the relationship (b) was statistically significant at \( \beta = -.484, p < .001 \); and the relationship (c) was statistically significant at \( \beta = -.356, p < .001 \). When the mediator was entered in step 3, the relationship (c) became insignificant at \( \beta = -.148, p = .121 \) and the mediation relationship was statistically significant at \( \beta = -.447, p < .001 \) indicating full mediation. In testing the mediation effect of Interaction Adjustment, the relationship (a) was statistically significant at \( \beta = .558, p < .001 \); the relationship (b) was statistically significant at \( \beta = -.318, p < .001 \); and the relationship (c) was statistically significant at \( \beta = -.356, p < .001 \). When the mediator was entered in step 3, the relationship (c) remained significant at \( \beta = -.226, p < .05 \) and the mediation relationship was statistically significant at \( \beta = -.249, p < .01 \) indicating partial mediation. Finally in testing the mediation effect of Work Adjustment, the relationship (a) was statistically significant at \( \beta = .393, p < .001 \); the relationship (b) was statistically significant at \( \beta = -.526, p < .001 \); and the relationship (c) was statistically significant at \( \beta = -.356, p < .001 \). When the mediator was entered in step 3, the relationship (c) became insignificant at \( \beta = -.167, p = .053 \) and the mediation relationship was statistically significant at \( \beta = -.503, p < .001 \) indicating full mediation.

The above supported mediations mean that even expatriates with higher CQ-Motivational are less likely to prematurely quit their current posts in China-mainland and return to their home countries, their different forms of cross-cultural cultural adjustment (i.e. general, interaction and work) remain decisive factors in the likelihood of their turnover intentions. In other words, the odds of an expatriate with high CQ to leave the host country before the agreed end of the contract are much less if the expatriate exhibits higher levels of cross-cultural adjustment.

**Figure 2: CQ Effects on Expatriates’ Adjustment and Turnover Intentions**
Managerial Strategies

Expatriates’ turnover is very costly and greatly affects MNCs global success. While the computations of exact costs or the estimation of worldwide rates are two controversial issues, there is a general consensus on the relevance of the problem. The results of this research show strong and direct positive effects of CQ on different forms of expatriates’ cross-cultural adjustment. Nonetheless, it is important to note that MNCs should not expect immediate improved work performance from their CQ trainees rather than seeking improved cultural adaptation that will lead to a better performance and eliminate any possible turnover intentions. Further, the results of CQ dimensional effects clearly indicate that the most important dimension was the motivational while the behavioral and cognitive were the least. This is unexpected finding that clearly contradicts the conventional assumption about how important the cultural knowledge is or how quickly CQ trained staff can exhibit appropriate actions in the new environment. It can be assumed that the cultural knowledge by itself is not enough without the drive to use it for effective adaptation and functioning across different cultures. In practice, while it is still essential for MNCs to provide their new expatriates with the right cultural knowledge, it seems more effective to motivate them to acquire this knowledge in their own ways on the long term.

Further, HRM practitioners at the hosting branches are very much aware of the usual dilemma on to what extent should the organization be responsible for the expatriate’s living conditions. For example, should they provide a residence or compensation, should they provide a 24 hours hot line to answer any inquiries or let the inexperienced expatriate learn swimming with individual efforts. Unfortunately there are no fixed answers. But in light of this research, it is evident that not only should MNCs pay attention to their expatriates’ adjustment within the boundaries of the organization, but also within the larger society outside the workplace. It is recommended that MNCs take into account both, the cultural distance and language difficulty of the host country as measures to reflect the extent of needed active interventions in the adaptation process. Finally, MNCs should also take into account two important factors that can affect the expatriation experience. First, all forms of previous international experience increase the expatriates’ CQ level. Accordingly studying abroad, international training or even leisure travel frequency and duration are potential topics for discussion during the recruitment process. According to this research, the length of stay in the host country can have an effect on the intentions to leave. Hence, MNCs should assess the expatriates’ desire to keep working in the host county periodically and plan in advance for a possible return to the base branch or a reallocation. Relevant communication should be sincere and direct. Otherwise a less adjusted expatriate might leave the organization entirely in avoidance of a specific host country.
Conclusion

In today’s world, global mobility of rare talents is an ever strategic asset where expatriates’ cross-cultural adjustment becomes a crucial factor for MNCs global success, if neglected, it can lead to poor performance or even early termination of the international assignment. Cultural intelligence is a capability that helps expatriates adjust and perform better. Despite investigating the relationship between CQ and different forms of adjustment by several scholars, this segment of CQ literature had a degree of disparity in findings; did not investigate the issue of turnover adequately; and most importantly it was limited in its geographical scope. For example, China-mainland as a lucrative market for global MNCs yet a challenge for western expatriates has so far been underrepresented in CQ research.

Utilizing a relatively large sample (n = 402) of professionals (mean age = 35) working in China-mainland, this study found out that with the exception of CQ-Behavioral, the remaining CQ dimensions had varying positive effects on all three facets of Expatriates’ Cross-cultural Adjustments and the effects of CQ-Motivational were the strongest. Further, the very same variable was the only predictor of Expatriates’ Turnover Intentions among CQ four dimensions. As expected, all three facets of Cross-cultural Adjustment had very strong and negative relationship with the same criterion explaining between 30-50% of its variation. Accordingly when potential mediations of the three facets in the relationship between CQ-Motivational and Turnover Intentions were tested, both of the General and Work adjustments produced full mediations. These findings have very important practical as well as theoretical implications for practitioners and scholars alike.

References


262
Leadership Effectiveness in Multi-cultural Teams: an exploratory study

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Abstract

Although global businesses today are increasingly diversifying and expanding internationally at an ever faster pace, research specifically focused on leadership in multi/cross-cultural teams is surprisingly limited. In general, cross-cultural research tends to focus on different cultural groups and highlight different conceptions of what leadership should involve within each culture. Other studies show that attributes associated with charismatic and transformational leadership are universally endorsed as contributing to outstanding leadership. However, research on the overlap of cross-cultural leadership and feminine style leadership is very scarce. In order to address this gap and contribute to the efforts of further understanding this research area, we developed a framework for this study based both on the extant literature on the topic and a on an exploratory empirical study. A number of in-depth interviews with carefully profiled respondents were carried out in Dubai (U.A.E.), deriving a model that points to factors impacting effective cross-cultural leadership and multi-cultural team performance. While we aim at identifying relevant executive competencies associated with effective cross-cultural interactions, we suggest a number of theoretical propositions that may be further developed into the hypotheses and tested in the future. The study also serves as a practical guideline for managers to better lead multicultural teams, highlights focal points for soft skills training, and contributes to the development of tools aimed at managing conflicts in projects involving multicultural teams.

Keywords: inter-cultural competence, global leadership, feminine-style leadership, multicultural teams, gender traits

Introduction

Looking at the world today, we can see that communication and transport technologies have brought people closer to each other than ever before and has made it possible for people to work and interact in various different ways. International travel is no longer a luxury for the limited few, international relocation and exchange opportunities are abundant, and people from mixed backgrounds as well as multicultural experience are on the rise. With the world becoming a smaller place, a closer space, yet such a diverse place for all, we consider that the day a universal set of competencies of leaders appreciated by all will come.

However, due to the reasoning that different cultures view leadership differently (House et al. 2002, Javidan et al. 2006a, Javidan et al. 2006b), they value different skill sets and leadership styles in their leaders (e.g., Hofstede 1980; 1983; 1991; Hofstede and Bond, 1984). Hence, on the one hand, there are no universal set of skills or approaches of leadership that have been accepted to be effective on all multicultural teams across the board. On the other hand, regardless of the size of enterprise, the topic regarding talents that can perform and deliver results internationally has never been more heatedly discussed than today. In an increasingly globalized world, the issue of finding, developing and retaining effective international managers is a key objective for all organizations, small and large regardless of its origins. Organizations realize that managers and leaders that operate outside of the home market, or as a part of an international team stretching across borders need specific skills and qualities.
One may argue that the concept of leadership has existed as long as humankind, however 'leadership' is relatively young as an academic research topic (Stone and Patterson, 2005). According to Yukl (2006), the study of leadership encompasses a vast amount of research, mostly in military, business, and government organizations. Kouzes and Posner (2002) even suggest that all individuals are potentially leaders and frequently lead by example.

Overall, the purpose of our main research project is to explore the competences that leaders should possess in order to effectively lead multicultural teams (MCTs). We aim to create guidelines for managers to manage a MCT effectively as well as to contribute to minimize conflicts in MCT projects. More specifically, the research question for the part of the main project that we are presenting here is: "What kinds of skills and competencies are common when we compare the two domains of cross-cultural leadership and feminine leadership?"

The objectives for this study are: (1) collect live information and investigate what the managers of international teams had as a general background, and what attitudes and skill sets they think are important for effectively managing multinational teams. (2) based on the literature, find out whether we have missed any major key factors or concepts that are important in cross cultural leadership, feminine leadership and MCT management.

It is important to note and define a few key words used in this project. The word ‘cross-cultural’ generally means relating to or involving two or more countries, where as ‘international’ means on top of involving two or more countries, occurring between countries or made up of people or groups from different countries. ‘Multinational’, on the other hand, means working in several countries as well as relating or involving more than two nations. ‘Multicultural’ could be defined as relating to or representing several different cultures. In this study, we have used the term “cross-cultural” and “international” as synonyms. Also, the terms ‘cross-cultural teams’, ‘multinational teams’, or ‘multicultural teams’, have the same meaning: a team consisting of people from different countries and cultural backgrounds.

**Literature review**

The current and foreseeable future challenge for global companies is recognizing that managers and leaders that operate outside of the home market or as part of a team that stretches across borders need specific skills and qualities such as coping with ambiguity, having clear and effective interactions and making decisions in unfamiliar environments become increasingly challenging when operating across border (Williams 2014). This has been discussed in the literature through concepts as 'global mind-set' or 'cosmopolitan'. One definition of global mindset is "the ability to influence individuals, groups, organizations, and systems that have different intellectual, social, and psychological knowledge or intelligence from your own" (Cohen 2010, p.7). 'Cosmopolitan' has a similar meaning. According to Hannerz (1996), ‘Cosmopolitans’ possess the ability to make way into other cultures through their skills in listening, looking, intuiting, and reflecting. A person who is cosmopolitan is defined by their "willingness to engage with the other, openness toward divergent cultural experiences, [and a search] for contrasts rather than uniformity" (Hannerz 1996, p.107). However, as pointed out by Hajro and Pudelco (2010), research that is specifically focused on leadership in multi-cultural teams (MCTs) is mostly conceptual, anecdotal or based only on single-country samples. This indicates an early stage of development.

Joshi and Lazarova’s (2005) study identified four competences for effective leadership that were considered to be important by respondents who were either MCT members or MCT leaders across multiple locations. The four competencies were: communication; direction and goal setting; motivating and inspiring; and facilitating teamwork. Further, they proposed communication and goal setting as being ‘core competences’ of effective MCT leadership. Schweiger et al. (2003) suggested that successful MCT leaders are able to succeed due to their ability to manage the complexities of MCT functioning. The personal capabilities and characteristics they identified that were relevant to increased performance were the following: (a) Ability to understand skills needed on an MCT; (b) Having solid relationships with
subsidiaries; (c) Being multilingual; (d) Project management skills; (e) Have a high need for achievement; (f) Demonstrates open-mindedness for learning. Many also suggest that MCT leaders need to be able to map, bridge and integrate the different perspectives of MCT members, which can be linked to Cultural Intelligence (CQ) (Maznevski and DiStefano, 2000). Matveev and Nelson (2004) claimed that in particular, leaders of MCTs must be good cross-cultural communicators in order for a team to perform well.

When we discuss women and leadership, generally, people tend to only consider female leadership. Female leadership refers to the women being the leader. The leader’s gender is a female in female leadership. However, when we say a “feminine style of leadership”, this means that the leadership can be asserted by either gender, male or female but the style of leadership we are talking of is female oriented. In other words, a feminine style of leadership concerns a leadership style based mostly on feminine traits, regardless of the gender of the leader.

Based on the extant literature on female leadership and cross cultural leadership, we propose that a feminine leadership style could be more appropriate for an inter-cultural communication setting. We clearly note some researchers arguing that female managers are naturally apt for international positions due to their communal nature. In a study by Westwood and Leung (1994), female expatriates were reported to believe that women benefited from being more interpersonally aware, empathetic, sensitive and sociable compared to men. Gurthrie et al (2003) found that a greater proportion of women (as compared to men) were selected for expatriate assignments based on their personality traits.

Through a review of the extant literature, we attempted to define the key factors and their impact on multicultural team leaders. Based on this information, a study model had been constructed as shown in Figure 1.

![Study Model](image-url)
The left side lists the competencies as primary variables, which were picked up from the literature related to 'cross cultural leadership' (CCL) and 'feminine style leadership' (FSL). The constructs that underpin the two dimensions are listed in the top and bottom square; Global mindset and cosmopolitanism for CCL, and perceptions of social roles in society for FSL.

This model (Figure 1) suggests that the overlapping competencies (commonality) of CCL and FSL are what directly impacts the effectiveness of the leader of the cross-cultural team (CCT). The implication here is that CCTs that perform effectively, is lead by a MCT Leader who possess a certain set of leadership competencies which makes them effective in the global arena.

For instance, one key competency that had overlapped in the literature was “Empathy”. Empathy is listed as one of the desired mental characteristics in ‘global leadership competency’ (Jokinen, 2005) and it is a key feminine sex-role trait (Grant, 1998; Eagly, Johannsen-Schmidt and Van Engen, 2003). Pritchard (1999) as well as Connerley et al. (2008) state that competencies are the knowledge, skills, abilities, personal characteristics and other factors of a person, that help determine outstanding performance from average performance. In general, cross-cultural research tends to point out that different cultural groups have different conceptions of what leadership should involve. However, Hajro and Pudelco’s study (2010) among others show that attributes associated with charismatic and transformational leadership are universally endorsed as contributing to outstanding leadership.

Methodology

A qualitative exploratory study was deemed appropriate to investigate our research question as previous studies are limited and some complexity is expected (Ghauri & Gronhaug, 2014). Qualitative case study research establishes a research area for clarifying greater insight into boundaries and phenomena while empirical research requires experimental data. (Yin, 2003). Eisenhardt (1989) suggests that case study research may lead to a more informed basis for theory development in a newly developing area of research. The strategy of using case studies, in this case a qualitative exploratory study, provides data for building theory (Glaser & Strauss, 1967) that contributes to existing knowledge by analysis from another perspective. And in scientific discovery, model building is the logical stage where it is critical to raise the possibility of new perceptions (Bhaskar, 1978). We followed Miles and Huberman (1994), McCraken (1988) and Yin (2003) for the preparation and implementation of in-depth interviews.

Our study takes place in Dubai, United Arab Emirates. Dubai is considered as one of the most international cities in the world, with as much as 85% of its citizens being expatriates. This backdrop provides us with an unique environment for this study where the majority of the people are familiar not only working in multicultural teams but also interacting on a personal level with people from various cultures. Dubai can be considered to be a perfect place to conduct this study as it possesses a large international workforce for all sectors. U.A.E is known to be heavily reliant on foreign labor to sustain economic growth and high standard of living (MPI Data Hub, 2005). Dubai is a very international city, a hub for many businesses in the Persian Gulf region. Immigrants from Asia and the Middle East and North African (MENA) region have dominated the low- and semi-skilled sectors, while workers from North America, Commonwealth nations and various Western European countries have become concentrated in the UAE's key high-skilled sectors. This is particularly so in the oil & gas industry, in addition to the banking & finance sector (Malit Jr. and Al Youha, 2013). Arabic is the national and official language in the UAE while English is used as a second language. Two of the most cited attractions of working in Dubai are the tax-free salaries and the warm climate.

The choice of respondent profile aimed at ensuring that he/she was perceived as having experience on successfully conducting cross-cultural interactions. The criteria for selecting participants in the inclusion in this study was that at least one international business professional recommended the person as being a good MNT leader, and that the person works with a team that has at least 4 different cultural backgrounds. Of the 12 people that were recommended, we contacted 7 for this pilot study, out of which 5 individuals were interviewed. All the interviewees were based in Dubai, U.A.E. as a result of the nature of the sampling criteria for this study (i.e., snowballing or asking working
professionals to recommend others to be interviewed). The interviewees had varied backgrounds but all were under 45 years old with the average age of 38. All had extensive international working experience having lived in at least 2 different countries prior to their current residence in Dubai. In addition to the guidance of Miles and Huberman (1994) and McCracken (1988), we have followed some recommendations for “elite interviewing” (e.g., Gaskell, 2000; Kvale, Steinar & Svend Brinkmann 2008) due to the seniority of the interviewees. The interviews all lasted around one hour and 3 were recorded and fully transcribed. 2 interviews were done without a recorder and their inputs reported here are based on interview notes.

The questions were developed based partially on published questionnaires (e.g. Halverson and Tirmizi, 2008; Gerzema & D’Antonio, 2013). In order to get a grasp of whether people who are considered good MNT leaders rate themselves more masculine or feminine oriented, a questionnaire based on the traits identified in the Athena Doctrine study by Gerzema & D’Antonio (2013) had was also conducted during the interviews. One hundred and nineteen (119) traits from the Athena Doctrine study were used for the questionnaire. Three separate sheets of paper were prepared with each a list of feminine, masculine or neutral traits on them (not indicated as such). The interviewees were asked to first take a look at each of the three sheets, and choose five of the traits from the feminine and masculine traits sheets and three traits from the neutral traits sheet they thought were important for a multicultural team manager. They were asked to then rate them in order of importance: 1 being most important, and 5 (or 3) being the least important. This was repeated for the other two separate sheets. Then, going back to the first sheet, the interviewees were asked to score themselves on the traits they identified with a number between 1 to 10 where 10 was excellent and 1 being poor.

A template analysis of the interviews was conducted in order to find what people focus on when discussing what are important in leading MNTs and whether there were any concepts and traits that have been missed in the review of the relevant literature. “Semi-structured interviews can yield a large volume of textual data, and the principles of thematic analysis are based on looking for patterns within the data.”(Ward et al. , 2012, p. 305). The template analysis is a way of thematically analyzing qualitative data. It involves the development of a coding template, summarizing themes identified from the transcripts. It is not the aim of template analysis to prove or disprove a certain expectation, but to sort out and develop the perceptions and thoughts of the people interviewed. The analysis can go beyond describing a set of data by interpreting the themes or patterns which arise in connection with specific research questions (Braun and Clarke, 2006). "The greatest advantage of template analysis resides in the fact that it is a highly flexible approach that can be modified for the needs of any study in a particular area.” (King, 2004, p. 268) The disadvantages on the other hand is that templates may be too simple to allow any depth of interpretation, or too complex to be manageable. In this study, template analysis was used as a creative thinking technique in a similar way as Stein et al.(2009). We have used it to sort out the underlying themes and what the real data was telling me apart from the themes already identified in the literature review. The initial template consisted of 5 highest order codes sub-divided into lower order codes. From there modifications were made as the analysis of the transcripts and notes progressed.

As all the interviewees had extensive international experience especially in terms of living abroad or marrying another nationality, two revisions under the first level-one code were made which was “International Experience to date” that originally comprised of five level-two codes. First, “Interaction with Foreigners.” was merged into “Ethnicity and Cultural Background.” Then we chose to sub-divide it with two level-three codes: “Family” and “Friends”. “Family” was again subdivided into two level four codes: “Parents” and “Spouse.” This allowed to capture the roots of the interviewer that would affect his/her view of the world and probably the way they carry themselves in the international environment. Secondly, with the same intent, we merged the third and forth level-two codes “Study Experience” and “Work Experience” into a new level-two code “Living Abroad”, and subdivided that into two level-three codes of “Education” and “Work”. The outcome was a cleaner, organized template that captured the interviewee's international experiences from three distinct factors that represent the three level-two codes: “Ethnicity and Cultural Background,” “Languages” and “Living Abroad”.

267
Results and Discussion

The literature suggested that several different factors were important for effective performance of multicultural team leaders (see Figure 1), and the study aims to go beyond identification or reclassification of them. We endeavour to collect and profile those who are considered good MCT leaders. As mentioned previously, we conducted five semi-structured in-depth interviews with senior-management level business professionals based in Dubai – UAE, in order to ascertain whether people who are considered good MCT leaders rate themselves as more masculine or feminine orientated.

Through a template analysis of the interviews, we identified the common skills and competencies, then labeled them according to their gender traits. A clear picture emerged from the interviews for what international professionals considered essential for a multicultural team leader. Over all there was a strong consensus that MCT leaders need to be good listeners and be attentive. All respondents agreed that a MCT manager is more skilled than those who manage homogeneous groups because of the need to understand cultural aspects. AR, one of our interviewees, summed it up as: "... on top of managing a team with different personalities, you also have to manage the cultural aspect and the communication aspect on top, which definitely increases your skill level on that side. And it opens your prospective and horizon." IP, another interviewee, pinpointed the superior soft skills of an effective MCT leader: "... there is more emotional intelligence, yes there can be a better way to communicate, sensitivity towards the different cultures – in that side yes, there is a bigger advantage for MCT managers."

The interviewees also considered, as described by Graen and Hui (1999), that a MCT leader is effective when they can transcend cultural differences and bring together various groups. The skills and competencies that are necessary to do the above match the keywords that kept reappearing in the interviews: 'good listening skills', 'flexible', 'adaptive', ‘attentive’, ‘cultural awareness’, ‘sensitive’, and ‘empathy’.

Considering the gender of these traits following the categorization done in most literature, including the Athena Doctrine (2013), we can consider that when it comes to MCT leadership, feminine traits are more vital. When discussing conflict within MCTs and how to deal with them, all of the interviewees said that they would use “collaboration” as a means to handle the conflict. “Collaboration” is categorized as traditionally a feminine trait (Gerzema & D’Antonio 2013), but it was perceived as being a more neutral trait by the people of today.

The analysis for the questionnaire was straightforward: the total scores the interviewee rated themselves on the feminine (FEM) and masculine (MAS) traits were compared. All the interviewees scored higher on the feminine traits. As for the actual traits that were pointed out as being important for a MCT manager/leader, we see a high overlap considering the respondents had chosen top 5 traits each from a range of 40 to 65 traits for the feminine and masculine traits, and top 3 from a set of 13 traits for the neutral (NEU) traits.

All five respondents agreed on one competency from each trait. From the feminine traits it was ‘adaptive’, from the masculine traits, it was ‘natural leader’ and from the neutral trait was ‘collaborative’. More than four of the interviewees also chose ‘flexible’ and ‘good listener’ from the feminine traits while ‘confident’ was chosen from the masculine traits and ‘intelligent’ from the neutral traits (See Figure 2).
We set out with the question; “What kinds of skills and competencies are common when we compare the two domains of cross-cultural leadership and feminine leadership?” in mind when we started this study. Rather than stating which competencies are of what category to discuss them in the interview, we let the interviewee speak freely of what MCT leaders ideally should possess as competencies and then tried to fit them back into the two domains. This way, the interviewees were not biased by our thought process or pre-set categories.

From the descriptions that the good MCT managers gave of what they thought would benefit a MCT manager or a leader, it became clearer that not only were they expected to be a good leader in general, but they had an extra ability to “react” to situations which were specific to cross cultural teams. This relates to situational leadership. One of the respondents said: “...because in an international environment, there is no one size fits all approach. So you need to be changing also your approach to managing your team...especially it is not only how you interact with the team, it’s also facilitating the interaction between the different team members of different nationalities.”

We looked at the original study model and highlighted any characteristics and skills discussed by our interviewees under “Feminine Style Leadership”. Because the interview discussed about MCT leaders, we could consider that these were the overlapping common competencies with “Cross Cultural Leadership”, which is a requisite of MCT leadership.

The following nine leadership competencies listed in Figure 3 were the outcome of this study.
A New Framework

Based on the results of the study and further review of literature, a new framework has been proposed (See Figure 4).

![Figure 4: Framework for Multicultural Team Performance](image)

Our proposition is that a feminine style leader is more likely to have a empathetic approach towards multicultural teams, having higher levels of ability in resolving conflict, and inter-group communication than a masculine style leader. The outcome should be a better MCT performance.

There is evidence in the literature as well as from the interviews we have conducted in the pilot study which supports that MCTs have more conflict and communication issues. Thus we consider that the more a leader is able to resolve conflict and have better ways of addressing inter-group communication, the more successful he/she will be in leading MCTs.

Therefore, we theorize that the leadership competencies we have identified in this study (Leadership competencies common to the two dimensions of Cross-cultural Leadership and Feminine Style Leadership) should have a positive impact on Resolving Conflict, and Inter-group Communication. Based on existing literature, the following section explains the backbones of the framework.

Multicultural Team Performance

In this study, we define and consider “teams” drawing from Hackman (1987) as well as Guzzo and Shea (1992), i.e. a team is composed of individuals who both see themselves and by others as an independent social entity embedded in larger organization whose performance affects others such as such as suppliers or customers. The members of the team have some degree of interdependence, with a differentiation of roles and duties. Hackman(1987) suggested that team performance is defined by three
criteria: (1) the productive output of the group meets or exceeds the performance standards of the customer; (2) the social processes used in carrying out the work maintain or enhance the capability of the members to work together on subsequent team tasks; (3) the group experience satisfies rather than frustrates the personal needs of the group members.

At the end of the day, in line with the above definition, team performance is the amalgamation of the efforts of the leader and their followers (team). When discussing teams in a global context, Maloney and Zellmer-Bruhn (2006), suggested that they differ from other forms of teams on the following two characteristics: (1) a globally dispersed work environment, and (2) heterogeneity on multiple dimensions. In line with the research of leading global teams by Zander et al. (2012), in this study we choose to focus specifically on national cultural heterogeneity. It is a salient characteristic of teams performing in the global arena, as nationality has been found to override other demographic and tenure-based categorizations in such teams (Butler, 2006; Earley and Mosakowski, 2000) and with respect to leadership (Zander and Romani, 2004).

Guzzo and Dickson (1996, p.331) suggest that “there is a real need to develop theory and data on the ways in which dissimilarity among members contribute to task performance”. In spite of the popularity of diversity, cross-cultural, and multinational organization literature in both academia and the business world, there has not been much development in this area of research in the last two decades. Many studies have shown that heterogeneous groups achieved better performance than homogeneous groups. In contrast, some studies have shown that homogeneous teams avoid mistakes caused by miscommunication and the subsequent conflict of more diverse teams. Williams and O'Reilly (1998) reviewed 40 years of diversity research on conflict and communication. Their conclusion was diversity does not have any predictable effects on team performance. Matveev and Milter (2004) identified the characteristics of high-performance multicultural teams as: clarity of team goals, complementary skills and experience of team members, clear responsibilities of team roles, high degree of commitment, cooperative team climate, high degree of motivation, cultural sensitivity, and access to technology.

Team leader abilities: Conflict Resolution and Inter-group Communication

Drawing from our empirical results and from the literature, we identified two abilities that are most important in leading a MCT that impacts group effectiveness: resolving conflict and communication (Inter-group communication). Many studies such as Joshi et al. (2002) have illustrated that an multinational corporations can easily bring workers from many nations together to accomplish a global strategy, but the potential for negative feelings in a MCT is very high. According to Adler (1991), process losses with in teams potentially result from the differing perceptions, attributions, and communication patterns that vary by national culture. Various studies have also shown (e.g. Jackson, 1992) that in regard to performance, simple tasks may be facilitated by group homogeneity, whereas complex decision-making may be hindered by it.

Past research on multinational teams indicates that cultural or national differences, reinforced by geographic dispersion, increase avenues of conflict that may be detrimental to team functioning (e.g., Gibson, 1996; Mohrman, 1999). It also suggests that conflict can have both beneficial as well as debilitating effects on team functioning (e.g., Jehn et al., 1999). Hajro and Pudelko (2010) emphasize that an inability to simultaneously work with people from different backgrounds together with a lack of insight into, sensitivity toward, and accommodation of different cultures are among the major reasons for MCT failure. Our review of multicultural team leadership literature as well as interviews conducted in the pilot study identified that leaders are expected to possess a competence of recognizing and bridging divergent member perceptions.

Liljegren and Zander (2011) point out that bridge makers facilitate intra-team communication, interaction, and resolve conflicts by bridging cultural and linguistic boundaries between team members. Although anyone in the team may be a bridge maker, we see the importance of the MCT leader having a
high degree of this ability. Being able to tune-in and identifying cultural cues, reading the in-between lines of ‘hidden’ contextual information (Steers et al., 2010) can enable communication and resolve communication misunderstandings. This is what makes bridge making an essential part of what team leaders need to do to leverage the full potential of a multicultural team (Maznevski, 2008).

Chevrier (2003) proposed that bridge making is also the essence of the leadership strategy, arguing that mere interaction between team members will not release synergy effects from drawing on different cultures, through a deep understanding of each other’s cultural backgrounds and world views. Conflict can emerge from varied sources across different cultures, particularly in multicultural team settings (Gibson and McDaniel, 2010). The definition of conflict varies. Simons (1972) defines conflict as a state of a social relationship with incompatible interests between two or more parties, whilst Schneer and Chanin (1987) defined it as a natural phenomenon involving individual perceptions among people with different values, ideas, or behaviors. Individuals and groups use various strategies to manage conflict (Blakei and Mouton, 1964), which usually parallel specific types of conflicts (Gibson & McDaniel, 2010). Conflict resolution has been defined as “the process used by parties in conflict to reach a settlement” (Sweeney & Carruthers, 1996, p. 328). Gibson & McDaniel (2010) further observed that cross-cultural research on conflict has extended theories pertaining to sources of conflict and intergroup relations, as well as the differential effectiveness of specific conflict management strategies.

Many studies have found that Easterners are less confrontational, less assertive, and more cooperative than Westerners (e.g. Ting-Toomey, 1988). Hence, the argument is that conflict resolution strategies are also culturally dependent. Gibson & McDaniel (2010) note that when dealing with conflict, there seems to be no universal strategy that is adopted, thus conflict resolution strategies may be culturally dependent.

Brett et al. (2006) draw our attention to four cultural barriers in multicultural teams: conflicting decision-making norms, conflicting attitudes toward hierarchy, direct versus indirect communication, and trouble with language fluency and accents. The former two barriers have to do with conflicting values and norms and the latter two are related to communication; this is not surprising given that a sizeable portion of the multicultural team research touches on this topic in some way.

In many studies of leadership, communicating vision, goals, and directions, engaging in feedback and developing routines together, avoiding communication breakdowns and steering the team on the right track stood out as important leader actions (e.g., Ayoko et al., 2002 and Matveev and Nelson, 2004). The importance of communication cannot be stressed enough for teams in general, but for MCTs, it holds more importance as there are much more tendency for miss-communication due to differences such as in social norm, values, language proficiency and comprehension of it’s team members, as we have explored.

Steers et al. (2010, p. 265) emphasized that “mastering intercultural communications by listening for contextual messages behind content messages” as one of the main leadership challenges for leaders of multicultural teams. Team leaders must also facilitate communication among team members, make communication norms explicit, and help build mutual understanding (Steers et al., 2010).

The topic of communication challenges in global teams is far from exhausted, and language in global teams has only started to receive attention. Zander et al. (2012) and others have pointed out that leaders need to possess certain competences, and possibly leadership styles, to be able to overcome such challenges.

“Multi-culturality” Components of Multicultural Teams

Depending on how multicultural a team is, we consider that it has an impact on the degree of effort that the leader of the team makes in resolving conflict and inter-group communication this would inevitably affect the group effectiveness as a whole.
Thomas (1999) suggested three mechanisms proposed to influence group effectiveness, which were Cultural Diversity, Socio-cultural Norms, and Cultural Distance. According to Thomas, these mechanisms are interrelated, however, each has different effects as well as potential to lead to differing predictions.

Below are the terms defined by Thomas (1999)

i. **Cultural Diversity**

The amount of cultural heterogeneity represented in the work group.

ii. **Socio-cultural Norms**

The culturally based orientations of the individuals represented in the work group toward group function and the structure that they bring to the group setting.

iii. **Cultural Distance**

The extent to which group members are culturally different from one another.

Our study will not cover in-depth effects of these mechanisms, but it is an interesting area of research to pursue for not only from a global leadership perspective but as an international business point of view for future development of the field. Thus we propose that additional research be conducted to explore the impact of these three mechanisms on team leader abilities.

**Conclusion (5. Conclusions)**

Past research (e.g. Erez & Earley, 1993; Hofstede, 1980) shows that individuals in different cultures learn different behavioral scripts and sets of values with which to evaluate situations and potential courses of action in group settings. Bettenhausen and Murnighan (1991) provide evidence that group members initially base their actions on the behavioral scripts that they held as members of different groups in similar situations. In their study, members of new groups who had previously developed norms for cooperation acted cooperatively in a subsequent, similar task.

Considering these points, we believe that leaders who are perceived good at managing and leading MCTs will inspire and enable others to mimic their “effective” behaviors and bestow the best values and abilities to those who aspire to be as good or effective in dealing with MCTs. In any case, the first step in unlocking a set of leadership competencies that would be appreciated by all is with the careful profiling and study of leaders that MCT members perceive as successful and effective.

This paper presents the lead up to creating a framework that has been constructed based on an empirical study and additional review of the extant literature. Future studies may advance knowledge by focusing on assessing the impact of effective cross-cultural leadership competencies that on to the two team leader abilities we have highlighted as most important for MCT leaders: resolving conflict and inter-group communication.

**References**

20-35.


Abstract

As teamwork becomes more prevalent in organizational decision making, the influence of emotional intelligence on team decision making process demands more research attention. The present study explores the impact of emotional intelligence on team decision making at both individual and team levels. Using a sample of 54 decision making teams, this study found that individual emotional intelligence is positively related to individual influence on team decisions. Team level emotional intelligence improves team decision making performance through increases in psychological safety.

Keyword: Emotional Intelligence; Psychological Safety; Team Decision Making.

Rational individual decision making has both a cognitive and an emotional component. On the one hand, decision making has long been categorized as a basic cognitive process of human behaviors through which a preferred option or a course of actions is chosen amongst a set of alternatives based on certain criteria (Wang and Ruhe, 2007). On the other hand, Nobel Laureate Herbert Simon (1967, 1983) had emphasized the important role of emotions in his decision theory of bounded rationality several decades ago. Since then the relevance of emotions to decision making has been recognized in several academic disciplines, including philosophy (Solomon, 1993), economics (Rick & Loewenstein, 2008), and neuroscience (Phelps et al. 2014). Research is increasingly showing that emotions are truly critical to rational decision making (Damasio, 1994). Rational decision making requires individuals to have the ability to experience emotions effectively because emotions provide vital information about how we interpret and decipher the world around us. The ability to effectively experience emotions and understand the world around us is well captured by the concept of emotional intelligence (EI), which is defined as being aware of the emotions of self and others, having control over one’s own emotions, and being cognizant in the management of others’ emotions (Goleman 1995). Empirical studies have shown that the influence of EI on organizational outcomes, such as leadership effectiveness, teamwork, relationship development, academic performance, and pro-social behaviors (c.f. Côté (2014) for a thorough review). For example, in a simulation study, Seo and Barrett (2007) found that students who were good at identifying and distinguishing among their own feelings made more profitable investment decisions.
While the number of studies on the impact of emotions on decision making is accumulating, research on group-level emotional processes is surprisingly scant, given that so many organizational decisions are made in teams (Lerner, Li, Valdesolo, & Kassam, 2015). Nowadays, a significant number of decisions are made by groups, teams, or committees in organizations (Johnson and Hollenbeck, 2007). Existing literature on team decision making has emphasized the cognitive aspects of decision making, such as identifying and ranking decision objectives, searching for information, generating alternatives, and analyzing decision consequences (Jackson, May, & Whitney, 1995). Research in this perspective has focused on the degree to which cognitively processed information and ideas are shared, though with outcomes occurring at both individual and team levels (Hinsz et al., 1997). Although information sharing is important to team decision making, Stasser and Titus (1985) found that teams often cannot take advantage of members’ unique expertise, thus not fully utilizing every team members’ potential to contribute and improve team performance. Compared to the cognitive perspective of team decision making, the other perspective acknowledges the more emotional aspects of team interactions (Jackson, May, & Whitney, 1995), reflecting on the fact that actual decision making processes are rarely ideallistically organized nor purely rational. The culprit for teams not leveraging members’ respective strengths can very well be inadequate emotional intelligence. Specifically, lacking in emotional intelligence may inhibit some individuals’ qualitative expression, analysis, or reception of information. While studies show that emotional intelligence improves interpersonal relationships and individual work outcomes (Goleman, 1998; Mayer, Salovey, & Caruso, 2000; Brief & Weiss, 2002), limited research has examined EI as a team characteristic with team decision making, and the findings are far from conclusive.

One possible explanation for the inconclusive results on the relationship between EI and team decision making lies in the difficulty of identifying variables mediating the link. Thus more studies need to focus on investigating the nuanced ways that EI impacts team decision making. An example of a potentially crucial team emergent state is psychological safety, defined as a shared belief by members of a team that the team is safe for interpersonal risk taking (Edmondson, 1999). For teams to function successfully, team members must willingly and readily participate in activities such as seeking feedback, asking for help, sharing information, and addressing mistakes, which all partially depend on the degree of psychological safety within the team environment (Edmondson, 1999). While the importance of psychological safety for social interaction has been noted (Edmondson, 1999; Nembhard & Edmondson, 2006), its antecedents have garnered limited empirical interest (Harper & White, 2013). Teams may develop an emergent state consisting of a certain level of psychological safety, it can be worthwhile to explore whether team members’ ability to recognize and regulate their own and others’ emotions has an effect on how team members perceive the team’s psychological safety. Therefore, a team’s emergent state of psychological safety can be derived from team members’ emotional intelligence to a certain extent. Overall, there is plenty of room to improve our understanding between EI, psychological safety, and team decision making.

To further understanding on these topics and address research gaps, the current study focuses on accomplishing three main goals. The first goal is to examine the relationship between individual EI and individual behaviour on decision making teams. The second goal is to explore the association between team EI and team decision making effectiveness. Finally, this study aims to assess the possible mediating effect of psychological safety on the relationship between team EI and team decision making effectiveness.

**Theory and Hypotheses**

EI is a set of psychological and social sensibilities and skills that provides a framework to understand and experience emotions more adaptively (Mayer et al., 1990). The construct of EI is partially derived from social intelligence (Cantor & Kihlstrom, 1987) and has been popularized by Goleman (1995, 1998). Unlike cognitive intelligence, which revolves around the ability to understand, learn, and manipulate symbols and abstract ideas, social intelligence focuses on the ability to relate and understand
people. Emotional intelligence specifically refers to an individual’s ability to accurately perceive reality to regulate and understand their own emotional responses while at the same time adapt and react to others (Mayer & Salovey, 1997; Pellitteri, 2002). In the context of the workplace, EI consists of affective tendencies that enable people to use emotional information advantageously to achieve desired work outcomes (Mehart, 1998). Some studies have suggested that EI is a primary predictor of individual job performance (Boyatzis, 1982), and Goleman (1995) claimed that cognitive intelligence only contributes twenty percent toward life success remaining eighty percent may be attributable to emotional intelligence. In particular, EI can be described as an array of competencies that can enhance leadership performance, as well as one’s ability to succeed at communicating their ideas and intentions in assertive and interesting ways, which makes others feel more suited to the occupational environment (Goleman, 1995; 1998).

**Individual EI and Decision Making in Teams**

Decision making teams are frequently used in workplaces (Wong, Ormisten, & Tetlock, 2011), which implies that many social influence attempts occur among team members. These influence attempts may be informational and/or normative (Deutsch & Gerard, 1955; Kaplan, 1989). Informational influence refers to efforts to persuade team members through informed argument, and normative influence emphasizes social cohesiveness (Kaplan, 1989). While research has demonstrated the importance of individual attributes for team effectiveness (Bell, 2007), the specific attributes leading to incremental influence on team decision making processes remain elusive. Which dispositional attributes make some individuals more influential than others in the team decision making context?

One possible answer to this question is emotional intelligence. According to Goleman (2000), EI encompasses self-awareness, self-management, social awareness, and social skills. Self-aware individuals have an understanding of their own emotions and needs and are able to reduce cognitive dissonance by aligning behaviour with attitudes. Self-regulation is the ability to control one’s behaviour rather than reacting impulsively. Social awareness consists of empathic insight into interpersonal processes, and social skill essentially involves friendliness with intent. These components of EI can potentially enhance observation and interpretation of social interaction on decision making teams and thus foster strategic influence attempts. In addition, the components of EI are closely related to the social skills needed for teamwork, where high EI individuals are more adept at finding out team members’ strengths and weaknesses, more likely to cope with environmental demands and pressures, and better at leveraging information regarding other members effectively (Bar-On, 1997). Therefore, at the individual level we propose that team members with higher levels of EI are more likely to have more influence on team decision making.

**Hypothesis 1:** A team member’s EI is positively related to his/her influence on team decision making.

**Team EI and Decision Making**

Since teamwork is inherently a social activity, emotions can play an important role in team effectiveness. Feyerherm and Rice (2002) found a positive correlation between a team leader’s ability to understand emotion and team performance on a customer service metric. Regarding EI specifically, team emotional intelligence can influence how a team responds to stimuli that elicit emotion (Druskat and Kayes, 1999), and one study found that teams with higher levels of EI performed better than teams with lower levels of EI (Jordan and Troth, 2004). In Luca and Tarricone’s (2001) study, emotional intelligence was found to strongly correspond to team harmony and success level, interestingly, they found that the lack of emotional intelligence was the main cause for failures in teams.

EI is a dispositional attribute that individuals can provide as a resource to teams for task accomplishment (Chang et al., 2012; Jordan & Troth, 2004; Quoidbach & Hansenne, 2009; Troth et al., 2012). How individuals’ traits interact in a team depends in part on the operative task (Barrick, Stewart,
Neubert and Mount, 1998: Steiner, 1972), and thus when team research aggregates team member individual attribute scores to form team-level constructs, the way individual scores are aggregated to the team level becomes important. Mean scores and variances have been widely used by researchers for this purpose (Prewett et al., 2009). Decision making teams often demand sequential, cumulative processing of information and analysis of alternatives in pursuit of optimal solutions. Therefore the task of decision making teams calls for an additive approach (Steiner, 1972), and thus it’s appropriate to operationalize team EI as the average of team members’ EI.

Team EI has the potential to improve team decision making in part because it can serve as a resource for conflict prevention and resolution. Team decision making processes involve moving from a diverse set of individual positions to agreement on a consensus choice (Kerr & Tindale, 2004), and this process of reconciling disagreement often requires conflict management. Teams with higher EI have conflict management strategies available as a resource to foster good information processing and quality decision making. Whereas teams with lower EI tend to be more competitive and negate any development of synergistic team environment, and members are more likely to feel excluded from decision making processes due to miscommunication and lack of cooperation (Luca & Tarricone, 2001).

**Hypothesis 2:** Team EI is positively related to team decision making performance.

**The Mediating Role of Psychological Safety within the EI - Team Decision Making Relationship**

Team decision making has been analyzed as a social influence process (Steiner, 1966; Stasser and Davis, 1981; Kerr and Tindale, 2004), and social influence has been conceptualized recently as consisting of compliance, comparison, and/or argumentation (Pavitt, 2014). Compliance involves team members voicing preferences they believe will gain them social approval. Comparison includes team members asserting their preferences and absorbing others’ views, and argumentation consists of team members informing and attempting to persuade others. This conceptualization of the social influence process on teams resembles the construct of information elaboration offered by van Knippenberg, De Dreu and Homan (2004). Information elaboration is a sequential individual process of exchanging information, analyzing information, and communicating analytical results to the group for discussion. Clearly, quality team decision making requires that team members inform the team of task relevant information, analyze information introduced by other team members, feed their interpretations back to the team, and participate in evaluative integration to contribute to a good decision.

Effective information sharing in teams demands a climate of psychological safety, which refers to individuals’ perceptions of the consequences of taking interpersonal risks in their work environment (Edmondson, 1999, 2004). When an individual feels psychologically safe in the workplace, he or she can freely communicate without fear of negative consequences to status or career (Kahn, 1990). In work settings psychological safety consists of confidence about how others will respond when an individual acts in a way that may be risky. When people feel psychologically safe they can disagree with peers or authority figures, ask naive questions, own up to mistakes, or present a minority viewpoint (Garvin, Edmondson and Gino, 2008). Research evidence suggests that psychological safety is positively related to team learning behaviors (Edmondson, 1999), experimenting with creative ideas (Gilson & Shalley, 2004), and firm performance (Baer and Frese, 2003). Therefore, a climate of psychological safety should positively affect team decision making effectiveness (van Ginkel and van Knippenberg, 2008, 2009).

**Hypothesis 3:** Team psychological safety is positively related to team decision making performance.

While team EI can enhance team decision making through greater quantity and quality of information sharing, that process is likely affected by the extent to which team members perceive a climate of psychological safety, which encourages the expression of varying information and discrepant views. The antecedents to team psychological safety remain largely unexamined, we propose that not
only will team EI foster continuous qualitative information sharing and decision making, team EI will also partially determine if a climate of psychological safety develops within a team in the first place. Low levels of team EI may result in an inability of the team to cope with conflict, thus reducing feelings of psychological safety. Teams with lower EI are less capable of perceiving and treating the emotions of team members and thus will be more prone to escalate emotional conflicts and lessen psychological safety (Harper & White, 2013). As such, the relationship between team EI and team decision making is likely mediated by team psychological safety. Therefore, we propose that:

**Hypothesis 4:** Team EI is positively related to team psychological safety.

**Hypothesis 5:** Team psychological safety mediates the relationship between team EI and team decision making performance.

**Method**

**Sample and Procedure**

A total of 241 undergraduate business students from a Mid-Atlantic university participated as subjects. The students were divided into teams of three (11 teams), four (15 teams), five (21 teams), six (6 teams), or seven students (1 team), in a total of 54 teams. The teams were required to work together throughout the semester to complete in-class team activities and a final team project.

Student teams participated in the Lost at Sea survival task (Warwick, 1994). The task requires the team to rank order fifteen items available to them in a rubber life raft that they occupy in a remote region of the South Pacific Ocean as a result of abandoning their larger ocean going vessel. First, students were asked to complete the ranking task individually within 20 minutes. After the individual ranking was completed, students were asked to discuss with team members and complete the team ranking.

**Measures**

**Team decision making performance.** The quality of the decision is indexed by a discrepancy score of the rankings by survival experts and subjects. The score was then reversed such that the higher the score the better the quality of the decision on a scale of zero to 112. Using this index, three decision making performance scores were created: (1) individual’s decision making quality (discrepancy score between individual rankings and experts rankings; (2) team average decision making quality (the mean score of all individual decision making quality scores within a team); (3) team decision making performance (discrepancy score between team rankings and team average decision making quality). Team decision making performance is positive when team decision is better than team average decision.

**Individual’s influence.** A discrepancy score of the rankings by each subject and his/her team decision was calculated. This discrepancy score was reversed to measure individuals’ influence on team decision. Individual’s influence is high when his/her decision is close to team decision.

**Psychological safety.** Psychological safety was measured by the 8 item scale from Edmondson (1999) (alpha = 0.79). Item responses were on a 5-point scale that ranged from strongly disagree to strongly agree. The scale includes such items as “I feel free to disagree with members in my team.”

**Emotional intelligence.** Individual’s EI was measured with a 25-item skill-based emotional intelligence scale (alpha = 0.93) from Hunsaker (2005). Average of individual’s EI in each team was used to measure team EI.
Results

Because team EI scores were aggregated from individual scores, the viability of aggregation needed to be examined. This was done by calculating within-group agreement \( (r_{wg(j)}) \) for each team (James, Demaree, & Wolf, 1984). The average \( r_{wg(j)} \) values were above .70, indicating that it was statistically appropriate to analyze EI at the team level (George, 1990).

Table 1 presents the means, standard deviations, and zero-order correlations for all of the variables used in the analysis.

Insert Table 1 Here

Individual’s EI and Individual’s Influence on Team Decision

Hypothesis 1 predicted that individual’s EI is positively related to individual’s influence on team decision, so that individuals with high level of EI are more likely to influence the team decision. To test hypothesis 1, individual’s influence score was regressed on individual’s EI score with gender and individual decision quality as control variables. Results in Table 2 indicates that individual’s EI is positively related to individual’s influence on team decision (\( \beta = .146, p<.05 \)). Thus hypothesis 1 was supported.

Insert Table 2 Here

Hypothesis 2, 3, 4, and 5 predict that team EI is positively related to team decision performance, and psychological safety mediates this relationship. To test the mediation effect of psychological safety on the relationship between team EI and team decision making performance, the Baron and Kenny (1986) method was used. First, psychological safety was regressed on team EI to test the relationship between team EI and psychological safety. Second, team decision making performance was regressed on team EI, psychological safety and control variables to establish the mediating effect of psychological safety. Table 3 displays the results for these hierarchical regression analyses. Team EI is positively related to team decision making performance (\( \beta = .348, p<.05 \)), therefore hypothesis 2 was supported. Hypothesis 3 predicted that team psychological safety is positively related to team decision making performance and it was supported (\( \beta = .529, p<.05 \)). Hypothesis 4, team EI is positively related to team psychological safety, was supported too (\( \beta = .423, p<.05 \)). When psychological safety was included in the regression model, the regression coefficient for team EI in model 5 became insignificant, indicating the mediation effect on psychological safety on the relationship between team EI and team decision making performance.

Insert Table 3 Here

Discussion

The main purpose of this study is to investigate the impact of emotional intelligence on team psychological safety and decision making performance. Essentially, we explore the impact of EI on decision making at both individual and team level. And we also examine the mediating role of psychological safety in the team decision making process.

Individual EI and Influence

The findings of this study reveals that higher level EI is associated with a higher level of individual influence on team decisions. Literature in this area has identified two fundamental types of
influence: informational influence and normative influence (e.g., Deutsch & Gerard, 1955; Kaplan, 1989), although there are studies that have documented the impact of social influence on team decision making, which individuals display more influence and how can individuals increase their influence in team decision making remains largely unexplored. The findings of this study contributes to the literature by identifying EI as an important personal attribute that increases an individual’s influence on team decisions.

**Team EI, Psychological Safety, and Team Decision Making**

Another key finding in this study is the mediating role of psychological safety on the relationship between team EI and team decision making performance. This finding confirms the importance of studying team emergent states variables, such as psychological safety, in opening the “black box” of team decision making. Future studies could explore the impact of team EI on other emergent states or process variables on team decision making. For instance, building on the conceptualization of groups as information processors (Hinsz, Tindale, & Vollrath, 1997), van Knippenberg, De Dreu and Homan (2004) defined information elaboration as the exchange of information and perspectives, individual-level processing of the information and perspectives, the process of feeding back the results of this individual-level processing into the group, and discussion and integration of its implications. High-quality group decision requires that group members inform the group on the basis of their own information about the task, carefully process the information introduced by other group members to understand the implications, feed these implications back to the group, and through integration of information make the optimal group decision. In an experimental study by van Ginkel and van Knippenberg (2003), the results showed that groups with shared mental models emphasizing elaboration made higher quality decisions than groups that held such shared task representations to a lesser extent.

It is important to consider the limitations of this study when interpreting the findings. The sample size is relatively small, and the research uses observational data and thus causality among variables is not warranted. In addition, participants were college students, so readers should be cautious when making generalizations with the results; a larger, more diverse sample, and an experimental design, may provide a better representation of the population of decision making teams.

**References**


### Table 1 Descriptive Statistics

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<th>4</th>
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<td>Team EI</td>
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<td>Team Worst Score</td>
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<td>-.15</td>
<td>.44**</td>
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<td>-.06</td>
<td>.36**</td>
<td>.20</td>
<td>.06</td>
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### Table 2 Individual EI and Individual’s Influence on Team Decision Making

<table>
<thead>
<tr>
<th>Gender</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
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<tr>
<td></td>
<td>.026</td>
<td>.038</td>
<td>.026</td>
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<td>Individual Decision Quality</td>
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<td>Individual EI</td>
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<td>.264**</td>
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<tr>
<td>Model F Statistics</td>
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<td>8.48*</td>
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<td>R²</td>
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<td>.08</td>
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### Table 3 Team EI, Psychological Safety, and Team Decision Making Performance

<table>
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<th>Psychological Safety</th>
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<tbody>
<tr>
<td>Model 1</td>
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<tr>
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Emerging Challenges of HRM in 21st Century: A Theoretical Analysis

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Abstract

Human Resource Management discipline extracted its roots from organizational psychology discipline and proved to be an important practice for managing organizations. The role of this practice has emerged to be strategic with due course of time. In an organization, HR has become an important strategic partner and the management of the same has become a challenging task for HR managers. Now a day, the role of human resource management departments has become indispensable for 21st century modern businesses. This article particularly focuses on changing role of human resource management practices in 21st century. This theoretical paper aims to highlight the importance of human resource managers, HR practices and its influencing factors. In addition to that, this article also elaborates the upcoming challenges which are being faced by 21st century HR managers. The literature analysis has been conducted to present emerging issues, challenges and practices of human resource management discipline in context of 21st century.

Key Words: Globalization, Strategic Partner, Competency Framework, Technological Advancement, Dynamic Environment, Change Management.

Introduction

Companies that aspire to sustain their competitive edge, both at present and in the future require human force well equipped with recent techniques and technologies to face the changes and upcoming challenges of 21st century. There are an incredible number of demands on organizations today. Few of them includes escalating globalization, tough competition, frequent changes in technology, new organizational alliances, novel organizational structures, demographical shift, change in methods of working etc. With all these changes, there is a huge amount of pressure on today’s organizations and especially HR function has a very critical role to play in order to help and navigate through evolutions. Hence HR needs to increase its apparent as well as real value.

HRM is one of the functions of management that endured tremendous theatrical changes in the new millennium. There is a shift in HRM managers’ responsibility from simply handling personal issues to designing strategic implementation of complicated strategies for the organization. Currently, there are extensive discussions going on regarding the main concerns for Human Resource in future. HR managers are facing a variety of challenges due to increased globalization, latest production techniques, change in customers’ demands and corporate restructuring. HR managers are struggling hard for retaining talent, meeting multicultural workforce demands, and economizing of employees. There is a need to develop a flexible workforce to meet the changing demands of 21st century. The purpose of this research paper is to explore HR issues and challenges and to propose some practical solutions.

Human resource management

Human Resource Management is a multidisciplinary function that depicts assumptions from different fields such as management, psychology, sociology and economics (Senyuce, 2009). An effective HRM attempts to get extraordinary results from ordinary people. Besides hiring the right person for right job at right time, HRM is also responsible for employee motivation, satisfaction, training, long term development & retention (Walker, 1994). This function has to assure through hard and soft approach that everyone is complying with companies’ laws and regulations (Dowling & Welch, 2004). It is vital to remain well versed with not only environmental changes but also technological shifts. One of the biggest challenges
today for HR personnel is to develop employees in accordance to global environmental factors as well as international marketplace (Andersen, Cooper, and Zhu, 2007)

HR now is not only limited to supportive role in the organizational functioning but actually it is taking a lead in developing strategic and competitive edge by being involved in making strategic decisions (Golden and Ramanujam, 1985). (Walker, 1994) elucidates that the integration of HR with businesses require a brand new paradigm for managing people in an organization, it also explains that HR propose solutions for many complicated issues related to organizational success.

21st century approach of HRM is to utilize the knowledge and expertise of people efficiently and effectively to meet organizational targets (Wong & Snell, 2003). Similarly (Tzafrir et al., 2004) shed light on the importance of focus of HR towards employees’ benefits and concerns as employees play a vital role in organizational success.

Organizations today are going through the challenges of dynamic environment which requires them to espouse recent changes and put effort for profit optimization (Robbin, 2005). In today’s era, organizations are coming across various challenges about 21st century human resource; that includes employing new technology, globalization, everyday innovations, political as well as economical instability and ethical & ecological challenges (Theunissen, 2007).

Change management is one of the biggest challenges of today’s era. The pre requisite for growth and survival of any organization is to merge with internal and external changes. Hence, along with other important business units of an organization the HR is also in a need to take the lead in keeping up with the required pace (Ulrich, 1997).

Globalization is a phenomenon the roots of which can be tracked back from early 80’s, but it has gained momentum recently. Globalisation is synonym with a concept that world is one market place where it is important to deal with culturally diverse people in a decent way. Globalisation has welcomed many business firms to expand globally which adds value to national income. It is amalgamating business actions beyond geographical limitations (Morris, 2004). Hence to cater the shifting needs of today’s era in 21st century, HR department will have to budge from traditional to a strategic approach (Johri, 2014).

**Emerging HR challenges in 21st century**

One of the crucial activities for HR managers is the HR planning. Regarding the HR functions of 21st century, the organizations have altered from “behind the scenes” to becoming the critical differentiator in businesses. The HR roles have taken a new dimension in the 21st century especially after globalization. Manpower management is an exasperating job and it requires specialized skills. During the previous few years, many transitions have taken place like due to rise in there were numerous layoffs; many people lost their jobs that put a lot of pressure on organization’s management to reassess its procedures and strategies (Zorlu, 2009). Following is a discussion on some of the challenges being faced by HR which is identified through reviewing literature.

**I. Recruitment & selection**

The foremost function of HR is to locate the people with needed expertise for the progression of a company (Miller & Cardy, 2000). The quality of people hired depends highly on how effective recruitment & selection strategies are. However, this process of recruitment & selection is not always sailing smoothly and is faced with many challenges due to globalization that has allowed firms to invest overseas. Tangible problems faced during the process may include the cost of advertising job openings while intangible obstacles can be communication gaps between recruiters and hiring managers. We know that every person is different from another; even the hiring committee will make decisions on the basis of their own perceptions as they are influenced by their values, beliefs and social views and thus it is difficult to rule out
the possibility of biasness. The HR of multinationals and local firms is passing through a difficult time. Both kinds of firms are struggling hard to find suitable candidates. In order to select the cream of talented people out of the whole pool, it is extremely important for 21st century managers to broaden their view of judging people on the basis of their origin, culture, values, ethnicity and background.

II. Career development & growth

Employee career growth activities refer to initiatives taken by employers and employees to polish their expertise and keep themselves familiar with the recent developments. Globalization has brought many technological changes and developments. The main key to grow and survive in any business is innovation. Providing internal career growth opportunities can help organizations keep top talent from seeking opportunities elsewhere. It is extremely essential to train and develop the employee so that they can cope up with all the changes and innovations coming in their way. Now a days the training should not be only limited to make employees learn any specific skill or knowledge, instead it must focus on overall growth and career development of employees. The training should not be conducted just for the sake of it; one has to be extremely conscious about the content of the training program too.

III. Promoting organization culture & heterogeneous workforce

The organizations today are having heterogeneous workforce; which is of course considered to be a positive thing as diverse minds will guide to new creations & ideas, but managing the culture where people have different mindsets and putting across the cultural values is indeed a challenging task. Culture of any workplace is its root and hence HR managers really have to put a lot of effort for developing a successful organization culture. Due to acquisition and mergers in 21st century, the HR managers have to develop such a culture that supports these changes (Williams, 2003).

IV. Conflict management and resolution

Conflict has two sides’ one positive which is called constructive conflict and another negative that is known to be destructive conflict. Today’s managers have to be well trained to deal with both kinds of conflicts. 21st century has brought with it long working hours, high level of competition, pressure to attain targets etc. which is known to have stress and conflicts among organizational employees. The HR managers need to find methods for coping up with conflict timely. They have to act as a mediator and must quickly respond to the conflict before it results into a drastic damage to an organization. The HR manager has to be a skilled communicator, as clear and transparent communication plays a vital role in conflict resolution. Sometimes HR managers are expected to explain the code of conducts to employee to handle employee complaints and sometimes they act as a liaison between employers and labor unions to resolve the conflict among parties.

V. Business ethics and values

Paying keen attention to business ethics and values is important to any manager’s job. With the recent changes in workplace culture, strategies and organizational structure, it has become more imperative to have values and ethic in place which will decide organizational sustainability in global market for a longer period. The HR department is bound to deal with an array of ethical issues or challenges as this unit directly deals with employees of a company. HR department encounters many ethical hazards that may damage the reputation of a company as well as its financial sustainability in a long run.

VI. Managing Multi-Generational Workforce

Organizations these days have employees belonging to multi generations who fall under various age groups. These generations are classified as Baby Boomers I, Generation Jones or Boomers II, Generation X, and Generation Y. Generation X and Y born people are known to be better aware of
technology and they like to use new techniques of working. They prefer to adopt new philosophies and they are considered to be innovative, while baby boomers & boomers II feel comfortable with their traditional ways and they do not like to come out of their comfort zone. It is important for an organization to retain both sets of people, as both categories are equally essential to organizations success. The task of HR manager is to respond to their needs accordingly.

VII. Strategies for motivation & retention

In the recent scenario, when there is no dearth of opportunities, it has become a great challenge to stop people from looking for new place to work. It has been noticed that the organizations have opened doors to make worldwide hiring; hence it is important for HR managers to design better policies for retention. We understand that all human beings are different from each other and the employers have to have different ways for motivating and keeping the talent. Financial benefits are no longer considered to be a tool for retaining employee. Every organization has to adopt new and latest ways for satisfying its people, this will help to control the rate of turnover (Henson, 2007).

VIII. Flexible work hours

Time has become more flexible as we moved into 21st century, which is a big challenge for HR managers. Due to the advancement of technologies and many other reasons, people now-a-days prefer to work from home. The internet has given birth to virtual world and 24/7 market place. Although flexible work arrangements have tremendous benefits but at the same time it is going to increase the level of stress on management & workforce that has to be dealt well by 21st century managers (Anderson, 2002). With the flexible work arrangements, the HR professionals need to monitor regularly the successes in various projects and challenges faced during the period. This can help to take better measures regarding flexible work arrangements in future.

IX. Striking work life balance

This concept is gaining a lot of attention these days. Due to tough competition in the market place, the workload is increasing day by day and this leads to various problems of health and high stress among workforce. It is a responsibility of the manager to make a segregating line between work and leisure activities. People often quit jobs if they do not find appropriate balance between personal lives and professional obligations. Hence the manager has to work to avoid such scenario and they need to help employees in finding right work life balance (Kossek, 1998).

X. Managing 5 R’s

In latest century with the changing role of HR managers, the 5 R’s are becoming crucial in the success of every organization. Today the managers have to take extra care of all these R’s namely Resourcing, Recruiting the right talent, Retaining the talent, Retraining and Restructuring.

XI. Industrial relations

One of the biggest complex problems of modern industrial society is Industrial relations. The progress of any industry is quite impossible without worker cooperation and harmonious relationships (Argyris, 1977). Therefore, it is in interest of HR managers to develop and maintain healthy relationships between worker/labors (employees) and management (employers).
The role of HR manager as a strategic partner

The HR role and responsibility has been changing for some time. The switching to human resources from personnel was a step to acknowledge the worth of employees as an organizational asset. In addition, this shift was intended to call for HR to show up as a strategic partner to advice on critical matters and to participate in major business decisions (Beatty & Schneier, 1997).

In the light of above discussed challenges, it is proposed that HR managers should keep in mind that they are required to adopt proactive rather than reactive approach. It is the requirement of time that HR managers must be responsive to the flexible environment facing organizations. It is not a good idea to stick to traditional methods to fulfill unique needs instead new processes must be adopted to achieve effective and efficient outcomes.

They need to be fully equipped with specific expertise to support their role as HR manager. In order to respond to 21st century challenges, the HR managers have to become the pioneer of change by showing the attitude of a change agent of the business who counsel employees to enhance their capabilities and reshape their expectations regarding the role of HR and what it delivers for organization. They should be involved in effective talent acquisition by investing in modern ways to attract and retain the best people as this will incur them a competitive edge over others. The HR managers should be able to anticipate that how certain changes are going to influence business.

The HR managers should travel an extra mile to meet the challenges of global environment; they must make a bunch of strategies for both flexibility and creativity that may help to compete well in international market and succeed in new territory, with new employees and clients. It is extremely important for HR function to stay consistent with other organizational functions or units.

In this period of transition, the HR managers need to develop competency framework that defines the skills and expertise required for performing job efficiently. These frameworks will help to revitalize the workforce and lead to excellence.

In today’s competitive world the need is to invest in the right technology and be armed with the right expertise to use that technology. Technology has brought tremendous changes in almost everything; from the techniques of production to the process of recruitment and then training. As the trend has moved from industry based economy to knowledge based economy, thus it is required to diversify HRM strategies to endow with value to both customers and employees.

Work life balance is a recent phenomenon that must be embraced by HR professionals as a positive drift. They must look at ways that can utilize work life balance as a tool to attract and retain qualified employees. The HR manager as a strategic partner needs to understand that work life balance trend is equally good for employee and employers that can lead to enhanced productivity and lower cost.

Recommendation & conclusion

From the viewpoint of 21st century HRM emergence, the globalization has many implications for the firms that may entail the diversity of cultures. The HRM in today’s era has to mount the expertise, mindset and capabilities that are needed to gain competitive edge on global scale. It is recommended that organizations must put efforts to align their HR processes efficiently with organizational goal on broader perspective. Last but not the least, HR must be on a continuous look out for creativity and innovation as it is known to be the key to success.
It depends highly on HR to face the challenges of globalization posed by 21st century which has given an entirely new look to organizations. The organizations have grown savvier in using technology hence it is important to adopt all changes. The role of HR has been shifted towards becoming strategic partners of organization which in turn forces HR to coordinate with all the function and provide support in various activities like attracting and retaining the best talent, developing organizational structure, train and retrain employees.

As companies grow by acquisition and merger, they make multiple HR groups. One approach is that the HR groups in various parts of the organization may develop their competencies in a specific domain and can meet the demands of the larger organization in that domain. HR groups that operate in this manner find each other as helpful resources rather than rivals which will help to gain high level competencies in numerous areas.

In 21st century, the HR has the handle many challenges like; change management, conflict management, managing multi generational workforce, managing 5R’s, workforce diversity, globalization, striking work life balance, succession planning etc. It is the responsibility of HR to increase organizational efficiency and effectiveness by adding value and gaining competitive edge over competitors for a long term survival in complex and highly uncertain market place.

It is clearly the time for a quantum leap in the field of human resource. HR professional can contribute in this transition by taking some serious steps to meet the challenges of organizational change; they can serve to find out ways to measure HR value for the company. Last but not the least; they can conduct significant research related to human resource and their performance in future organizations.

References


A Study of Public Leadership Roles for Its Effect on Employees’ Organizational Commitment in Public Institutions: An Empirical Investigation in Pakistan’s Public Sector Context

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Ramsha Qaiser, Research scholar, IBIT University of the Punjab, Lahore Pakistan

Abstract:

The phenomenon of public leadership is worth studying because public sector organizations face immense challenges in this complex and dynamic world. Current research aimed to highlight the impact of public leadership roles on organizational commitment among the teachers of public sector universities in Lahore, Pakistan. The study design was essentially cross sectional and a quantitative technique of analysis has been employed. The data collection was done through questionnaire survey and disproportionate stratified random sampling was used, based on a sample of 277 teachers, working in different public sector universities of Lahore. A confirmatory factor analysis was performed on public leadership roles instrument in order to validate it for the Pakistan’s context. Findings reveal that Public leadership roles and organizational commitment of public sector employees have a moderate relationship which is significant. Moreover, Public leadership roles were also analyzed with dependent variable to find out their significance individually. These roles were tested with organizational commitment using a no of items. Among them, three roles i.e. accountability leadership, rule following leadership and network governance leadership were proved to be moderately significant for employees’ commitment while political loyalty leadership proved to be insignificant for organizational commitment in Pakistan’s context.

Introduction:

In today’s world, leadership is of primary importance for organizations and society as a whole. It helps in maximizing efficiency and achieving organizational objectives and goals. Many authors have defined leadership in different contexts but almost all the definitions refer to directing a group (team, organization etc.) towards a goal. For instance, According to A Locke (1999), leadership is “the process of inducing others to take an action towards a common goal”. The concept of public leadership is worth studying because in this dynamic environment, public leaders and their organizations have to face immense challenges. Because of these extreme pressures, the researchers of public administration are now agreed upon one point that leadership is very important for accountability, effectiveness and efficiency of public sector organizations and thus requires greater recognition and awareness (Vogel & Masal, 2014).

Now, organizations are in constant struggle to be competitive in this dynamic environment, and it is the responsibility of top management or leaders to motivate their followers to play their part in the organization’s success, and for that, the employees commitment is very crucial because it is a remarkable way to achieve organizational goals, as the committed employees have little or no intention to leave the organization (Javaid & Mirza, 2012). Studying organizational commitment is not just important in terms of management but it is also crucial to studies concerning individual and organizational performance. It has a multi-dimensional structure which includes attitudinal and behavioral components. Marchiori & Henkin (2003) states that “organizational commitment occurs when an employee feels he is a part of an organization”

One of the main topics of interest that is studied with organizational commitment is ‘leadership’. A review of a meta-analysis of ‘leadership and organizational commitment’ showed that there is a positive relationship between these two variables. The results highlighted that leadership is crucial in creating and sustaining organizational commitment (Karadağ, 2015). The role of leadership is also very important in
creating stability and sustainability through their vision, action strategy and organizational group empowerment, during the process of organizational change (Zogjani & Raçi, 2015).

There is an empirical evidence of many research studies, theorists and books on highlighting the effect of leadership styles (Transactional, Transformational, Servant, Autocratic, Democratic, Bureaucratic, and Charismatic leadership) on employees organizational commitment, for instance (Afshari & Stephen Gibson, 2016, J Avolio et al, 2004, S Olesia, Namusonge & E Iravo, 2013), but there is a very little empirical research on examining the relationship between “public leadership roles and organizational commitment” so this study is devoted to a new aspect of employee-leader relationship, which is specifically directed towards public sector universities. The fundamental objective of this study is to comprehend what has been done so far in public administration context and highlighting employee-leader relationship, so that directions for future research can be suggested.

**Literature review:**

The concept of public leadership is emerging as a distinguished and independent domain in public management studies, although this topic is still lagging behind related disciplines such as business management studies and psychology. Leadership expertise genuinely matters in enhancing the performance and productivity of public sector organizations. A study on ‘public leadership’ proposed that public leaders behave differently from those of the business world, and so leadership development programs need to be developed and implemented which should put emphasis on these differences rather than just imitating the programs developed for private sector leaders (Christian Orazi, Turrini & Valotti, 2013).

There are two different views of leadership that are quite contrasting in nature (Howell & Hall-Merenda, 1999). The first view is leader focused which explains that the outcomes are directly linked to the actions taken by leadership. This view is embraced in transformational and transactional leadership theories. For example if we analyze accountability leadership, the leader focused view will attempt to highlight if a leader is accountable or not, for his actions or those taken in the organization. Does he communicate with his stakeholders and keep them informed about the events happening in the organization?

The second one is relationship based which attempts to investigate if the behavior of leaders motivate their employees. The top down traditional approach has been challenged in a recent study which aims to highlight that leadership is a shared venture, being diffused among individual employees and teams (Fernandez et al., 2010). For instance, while analyzing accountability leadership, this view shows whether employees are motivated to explain and rationalize their actions to various stakeholders. Not to forget that this is only possible when such opportunities are provided by their leaders (Tummers & Knies, 2015).

The most recent work on public leadership highlights the importance of good governance, public sector reforms and dynamic trends in global environment. Recent models emphasizes that authority is diffused among various stakeholders. This again leads to the arguments on transformational and transactional leadership context. Public management theory is assigned to the 1980’s debates on public leadership. This theory has a different approach towards public leadership and focuses on the objective that public leaders are qualified to play a larger role, and an otherwise situation would cause a critical vacuum in terms of leadership (Çetin, 2012).

Four main roles of public leaders can be justified below. These roles are considered important in public administration context.

- **Accountability leadership** (“Leaders who stimulate their employees to justify and explain their actions to various stakeholders”)
• **Rule-following leadership** ("Leaders who encourage their employees to act in accordance with governmental rules and regulations")

• **Political loyalty leadership** ("Leaders who stimulate their employees to align their actions with the interest of politicians even if this is costly for them")

• **Network governance leadership** ("Leaders who encourage their employees to actively connect with relevant stakeholders")

As we are doing research on public sector so accountability and rule following leadership are important aspects here, while the first three roles relate to traditional bureaucratic system. The role of network governance leadership is given prominence in public organizations where managing and maintaining networks with other contemporary organizations is considered important (Tummers & Knies, 2015).

**Leader member exchange theory:**

Leader member exchange (LMX) theory is a twofold relationship based theory, which assumes that leaders influence their followers (members) through quality and value of the relationships, they have with them. These relationships are of varying quality which leads to the study of different work groups. Researchers are likely to count on social exchange based reasoning to describe the relationship between LMX quality and its consequences. A good relationship is developed by respect, loyalty, liking and trust and also by the exchange of valued resources. Leaders provide assistance, developmental opportunities and guidance to their employees which results in employee’s motivation and they return the favor in the form of loyalty. Thus it could be suggested that the employees in high quality exchange will distinguish their leaders as more authentic, ethical, transformational and less undermining, rude, offensive and abusive. (Erdogan, Bauer & Prince ololube, 2015).

While the concept of organizational commitment also holds a very strong place in industrial psychology. For increasing organizational commitment, the public leaders should provide their followers with a sense of economic, social and financial security or stability. When employees feel psychological satisfaction at their workplace, their trust and commitment towards the organization increases and hence further motivation becomes easier for the leaders. When the employee’s ideals, interests and beliefs are in compliance with the vision of organization they are working in, then they will adapt that vision, work hard and smart for sharing the common objectives (Sahin & K, 2016). Various researches have been done on the topic of organizational commitment. The major reason for interest in this area is that it is linked with different organizational concepts like job satisfaction (Nath Gangai & Agrawal, 2015), organizational citizenship behavior (Zayas-Ortiz et al, 2015) and organizational trust. (Vijayabanu & Swaminathan, 2016)

Over the years, three approaches have been developed to define and measure organizational commitment; calculative, attitudinal and multidimensional approaches. **Calculative approach** refers to the side bet theory of Howard Becker, who referred this term to the investments made by individuals, which would be lost or worthless if he would leave his organization. The person then becomes committed to his organization if he has the fear of losing the investments he had made and also because of less alternatives available for him. According to **attitudinal approach**, employee’s commitment is based on their identification with that organization’s goals, values and objectives. Commitment under this approach has been labeled as effective and value commitment. According to multidimensional approach, two scholars, Meyer and Allen (1984) proposed two dimensional construct of organizational commitment, termed as effective commitment (which highlights emotional attachment of the employees towards the organization. They start relating themselves to the organization and enjoy being a part of it. In other words it represents the emotional ties with the organization) and continuance commitment (which includes the perceived costs (economic and social) of leaving the organization). Later they added a third dimension normative commitment i.e.; which
explains that the employees feel it’s their responsibility and obligation to remain loyal to their organization (Cohen, 2013).

Continuance and normative commitment has been reviewed as inconsistent with affective commitment. Researchers have argued that the perspective of continuing membership of an organization because of perceived benefits and costs may not necessarily correlate or conform to higher effective commitment. This theory claims that uncommitted employees may stay loyal towards the organization and effectively committed individuals may leave. While effective commitment is strongly connected with some significant organizational outcomes like performance, OCB, turnover and attendance (Chordiya, Sabharwal & Goodman, 2017).

Public leadership roles and organizational commitment:

There’s not much empirical evidence found on the research regarding the impact of public leadership roles on employee’s organizational commitment. The public leadership scales relate to leadership effectiveness and transformational leadership. They also correlate with turnover intention, organizational commitment and work engagement (Tummers & Knies, 2015). Various researchers have studied the topic of organizational commitment with other variables. For instance a study was conducted on finding the relationship between organizational commitment and job satisfaction on coping with the organizational change. The results found out that favorable attitude of an employee towards his organization and job would help him/her in the coping process, which indicates a positive relationship between the variables under study (Vijayabanu & Swaminathan, 2016). Another study highlighted the effect of HR practices on organizational commitment and intentions to stay. The results showed that HR practices positively affect both the variables. Affective and normative commitment were found to be positively associated with employees intention to stay but continuance commitment and employees intention to stay were insignificant and negatively related to each other (Shankar Uraon, 2017).

Formulated Hypotheses:

The hypothesis for this research is divided into two parts. First part states the hypothesis for variables and the second part states the hypothesis for demographics.

**Hypothesis 1:**

**H1:** There is a relationship between public leadership roles and organizational commitment.  
**Ho:** There is no relationship between public leadership roles and organizational commitment.

**Hypothesis 2:**

**H1:** There is a relationship between accountability leadership and organizational commitment.  
**Ho:** There is no relationship between accountability leadership and organizational commitment.

**Hypothesis 3:**

**H1:** There is a relationship between rule following leadership and organizational commitment.  
**Ho:** There is no relationship between rule following leadership and organizational commitment.

**Hypothesis 4:**

**H1:** There is a relationship between political loyalty leadership and organizational commitment.  
**Ho:** There is no relationship between political loyalty leadership and organizational commitment.

**Hypothesis 5:**

**H1:** There is a relationship between network governance leadership and organizational commitment.  
**Ho:** There is no relationship between network governance leadership and organizational commitment.
Conceptual framework:

Figure: 1

This review is based on leader member exchange (LMX) theory and past researches have also provided us with a little evidence on the study of relationship between public leadership roles and organizational commitment. Among these variables, ‘public leadership roles’ is the independent variable, which is further divided into four dimensions named as accountability leadership, rule following leadership, political loyalty leadership and network governance leadership. Out of these four roles, accountability leadership relates to the sense of responsibility – “a willingness to act in a transparent, fair and equitable way” (Lewis jr, 2017). The most important aspect in public sector organizations is accountability, which is basically a personal commitment of the employees with their organization to deliver effectively on their goals and required tasks and objectives (Karsten, 2015). Then comes the rule following leadership which shows that in public sector organizations, governmental rules and regulations are strictly implied as those are owned and operated by the government so following those rules, is of primary importance and here the role of leader is to get those rules followed and policies implemented (Tummers & Knies, 2015). Third role is political loyalty leadership which shows that political loyalty is a prominent factor because the politicians need to ensure that government agencies are loyal to them (Wagner, 2011: 145).

Here ‘Organizational Commitment’ is the dependent variable. One of its three dimensions is affective commitment which shows the emotional attachment and involvement of employees towards the organization. Then comes the continuance commitment, which includes the perceived costs i-e economic and social costs of leaving the organization (Cohen, 2013). The third dimension of normative commitment is further divided into two categories by Stehen jaros (2007). First category is indebted obligation dimension and the second one is moral imperative dimension. Meyer and Parfyonova (2010) also argued that normative commitment is of dual nature and obligations when combined with strong affective commitment,
are experienced as moral imperative which reflects that employees strive to meet valued outcomes. When obligations are combined with weak AC and strong CC, it creates a sense of indebted obligation which reflects that employees feel it’s a need to meet other’s expectations (Jaros, 2007).

Data Analysis and Findings:

Table 1: Correlation analysis of public leadership roles and organizational commitment

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<td></td>
</tr>
<tr>
<td>N</td>
<td>277</td>
<td>277</td>
</tr>
</tbody>
</table>

Table 1 shows that the value of Pearson correlation is 0.483 and the level of significance is 0.000 (less than 0.01), which indicates that correlation is significant at 0.01 level and a significant positive relationship exists between the dependent and independent variable. Moreover the relationship is moderate because its value lies in between 0.3 to 0.7. H1 is accepted and H0 is rejected which highlights a significantly positive relationship between public leadership roles and organizational commitment.

Table 2: Correlation analysis of accountability leadership and organizational commitment

<table>
<thead>
<tr>
<th>Correlations</th>
<th>org_commitment</th>
<th>accountability_l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.408**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>277</td>
<td>277</td>
</tr>
</tbody>
</table>

Table 2 shows that the value of Pearson correlation is 0.408 and the level of significance is 0.000 (less than 0.01), which indicates that correlation is significant at 0.01 level and a significant positive relationship exists between the dependent and independent variable. Moreover the relationship is moderate because its value lies in between 0.3 to 0.7. H1 is accepted and H0 is rejected which highlights a significantly positive relationship between accountability leadership and organizational commitment.
Table 3: Correlation analysis of rule following leadership and organizational commitment

<table>
<thead>
<tr>
<th>Correlations</th>
<th>org_commitment</th>
<th>RuleFollowing_leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Org_commitment</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>277</td>
</tr>
<tr>
<td>Rule-Following_leadership</td>
<td>Pearson Correlation</td>
<td>.446**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>277</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows that the value of Pearson correlation is 0.446 and the level of significance is 0.000 (less than 0.01), which indicates that correlation is significant at 0.01 level and a significant positive relationship exists between the dependent and independent variable. Moreover the relationship is moderate because its value lies in between 0.3 to 0.7. H1 is accepted and Ho is rejected which highlights a significantly positive relationship between rule following leadership and organizational commitment.

Table 4: Correlation analysis of political loyalty leadership and organizational commitment

<table>
<thead>
<tr>
<th>Correlations</th>
<th>org_commitment</th>
<th>PoliticalLoyalty_leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Org_commitment</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>277</td>
</tr>
<tr>
<td>PoliticalLoyalty_leadership</td>
<td>Pearson Correlation</td>
<td>.114</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.058</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>277</td>
</tr>
</tbody>
</table>

Table 4 shows that the value of Pearson correlation is 0.114 and the level of significance is 0.058 (greater than 0.01), which indicates that correlation is insignificant at 0.01 level and an insignificant positive relationship exists between the dependent and independent variable. Ho is accepted and H1 is rejected which highlights an insignificantly relationship between political loyalty leadership and organizational commitment.
Table 5: Correlation analysis of network governance leadership and organizational commitment

<table>
<thead>
<tr>
<th>Correlations</th>
<th>org_commitment</th>
<th>NetworkGovernance_leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>1</td>
<td>.418**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>277</td>
<td>277</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5 shows that the value of Pearson correlation is 0.418 and the level of significance is 0.000 (less than 0.01), which indicates that correlation is significant at 0.01 level and a significant positive relationship exists between the dependent and independent variable. Moreover the relationship is moderate because its value lies in between 0.3 to 0.7. H1 is accepted and Ho is rejected which highlights a significantly positive relationship between network governance leadership and organizational commitment.

Regression analysis:

Table 6: Public leadership roles and organizational commitment

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Change Statistics</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>.483a</td>
<td>1</td>
</tr>
<tr>
<td>F Square</td>
<td>.2</td>
<td></td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>Std. Error of the Estimate</td>
<td>43221</td>
<td></td>
</tr>
<tr>
<td>Change Square Change</td>
<td>233</td>
<td>1</td>
</tr>
<tr>
<td>Change</td>
<td>8</td>
<td>75</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), public_leadership
b. Dependent Variable: org_commitment

table 6 gives the model summary in which value of R is 0.483, representing a moderate level of association between the two variables. The value of R square is 0.233 which shows 23.3% change in dependent variable which is ‘organizational commitment’ is caused by independent variable which is ‘public leadership roles’ and the remaining is caused by other factors which are not included in the model.
Table 7: ANOVA Table

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>d</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>15.637</td>
<td>1</td>
<td>15.63</td>
<td>8</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>51.372</td>
<td>2</td>
<td>75</td>
<td>.187</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>67.010</td>
<td>2</td>
<td>76</td>
<td>3.707</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: org_commitment
b. Predictors: (Constant), public_leadership

Table 7 shows that value of F is 83.707 and level of significance is .000 which is less than 0.05. This means that public leadership roles are a significant predictor of organizational commitment. H1 is accepted and Ho is rejected which implies the relationship between these two variables.

Table 8: coefficient table

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>95.0% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.012</td>
<td>.174</td>
<td></td>
<td>.000</td>
<td>1.669</td>
</tr>
<tr>
<td>public_leadership</td>
<td>.453</td>
<td>.049</td>
<td>.483</td>
<td>.000</td>
<td>.355</td>
</tr>
</tbody>
</table>

a. Dependent Variable: org_commitment

This table shows that the value of unstandardized coefficient B is 0.453 and level of significance is 0.000 which is less than 0.05. This means that 1 unit increase in public leadership roles will increase 0.453 units of organizational commitment, indicating a positive relationship between these two variables.

Conclusion:

The results of this study reveal that public leadership roles have a positive and significant impact on employee’s organizational commitment. Furthermore it is also concluded that this impact is of moderate level in the public sector universities. The reason could be the lack of leadership qualities in public sector managers, so it induces the need for new leadership methods in public sector universities so that further studies can prove strong positive impacts. Employees desire to be heard in important decisions regarding organization’s management, so their values and suggestions should be considered important if their prolonged stay in the same organization is expected. As this study focuses on public sector universities, so it is the responsibility of head of the departments to create a balance between their roles and duties and the departmental benefits. A healthy working environment should be formed where teachers are given required authorities and are paid better for their job. When they get satisfied with their job then switching becomes a secondary option.
Research Limitations and Future Implications:

For future research larger number of respondents can be taken to represent true population size. Geographical limitation can be removed and data can be gathered from different cities of Pakistan. From the statistical analysis and different tests that were applied, political loyalty leadership has shown an insignificant relationship with organizational commitment. Future research can investigate the political loyalty dimension through qualitative study to find out the underlying reasons of no relationship.

Moreover, future research can be done in different sectors including civil servants, hospitals, wapda and law enforcing agencies. In future a mixed method of studying can also be utilized the underlying phenomenon.

References:

Track 8: Sustainable Development
Introduction

Habituating a positive behavior is a main goal of learning and education (Covey, 1989; Merriam, Caffarella, & Baumgartner, 2007). Business students’ using the legal software during college years is important because it helps future business professionals exercise compliances in the respective business disciplines. In addition, using legal software in classes increases learning effectiveness while marginalizing the risks of malware attacks and personal information leaks (BSA, 2016). Studies have shown that using piracy software in the workplace or on a college campus is a central problem in business and education (Peace, Galletta, & Thong, 2003; Publishers’ Association, 1998). For instance, the use of piracy software results in higher prices to those who purchase legal software through authorized sales channels, which also deters the continual innovation of software producers (Chiang & Assane, 2002). On the other hand, the malware attacks have dramatically increased (around 36% every year) and more than half a billion personal information records have been stolen or lost through data breaches in recent years (BSA, 2016).

While a range of user behaviors have been studied and related to national, cultural, and economic perspectives (Leidner & Kayworth, 2006; Moores, 2005; F. Wang, Zhang, Zang, & Ouyang, 2005), there have been few, if any, studies, focusing on long term user behavior changes regarding legal software acceptance within a global organization. Particularly the technology acceptance by gender have been rarely studies in the Asian context (Venkatesh, Morris, Davis, & Davis, 2003; Venkatesh, Thong, & Xu, 2016; Y. Wang, Wu, & Wang, 2009). If any, the gender difference in technology acceptance was not universal (Khechine, Lakhal, Pascot, & Bytha, 2014; Williams, Rana, & Dwivedi, 2015).

For example, two Asian technology acceptance studies presented mixed results of gender and age effect (Chan et al., 2010; Y. Wang et al., 2009). Specifically, the gender effect of effort expectancy (EE) and facilitating condition (FC) were not found in a study (Chan et al., 2010) while the gender effect of social influence (SI) was observed in another study (Y. Wang et al., 2009). Performance expectancy effect is universal regardless of gender difference in both studies though. Thus, gender effects are necessary to be empirically tested in relation to legal software use in the Asia context. The purpose of this study is to address the question of “Does the gender matter in legal software use behavior in China?” To achieve the purpose, we tested a hypothesis of “Relationships among UTAUT constructs are different by gender” by using a quantitative survey study.

Method

Synthesizing the Unified Theory of Acceptance and Use of Technology (UTAUT) model (Venkatesh et al., 2003) and the Diffusion of Innovation Theory (Rogers, 2010), the authors formulated a survey and administered it to the target population of business students at an American business school in mainland China ((N ≈ 800).
265 completed surveys were returned, and forty-seven non-business students’ data and three poor data surveys were purposefully screened out. Consequently, 215 sample data (26.7%) were used for further analyses. 94 male business students (43.7%) and 121 female business students (56.3%) participated in the survey. 21 seniors (9.8%), 92 juniors (42.8%), 85 sophomores (39.5%), and 17 (7.9%) freshmen/fresh women business students completed and returned surveys. It is noteworthy that all participants are traditional students with almost same age and school experiences because of the nature of the global campus and the Chinese higher education system (Kan & Morgan, 2017).

We tested the reliability of these proposed key measures by using Cronbach’s coefficient \( \alpha \) estimates of internal consistency that is the most common scale reliability indicators in social science studies (Cronbach, 1951) by using the gathered 215 sample data. Results indicate that the measurement reliabilities are in satisfactory range of internal consistency, 0.79 ~ 0.84. We use the confirmatory factor analysis (CFA) method to test the validity of the measurement model (Schreiber, Nora, Stage, Barlow, & King, 2006). Drawn from the initial CFA, the measurement instrument of this study has sufficient measurement validity (factor loading is higher than .60) (Cabrera-Nguyen, 2010).

We used the partial-least square structural equation modeling (PLS-SEM) method to test the proposed hypothesis because the newly emerging statistical technique gives us a more robust structural equation model convergence over covariance-based SEM technique in many situations, especially when a research model has many indicators, paths, and relationships among key variables and constructs (Chin, 2010; Hair & Hult, 2016; Henseler et al., 2014).

Result

We could support the proposed hypothesis of there are significant gender differences in technology acceptance by using an empirical survey data from a Chinese business student at a global campus. For instance, the social influence (SI) and effort expectancy (EE) have significant influences on use behavior intention (BI) for females while these factors did not have significant influences on males.

In addition, we confirmed that the influence of facilitation condition (FC) on user behavior (UB) had a significant gender difference – males were more sensitive to the formal authority than females – when we conducted the PLS multi-group analysis (PLS-MGA) as shown in the Table, \( \Delta \) Path Coefficient = \( \beta_{\text{Male}} - \beta_{\text{Female}} = .357; p = .056. \)

Discussion

This study support the mainstream research findings about gender effect on technology acceptance, that is females are more socially motivated users while males more pragmatic in accepting a new technology (Haferkamp, Eimler, Papadakis, & Kruck, 2012; Koivisto & Hamari, 2014; Muscanell & Guadagno, 2012).

Underpinning the universal empirical evidences, we suggest that an organization may need to differentiate new technology acceptance strategies by gender. For instance, the organization uses more direct and indirect social network to encourage females accepting the new technology. On the other hand, the organization may deliver instructional messages for male users through formal interventions or regular notices from the authority such as an IT department. With marginalized limitations, this study can be a strong stepping-stone for future studies that can help business educators and administrators change and develop future business leaders, who follow strict ethical and social regulations by habituating legal software use in the global context.

Key Words: gender difference, legal software, technology acceptance, china, global campus, business ethics education, PLS-SEM
Figure. Partial least square structural equation modeling (PLS-SEM) testing results of UTAUT model by gender

Table

<table>
<thead>
<tr>
<th>Comparison (PLS-Multi Group Analysis)</th>
<th>Δ Path Coefficient</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Expectancy → Behavioral Intention</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Effort Expectancy → Behavioral Intention [1st – 3rd]</td>
<td>0.783</td>
<td>0.040</td>
</tr>
<tr>
<td>Effort Expectancy → Behavioral Intention [3rd – 4th]</td>
<td>0.374</td>
<td>0.978</td>
</tr>
<tr>
<td>Social Influence → Behavioral Intention</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Facilitating Condition → Use Behavior</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Behavioral Intention → Use Behavior</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: PLS-MGA (Henseler’s MGA) with 5% of significance level. p-value < .05 or > .95

References


University-Industry Partnerships in Making Cities Resilient

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Abstract

Making cities resilient is a campaign started in 2010 by the United Nations International Strategy for Disaster Reduction. The campaign provides a list of ten essentials for cities to implement their resiliency. The campaign also encourages cities to exchange their experiences with each other to help enhance their resiliency. One example is the New Orleans / Gothenburg Exchange in 2015 during the ten-year anniversary of the devastating Hurricane Katrina in Louisiana and five years after the disastrous oil spill in 2010. This exchange produced a report of 323 pages documenting how the two cities learning from each other to make their cities more resilient to disasters. According to Louisiana Economic Development, Louisiana has attracted, since 2008, more than $60 billion in Foreign Direct Investment (FDI) which enables the state to be number one in the U.S. for per capita FDI attraction. Chinese investment in Louisiana is significant in driving this high FDI record. Here are two examples: Shandong Yuhuang Chemical invested $1.85billion to build a methanol plant in 2014 and Wanhua Chemical announced to build a $.12 billion plant in 2017. The recent New York Times three-part special report, entitled "The Drowning Coast," indicates a long way to go to make Louisiana coastal cities resilient. The question for Chinese multinationals then is: As a part of corporate social responsibility, how can the companies can partner with universities to participate in making cities resilient while investing in Louisiana?

As reported in the New Orleans / Gothenburg Exchange, one of the effective developments of making coastal cities resilient is conducting extensive wetland growth and regrowth to maintain healthy ecology and protect land losses. Louisiana people and industries, working with universities, have risen up to develop wetland entrepreneurship businesses to provide solutions to help address the issues of wetland losses and maintain healthy wetland ecosystems. For example, Louisiana coastal wetlands have been significantly damaged by nutria. Marsh Dog turns nutria meat into dog treats and Righteous Fur designs clothing for the contemporary fashion market using nutria fur. Both businesses help save the wetlands. Oyster Bed uses oyster shells to build reefs to farm more oysters and prevent land losses. SHORE/LINKS addresses coastal land losses by creating effective erosion control products such as mats and logs. Martin Ecosystems is another Louisiana startup that developed floating islands to clean polluted lakes, support a wildlife habitat, protect wetland erosion, and facilitate wetland restoration. Multinationals are also investing in making Louisiana cities more resilient. For example, energy companies such as Conoco Phillips and Entergy supported Tierra Resources to plant mangroves using crop duster planes to spread the seed through the air. This enables Louisiana people to effectively develop new wetlands with much less costs. Similarly, through the support of Shell and Entergy, Martin Ecosystems work with Coastal Conservation Association’s Building Conservation Trust and 100 Lafourche Parish school students to help build the Floating Islands Restoration Project in Grand Isle, a frontier city in Louisiana fighting the eroding wetlands. On the other hand, Dow helped students along the shores of Louisiana’s Lake Pontchartrain explore wetland conservation and encouraged students in the Netherlands to build their own wetland chain reactions.

In this paper, we show how the Chinese multinationals can learn from the university-industry partnerships in making cities resilient while they invest abroad. We draw upon the theory of "Sciences of
the Artificial” by Herbert Simon (1996) to design an evolving artifact of Making Cities Resilient (MCR) depicted in the figure below. The MCR artifact is an interface between the outer and inner environments (Sarasvathy, 2003) with four basic requirements. First, the artifact needs to attain the goals of the outer environment. Second, the goals are attained through the available means in the inner environment. Third, the inner environment shall adapt to the evolution of the outer environment. Fourth, the interface design shall be grounded in theoretical models. The artifact receives inputs from both outer and inner environments and produces outputs to them. The inputs to the artifact from the outer environment are the needs in the Louisiana context. The outputs from the artifact to the outer environment are the activities of economic development addressing the needs grounded in Customer Service Life Cycle (Ives & Learmonth, 1984; Ives & Mason, 1990). The inputs to the artifact from the inner environment are resource allocation, grounded in the Input-Process-Output Model of Strategic Entrepreneurship (Barney, 1991; Hitt et al., 2011; Sirmon et al., 2011), and Coordination and Identification, grounded in distributed cognition based on the theory of docility (Secchi, 2010).

Keywords: Making Cities Resilient, University-Industry Partnerships, Social Entrepreneurship

References


Emerging determinants for SME growth in Benin

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Keywords: SMEs in Benin, growth, emerging determinants.

Research objectives and theoretical framework

This research aims to give an update on the issues and challenges of African SMEs' growth, with a focus on some emerging factors which discriminate these SMEs. We have adopted the following criteria to identify these factors: 1) the recurrence of these factors in articles on African SMEs' growth; 2) the factors’ relevance to current issues in the African business environment; 3) accessibility of the information needed to measure the factors; 4) citations of the factors in the performance, implementation, end-of-program and international studies reports on Africa; (5) recurrence of the factors in reports of economic fora on African SMEs' growth and in national business surveys; 6) opinion of resource persons contacted during the study's pre-data collection stage in May 2015. The following 5 emerging determinants have been identified in this study:

1. Firm’s investment (FI)

A firm’s investment is a commitment by the company and/or its shareholders. It can be a purchase of more efficient production equipment, construction of new annexes or new branches to sell the company's products, etc (Pezet 2009). The decision to invest is often tied to the notion of risk. Given the importance of risk taking; traditional investment econometric models take into account the constraints perceived or anticipated by companies in the markets where they decide to invest. In Africa, more and more investments are being made by international companies (Adams et al. 2015, Schoneveld et al. 2015) but, the links between the companies' investments and the companies' growth remain unclear. According to the McKinsey Global Institute (2010), African SMEs are increasing their investment in research and development to improve their technological level and make better use of globalization. According to this same source, the critical sectors in Africa, listed in their order of priority are: goods and services, natural resources, agriculture, infrastructure and education.

2. Corporate Social Responsibility (CSR)

Corporate social responsibility which includes sponsorships, relation with the community, professional relationships within the firm, etc. must be distinguished from the firm’s societal responsibility which emphasizes on the responsibility of the firm itself (Hannah Arendt, 2005) in that each firm is responsible for its actions and the consequences that may arise from them. Corporate social responsibility (Attarça et al. 2005) is important to business owners as it reflects their desire to better control societal constraints in order to foster business development and sustainable economic growth. Corporate social responsibility is "the voluntary integration of social and environmental concerns into business activities and relationships with stakeholders" (European Commission 2001; Attarça et al. 2005). In this study, we are interested in whether donations and sponsorships (Bulu 2005, Péklé 2006) used by SMEs in the sub-Saharan context can serve as discriminating factors.
3. Use of external expertise (UEE)

Firms’ access to external expertise is defined as access to knowledge or skill that is relatively rare within the firm (Viljamaa 2011). Most studies recognize the crucial role of external skills to companies (Ifinedo, 2008, Ifino, 2011, Viljamaa, 2011, Fischer et al. 2012). However, these studies do not often take into account the different cultural perceptions within the company. For example, Robson et al. (2000) analyzed the relationship between the SMEs' growth and acquisition of external advice, while controlling the influence of SME characteristics on age, manufacturing / services, high technology, etc. They found that the relationship between external skills and SME's performance is statistically significant for a small number of sources and domains. Thus, it is relevant to study the use of external skills especially in Africa where languages and morals differ between countries.

4. Access to Energy (AE)

The issue of African companies’ access to energy can be appreciated from the point of view of volatility and the variability of product prices (UPDEA, 2009). According to this study, which takes into account most African countries, there is a great disparity in definitions of content and tariff structures. In each country, production or distribution companies have their own categorization, even those operating in similar socio-economic and political environments. Some companies use a single price for all customers while others use flat-rate billing for certain types of customers. Other studies provide information on the critical problem of energy dependence in Africa (Magrin 2007, Sow 2010, Adjamagbo et al. 2011, Dangbedji et al, 2011). These situations currently drive some African countries to undertake reforms in this sector. For example since 2010, Nigeria has initiated the reform called, an «Electric Power Sector Reform - EPSR – Act» supported by the World Bank. This reform led, to the dismantling of the country’s historic operator and the signature of electricity purchase contracts with new independent power producers (IPPs).

5. Duties and taxes (DT)

In Africa, as elsewhere there are direct and indirect taxes (Cagnat, 1982, Degos et al. 2017, Saiche et al. 2017). However, in Africa direct taxes contribute heavily to tax revenues in many countries (Chambas 2005). In these countries, because of the existence of informal SMEs that are not controlled by the states, tax incomes weigh heavily on formal SMEs, and are often concentrated on a small number of them (Tanzi et al. 2000). For Chambas et al. (2005), these SMEs inject a large number of taxes (value-added taxes, taxes on employees' incomes, excise duties, etc.) in the state coffers. On the other hand, when analyzing companies’ taxation in the sense of reducing what they receive from the State, opinions are mixed (Chirinko et al. 1999; Bloom et al. 2002; Parisi et al 2003; Mairesse et al. 2004; Czarnitzki et al. 2011). Perception of companies’ tax rates and their effect on companies’ growth differ between authors. For some, it's interesting as we noted above. For others, it raises the issue of firms competitiveness (Ngok, 2015) as they are overtaxed by the state.

Research methodology

Our data was collected from the financial statements produced by Beninese SMEs from 2008 to 2013. Data collection was limited to six years because of study budget constraints. Initially there were 12 variables in the database, but due to the unavailability of data on "other investments" (advertising and publications costs as well as those of receptions and missions) and "other energies" (solar and biomass) there were finally 10 variables evaluated: business growth (BG), use of external expertise (UEE), investments in consumer goods and services (ICGS), investments in infrastructure (II), investment in research and development (IRD), corporate donations (CD), corporate sponsorship (CS), direct taxes and duties (DTD), indirect taxes and duties (ITD) and access to energy (AE).

As a result of missing data, the database was audited using SPSS software. In the process, the following operations were carried out: 1) We calculated the after-tax growth rate per year; 2) 731
companies whose growth rate result was not available for at least four years over the study period were subsequently deleted from the database; 3) the selected companies are those that provided results for at least three fiscal years. Of these, (13) had data covering 03 years, (26) had data covering 04 years and (14), had data covering 05 years. The missing data of these firms (1.7%) were estimated as the average value of the available data. Overall, 1,007 firms were analyzed, yielding a total of 6,042 observations (1,007 x 6). The first step was to present the evolution of the average annual growth rates of the internal (UEE, ICGS, II, IRD, CD, CS) and external (DTD, ITD, AE) factors. For a factor X, the annual growth rate over n period, marked as $T^{(n)}_X$ is calculated as follows:

$$T^{(n)}_X = \frac{X_n - X_{n-1}}{X_{n-1}} \times 100$$

where $X_n$ is the value of variable X over n period. The period covered by the study being 2008 to 2013. As a result, the average annual growth rate of factor X, ($AAR_X$) is:

$$AAR_X = \frac{1}{5} \sum_{k=1}^{5} T^{(k)}_X$$

We first tested the fit between our data and the factor model using the Kaiser-Mayer-Olkin (KMO) and Bartlett (Greene, 2005) tests. The KMO coefficient, evaluates the fit of the factorial solution: when it is high, it suggests a statistically acceptable factorial solution and reflects the relationships between the variables. The KMO test is very good, good, average and poor / unacceptable if the coefficient is respectively greater than 0.8, between 0.6 and 0.8, between 0.5 and 0.6 and lower than 0.5 (Greene, 2005). The Bartlett test measures the sphericity which is the fit between the data and the factor model. In order to continue the factor analysis, this test must be significant.

You have to join the variables in order to achieve homogeneity and establish a hierarchy between the factors. First, we will estimate the KMO coefficient to test the fit of the factor solution. Then, we will check the robustness of the linear association between the variables through the communality, an indicator that measures the proportion of common variance between a variable and the other variables of the model (Field 2009: 661). To identify the factors that best describe the behavior and characteristics of companies, the Cattel test was conducted given that our study included only four factors. Finally, we interpreted the selected variables by giving them a name. The remainder of this study was used to identify among the selected variables those that significantly explained companies’ growth (i.e. helping to understand their different behaviors in terms of their size and sector). This was performed with a discriminant analysis (DA) used to detect discriminatory variables, test homogeneity of covariance matrices, calculate discriminant coefficients and structure coefficients, and classify companies into different groups using SPSS software. Discriminant (or independent) variables are: II, CD, CS, ITD, AE, and UEE.

### Results and discussions

#### Correlation matrix

<table>
<thead>
<tr>
<th></th>
<th>DTD</th>
<th>AE</th>
<th>IRD</th>
<th>CS</th>
<th>CD</th>
<th>CSR</th>
<th>II</th>
<th>ICGS</th>
<th>ITD</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTD</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AE</td>
<td>0,034</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRD</td>
<td>-0,024</td>
<td>-0,104</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>0,2</td>
<td>0,043</td>
<td>-0,011</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CD</td>
<td>0,096</td>
<td>0,042</td>
<td>0,00</td>
<td>0,804</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSR</td>
<td>-0,042</td>
<td>-0,132</td>
<td>0,862</td>
<td>-0,03</td>
<td>-0,003</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>0,027</td>
<td>0,633</td>
<td>-0,154</td>
<td>0,064</td>
<td>0,052</td>
<td>-0,226</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

314
The correlation matrix reveals a high correlation (> 0.5) between AE and II, AE and ICGS, IRD and UEE, CS and CD; II and ICGS. It is therefore possible to factorize certain factors to facilitate the discriminant analysis. As shown in the table 4 below, KMO and Bartlett tests confirm this approach (5% significant threshold).

**Kaiser-Meyer-Olkin (KMO) and Bartlett tests**

<table>
<thead>
<tr>
<th>KMO and Bartlett tests</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement of the sampling precision with KMO</td>
<td>0.572</td>
</tr>
<tr>
<td>Bartlett sphericity test and Khi-square approximé</td>
<td>31979.119</td>
</tr>
<tr>
<td>Degree of freedom</td>
<td>36</td>
</tr>
<tr>
<td>Significance of the Bartlett test (P-value)</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

As the conditions (Correlation, KMO, and Bartlett) are met, we can try to identify the different clustering dimensions of these factors. In the literature, three equivalent rules can be used: i) the Kaiser rule based on eigen values > 1, ii) the choice of the number of axes according to the minimal level of information desired (rule of explained variance) and iii) the scree-test (Torrens-Ibern 1972). In this study, we chose the rule of explained variance which identified four grouping actors (components). Factor 1 called *recurrent expenses for the financial year* includes: ICGS, II and AE, factor 2 (*corporate social responsibility*) includes: CD and CS, factor 3 (*research and external expertise*) includes: IRD and UEE and factor 4 (*taxes*) includes: DTD and ITD. Factor 1, 2, 3 and 4 respectively account for 30.808%, 21.5%, 18.557% and 12.608% of the total variability.
### Explanation of total variance

<table>
<thead>
<tr>
<th>Component (factor)</th>
<th>Factor’s name</th>
<th>Initial values</th>
<th>Sum of the squares of the factors selected</th>
<th>Sum of the squares of the factors selected for rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>% of variance</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>1</td>
<td>Recurrent expenses for the fiscal year</td>
<td>2.773</td>
<td>30.808</td>
<td>30.808</td>
</tr>
<tr>
<td>2</td>
<td>Corporate social responsibility</td>
<td>1.935</td>
<td>21.5</td>
<td>52.307</td>
</tr>
<tr>
<td>3</td>
<td>Research and external expertise</td>
<td>1.67</td>
<td>18.557</td>
<td>70.864</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>0.724</td>
<td>8.04</td>
<td>91.512</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>0.369</td>
<td>4.095</td>
<td>95.608</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>0.175</td>
<td>1.943</td>
<td>97.551</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>0.134</td>
<td>1.487</td>
<td>99.038</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>0.087</td>
<td>0.962</td>
<td>100</td>
</tr>
</tbody>
</table>

**Factor 1**: Investment in Consumer Goods and Services (ICGS), Investment in Infrastructure (II), Access to Energy (AE)

**Factor 2**: Corporate donations (CD) and corporate sponsorship (CS)

**Factor 3**: Investment in Research and Development (IRD), Use of External Expertise (UEE)

**Factor 4**: Direct and indirect taxes and duties (DTD and ITD)

### Dimensions components

#### Components’ matrix

<table>
<thead>
<tr>
<th></th>
<th>1. Recurrent expenses for the fiscal year</th>
<th>2. Corporate social responsibility</th>
<th>3. Research and external expertise</th>
<th>4. Duties and taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICGS</td>
<td>0.906</td>
<td>-0.112</td>
<td>0.329</td>
<td>-0.008</td>
</tr>
<tr>
<td>II</td>
<td>0.83</td>
<td>-0.097</td>
<td>0.274</td>
<td>-0.025</td>
</tr>
<tr>
<td>AE</td>
<td>0.82</td>
<td>-0.104</td>
<td>0.382</td>
<td>-0.018</td>
</tr>
<tr>
<td>CS</td>
<td>0.211</td>
<td>0.896</td>
<td>-0.106</td>
<td>-0.225</td>
</tr>
<tr>
<td>CD</td>
<td>0.179</td>
<td>0.835</td>
<td>-0.081</td>
<td>-0.425</td>
</tr>
<tr>
<td>IRD</td>
<td>-0.457</td>
<td>0.198</td>
<td>0.826</td>
<td>0.031</td>
</tr>
<tr>
<td>CSR</td>
<td>-0.513</td>
<td>0.19</td>
<td>0.795</td>
<td>0.02</td>
</tr>
<tr>
<td>DTD</td>
<td>0.131</td>
<td>0.379</td>
<td>-0.084</td>
<td>0.688</td>
</tr>
<tr>
<td>ITD</td>
<td>0.154</td>
<td>0.428</td>
<td>-0.039</td>
<td>0.655</td>
</tr>
</tbody>
</table>
## Grouping variables’ coding

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>Business lines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>1</td>
<td>Very small entreprise</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Small entreprise</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Medium-size entreprise</td>
</tr>
<tr>
<td><strong>Sector</strong></td>
<td>1</td>
<td>Primary</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Secondary</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Tertiary</td>
</tr>
</tbody>
</table>

1. **Size**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Business lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(3) Mining; (4) Agriculture, livestock and fisheries</td>
</tr>
<tr>
<td>2</td>
<td>(6) Construction and agro-food</td>
</tr>
<tr>
<td>3</td>
<td>(1) Accommodation and catering; (2) Health and social action; collective or personal activities; (5) Trade; (7) Education and other business services activities; (8) Transport, Telecommunications and Financial Activities.</td>
</tr>
</tbody>
</table>

### Conclusion and contributions

This study aimed to identify the variables discriminating companies’ sizes, sectors and business lines. At the end of the analysis, the 10 variables analyzed were grouped in four discriminating dimensions/factors:

1. **Factor 1** recurrent expenses for the financial year which includes: investments in consumer goods and services (ICGS), infrastructure investments (II), and access to energy (AE).
2. **Factor 2** corporate social responsibility (CSR) which includes corporate donations (CD) and corporate sponsorship (CS).
3. **Factor 3** research and external expertise which includes investments in research and development (IRD) and use of external expertise (UEE).
4. **Factor 4** Duties and taxes which include direct and indirect duties and taxes (DTD and ITD).

All (100%) the variations in companies’ sizes are explained by the factor 2. For the business lines, 99.3% of the total variation is explained by factor 2 and 0.7% by factors 4 and 1. Regarding the business sector, 90.4%, 8.2% and 1.4 % of the total variation are explained by factors 2, 4 and 1 respectively. At a 10% significance threshold, factor 3 was not discriminant and was therefore not taken into account during analysis.
Impacts of Economic Openness on Environment Sustainability in SAARC Countries

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Abstract

This study aims to investigate the possible environmental impacts of economic openness including trade liberalization, foreign direct investment (FDI) inflows, and economic growth in SAARC (South Asian Association for Regional Cooperation) countries. We employed the panel autoregression model (PVAR) in conjunction with Toda and Yamamoto’s test to evaluate the environmental effects of trade openness; the Granger Causality test was also conducted to confirm causality between the variables under discussion. The results show that trade has a positive correlation with environmental degradation in SAARC countries. We thus conclude that, while trade liberalization and FDI increase economic growth by creating new job opportunities, trade liberalization is harmful to the environment.

Keywords: Economic Openness; Trade liberalization; Foreign Direct Investment; Economic Growth; Environmental Quality

Introduction

In recent years, policy makers and scholars have paid close attention to the environmental impacts of trade liberalization, foreign direct investment (FDI) inflows, and economic growth. Previous studies have shown that FDI inflow and trade openness have the capacity to expand international manufacturing and energy use, and thus drastically degrade the environment. Developing countries are especially sensitive to this result due to their already weakened ecosystems.

Environmental sustainability is also decreasing as countries take steps to quicken their economic growth by increasing FDI inflows and trade openness. However, we can also say that without being open to the kind of trade and developmental activities which attract FDI inflows, countries can neither improve their quality of life nor achieve economic growth.

To reduce poverty levels and improve such quality of life for their populations, select countries – e.g. India, Vietnam, and Uganda – have been opening their borders to international markets and FDI. It is clear from previous studies those countries which do not open their borders for international trade and FDI do not grow as quickly as those who choose to do so.

There are a number of studies that have analyzed the relationships between FDI inflows, trade liberalization, economic growth and environmental sustainability. Some have found that, while increases in trade and FDI correspond to increases in economic growth, such growth comes at the expense of environmental sustainability; others have shown that trade and FDI activity improves the allocation of resources domestically and enables technological progress, both of which have been shown to reduce environmental degradation. In light of these findings, we conclude that increases in trade and FDI have both positive and negative effects in terms of environmental sustainability.

Research has also been conducted concerning the ways in which FDI, trade, and economic growth impact the environment. Some scholars have found that as increases in trade and FDI improve the allocation of domestic resources, a longer life expectancy and better quality of life for the populations affected results. Others have found that such activity results in a decrease in pollution due to the development of new, more...
energy-efficient technologies. Studies of the macro and micro-level effects of these factors on the environment have often arrived at conflicting conclusions. Research by Buckley and Casson (2003) evaluated the relation of FDI to economic growth. Studies by Borensztein, De Gregorio and W Lee (1998) and Bende-Nabende et al. (2003) found that FDI increased productivity and efficiency which, in turn, led to the growth and increased capital necessary for new, more efficient and less harmful technologies. Research from Sbia and Shahbaz et al. (2014) concluded that both trade liberalization and FDI have the effect of introducing new technologies to host countries. Hanson (2001) found that FDI had minimal positive effects on host countries, while Lipsey (2004) concluded the opposite, namely, that FDI inflows had positive effects on the recipient county.

We have contributed to the existing literature by directing our attention to SAARC (South Asian Association for Regional Cooperation) countries, which include Pakistan, India, Bhutan, Nepal, Sri Lanka, Maldives, Afghanistan, and Bangladesh. Our focus on these countries is important for two primary reasons. First, there has been little research investigating FDI, trade liberalization, economic growth, and environmental sustainability among these countries. Second, SAARC is the major geopolitical and intergovernmental body of South Asia, with all member nations participating in the South Asian Free Trade Area (SAFTA) agreement and operating similar and mutually reinforcing economic policies.

Therefore, the primary aim of this study is to evaluate the environmental impacts of trade, FDI, and economic growth in SAARC countries. To conduct our study, we have employed the panel VAR model using Toda and Yamamoto’s test.

Our research is organized into seven sections. Section two describes the nature of trade in SAARC countries. Section three conducts a review of the existing literature on the effects of trade, FDI, and economic growth on the environment among SAARC members. Our data analysis methodology is described in section four. The results of our analysis are presented in section five, and our conclusions and policy implications are reported in section six.

**FDI inflows, trade liberalization, economic growth and environmental sustainability in SAARC countries**

Despite political difficulties between particular SAARC countries - India, Pakistan, and Bangladesh, for example - it has been recommended that they expand economic associations with each other. This has had the effect of increasing bilateral trade between them between 2009 to 2015. Governments facilitate such trade by determining the economic relations between SAARC countries, which in practice can be viewed as trade between business groups.

In the area of foreign and domestic policy, many nations have shifted the emphasis from politics to economics; the North American Free Trade Agreement (NAFTA), the Association of South-East Asian Nations (ASEAN), and the European Union (EU) all attest to this shift in focus. SAARC’s potential for increased cooperation and trade has likewise resulted in mutually beneficial agreements. At the 1993 SAARC summit in Dhaka, member states signed the South Asian Preferential Trade Agreement (SAPTA), which provided rules for the liberalization of trade and served to reduce tariffs between SAARC countries. This cooperation was meant not only to lower freight costs – thereby reducing cost of goods sold and overall selling prices – but also to improve the quality of life for the people affected. The resolution to improve economic growth was renewed during the fifteenth SAARC summit, which emphasized energy, climate change, telecommunication, poverty alleviation, trade, transportation, food security, education, and tourism.

SAARC was established by the heads of its constituent states on December 8, 1985. Dedicated to technological, economic, cultural, and social development, the organization emphasizes collective self-reliance in order to improve the quality of life and general welfare of populations living in South Asia. There have been two trade agreements among SAARC member states. The first, SAPTA, was signed on 11 April, 1993, and came into force on 7 December, 1995. The second, SAFTA, was signed in Islamabad, Pakistan during the twelfth SAARC summit on 6 January, 2004, and came into force on 1 January, 2006. SAFTA created a free trade area affecting 1.8 billion people and removed trade barriers to increase economic cooperation. Furthermore, the SAARC Chamber of Commerce and Industry encouraged intra-regional trade by creating business linkages among member states. Like many other countries, SAARC member nations have a relatively low cost of labor, qualified human capital, and decent infrastructure, all of which tend to attract both FDI and free trade.
<table>
<thead>
<tr>
<th>Country Name</th>
<th>FSI-1981</th>
<th>FDI-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>5,360,000</td>
<td>3,380,251,354.5</td>
</tr>
<tr>
<td>Bhutan</td>
<td>600,000</td>
<td>33,638,273.42</td>
</tr>
<tr>
<td>India</td>
<td>91,920,000</td>
<td>44,208,019,071.77</td>
</tr>
<tr>
<td>Maldives</td>
<td>30,000</td>
<td>323,872,391.47</td>
</tr>
<tr>
<td>Nepal</td>
<td>230,000</td>
<td>18,630,735.97</td>
</tr>
<tr>
<td>Sri Lanka’s</td>
<td>49,264,554.42</td>
<td>169,086,610</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>180,000</td>
<td>169,086,610</td>
</tr>
<tr>
<td>Pakistan</td>
<td>108,084,748.50</td>
<td>979,000,000</td>
</tr>
</tbody>
</table>

From 1981 to 2015, the number of firms and amount of investments in the energy, manufacturing, and service industries increased every year. That said, it is important to note that, as a result of uncertainty, risk, and terrorism, FDI rates have also decreased during certain years.

Moreover, further increases in investment and trade openness in SAARC countries would encourage more importing and exporting, thus continuing to grow member countries’ economies. World Bank data from 2017 shows that trade and FDI improved significantly every year.

**Literature review:**

The relationship between FDI inflows, trade openness, economic growth, and environmental sustainability has been of particular interest to policy makers and researchers in recent years. Seminal papers by Singer (1950) and Parikh and Stirbu (2004) have developed earlier studies on the subject, explaining the positive effect of FDI on economic growth in both receiving and host countries during times of prosperity.

Early research has grouped these relationships into three classes (Papageorgiou, Michaely and Choksi 1991). Scale effect, the first class, assumed that trade openness increased the level of domestic consumption and production, which in turn enhanced economic activity. The second class, known as the technical effect, showed that emerging technologies which contribute to environmental sustainability are more readily transferred to new regions when trade was liberalized. The third class, called the composition effect, argued that trade has effects on the improvement of economic structures. Both theoretical and empirical researchers have given conflicting results and evidence concerning trade’s effect on economic growth and the environment. Those in favor of the theory that trade liberalization has a positive impact on economic growth have claimed that an increase in trade will prompt international traders to invest outside their countries, thereby enhancing the exchange of knowledge between poor and rich nations. For example, Campos and Kinoshita (2002) found that FDI in the form of reassigned technology had important effects on growth. A cross-country regression framework by Borensztein, De Gregorio and W Lee (1998), which used data from 69 developing countries over the period from 1970-89, concluded that FDI, through upward technological progress, has a strong positive effect on economic growth. Similar results were found by other researchers as well. A study by Parikh and Stirbu (2004), which investigated the relationship between trade liberalization, economic growth, and trade balance using an econometric approach, concluded that there is a positive relation between growth and trade liberalization. Research by Wacziarg and Welch (2008) and Grossman and Krueger et al. (1991) showed a 1.5% growth rate increase when countries liberalized. Oladipo (2011), whose research used econometric methodologies and the error correction model to analyze data from 1980-2008, found that economic growth is dependent upon trade openness and FDI. Shahbaz, Loganathan, Sbia and Afza (2015) used the ARDL bounds testing approach to examine the long-term effect of trade openness on growth in Pakistan.

However, some studies have reached conflicting conclusions, namely, that FDI has either a negative or no effect at all on growth. For example, Yanikkaya (2003) used panel data taken from 100 developing and developed countries from 1970-1997 to study the relationship between growth and liberalization. Using the ordinary least square (OLS) regression, seemingly unrelated regression (SUR), and three-stage least squares
(3SLS) method, Yanikkaya concluded that there is a weak relation between growth and trade openness. Eriş and Ulaşan (2013) used Bayesian Model Averaging (BMA) techniques to conclude that there is no direct relationship between economic growth and trade liberalization. Menyah, Nazlioglu and Wolde Rufael (2014), using data from 21 countries over the years 1965-2008, found that financial development and trade liberalization does not have a major impact on economic growth. Paudel (2014), using data from 193 countries and covering the period 1985-2010, concluded that trade liberalization had a different impact on economic growth and development in each country studied. Their studies on Nigeria concluded that trade liberalization does not affect economic growth, at least in that market. Similar conclusions were reached in a study on Bangladesh by Manni and Afzal (2012), which used data from 1980-2010; they found that liberalization does not impact inflation. Research from Greenaway, Morgan and Wright (1997) found that the level of economic growth actually decreased because of trade liberalization. Concerning greenhouse gases, Hakimi and Hamdi (2016) found that capital has a positive correlation with CO₂ emissions.

The impact of trade liberalization on the environment has become most apparent over the past two decades. Nonetheless, existing literature on the subject is limited. Some environmental economists – e.g. Grossman and Krueger (1991), Panayotou (1993), Selden and Song (1994), Antweiler, Copeland and Taylor (2001), and Ferrantino and Linkins (2003) – have found a positive relationship between economic growth, environmental policies and trade. Researchers supportive of this conclusion have explained that an increase in trade and investment improves the quality of technology, which in turn reduces industrial pollution. Moreover, higher environmental standards are often imported to developing countries as a result of commercial and technological exchange, thereby compounding the positive environmental impact. However, other ecological economists – e.g. Cole and Rayner et al. (1997), Lopez (1997), and Strutt and Anderson (2000) – have suggested alternative views. For example, when host countries invest in industries which pollute the environment, more trade openness, while arguably good for production, tends to further reduce environmental sustainability in those industries.

Taskin and Zaim (2001), using an econometric approach in their study of 50 countries over the years 1970-1990, found that increased trade openness has a positive impact on environmental sustainability. Using the GLS model, Feridun, Ayadi and Balouga (2006) investigated the impact of trade liberalization on environmental sustainability in Nigeria; they found that the capital to labor ratio and GNP were negatively related to pollution, while pollution was positively correlated with trade and real GDP per square kilometer. A study by Antweiler Copeland and Taylor (2001), which included 43 countries and data from the period 1971-1996, explained that pollution decreases as trade increases. In a study of 51 countries over the years 1997-2007, Chang (2015) concluded that increased trade results in a corresponding increase in CO₂ emissions. Research from Aller,s Ductor and Herrerias (2015), which analyzed data from 96 countries from 1996-2010, stated that increased trade in high-income countries tends to degrade the environment, while the opposite is true for low-income countries. Shahbaz, Hye, Tiwari and Leitao (2013) found that trade liberalization increased energy consumption and wealth in Malaysia from 1970-2011. A study from Managi, Hibiki and Tsurumi (2008) used sulfur dioxide (SO₂) and CO₂ emissions data from 88 countries over the years 1973-2000 and biochemical oxygen demand statistics from 83 countries from 1980-2000, to inspect the effects of trade openness on the environment. They applied the GMM method to analyze the results and concluded that the effects of trade vary from country to country. Damania, Fredriksson and List (2003) employed panel data from 30 countries over the period 1982-1992, to argue that the impact of trade openness are dependent upon a country's level of corruption.

It is important to note the conspicuous lack of studies related to FDI inflows, economic growth, trade liberalization, and environmental sustainability in SAARC countries in the preexisting literature – we intend to fill this void.

Empirical Analysis:

Data & Statistics

To determine the relationship between FDI, income, trade openness, and capital in SAARC countries, we analyzed data from the following sources: CO₂ emissions, FDI inflows, trade openness, GDP growth (GDP), and capital (K). GDP is used as the proxy for income, and CO₂ emissions as the proxy for environmental quality.
The data we used covers the period from 2001-2015. The sources and descriptions of data are given in Table A.1. We transformed all variables into log form. Summary statistics are described in Table A.2 and the correlation matrix is summarized in Table A.3.

In Table A.3, the correlation matrix shows that CO2 and FDI, GDP and CO2, and K and CO2 are positively correlated with each other; however, CO2 and trade openness are negatively correlated. These correlations only present the possible relation between all the variables. We will further describe these relationships below.

The aim of this study is to analyze the possible long-term relationship between CO2, FDI inflows, GDP, trade openness, and K. The research has been completed in three steps, the first of which was to check the unit root and confirm the stationary of our data. The unit root is checked by the ADF, IPS, and PP (Phillips Perron) tests.

Concerning our variables, some were I(0), others were I(1), and one was I(2). Because of the differences common in series containing I(0), I(1) and I(2), no test for the long-run relationship was estimated. Thus, in the second step we applied the panel VAR model using the Toda Yamamoto approach for I(2). Toda and Yamamoto (1995) said to submit F statistics to the Granger Causality test; however, such causality may not be effective because the test lacks a standard distribution when the data is cointegrated. That said, we did use the Granger Causality test to determine causality between variables.

**Test for Cointegration:**

The Johansen Fisher Panel Cointegration Test, using the Toda Yamamoto approach, was applied to test the relationship between CO2 emissions, trade liberalization, FDI, GDP, and K. Knowledge of cointegration was not required in order to take this approach, nor did it require the same series of integration. This test estimated the panel vector autoregressive model by considering each variable as dependent.

We developed a multivariate procedure through the panel autoregressive model to conduct this analysis, which is stated as follows:

\[
\Delta \text{CO}_2 = a_1 + \sum \beta_1 \Delta \text{CO}_2 + \sum \beta_1 \Delta \text{FDI} + \sum \beta_1 \Delta \text{Trade} + \sum \beta_1 \Delta \text{GDP} + \sum \beta_1 \Delta \text{K} + \eta + \delta + \mu_1 \\
\Delta \text{GDP} = a_2 + \sum \beta_2 \Delta \text{CO}_2 + \sum \beta_2 \Delta \text{FDI} + \sum \beta_2 \Delta \text{Trade} + \sum \beta_2 \Delta \text{GDP} + \sum \beta_2 \Delta \text{K} + \eta + \delta + \mu_2 \\
\Delta \text{FDI} = a_3 + \sum \beta_3 \Delta \text{CO}_2 + \sum \beta_3 \Delta \text{FDI} + \sum \beta_3 \Delta \text{Trade} + \sum \beta_3 \Delta \text{GDP} + \sum \beta_3 \Delta \text{K} + \eta + \delta + \mu_3 \\
\Delta \text{K} = a_4 + \sum \beta_4 \Delta \text{CO}_2 + \sum \beta_4 \Delta \text{FDI} + \sum \beta_4 \Delta \text{Trade} + \sum \beta_4 \Delta \text{GDP} + \sum \beta_4 \Delta \text{K} + \eta + \delta + \mu_4 \\
\Delta \text{Trade} = a_5 + \sum \beta_5 \Delta \text{CO}_2 + \sum \beta_5 \Delta \text{FDI} + \sum \beta_5 \Delta \text{Trade} + \sum \beta_5 \Delta \text{GDP} + \sum \beta_5 \Delta \text{K} + \eta + \delta + \mu_5 
\]

(Eq.1)

(Eq.2)

(Eq.3)

(Eq.4)

(Eq.5)

In these equations, \(\text{CO}_2\) is the log of CO2 emissions; \(\text{FDI}\) is the log of FDI inflows; \(\text{Trade}\) is the log of trade; \(\text{GDP}\) is the log of GDP; and \(\text{K}\) is the log of K. All data was collected from the World Bank (2017), and the selection of said data was based purely upon availability.

**Results:**

We used the following panel unit root tests: PP, IPS (IM, Pesaran, and Shin), and ADF (Augmented Dickey Fuller). Results from these tests are given in Table A.4 and show that the log values of CO2, trade, FDI, and K are statistically insignificant at the levels indicated. When we apply the panel unit root results to the time series’ first difference, all the variables except CO2 are statistically significant; however, CO2 becomes statistically significant at the second difference. One variable is I(0), three variables are I(1), and one variable is I(2).

As our variables differ in their orders of integration, we applied panel vector autoregression using Toda Yamamoto’s test, the results of which are in Table A.5. When testing for causality, Toda and Yamamoto’s approach avoids the problems inherent in the Granger Causality test by ignoring the cointegration and non-stationary of data. This approach was used to artificially expand the VAR order. Thus, \(d_{max}\) was used to represent
the maximum orders of integration. When this was finished, \((k+d_{\text{max}})\)th was calculated in VAR, whereby we ignored the value of the last lag \(d_{\text{max}}\) (Zapata and Rambaldi, 1997; Pittis, 1999; Campos and Kinoshita, 2002).

Table A.5 shows the results of the panel VAR. In this table, \(\text{ICO}_2\) is a dependent variable. According to the Akaike information criterion (AIC) and Schwarz criterion (SBIC), the optimum lag length is 4. We determined long run equilibrium by using the panel VAR model. Coefficients were assumed to be elastic, as the variables were taken in log linear form.

These results show that FDI inflow is negatively correlated with \(\text{CO}_2\) emissions at the maximum lag of 4. Therefore, this study finds that, as FDI increases in SAARC countries, environmental degradation decreases because of the long-run decrease of \(\text{CO}_2\) emissions. The result shows that the FDI coming from investing countries is not clean, that is, is not environmentally sustainable. Panel VAR results show that GDP has a positive correlation with \(\text{CO}_2\) emissions in all countries studied. As GDP increases and more people invest in the economy of a given country, \(\text{CO}_2\) levels and environmental degradation also increase. These results are consistent with the results found in studies by Lee and Chang (2009), Narayan and Narayan (2010), and Menyah et al. (2014).

The results concerning trade at lag 4 shows a positive correlation with \(\text{CO}_2\) emissions. This means that as trade openness increases in the economy, environmental degradation also increases because of higher levels of \(\text{CO}_2\). This result is consistent with studies by Grossman and Krueger (1991), Antweiler et al. (2001), and Feridun et al. (2006). \(K\) is negative at lag 4, and indicates that when wealth increases, people invest in newer technologies which emit less \(\text{CO}_2\) into the environment. The value of \(R^2\) is higher, which shows that the model is fit for evaluation.

We employed several tests to determine whether the panel VAR model is stable. The lower level of Table A.5 shows the results of the VAR Residual Serial Correlation LM test, which indicate that the model is correct and that the residuals are serially uncorrelated. We also conducted the VAR residual normality test. Given that the \(P\) value is greater than 5%, the null hypothesis is not rejected, thereby making the residuals multivariate normal. We are also confident that the \(R^2\) value is also a good fit for future modeling, and that the panel VAR model is valid for interpretation.

The next step was to check the Granger Causality between all variables in the model. If the model is to be considered stable, Granger Causality should exist between variables in at least one way. The results of the Granger Causality test are given in Table A.6 and are based on the panel vector autoregression model (PVAR).

We can draw several important conclusions from this table. First, it reveals the causality between FDI inflows and \(\text{CO}_2\) emissions. This shows that FDI may be cleaner in those countries where foreign nations bring with them new, more environmentally sustainable technologies when investing in the economy. Second, bidirectional causality was also found between GDP and \(\text{CO}_2\) emissions; this shows that GDP does affect \(\text{CO}_2\) emissions, which is consistent with the results of Jumbe (2004), Zachariadis and Pashourtidou (2007), and Tang (2008). Third, the results of \(K\) are less than 5%, which reveals that capital also has bidirectional causality with \(\text{CO}_2\) emissions. Finally, trade likewise has a bidirectional relation with \(\text{CO}_2\) emissions, which illustrates that trade has an effect on \(\text{CO}_2\) emissions.

We also found bidirectional causality between trade and GDP. This means that as trade increases in SAARC countries, employment opportunities also increase as the economy grows. One explanation for this might be that increases in trade liberalization attract foreign investors, who, having profited, bring high skilled workers, more capital, and a lower cost of labor to both the host and foreign countries. Therefore, we conclude that more trade openness will lead to higher FDI and economic growth.

**Conclusion and Policy Implications:**

Much attention has been given to environmental management over the past few years. This study was conducted to better understand the impact increased trade has on the environment. The geographic focus of the study - SAARC countries - is particularly interesting as they're all developing and liberalized economies. We used annual panel data from 2001-2015 during our empirical analysis, presented in the Empirical Analysis section; panel auto regression (PVAR) was used to investigate the relationship between variables, and the
Granger Causality test was then conducted to determine causality between variables. Next, stability tests were carried out to check reliability of the model. A variety of conclusions have thus been drawn.

FDI inflows have a negative relation with CO₂ emissions. Given the recent and ongoing debate about environmental sustainability, our results show that GDP growth has a positive correlation to environmental degradation; that is, as GDP growth increases, the healthiness of the environment decreases. The Environment Kuznets Curve, used in prior literature on the subject, also described the relationship between GDP growth and the environment. Trade correlates positively with environmental degradation as well, but capital has a negative correlation. The Granger Causality test confirmed the bidirectional relation between FDI, trade, economic growth, capital, and CO₂ emissions. Hence, we suggest that policy makers in these economies promote green trade liberalization for the welfare of their people; after all, it is in vain to build wealth if the resultant environmental damage precludes the longevity and quality of life necessary to enjoy it. Governments are encouraged to develop strategies which reduce environmental degradation and improve environmental sustainability. All countries under study should invest in green energy and green trade liberalization to reap the full benefits that such liberalization has to offer. This approach will attract more FDI in the long-term.

Acknowledgment

The authors appreciate the valuable comments of anonymous reviewers. We are also grateful for the financial support provided by the National Natural Science Foundation of China (No. 71774071, 71690241, 71473106), China Postdoctoral Science Foundation (No.2016M601568), Grant for Soft Science Project of Jiangsu Province (No. BR2017024), Grant for Service Research Center of Philosophy and Social Science Foundation of Zhejiang Province (No. 2013JDN01), Young Academic Leader Project of Jiangsu University (5521380003).

Reference

### Table A.1: Source and Description of Data

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>GDP growth (annual %)</td>
<td>World Bank (2017)</td>
</tr>
<tr>
<td>CO₂</td>
<td>CO₂ emissions (kt)</td>
<td>World Bank (2017)</td>
</tr>
<tr>
<td>Trade</td>
<td>Trade (% of GDP)</td>
<td>World Bank (2017)</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign direct investment, net inflows (BoP, current US$)</td>
<td>World Bank (2017)</td>
</tr>
</tbody>
</table>

### Table A.2: Summary Statistics

<table>
<thead>
<tr>
<th></th>
<th>LCO₂</th>
<th>LFDI</th>
<th>LGDP</th>
<th>LK</th>
<th>LTRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>10.19237</td>
<td>19.67088</td>
<td>1.634741</td>
<td>23.35711</td>
<td>3.897564</td>
</tr>
<tr>
<td>Median</td>
<td>10.04103</td>
<td>20.15667</td>
<td>1.733064</td>
<td>23.64368</td>
<td>3.834354</td>
</tr>
<tr>
<td>Maximum</td>
<td>14.52588</td>
<td>24.51217</td>
<td>2.886242</td>
<td>27.32013</td>
<td>4.864681</td>
</tr>
<tr>
<td>Minimum</td>
<td>5.730191</td>
<td>12.94167</td>
<td>-2.118042</td>
<td>19.72063</td>
<td>3.240452</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>2.542279</td>
<td>2.767392</td>
<td>0.591667</td>
<td>2.017592</td>
<td>0.396839</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.066767</td>
<td>-0.246439</td>
<td>-2.992535</td>
<td>0.230795</td>
<td>0.628160</td>
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<tr>
<td>Kurtosis</td>
<td>2.134974</td>
<td>2.391630</td>
<td>19.50187</td>
<td>2.515003</td>
<td>2.662058</td>
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<tr>
<td>Jarque-Bera</td>
<td>2.872878</td>
<td>2.298915</td>
<td>1155.498</td>
<td>1.681081</td>
<td>6.347044</td>
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<tr>
<td>Probability</td>
<td>0.237773</td>
<td>0.316809</td>
<td>0.000000</td>
<td>0.431477</td>
<td>0.041856</td>
</tr>
<tr>
<td>Sum</td>
<td>917.3137</td>
<td>1770.379</td>
<td>147.1267</td>
<td>2102.140</td>
<td>350.7808</td>
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</table>

### Table A.3: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>L CO₂</th>
<th>LFDI</th>
<th>LGDP</th>
<th>LK</th>
<th>LTRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>L CO₂</td>
<td>1.000000</td>
<td>0.907187</td>
<td>0.066746</td>
<td>0.976926</td>
<td>-0.647820</td>
</tr>
<tr>
<td>LFDI</td>
<td>0.907187</td>
<td>1.000000</td>
<td>0.188068</td>
<td>0.910707</td>
<td>-0.434122</td>
</tr>
<tr>
<td>LGDP</td>
<td>0.066746</td>
<td>0.188068</td>
<td>1.000000</td>
<td>0.121768</td>
<td>0.202885</td>
</tr>
<tr>
<td>LK</td>
<td>0.976926</td>
<td>0.910707</td>
<td>0.121768</td>
<td>1.000000</td>
<td>-0.561180</td>
</tr>
<tr>
<td>LTRADE</td>
<td>-0.647820</td>
<td>-0.434122</td>
<td>0.202885</td>
<td>-0.561180</td>
<td>1.000000</td>
</tr>
</tbody>
</table>
Table A.4: Panel Unit Root Test of SAARC Countries

<table>
<thead>
<tr>
<th>Vr.</th>
<th>PP</th>
<th>IPS</th>
<th>ADF</th>
</tr>
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<tr>
<td></td>
<td>Level</td>
<td>1st diff</td>
<td>2nd diff</td>
</tr>
<tr>
<td>lCO2</td>
<td>10.96</td>
<td>61.75**</td>
<td>139.72*</td>
</tr>
<tr>
<td></td>
<td>*</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>lTrade</td>
<td>29.46</td>
<td>84.82**</td>
<td>-0.45</td>
</tr>
<tr>
<td></td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IGDP</td>
<td>53.30**</td>
<td>-</td>
<td>3.75***</td>
</tr>
<tr>
<td></td>
<td>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lFDI</td>
<td>35.96**</td>
<td>94.80**</td>
<td>-1.18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lK</td>
<td>5.27</td>
<td>41.19**</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>*</td>
<td></td>
<td></td>
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</table>

Note: *** indicates 1%, ** indicates 5% and * indicates 10% confidence interval.

Table A.5: Panel Vector Autoregression Results

LCO2 is dependent variable

<table>
<thead>
<tr>
<th>Vr.</th>
<th>Coef.</th>
<th>Standard Error</th>
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</thead>
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<tr>
<td>LCO2 (-1)</td>
<td>1.072486</td>
<td>0.15664</td>
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<tr>
<td>LCO2 (-2)</td>
<td>-0.067824</td>
<td>0.21706</td>
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<tr>
<td>LCO2 (-3)</td>
<td>-0.095751</td>
<td>0.16630</td>
</tr>
<tr>
<td>LCO2 (-4)</td>
<td>0.039791</td>
<td>0.14357</td>
</tr>
<tr>
<td>LFDI(-1)</td>
<td>-0.013534</td>
<td>0.01327</td>
</tr>
<tr>
<td>LFDI(-2)</td>
<td>-0.015094</td>
<td>0.01283</td>
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<tr>
<td>LFDI(-3)</td>
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</tr>
<tr>
<td>LFDI(-4)</td>
<td>-0.011697</td>
<td>0.01135</td>
</tr>
<tr>
<td>LGDP(-1)</td>
<td>0.024034</td>
<td>0.02538</td>
</tr>
<tr>
<td>LGDP(-2)</td>
<td>-0.011120</td>
<td>0.03239</td>
</tr>
<tr>
<td>LGDP(-3)</td>
<td>0.025068</td>
<td>0.02868</td>
</tr>
<tr>
<td></td>
<td>LGDP(-4)</td>
<td>0.094536</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>LK(-1)</td>
<td>-0.040897</td>
<td>0.09389</td>
</tr>
<tr>
<td>LK(-2)</td>
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<td>0.12309</td>
</tr>
<tr>
<td>LK(-3)</td>
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<td>0.17941</td>
</tr>
<tr>
<td>LK(-4)</td>
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<td>0.21163</td>
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<tr>
<td>LTRADE(-1)</td>
<td>0.107665</td>
<td>0.09386</td>
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<td>LTRADE(-2)</td>
<td>-0.281614</td>
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<tr>
<td>LTRADE(-3)</td>
<td>-0.003368</td>
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<tr>
<td>LTRADE(-4)</td>
<td>0.272511</td>
<td>0.10032</td>
</tr>
<tr>
<td>C</td>
<td>0.756338</td>
<td>0.47004</td>
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<tr>
<td>R-squared</td>
<td>0.999787</td>
<td></td>
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<tr>
<td>Adj. R-squared</td>
<td>0.999626</td>
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</tr>
<tr>
<td>F-statistic</td>
<td>6199.581</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>111.4769</td>
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</tr>
<tr>
<td>Akaike AIC</td>
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<td></td>
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<tr>
<td>Schwarz SC</td>
<td>-1.981996</td>
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</table>

**VAR Residual Serial Correlation LM test**

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<thead>
<tr>
<th>Lags</th>
<th>LM-Stat</th>
<th>Prob</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>26.50374</td>
<td>0.3811</td>
</tr>
<tr>
<td>2</td>
<td>38.61713</td>
<td>0.0402</td>
</tr>
<tr>
<td>3</td>
<td>15.14334</td>
<td>0.9380</td>
</tr>
<tr>
<td>4</td>
<td>20.48412</td>
<td>0.7210</td>
</tr>
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</table>

Table A.6: Granger Causality Test

<table>
<thead>
<tr>
<th>Vr</th>
<th>LCO2</th>
<th>LFDI</th>
<th>LTrade</th>
<th>LGDP</th>
<th>LK</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCO2</td>
<td>-</td>
<td>14.37*</td>
<td>16.79**</td>
<td>7.36*</td>
<td>10.77**</td>
</tr>
<tr>
<td>LFDI</td>
<td>8.75*</td>
<td>-</td>
<td>16.45**</td>
<td>3.51</td>
<td>9.92**</td>
</tr>
<tr>
<td>LTrade</td>
<td>16.32**</td>
<td>3.57</td>
<td>-</td>
<td>3.25**</td>
<td>2.49</td>
</tr>
<tr>
<td>LGDP</td>
<td>30.93***</td>
<td>4.96</td>
<td>6.38*</td>
<td>-</td>
<td>4.60</td>
</tr>
<tr>
<td>LK</td>
<td>19.95***</td>
<td>3.57</td>
<td>18.92***</td>
<td>14.27***</td>
<td>-</td>
</tr>
<tr>
<td>ALL P-value</td>
<td>0.0000</td>
<td>0.0030</td>
<td>0.0000</td>
<td>0.0052</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

Note: *** indicates 1%, ** indicates 5% and * indicates 10% confidence interval.
Track 9: Operations Management
A personalized recommendation method based on collaborative filtering algorithm

Hui Liu, Beijing Institute of Technology
Lixin Cui, Beijing Institute of Technology
Rongrong Li, Beijing Institute of Technology
Ting Yao, Beijing Institute of Technology

Abstract:

Collaborative filtering algorithm is a widely used recommendation algorithm. By introducing the idea of timing update, this paper regards the user’s shopping time as a set of time periods, considering the influence of the user’s interest at different times on the similarity of the user, and the influence of trust relationship between target users and similar users on the establishment of nearest neighbor set. On this basis, faced with the difference of evaluation criteria of different users on the same recommendation project, this study gives a pre-scoring method for target users to recommend items. Considering the relationship between the recommended items and other projects, this paper also proposes an idea of association recommendation based on recommended projects. At the end of this paper, the proposed method is verified on the review data set in MovieLens which is provided by the College of computer science and engineering of University of Minnesota. The experimental results show that the proposed method has obvious recommendation accuracy compared with the traditional collaborative filtering algorithm.

Keywords: Collaborative filtering, Personalized recommendation, Timing update, Degree of trust, Association recommendation

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Collaborative filtering algorithm is a widely used recommendation algorithm. By introducing the idea of timing update, this paper regards the user’s shopping time as a set of time periods, considering the influence of the user’s interest at different times on the similarity of the user, and the influence of trust relationship between target users and similar users on the establishment of nearest neighbor set. On this basis, faced with the difference of evaluation criteria of different users on the same recommendation project, this study gives a pre-scoring method for target users to recommend items. Considering the relationship between the recommended items and other projects, this paper also proposes an idea of association recommendation based on recommended projects. At the end of this paper, the proposed method is verified on the review data set in MovieLens which is provided by the College of computer science and engineering of University of Minnesota. The experimental results show that the proposed method has obvious recommendation accuracy compared with the traditional collaborative filtering algorithm.

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Abstract:

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有效的个性化推荐可以为电商和用户带来双赢的局面。电商通过主动服务的模式，发现每一个用户的潜在需求，并根据其推荐给用户，这一方面提高了用户的购物体验，另一方面为电商卖家创造了更多的价值。如今，如何为用户提供更精准的推荐成为各大电商企业不可忽视的问题。因为只有做到比用户更懂用户，才能成为电商竞争中的赢家。

协同过滤作为电子商务推荐系统中使用最广泛的推荐技术之一，在实际应用中发挥了有效的作用。国内外学者在理论上对协同过滤推荐技术进行了深入的研究，旨在提高个性化推荐的准确性。袁利将聚类算法应用到协同过滤推荐中，并针对聚类算法中初始聚类点不稳定的问题，提出了利用Kruskal算法来确定初始聚类点，从而提高推荐的准确性[4]。王明佳将模糊集的概念引入到协同过滤算法中，提出了基于模糊聚类的协同过滤算法[5]。Salehi,M通过分析学习者的属性特征和对学习资源的访问顺序，提出了一种基于隐式和显式属性的协同过滤改进算法[7]。Nasiri,M和Minaei,B提出了一种基于矩阵分解的协同过滤方法，该方法降低了数据的稀疏性，提高了矩阵分解收敛的速度[8]。由此可见，众多学者正在从不同的方面进行研究，但时序更新的思想被提及的较少，本文旨在从时序更新和增强信任度的角度对传统的推荐算法进行改进研究。

1. 协同过滤推荐面临的问题

根据协同过滤在考虑相似性过程中表现出来的差别，协同过滤算法分为基于用户的协同过滤算法和基于项目的相关过滤算法。

（1）基于用户的协同过滤

在现实生活中，对于和自己趣味相投的朋友喜欢的东西，自己也很有可能会喜欢。基于用户的协同过滤正是基于这种思想。它通过用户购物的历史数据发现相似用户，找到目标用户的最近邻（也就是最相似的）用户，然后将最近邻喜欢的东西推荐给目标用户。例如看电影，如果用户A喜欢《蝙蝠侠》、《碟中谍》、《星际穿越》、《源代码》等电影，另外有一些人也都喜欢这些电影，最近如果正在上映《钢铁侠》，他们很喜欢这部电影，那么将《钢铁侠》推荐给用户A。如果A用户A很可能也喜欢这部电影，从而产生购买行为。因此，当用户A需要个性化推荐时，可以先找到与之兴趣相似的用户群体G，然后把G喜欢的，并且A没有购买的物品推荐给A。

（2）基于项目的协同过滤

基于项目的协同过滤的基本思路是：若用户喜欢一件物品，则与该物品相似的物品该用户也很可能会喜欢。需要注意的是，基于项目的协同过滤是根据系统中对两个物品都偏爱的用户行为来发现物品之间的相似性的。

当推荐系统中数据完备且丰富的情况下，传统的协同过滤算法具有推荐准确，推荐效果好的特点。然而就新用户来说，由于缺乏对项目和的感兴趣数据，使得推荐出现了冷启动问题。另外，当用户之间历史兴趣数据相对较少或者项目数量巨大导致用户间的兴趣数据稀疏时，推荐就存在稀疏性问题。

面对商务活动的复杂性和协同过滤算法的不足，协同过滤技术在实现电子商务的个性化推荐时将面临这些问题。第一，传统协同过滤的推荐是基于用户-项目评价矩阵发现用户与项目之间的相似度，没有考虑用户兴趣随时间推移而发生变化的状况，即没有考虑用户兴趣的时效性问题。第二，传统协同过滤的推荐忽略了用户社交网络的信任问题。第三，传统的协同过滤推荐缺乏项目类别之间的固有关系，如打印机与墨盒、某品牌化妆品等，对推荐的影响考虑。

2. 基于协同过滤的个性化推荐方法

基于前面1的研究，考虑到用户兴趣随时间而变化的特点，对用户兴趣特征的分析按照不同的时间段来考察，不同阶段的用户，其兴趣特征会有变化。尽管用户的兴趣会随着时间发生变化，但长期形成的用户之间的信任关系仍然对推荐产生正面影响，这是本研究不能忽略的方面。由于不同用户的评价标准存在主观差异，如何消除主观差异对推荐项目的推荐干扰，也是本研究的一部分。为补充推荐中缺失的相关项目，本研究还从项目之间存在的某些关系入手，基于推荐项目与目标用户进一步推荐关联项目。

2.1 基于时间序列的协同过滤相似用户研究
面对用户的兴趣对时间敏感的特点，本研究将时序的思想引入协同过滤算法。这里的时序思想是按阶段来分析用户的购买行为。两个阶段相隔越近，用户兴趣的偏移越小。

这里将用户U的购买历史按照周期T被分解成k个阶段(tᵢ₋₁, tᵢ)，其中1 ≤ i ≤ k，t₀ = tᵢ₋₁ + iT，t₀表示用户U购买历史的开始时刻。

考虑到用户兴趣的偏移规律跟人们的遗忘规律很相似，本研究引入德国心理学家艾宾浩斯的遗忘曲线表示兴趣偏移规律。遗忘曲线展示了人类记忆保留的非线性递减规律，本文使用一个Logistic函数来表示这种遗忘曲线，以此反映用户兴趣的偏移趋势。遗忘函数见公式(2-1)，表示时间过得越久，遗忘越多。

$$f(tᵢ) = \frac{1}{1 + e^{-tᵢ}}$$

其中tᵢ表示用户U当前的时刻，tᵢ₋₁表示用户U第i次推荐行为的时刻。

基于遗忘函数，定义兴趣偏移权重，见公式(2-2)。

$$g(tᵢ) = 1 - f(tᵢ)$$

定义Nᵢ₋₁为用户U在tᵢ₋₁时刻的最近邻集；ΔNᵢ为用户U在(tᵢ₋₁, tᵢ]时间段的最近邻集合ΔNᵢ由传统的协同过滤算法获得。则用户U在tᵢ时刻的可能相似邻居集R(Nᵢ)表示如下：

$$R(Nᵢ) = Nᵢ₋₁ ∪ ΔNᵢ$$

一般来说，用户U在tᵢ₋₁时刻和tᵢ时刻的最近邻集合比较接近，由于Nᵢ₋₁中用户U的最近邻是指用户U在(tᵢ₋₁, tᵢ]时间段与用户U的相似程度较高的那些用户，这种处理方式存在的一个问题就是，在某些情况下可能淘汰掉Nᵢ₋₁中经过第K周期后，与用户U的相似程度较低的用户。

定义ΔSimᵢᵣ是目标用户U与其他用户V在(tᵢ₋₁, tᵢ]时间段的阶段相似度，即用户U与R(Nᵢ)中用户V在tᵢ时刻的相似性可用公式(2-4)给出的Simᵢᵣ度量。

$$Simᵢᵣ = \sum_{i=1}^{k} g(tᵢ) \Delta Simᵢᵣ$$

其中，Cᵢ = ∑ᵢ₋₁ g(tᵢ)。

2.2 近似于数值信任度的相似用户研究

面对数据稀疏导致的用户V在(tᵢ₋₁, tᵢ]时间段和目标用户U没有共同购物活动的状况（一种情况是这里的用户V在前k-1个阶段都是目标用户U的最近邻，但在(tᵢ₋₁, tᵢ]时段与目标用户U的相似度为0），本研究引入John O’Donovan提出的一种隐式获取用户信任度的思想，将信任度的概念引入2.1介绍的方法中，将信任度作为用户相似性的一种补充，使R(Nᵢ)中按照时序更新的思想在tᵢ时刻从最近邻集Nᵢ₋₁中被不当剔除的用户V仍能为目标用户U作项目推荐。

John O’Donovan的隐式获取用户信任度的基本思想是：根据某用户对目标用户的推荐历史记录，发现该用户正确推荐的次数与总的推荐次数的比例，以此反映目标用户对该用户的一种潜在的信任度。这里的信任度就是为了弥补时序更新思想下错误剔除用户所造成的最近邻集的偏差。

本研究的基于时间信任度的最近邻集思想是：面对目标用户U的相似邻集R(Nᵢ)中相似度Simᵢᵣ较低的需要剔除的用户V，考虑其与目标用户U之间的信任关系，如果目标用户U对该用户V的信任度较高，则可将其作为补充的最近邻保存在Nᵢ₋₁中，否则，将其移出Nᵢ₋₁。

目标用户U对用户V的信任度的衡量标准也可以定义为：用户V在(tᵢ₋₁, tᵢ]时间段内有r或r以上阶段都是用户U的相似邻居，其中r可设置为k-1，3k/4，或是其他合理的函数。
2.3 目标用户预测评分研究

为消除不同用户评分标准的差距，减少相似用户评分标准不同造成的干扰，本文给出一种优化的预测评分策略来预测目标用户对目标项目的评分。

根据2.1和2.2形成了目标用户U的最近邻用户集。定义N^t(i)是用户u在t时刻的对项目i进行了评价的最近邻用户集，用户v∈N^t(i)考虑目标用户u与最近邻用户v的相似关系，获得用户u在参考用户v对项目i的评价后对项目i的预评分（见公式（2-5））。

\[
P_u(i|R_v) = \overline{R_u} + \text{Sim}_{kv} \times (R_v - \overline{R_v})
\]

（2-5）

其中，R_v表示用户v对项目i的评分，P_u(i|R_v)表示目标用户u在R_v条件下对项目i的预评分值，\overline{R_u}和\overline{R_v}分别代表目标用户u和最近邻用户v的评价均值。

基于N^t(i)中用户u的所有最近邻用户对目标项目i的评价，由公式（2-6）得到目标用户u对目标项目i的预评分。

\[
P_u(i) = \frac{\sum_{v \in N^t(i)} \text{Sim}_{kv} \times P_u(i|R_v)}{\sum_{v \in N^t(i)} \text{Sim}_{kv}} = \overline{R_u} + \frac{\sum_{v \in N^t(i)} \text{Sim}^2_{kv} \times (R_v - \overline{R_v})}{\sum_{v \in N^t(i)} \text{Sim}_{kv}}
\]

（2-6）

2.4 面向推荐项目的关联推荐

在由2.1-2.3实现的推荐基础上，利用项目之间的固有联系，挖掘关联项目数据，进一步地实现有效的关联项目的推荐。

对于电商的商品项目而言，它们之间通常存在如下一些关系：

①结构化的层次关系。商品项目的属性分类，在商品项目集合中形成了项目之间的树形层次结构关系。
②需求依赖关系。在经济学中，一些商品项目之间存在着明显的使用依赖关系，用户使用一种商品的同时必须使用另一种商品，由此在两种商品之间形成了明显的依赖关系。例如打印机和打印纸，购买了打印纸的用户一定会再购买打印机。
③互补关系。具有某些属性的商品项目有着很强的互补性和不满足性，用户需要大量的同类项目作为补充，才能满足其需要。例如电影和音乐。
④替代关系。某些商品项目之间则存在明显的替代关系，用户对一种商品的需要可替代其在某一段时间里对另一种商品的需求。例如在年轻人手机市场上，OPPO手机和VIVO手机都提供了优秀的产品，对于没有明显品牌偏好的用户来说，只要购买了两者中的任意一个的产品，短期内都不会购买另外一家生产的手机。

基于项目之间的上述关系，可对推荐项目进一步地进行关联推荐。例如推荐项目的互补项目存在时，用户没有购买过项目，则可推荐互补商品给用户；当存在推荐项目的需求依赖项目时，根据消费历史数据的分析，决定是否向用户推荐其需求依赖项目。实施关联推荐时可以考虑基于用户的综合评分进行选择推荐。

3. 实例验证

本文在明尼苏达大学计算机科学与工程学院GroupLens项目组搜集整理的一组影评数据集MovieLens上，对本研究提出的个性化推荐方法的推荐有效性和可行性进行验证。

3.1 实验环境和实验数据

本实验环境如下：
（1）硬件环境：CPU：AMD 2.0GHz，内存：2GB，硬盘：250G；
（2）软件环境：Windows 7，Eclipse，JDK1.6；
（3）编程语言：Java。
影评数据集 MovieLens 上包括以下两类主要信息，一类是 943 个用户对 1682 部电影的 100000 个评分记录，在该数据集中，评分采用 5 分制，评价值越高，表明用户对该电影越偏爱。另一类是用户的一些基本信息和电影信息。

用户的基本信息包括：用户的人口统计学信息等，如用户年龄、性别、职业等信息。

电影信息包括电影编号、电影名称、电影上映时间、评分发布时间、电影链接、电影题材等关于该电影的详细信息。

用户对电影的评价包括评分信息和评分时间。

本文对 MovieLens 数据集进行 80：20 的分割，80%的数据用来作为训练集，20%的数据用来作为测试集。为了更好的检验算法的准确性，数据集被分成了 5 组，各组对应的测试集之间没有交集。

3.3 评价指标

平均绝对误差 MAE（Mean Absolute Error）是一种统计精度度量方法。用它来对推荐系统的推荐准确性进行评价。

设测试集 test 中各项的评分为 \{p_1, p_2, p_3, \ldots, p_n\}，相应的实际评分为 \{q_1, q_2, q_3, \ldots, q_n\}，则 MAE 定义如下：

$$MAE = \frac{1}{n} \sum_{i=1}^{n} |p_i - q_i|$$

MAE 值越低，表明评分预测的准确度越高。

3.3 实验设计及结果

在相同的实验条件下，本文在数据集 MovieLens 上使用 Java 语言实现了对传统的协同过滤算法和本文 2.1-2.3 所提出算法的对比验证。验证是在时序周期分别为 30 天、60 天和 90 天的情况下进行的对比，实验结果如图 3.1 所示。结果表明，本文所提方法的推荐精度高于传统的协同过滤算法，并且随着时序周期增加到一定时间，平均绝对误差（MAE）值不断减小，本文方法的推荐精度更是优于传统的协同过滤算法。从图 3.1 来看，当是时序周期分别为 90 天和 60 天时，MAE 值差别甚微，故此，在保证一定精度的条件下，将时序周期选择为 60 天是较好的选择。

图 3.1 改进前后协同过滤算法的 MAE 比较
4. 结论

本文通过引入兴趣时序更新、目标用户信任度、评价标准差异化的思想对传统的协同过滤算法进行优化，同时基于项目关联关系进一步考虑关联项目的推荐，提出了一种个性化的商品推荐方法。在 MovieLens 数据集上的验证表明本研究的推荐方法相比传统的协同过滤算法，其个性化推荐的准确度更高，并且随着时序周期的不同，推荐结果的准确程度不同。由于受到实验数据集中项目关联关系不足的限制，关联项目推荐的验证无法有效体现，这部分内容将在我们下一步的研究工作中进行。

参考文献

Abstract:

Online Peer to Peer lending is a typical model of the integration of Internet and finance. In recent years, the prosperity and development of P2P in China also exposed many problems. The government has promulgated many regulatory policies for the P2P platform, among which the policy of Third-party deposit policy is an important policy. This paper uses complex system theory and management synergy theory to construct the ability factor system of P2P platform, and they are grouped according to the development synergy of the platform, then uses DID model to carry out quantitative evaluation. It proves that the fund deposit and management policy has a negative impact on the platform operation ability in a short time, has a significant positive impact on the risk control ability and has no significant impact on the potential development ability. The fund management policy is proved to be feasible and effective. In addition, the sub capabilities of the P2P platform with high synergy are less volatile due to the Third-party deposit policy, which indicates that the P2P platform with high synergies of each sub capacity is more suitable for the implementation of the policy.

Keywords: P2P; Depository policy; P2P capacity; Management synergy theory; DID

摘要

P2P(网络借贷)是"互联网+金融"的典型代表。近年来在我国P2P借贷繁荣发展的同时也暴露出了很多问题。对此国家出台了很多针对P2P网贷平台的监管政策，其中资金存管政策是影响较大的一项政策。本文采用复杂系统理论和协同论构建了P2P网贷平台的能力要素系统，并依据平台发展协同度过样本平台进行分组，采用双重差分模型进行定量评估。研究结论证明资金存管政策出台后，在短期内P2P平台的运营能力受到了不同程度的负面影响，但风险控制能力得到了有效地提升，同时发展能力所受影响不大。此外协同度高P2P平台的各子能力因资金存管政策产生的波动更小，表明各子能力协同度高的P2P平台更加适应政策的实施。

关键词：P2P；资金存管政策；P2P平台能力；管理协同理论；双重差分模型

1. 引言

P2P网络借贷（Peer to Peer Lending）是指个体和个体之间通过互联网平台而不是传统银行实现的直接借贷行为，个体包含自然人、法人及其他组织，P2P网络借贷通常由具有资质的平台公司作为中介，在交易过程中收取一定量的手续费或管理费。

P2P网络借贷在英国诞生，在美国发展，对于提供小额、多样化需求的贷款极具优势。2007年我国第一家P2P平台"拍拍贷"诞生之后，我国P2P平台数量不断增加, 截止到2018年4月累计

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②网贷之家 https://www.wdzj.com


2.文献综述

本文主要研究基于能力视角的P2P平台对资金存管政策的适应性,所以主要介绍有关P2P平台能力体系和相关政策的研究现状。

2.1 金融中介综合竞争力的研究现状

在研究P2P对政策适应性的时候,应该构建一个测量P2P平台各种指标和变化的体系,即P2P平台综合竞争力评价体系。对于P2P竞争力的研究主要在国内且大多为定性研究,对于P2P平台能力的定量研究较少。同时,对于传统金融中介竞争力的研究也可以为P2P平台竞争力体系的构建提供一些启发和借鉴。

2.1.1P2P平台综合竞争力的研究


2.1.2商业银行竞争力研究

表 2.1 是对以上文献综述中金融中介竞争力评价体系的指标汇总。以上学者的研究基于不同的视角与研究问题构建了不同的金融中介竞争力评价模型。从对比中我们可以看出，在指标的选取上有一些是重叠的。其中，金融中介的盈利能力、风控能力和发展能力都在考量范围内。

### 表 2.1 金融中介竞争力评价体系研究现状

<table>
<thead>
<tr>
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<td>陈霄（2015）</td>
<td></td>
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<td>许楠、曹齐芳（2016）</td>
<td></td>
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<td>积分、技术积分、流动性积分、杠杆积分、透明度积分、品牌积分</td>
<td>刘勇（2016）</td>
<td></td>
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<tr>
<td>平台运营与未来发展</td>
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<td>股东背景、新闻搜索量、产品创新度</td>
<td>詹正华、张雨微（2016）</td>
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<td>顾建飞（2016）</td>
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<td>物质能力要素子系统</td>
<td>有形资源、运营能力、营销能力、风控能力、组织学习能力、品牌</td>
<td>俱敏萍（2012）</td>
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</table>
2.2 政策适应性及 P2P 平台监管政策的研究现状 2.2.1

政策适应性的研究现状

适应性是特定开放系统与环境相互作用而形成的互利性的良性循环模式。适应性主要包括两个部分的内容：（1）开放的系统通过自身的调整与所处环境环境形成功能协同；（2）开放的系统以自身特性的优化（诸如目的、手段、体制、模式等）影响外部环境的优化和提升[9]。

目前关于政策适应性的研究大都为定性研究，研究系统或个体是否适应政策环境，并提出更好适应新政策环境的建议。

向玉琼（2004）用生态学来渗透政策科学，研究政策系统和政策生态环境之间的平衡关系，分析了全球化与政策体系的适应性，提出了国内公共政策如何适应全球化环境的一些建议[10]。曹堂哲（2002）以“系统范式”和适应性作为指导理念，引入比较分析的方法，阐述了中国加入世界贸易组织后政府公共政策的适应性问题[9]。

2.2.2 P2P 平台监管政策的研究现状

金融模式和产品的创新与监管的发展应该有一个平衡，无监管的创新必定会扰乱市场的秩序。数据基础和外部监管是 P2P 网络借贷健康发展的前提条件，不能因为其发展不成熟就采取自由放任的监管理念，应该以监管促发展，在一定的底线思维和监管红线下，鼓励互联网金融创新[11]。

在传统金融领域，证券公司的客户资金最初由证券公司独立管理，一些证券公司非法挪用客户资金、违规经营，严重侵害了投资者的权益，影响了资本市场的规范和发展，扰乱了正常的金融秩序（蒋忆明等，2006）[12]。2006 年我国新修订的《证券法》出台，要求所有证券公司必须对客户资金进行银行第三方资金存管 13。所谓银行资金存管，指由银行管理资金，平台管理交易，做到资金与交易分离，使得平台无法直接接触资金，从而避免客户资金被挪用。

对资金存管政策的实证研究，目前仅有王钦安和王斯瑶（2008）两位学者，采用案例研究方法，对证券业的资金存管制度进行了简单的实施成效分析，总结实施结果的同时，提出了资金存管存在的若干风险及改进建议[13]。

P2P 平台资金存管的业务模式包括直接存管、银行直连、联合存管三大类[14]。国内关于资金第三方存管（托管）的研究归纳为两个方面：一是从商业银行自身业务、制度视角，银行可通过加强服务与产品创新、风险管理体制建设和增加风险准备金等措施改进托管业务现状[15]。二是监管部门、商业银行和第三方存管机构三方关系的研究。研究者们以博弈论的视角分析监管部门、存管机构（商业银行）和网贷平台三方关系，从而探讨该行业未来发展[16]。

2.3 复杂系统与协同论

复杂系统是由不同属性的子系统相互交织、相互作用、相互依赖而构成的具有特定结构和功能的开放、复杂的动态系统[17]。结合复杂系统理论，可以将 P2P 平台综合竞争力视为一个由能力、环境、资源、创新等多要素相互作用、相互交织而成的复杂系统（周敏等，2012；詹正华，吴寻，2017；谢以恒等，2017）。P2P 平台综合竞争力这一系统下的各子系统间相互协调、动态配合，共同实现了 P2P 平台的发展。
协同论（Synergetics）是在1969年由德国斯图加特大学理论物理学家哈肯（Haken）提出的，研究有序结构形成和演化的机制，描述各类非平衡相变的条件和规律的一门科学[18]。协同论认为，各个系统千差万别、属性各异不同，但在整个环境中，各个系统间存在着相互影响而又相互合作的关系[19]。协同论指出，由大量子系统组成的系统，在一定条件下，子系统间会相互作用，因此，应用协同论方法，可以用于找出影响系统变化的那些主要因素，进而发挥系统内子系统间的协同作用[20]。因此可以找出来因为资金存管政策的实施受到影响的P2P平台能力体系的子能力及各项指标，进而探讨P2P平台对资金存管政策的适应性，并研究不同子能力协同发展水平的P2P平台，对资金存管政策的适应性差异。

国内学者孟庆松和韩文秀（2000）从系统学的角度将复杂系统内子系统的协调度称为有序度，而复杂系统整体的协调度称之为协同度，并构建了可以实际计算的复杂系统协调度模型[21]。在一个复杂系统中，系统的协同度可以用来衡量系统的协同效应，系统的有序结构则可以通过构成系统的子系统的有序度来表现。所谓子系统的有序度，指能力要素系统中子系统各个指标对能力要素系统有序度的贡献程度，数值越大，子系统有序度贡献越大，所以子系统有序度变化后的变化反映出子系统能力的相应变化。在复杂系统理论中，协同度则体现了子系统间的协同发展程度，一般称之为系统的协同度[8]。构建了P2P平台能力系统后，可以根据协度算法计算构成P2P平台能力要素系统的子系统的协调度。


2.4 现有文献评述

通过文献梳理我们发现目前对P2P能力体系的研究（1）对P2P网贷平台竞争力的概念认识还不统一，在指标选取上有很多重叠交叉，缺少全面的评价框架；（2）研究主体过于单一，缺少全局视角。本文参考了以往研究者们对传统商业银行竞争力评价系统的成果，参考资金存管政策的特质及影响，建立了P2P平台能力系统，并以166家P2P平台作为研究对象，基于平台能力视角研究不同协同发展水平的P2P平台对资金存管政策的适应性问题。

以往对于P2P网贷监管政策的研究（1）主要集中在如何进行更科学有效的监管，对政策实施效果没有展开相应的讨论，也通常缺少量化结果的数据支撑；（2）主要站在监管者视角考虑政策的制定与实施，而没有站在P2P平台管理者角度探讨如何调整企业发展，使之更适应政策实施；（3）并未探讨在相同的政策环境下为什么各P2P平台产生了不同的变化。本文将定量研究不同协同发展水平的P2P平台对资金存管政策的适应性问题，并展开深入讨论。

3.理论模型构建

3.1 P2P平台能力体系构建

总结文献综述中学者们对于P2P平台综合竞争力评价体系的构建中，都考虑到了盈利水平、资金资源、规模等[2,3,4]。本文把这些归结为运营能力，P2P平台的运营能力是P2P平台的运行经营能力。P2P平台的运营能力可以通过交易额、交易规模、用户数量等来衡量[25]，本文采用平均投资人数、平均借款人数、人均投资额、人均借款额和成交量五个三级指标刻画P2P平台的运营能力，并以月为单位计量。


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3.2 复杂系统的有序度及协同度测算 3.2.1

复杂系统有序度测算方法

本文采用能力要素子系统的有序度指标来构成了整个能力要素系统协同发展模型。有序度的计算公式如 3.1 所示：

$$
\sum_{i=1}^{m} e_{i,j} \cdot \eta_{i,j} \cdot 1, m^* 
$$

（3.1）
是三级指标的有序度，是第 个子系统的第 指标，是所限制的时间段内 的最大值，为最小值。运营能力和发展能力子系统的指标是正向指标，用上式计算；风险控制能力子系统的指标是反向指标，用下式计算。由此，可得出各三级指标的有序度。经过此项处理，的值在 与 之间。二级指标的有序度计算公式如式 (3.2) 所示：

\[
\gamma_i = \frac{\sum_{j} e_{ij}}{n} 
\]

是二级指标的有序度，其值在本文中代表了三个子系统对能力要素系统的贡献度，事件前后子系统有序度的变化可反映出子系统的结构及其所受到的影响。

3.2.2 P2P 平台能力的协同度测算方法

P2P 平台能力体系是一个复杂系统。本文所构建的 P2P 平台能力体系有三个子能力，所以本文中的 P2P 平台协同度衡量了 P2P 平台三个子能力的发展协同程度。系统协同度是系统的固有属性，不会因政策变化产生大的变化，本文测算了政策出台前所有样本的协同度，并据此展开研究。能力系统的协同度计算如式 (3.3) 所示：

\[
C = \sqrt{\sum_{i=1}^{n} \frac{\gamma_i}{\gamma_i}} 
\]

是 P2P 平台能力要素系统的协同度，指在本文中是指资金存管政策出台前所选时间段初的子系统有序度，指在本文中是指资金存管政策出台前所选时间段末的子系统有序度，在本文中 的值为 3（三个子能力），的范围在 0 和 1 之间，其数值越大，P2P 平台能力体系的协同水平越高，两个子系统之间的协调配合越融洽有效；反之，则系统的协同水平越低。在本文后续的研究中，将根据 C 值大小对 P2P 平台进行分组，定量研究不同组别的 P2P 平台对资金存管政策的适应性差异。

3.3 P2P 平台资金存管政策适应性测量的双重差分模型

在一个复杂系统中，构成系统或子系统的某个要素的波动，将引发要素之间的相互影响与相互协同，从而使系统整体也会呈现出变化。在 P2P 平台对资金托管政策的适应性研究中，不同 P2P 平台各子系统因政策产生的波动的程度可能不同，当子系统协同度较高时，也即各子能力系统发展较为平衡时，资金托管政策使平台子能力产生的波动较小，可以理解为这类系统对政策的适应性更好。本文中，P2P 平台对资金存管政策的适应性可通过子能力在政策实施前后的有序度 的波动，本文用 来表示。

代表 P2P 平台能力系统各子能力发展协同程度，是各子系统的固定属性，是一个可变的指标，代表 P2P 平台各子能力因资金存管政策产生的波动系数。

本文采用双重差分 (DID) 模型定量分析不同协同度的子能力对资金存管政策的适应性，双重差分模型由 Ashenfelter 和 Card (1985) 首次提出，近年来越来越多的文献使用这一研究方法来探究变量之间的因果关系[25]。DID 模型把样本分为事前事后、处理和未处理以排除所研究政策外因素的影响，
通过比较实验组（处理）和控制组（未处理）在政策实施前后差异的变化来控制二者的系统性差异，进而到达检验此政策的实施效果。基本的双重差分模型如式 3.4 所示：

\[
Y_{it} = \beta_0 + \beta_1 \text{Treated} \cdot \text{Period} + \beta_2 \text{Treated} + \beta_3 \text{Period} + \epsilon_{it}
\]  

式中，Treated 代表处理（取 1）或未处理（取 0），Period 代表处理前（取 0）或处理后（取 1），刻画了 P2P 平台子能力因资金存管政策产生的波动变化，是 P2P 平台对资金存管政策的适应性指标，是本文主要的关注对象，可通过其正负（系数为正代表影响是正向；反之为负向影响）和大小（系数大小表征所受到的影响大小）分析平台子能力因政策产生的波动特征。 \( \epsilon_{it} \) 是平台子能力 \( t \) 时期的有序度。


公式如式 3.5 所示，其中 \( X_{it} \) 代表新加入的自变量：

\[
Y_{it} = \beta_0 + \beta_1 \text{Treated} \cdot \text{Period} + \beta_2 \text{Treated} \cdot \text{Period} \cdot X_{it} + \epsilon_{it}
\]  

以往研究者们依据想要考量的变量对样本进行分组，并把对变量的考量加入到基本的 DID 模型中。而本文想要研究不同协同发展平台对于政策不同的适应性，因此依据协同发展对样本进行分组，并在基础模型中加入对协同发展度的考量。

在本文采集到的样本中，T0 时期实验组平台协同发展度最小值为 0，最大值为 0.6007，中位数为 0.167。根据样本特征本文把实验组样本分为三组，协同发展能力较低组的协同发展度范围是[0,0.1)；协同发展能力中等组的协同发展度范围是[0.1,0.2)；协同发展能力较高组的协同发展度范围是[0.2,1.0]。加入组别的公式如式 3.6 所示：

\[
Y_{it} = \beta_0 + \beta_1 \text{Treated} \cdot \text{Period} + \beta_2 \text{Treated} \cdot \text{Period} \cdot X_{it} + \beta_3 \text{Treated} \cdot \text{Period} \cdot \text{Group} + \epsilon_{it}
\]  

其中，Group 代表组别，在不同的方程组，分别代表协同发展能力较低组、协同发展能力中等组及协同发展能力较高组（是此组则取 1，否则取 0）。通过以上处理可以通过交叉项系数 + 大小（系数大小表征所受到的影响大小）分析 P2P 平台各子能力对资金存管政策所产生的波动大小，波动较大，即适应性较差。

3.4 研究假设与模型图示

P2P 平台进行资金存管后，其客户资金与平台自有资金分离，按照要求实现规范化管理。所以在政策实施后的一段时间内，平台的资金使用规模、运作能力可能受到新政策的限制。P2P 平台原有的的一些不符合新政的促进优惠的行为则无法展开，这可能会影响到该平台的成交量、借贷人数等，平台的运营能力将可能会有所下降。而对于各项子能力发展较为平衡，各子能力协同发展程度高的平台，它们所受到的负向影响会相对较小，也即即运营能力波动小，反映在双重差分模型 3.6 中，即该组系数较小。说明该组 P2P 平台较为适应资金存管政策的实施。故提出假设 1：

\( H1: \) 协同发展程度高的平台，其运营能力对资金存管政策的适应性较好。

《网络借贷资金存管业务指引》的出台目的在于规避风险，规范网贷行业健康发展，提高 P2P 平台的风险控制能力。在政策实施前协同发展程度即为较高的平台，说明在其高速发展盈利业务的同时，
已经注意到其风险控制能力的建设，平台本身的风控能力相对较好。因此，协同度较高的平台其风险
控制能力更适应资金存管政策的实施。故提出假设 2:

H2: 协同发展程度高的平台，其风险控制能力对资金存管政策的适应性较好。

对 P2P 平台发展能力的判断主要基于平台一些指标的增长率，如成交量增长率、投资人数增长率、
借款人数增长率，资金存管政策实施后短期内，平台的运营能力在一定时期内会受到一些负面影
响，这可能会影响到融资与投资客户对平台的信心。导致影响在成交量和参与人数方面的快速增长。但是，
这种影响对各子能力发展协同度较高的平台来说，可能造成的波动较小。故提出假设 3:

H3: 协同发展程度高的平台，其发展能力对资金存管政策的适应性较好。

P2P 平台发展能力统筹情况与资金存管政策适应性关系模型，如图 1 所示。本文首先测算资金存管政策
实施前一段时间内的指标数据，得到各子能力有序度及平台发展能力协同度，然后依据 P2P 平台发展
能力协同度把样本平台分为三组，运用双重差分模型，得出不同组别的子能力波动系数。最后，通过对比各组系
数的大小，以验证研究假设。

图 1 P2P 平台能力协同度与资金存管政策适应性关系模型

4. 假设检验

4.1 数据收集

本文所需要的数据可通过“网贷之家”、“网贷天眼”获取，平台搜索量可通过 360 指数获取。本文所
研究的政策，《网络借贷资金存管业务指引》出台于 2017 年 2 月 23 日，在随后的几个月中 P2P 平
台陆续进行资金存管调整，本文用平台实行资金存管前的三个月数据作为 7=0 时期的指标数据，用实
行资金存管后的三个月数据作为 7=1 时期的指标数据。本文所取的控制组样本是在政策出台前至少三
个月就已经进行了第三方资金存管的 P2P 平台。

本文共选取了 166 家 P2P 平台，其中在资金存管政策出台前就已进行存管的（称为控制组）有 62 家，资金存管政策出台后进行存管的（称为实验组）104 家。数据的基本描述如表 4.1 所示：

<table>
<thead>
<tr>
<th>Name</th>
<th>Obs</th>
<th>Mean</th>
<th>Std.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>借款人数</td>
<td>996</td>
<td>18940</td>
<td>112718.4</td>
<td>1</td>
<td>1350607</td>
</tr>
<tr>
<td>投资人数</td>
<td>996</td>
<td>11831</td>
<td>31306.33</td>
<td>14</td>
<td>252161</td>
</tr>
<tr>
<td>人均借款额</td>
<td>996</td>
<td>406.35</td>
<td>2051.62</td>
<td>0</td>
<td>31068.76</td>
</tr>
<tr>
<td>人均投资额</td>
<td>996</td>
<td>6.42</td>
<td>10.32</td>
<td>16</td>
<td>146.13</td>
</tr>
<tr>
<td>成交量</td>
<td>996</td>
<td>56498.08</td>
<td>297992.5</td>
<td>29.32</td>
<td>6026638</td>
</tr>
<tr>
<td>参考收益率</td>
<td>996</td>
<td>10.37%</td>
<td>2.36</td>
<td>4.45%</td>
<td>17.83%</td>
</tr>
</tbody>
</table>
11 个三级指标都获取了 6 个月的数据，共 996 个观测值。每个 P2P 平台存续时间取资金存管之前和之后两个值。对这些数据进行处理，得出子系统的有序度与协同度，结果如表 4.2 所示：

表 4.2 有序度及协同度

<table>
<thead>
<tr>
<th>Name</th>
<th>Obs.</th>
<th>Mean</th>
<th>Std.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>332</td>
<td>0.3716</td>
<td>0.308</td>
<td>0</td>
<td>0.941</td>
</tr>
<tr>
<td>2</td>
<td>332</td>
<td>0.3651</td>
<td>0.1635</td>
<td>0.0095</td>
<td>0.898</td>
</tr>
<tr>
<td>3</td>
<td>332</td>
<td>0.3461</td>
<td>0.1443</td>
<td>0.0158</td>
<td>0.7136</td>
</tr>
<tr>
<td>C</td>
<td>332</td>
<td>0.1049</td>
<td>0.1411</td>
<td>0</td>
<td>0.642</td>
</tr>
</tbody>
</table>

\(^1\) 是运营能力有序度，\(^2\) 是风险控制能力有序度，\(^3\) 是发展潜力有序度。\(C\) 是协同度。三个协同度均值差异不大，标准差较小，数据分布较集中。

4.2 运营能力对资金存管政策的适应性

对运营能力有序度 \(^1\) 做基本模型的双重差分，结果如表 4.3 所示：

表 4.3 运营能力有序度双重差分结果

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated</td>
<td>0.0548***</td>
<td>0.0538**</td>
<td>0.0563**</td>
<td>0.0542**</td>
</tr>
<tr>
<td></td>
<td>(0.0245)</td>
<td>(0.025)</td>
<td>(0.0248)</td>
<td>(0.0250)</td>
</tr>
<tr>
<td>Period</td>
<td>0.1812***</td>
<td>0.1812***</td>
<td>0.1812***</td>
<td>0.1812***</td>
</tr>
<tr>
<td></td>
<td>(0.0286)</td>
<td>(0.0286)</td>
<td>(0.0287)</td>
<td>(0.0287)</td>
</tr>
<tr>
<td>Treated*Period</td>
<td>-0.1610***</td>
<td>-0.1610***</td>
<td>-0.1610***</td>
<td>-0.1610***</td>
</tr>
<tr>
<td></td>
<td>(0.0397)</td>
<td>(0.0000)</td>
<td>(0.0397)</td>
<td>(0.0397)</td>
</tr>
<tr>
<td>Existence</td>
<td>-0.0029</td>
<td>-0.0081</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
控制组有 62 个样本分前后两期共 124 个观测值，实验组有 104 个样本前后两期共 208 个观测值。模型 A 为基础模型，模型 B、C 和 D 是分别加入平台存续时长（Existence）、平台搜索量（logSearch）和同时加入。通过双重差分处理可得，P2P 平台运营能力因资金存管政策产生的波动系数为 -0.161，并在 99% 的统计水平下显著。这说明在基础模型中，资金存管政策的实施，对于平台运营能力存在着负向的影响。在加入新变量后发现基础模型回归系数及显著性水平未发生变化，证明了基础模型的稳健性。

接着本文依据 T0 时期平台协同度的大小将实验组样本分为三组，其中协同度较低组有 34 个平台样本，协同度中等的有 35 个平台样本，协同度较高组有 35 个平台样本。用双重差分模型检验样本运营能力变化，结果如下表 4.4 所示：

<table>
<thead>
<tr>
<th></th>
<th>Ce[0.2,1]</th>
<th>Ce[0.1,0.2)</th>
<th>Ce[0.2,1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated<em>Period</em>Group</td>
<td>-0.1170*** (0.0359)</td>
<td>-0.1670*** (0.0480)</td>
<td>-0.1700*** (0.0510)</td>
</tr>
<tr>
<td>Existence</td>
<td>-0.061 (0.0052)</td>
<td>-0.0029 (0.0072)</td>
<td>-0.0566 (0.0051)</td>
</tr>
<tr>
<td>logSearch</td>
<td>-0.0134 (0.0122)</td>
<td>0.0011 (0.0068)</td>
<td>-0.0123 (0.0111)</td>
</tr>
<tr>
<td>_cons</td>
<td>0.2127*** (0.0358)</td>
<td>0.2731*** (0.0360)</td>
<td>0.2520*** (0.0208)</td>
</tr>
<tr>
<td>R²</td>
<td>0.17</td>
<td>0.18</td>
<td>0.19</td>
</tr>
</tbody>
</table>

(***p<0.01; **p<0.05; *p<0.1)
从得出的数据中可看出，资金存管政策的实施对三组样本的运能能力都存在着负面影响。发展协同发展度较低组的运能能力因资金存管政策产生的波动系数为 -0.170，这一系数在 99% 的统计水平上显著；而协同发展度中等组的波动系数为 -0.167，这一系数在 99% 的统计水平上显著；协同发展度较高组的波动系数为 -0.117，这一系数在 95% 的统计水平上显著。可见资金存管政策对发展协同发展度较高的平台的运能能力影响较小，即发展协同发展度高的平台对政策更加适应。假设 1 成立。

4.3 风控能力对资金存管政策的适应性

对风控能力有序度 T2 做基本模型的双重差分及稳健性检验，结果如表 4.5 所示：

表 4.5 风控能力有序度双重差分结果

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated</td>
<td>0.0183** (0.0082)</td>
<td>0.0179** (0.0082)</td>
<td>0.0188** (0.0083)</td>
<td>0.0181** (0.0083)</td>
</tr>
<tr>
<td>Period</td>
<td>0.3937*** (0.0095)</td>
<td>0.3937*** (0.0095)</td>
<td>0.3937*** (0.0096)</td>
<td>0.3937*** (0.0096)</td>
</tr>
<tr>
<td>Treated*Period</td>
<td>0.2797*** (0.0126)</td>
<td>0.2797*** (0.0126)</td>
<td>0.2797*** (0.0126)</td>
<td>0.2797*** (0.0126)</td>
</tr>
<tr>
<td>Existence</td>
<td>-0.001 (0.0024)</td>
<td>-0.0027 (0.0026)</td>
<td>-0.0027 (0.0026)</td>
<td>-0.0027 (0.0026)</td>
</tr>
<tr>
<td>logSearch</td>
<td>0.0037 (0.0031)</td>
<td>0.0052 (0.0034)</td>
<td>0.0052 (0.0034)</td>
<td>0.0052 (0.0034)</td>
</tr>
<tr>
<td>_cons</td>
<td>0.0757*** (0.0062)</td>
<td>0.0790*** (0.013)</td>
<td>0.0683*** (0.0089)</td>
<td>0.0746*** (0.0108)</td>
</tr>
<tr>
<td>R²</td>
<td>0.96</td>
<td>0.96</td>
<td>0.96</td>
<td>0.96</td>
</tr>
</tbody>
</table>

(**p<0.01; *p<0.05; p<0.1)

从表 4.5 可以看出，平台风险管理能力因政策产生的波动系数为 0.2797，且在 99% 统计水平下显著。说明资金存管政策的实施对 P2P 平台风险管理能力有显著正向影响。此外加入的两个变量回归系数在各个模型中都不显著，也没有引起基础模型中的自变量回归系数的显著变化，说明了基础模型比较稳健。

将客户资金与自有资金分开管理，对资金更规范的使用能够显著提高 P2P 平台的风险控制能力。

本文依据 T0 时期平台发展能力有序度的大小进行有组别的双重差分模型处理，结果如表 4.6 所示:
表 4.6 加入协同度考量的风控能力双重差分结果

<table>
<thead>
<tr>
<th></th>
<th>Ce[0.2,1]</th>
<th>Ce[0.1,0.2)</th>
<th>Ce[0,0.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated<em>Period</em>Group</td>
<td>0.2410***</td>
<td>0.2760***</td>
<td>0.3220***</td>
</tr>
<tr>
<td></td>
<td>(0.0359)</td>
<td>(0.048)</td>
<td>(0.051)</td>
</tr>
<tr>
<td>Existence</td>
<td>-0.0061</td>
<td>-0.0029</td>
<td>-0.0566</td>
</tr>
<tr>
<td></td>
<td>(0.0026)</td>
<td>(0.0027)</td>
<td>(0.0025)</td>
</tr>
<tr>
<td>logSearch</td>
<td>0.0052</td>
<td>0.0051</td>
<td>0.0053</td>
</tr>
<tr>
<td></td>
<td>(0.0022)</td>
<td>(0.0068)</td>
<td>(0.0111)</td>
</tr>
<tr>
<td>_cons</td>
<td>0.0790***</td>
<td>0.0782***</td>
<td>0.0746***</td>
</tr>
<tr>
<td></td>
<td>(0.0358)</td>
<td>(0.036)</td>
<td>(0.0208)</td>
</tr>
<tr>
<td>R²</td>
<td>0.96</td>
<td>0.96</td>
<td>0.96</td>
</tr>
</tbody>
</table>

(***p<0.01; **p<0.05; *p<0.1)

从得出的数据中可看出，风控能力有序度较高组因资金存管政策产生的波动系数为0.241，这一系数在99%的统计水平上显著；风控能力有序度中等组的波动系数为0.276，这一系数在99%的统计水平上显著；风控能力有序度较低组的波动系数为0.322，这一系数在99%的统计水平上显著。可见资金存管政策对风控能力有序度较低的平台影响较大，假设2成立。这是因为发展协同程度较高的平台本身的风控能力就处于良好的发展态势，所以资金存管会使原来风控能力有序度较高的平台影响较小。

4.4 发展能力对资金存管政策的适应性

对发展能力有序度做基本模型的双重差分，结果如表4.7所示：

表 4.7 发展能力有序度双重差分结果

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
</table>

479
通过双重差分处理可得到，P2P 平台发展能力因资金存管政策产生的波动系数为 -0.056，系数较小且并不显著。这说明在基础模型中，不能证明资金存管政策的实施对于平台发展潜力存在影响。

接着用加入协同度考量的双重差分模型检验样本发展能力的波动，结果如表 4.8 所示：

表 4.8 加入协同度考量的发展能力双重差分结果

<table>
<thead>
<tr>
<th></th>
<th>$C \in [0.2,1]$</th>
<th>$C \in [0.1,0.2)$</th>
<th>$C \in [0,0.1)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated<em>Period</em>Group</td>
<td>-0.012</td>
<td>-0.066</td>
<td>-0.0900*</td>
</tr>
<tr>
<td></td>
<td>(0.0490)</td>
<td>(0.0460)</td>
<td>(0.0469)</td>
</tr>
<tr>
<td></td>
<td>C 较高组</td>
<td>C 中等组</td>
<td>C 较低组</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>运营能力</td>
<td>-0.117***</td>
<td>-0.167***</td>
<td>-0.170***</td>
</tr>
<tr>
<td>风控能力</td>
<td>0.241***</td>
<td>0.276***</td>
<td>0.322***</td>
</tr>
<tr>
<td>发展能力</td>
<td>-0.012</td>
<td>-0.066</td>
<td>-0.090*</td>
</tr>
</tbody>
</table>

(*p<0.01; **p<0.05; *p<0.1)

5. 结论讨论

本文构建了 P2P 平台能力要素系统，二级指标有运营能力、风险控制能力和发展能力，三级指标共选取了 11 个。选取了 166 家 P2P 平台作为样本，样本数据来自“网贷之家”、“网贷天眼”和“360 指数”。运用双重差分模型进行数据处理，分别探讨了政策出台后 P2P 平台运营能力、风控能力和发展能力的变化，进一步依据协同度把平台进行分组，得到不同协同发展程度的 P2P 平台对政策的适应性差异。得到以下结论：

（1）资金存管政策的实施对 P2P 平台运营能力有负向的影响，协同度较高的平台因资金存管政策产生的波动较小，即更适应政策的实施。原因是协同度高的平台各能力发展较为平衡，受到政策实施的冲击会比较小。

（2）协同发展程度显著影响 P2P 平台的多种能力变化。协同发展程度较高的平台因资金存管政策产生的波动较小，即更适应政策的实施。原因是协同发展程度高的平台各能力发展较为平衡，受到政策实施的冲击会比较小。

（3）发展协同度次于的平台因资金存管政策产生的波动最大，即最不适应资金存管政策的实施。
（2）资金存管政策的实施对P2P平台风险控制能力有正向的影响，协同度较高的平台，其风控能力因资金存管政策产生的波动较小，即更适应政策的实施。原因是资金存管政策使得P2P平台对于资金的使用更加规范，加强了风控能力；而协同度较高的平台本身风控能力就处于良好的发展态势，所以波动会较小，即更适应政策的实施。

（3）本文不能证明资金存管政策的实施对整体实验组P2P平台发展能力有显著影响，但当把P2P平台按照协同度高低进行分组后发现政策的实施对协同度较低的平台发展能力存在着负面影响。这证明了协同度较低的平台，其发展能力因政策实施产生的波动较大，即对政策的适应性较差。

从政策制定者角度看，政策制定的目的是为了规范行业发展，维持金融市场秩序，保持金融市场稳定发展。本文证明了在短期内P2P平台的运营能力受到了不同程度的负面影响，但风险控制能力得到了有效提升，同时发展能力所受影响不大，这些结果证明了资金存管政策是可行有效的。所以应坚定不移地根据互联网金融的新发展不断完善相应的法律法规，在创新和监管中达到一个平衡。这样互联网金融才会有更加健康，更加长期稳定的发展。

从平台经营者角度来看，本文证明了子能力协同发展程度高的P2P平台对资金存管政策的适应性较好。所以P2P平台经营者应立足于长远发展，促进平台的各项能力协同发展，从而提高平台的稳健性。只有这样在面临政策等外部环境变化时才能具有较好的适应能力。

受政策出台时间限制，本文所收集的数据时间跨度并不长，以后的研究者可以收集时间跨度更长的数据丰富和完善对于资金存管政策对P2P平台的影响。

参考文献


邢威加, 王军礼. 网络借贷平台盈利模式分析[J]. 技术与市场，2015(10):140-144.


基于低成本战略中国物流业的优化策略

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摘要：随着物流需求的迅速增加，行业竞争越来越激烈。世界经济一体化发展背景下，企业物流朝着标准化、专业化和网络化等方向发展。在国内，物流对国民经济的影响越来越大，物流成本的重要性被愈加的认可，物流成本已经成为了各个企业竞争的关键。本文主要对物流业现状、发展中的问题，以及低成本在物流中的七大职能中的应用进行分析，从而给出在低成本战略下中国物流业的优化策略，实现物流业的低成本高收益。

关键词：低成本战略；物流业；优化策略

1 引言

现代物流通过对运输、存储、装卸、包装、流通加工、配送、信息处理等作业领域的综合管理，将物品从供应地到接收地的实体流动过程中的每个环节有机的结合起来，形成一个协调、有序的整体，实现物流最大的时间效益和空间效益。现代物流作为一种先进的组织方式和管理理念，被广泛地认为是企业降低物耗，提高劳动生产率以外的第三利润源泉。随着我国加入世界贸易组织，企业运输、配送、仓储、流动加工的范围更加广阔，企业间的合作关系日趋复杂，而企业间的竞争已不单是产品性能和质量的竞争，也包含着物流能力的竞争，最大限度地降低企业的物流成本是企业在激烈的市场竞争中实施低成本优势战略的基础保证。分析我国物流业发展现状，优化我国物流业发展的战略对推动我国物流业的健康发展，保证我国企业实施低成本优势战略具有十分重要的战略意义。

2 物流业相关概念概述

2.1 物流业

政治、文化和经济等是人类社会的组成部分，其中经济活动包括了生产、流通和消费。在流通活动中，最重要的两部分是物流和商流。物质所有权的转移是商流的实质，转移的过程即生产者——商家——（最终）消费者，而物流活动开始于人们的日常生活中，也隐藏在人类所有活动中。它是指物品从生产者到最终消费者之间的流动，是无处不在的。如图1所示描述了物流业的社会分工情况。
图 1 物流业社会分工情况

传统物流业是由仓储、运输等行业构成的，现代物流业的提出是为了区别传统物流业的。现代物流业是一种新型的集成式管理，不再是传统物流的简单货物流通，涉及一系列综合物流活动，包括仓储、包装、搬运装卸、配送运输、流通加工、库存以及物流信息等，运用先进的信息技术和管理技术，最大限度降低物流过程的总成本，提供给消费者最好的物流服务。现代物流的动力源泉不是来自于生产制造，而是消费者的需求，这也是企业生产商品的决定性因素。在物流系统的各个环节中，消费者需求信息的传递贯穿始终，对消费者的需求反应较快，也就决定了现代物流的最终目的是尽最大可能满足消费者的需求，因此其也被称为反应式物流。

若将现代物流业看为一个产业系统，则该系统由三个层次构成，分别是平台层、市场层和技术层。平台层是建立在物流基础设施和运输系统的基础层，市场层是依托市场的组织形式，技术层是在物流业务过程中呈现的物流技术等，三个层次的具体构成部分详见表 1。

表 1 现代物流业系统层次构成内容

<table>
<thead>
<tr>
<th>现代物流业 层次结构</th>
<th>作用</th>
<th>层次结构的构成体系</th>
</tr>
</thead>
<tbody>
<tr>
<td>平台层</td>
<td>保障现代物流产业发展</td>
<td>物流基础设施、场站设备等</td>
</tr>
<tr>
<td>市场层</td>
<td>承担现代物流产业组织功能</td>
<td>物流方案的设计者、实施者，以达到专业化、信息化和网络化的目的</td>
</tr>
<tr>
<td>技术层</td>
<td>物流运作过程中的物流技术手段保障</td>
<td>包括物流技术和人才，人才是指使用信息化和标准化物流技术的物流人才</td>
</tr>
</tbody>
</table>

2.2 物流成本

2.2.1 物流成本的概念

物流成本是企业的物流系统为完成物流活动，实现商品在空间、时间上的转移而发生的各种耗费的货币表现。具体的说，它是产品在实物运动过程中，如包装、装卸、搬运、运输、储存、流通加工、物流信息等各个环节所支出的人力、物力、财力的总和。物流成本是物流作业链各环节所有成本之和。企业物流成本实质上应该是客户订单的完成成本。
在《物流技术用语》一书中，对物流成本是这样解释的：用金额评价物流活动的实际情况为物流成本。物流成本的大小，取决于物流活动的范围和采用的评价方法。

物流成本的范围是由三方面因素决定的：第一是物流成本的计算范围，即物流的起止问题。物流的范围是相当大的，它包括：原材料物流；工厂内物流；从工厂到仓库、配送基地的物流；从配送基地到顾客的物流等部分。从这些物流中选择有明显的差别。第二是物流活动环节，运输、储存、装卸、搬运、包装等诸种物流活动，以哪几种活动作为物流成本的计算对象问题。以所有的物流活动为对象计算出来的物流成本，与只以其中的运输、储存等活动为对象计算出来的物流成本当然是有差别的。第三是费用性质，运费、保管费等企业外部支付的物流费，或人工费、折旧费、修缮费、燃料费等企业内部的费用支出，究竟其中的哪一部分列入物流成本中进行计算，将直接影响到物流成本的大小。

2.2.2 物流成本的形成机制

物流的大部分责任不在物流管理部门，而在发生物流作业的部门，即采购、仓储、制造和销售部门。在物流成本这一问题上，销售部门或生产部门决定着物流成本的一大半。因此，它们是物流成本的决定者。这是由于物流的系统结构在很大程度上，受销售和生产部门制约的缘故，所以物流系统结构一经决定，过一半的物流成本就自行定下来了。如图2所示。
2.2.3 物流成本的构成

生产企业的主要目的是生产能够满足社会需要的产品，以此换取企业的利润。为了进行生产经营活动，企业必须同时进行有关生产要素的购进、仓储、搬运以及产成品的销售等。另外，为保证产品质量，为消费者提供优良产品，企业还要进行产品的返修和废品的回收。因此，生产型的企业物流成本是指企业进行供应、生产、销售、回收等过程中所发生的运输、包装、配送、回收方面发生的费用。生产企业的物流成本的构成主要包括以下部分：

1. 供应、仓储、搬运和销售环节的职工工资、奖金及各种形式的补贴等；
2. 生产材料的采购费用，包括运杂费、保险费、合理损耗成本；
3. 生产过程中所发生的物流费用；
4. 产品销售费用，如广告费、运输费、展览推销费、信息费；
5. 仓库保管费，如仓库维护费、搬运费等；
6. 有关设备和仓库的折旧费、维修费、保养费等；
7. 运营费用，如能源消耗费、物料消耗费、折旧费、办公费、差旅费、保险费、劳动保护费等；
8. 财务费用，如仓储物资占用的资金利息；
9. 回收废品发生的物流成本。

3 低成本战略概述

3.1 低成本战略的内涵

低成本战略是美国哈佛大学迈克尔•波特教授提出的三种基本竞争战略之一。低成本战略也称为成本领先战略，是指企业在提供相同的产品或服务时，通过在研究、开发、生产、销售、服务和广告等领域内把成本降低到最低限度，使成本或费用明显低于行业平均水平或主要竞争对手，从而赢得更高的市场占有率或更高的利润，成为行业中的成本领先者的一种竞争战略。

除了低成本战略，基本竞争战略还包括差异化战略和聚焦战略。企业在经营过程中，往往会根据自身的情况和内外部竞争环境，从三种基本竞争战略中选择其中一种作为主导战略。波特教授认为，由于差异化的厂商价格溢价将会被其不显著的成本位置所抵消，所以，一个能创造和保持经营差异化的公司决不能忽视对成本地位的追求。因此，无论如何企业采用何种基本竞争战略，竞争优势的取得和保持，都在很大程度上依赖于成本优势的建立和长期维持。由此可知，低成本战略是基本竞争战略中的基础战略。

3.2 低成本战略的优势

3.2.1

能有效抵御行业内企业的竞争。在价格为基础的竞争中，如果低成本企业以低于竞争对手的价格销售产品可提高企业产品的市场占有率，抢占竞争对手的市场份额。如果企业的总成本控制在行业最低水平，即使在激烈的价格竞争中，当其他企业无法盈利时，该企业仍有利可图，从而有效地抵御了竞争对手的威胁。

3.2.2

357
3.2.3

有利于企业在强大的买方威胁中保护自己买方的威胁在于买方的议价能力，也就是买方采用压低价格、要求较高的产品质量或者索取更多的服务等手段，从卖方与竞争对手彼此对立的状态中获利。实施低成本战略的企业，产品在价格方面有较大的弹性。即使买方压低价格，低成本企业仍然比行业内高成本企业获得更多的利润，从而能有效抵御买方议价能力的威胁。

3.2.4

具有抵御供应商威胁的能力供应商的威胁在于供方的议价能力，也就是供应商通过提高价格或者降低产品或服务的质量使购买商面临成本上涨，利润下降的威胁。低成本企业比竞争对手具有较大的物价上涨的承受能力，具有较大的抵抗价格风险的能力。除此之外，低成本企业往往进行大规模生产，因此，企业可以享受规模采购的好处，在与供应商的交易中有较强的价格还价能力，增强抵御市场供应风险的能力。

4 我国物流业发展现状

随着科学技术的迅猛发展，信息技术的普遍应用，消费需求个性化趋势的增强，竞争机制的设立各个企业为了提高自己的竞争力，不断对物流行业提出了新的需求。我国政府逐步开始重视物流的发展，逐步对一些老的运输企业进行改建和重组。促使他们不断地提供新的物流服务，而且还出现了一批新的能够适应市场经济发展的发展物流企业。我国的物流行业虽然有了一定的发展，但目前还没有形成比较完善的体系。总的来说，我国物流的发展还处于刚刚起步的阶段。近些年来，我国部分地区开始认识到物流发展的重要性。

物流产业是由多个部门组成的综合性的产业，其产业结构复杂。近年来，随着我国经济的快速发展，我国物流行业也迎来了崭新的春天。基础设施方面逐步完善。我国的公路里程位列世界第三；铁路运力位列亚洲第一；在水运方面，我国港口的吞吐能力有了很大的提高，位列世界第五；民航也新扩建了一些机场，以及一些航线的增开。使航空的运载能力有了大大的提高。配送体系方面，在全国范围内形成了一大批有规模的物流企业。第三方物流也得到了快速的发展。我国的物流行业从第一方物流、第二方物流逐步向第三方物流转变。第四方物流也渐渐兴起。我国目前物流的发展环境明显得到了好转。

第一方物流(1PL)是指生产或流通企业自身来做物流各方面的运作，如仓储、运输等。生产企业拥有自己的仓库、车辆，不依靠任何的社会化的物流服务。

第二方物流(2PL)是指那些自身没有车辆、仓库，雇佣车辆、仓库来做货物的仓储、运输，是属于功能性的、比较单一的服务企业。第三方物流(3PL)是指生产企业为了能够最大限度地把自己的生产任务完成
好，把自己的物流方面的工作以合同的方式交给能够提供专业服务的物流企业，也就是由第三方物流公司完成货物的仓储、运输、搬运、包装等。

第四方物流(4PL)是一个供应链的集成商，是政府为了促进地区物流产业的蓬勃发展，而搭建的一个能够提供共享和发布信息的物流平台，以此能够领导供需双方及第三方物流。它能够帮助企业降低成本、提高生产率，实现资源的有效整合。但第四方物流在中国的发展刚刚兴起，还存在一系列的问题，如基础设施的落后、管理体制不健全、物流信息化程度低、人才缺乏等。要想发展好第四方物流，就需要大力发展第三方物流，加强基础设施的建设、加快人才的培养等等。

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但我国的物流体系仍存在很多问题有待改善。物流企业规模小，物流管理不集中。我国的物流在各地区之间被分割成若干的部门和地区，各自之间自成体系，缺乏整体的物流规划。大多数物流企业运营方式单一，缺少综合性的物流公司。无法形成协调，统一发展的现代物流产业，使得货物的仓储、运输、配送不能有效结合起来运作，以至于物流成本大大提高，物流速度大大降低，环节上的浪费严重，管理成本也加大。物流资源不能得到科学、充分、有效的统一分配，从而导致了我国物流企业的竞争力不强，阻碍了物流产业进一步发展。

与此同时，我国物流基础设施仍然不足，尚未建立起布局合理的综合交通运输体系；物流园区和物流技术装备等建设尚有待提高；人才培养、物流技术、物流标准不能完全满足物流发展的需要，物流服务集约化和一体化程度亦不高。在企业经营管理中，很多企业的管理人员对于物流方面的知识相对匮乏。还处于摸索阶段，缺乏物流专业技术和管理方面的人才。现代企业的内部物流管理是以信息技术为支撑的。信息化决定了现代物流的发展，但现在我国很多物流企业在日常管理中还在沿用传统的人工作业，因而降低了企业的运营效率。

5 低成本战略在七大职能中的应用

5.1 低成本战略在包装职能中的应用

包装是物流作业的重要环节，也是物流系统中的一项重要的基本功能。近年来随着现代物流技术的不断发展和物流管理内容的不断延伸，包装技术开始走向专业化。经过一些行业的应用探索，“物流包装”的定位日渐清晰，以实现货物在物流系统中安全、高效、低成本地流通作为最终目标，并逐渐形成了单元化、集装箱化、标准化、可循环使用等发展方向。以及适用于不同行业的解决方案。但总体来看，目前我国物流包装技术发展尚未成熟，还有很多市场空白。应用前景看好。

5.2 低成本战略在仓储职能中的应用

我国物流行业虽然已经发展的十分迅速，但是由于起步晚与其他国家相比有一定的差距。为了推动物流行业的发展降低物流成本，必须对当前存在的问题进行分析解决，对仓储管理技术进行改进。紧跟时代步伐使其向信息化、自动化、智能化方向发展。加强人才队伍建设，提高整体人员的专业技术水平和职业能力，培养满足社会需求的高端人才，以促进我国物流行业的快速发展。

5.3 低成本战略在运输职能中的应用
20 世纪 50 年代，集装箱运输开始规范化，接轨国际，在六七十年代进入了标准化和多式联运的国际轨道，并且发展迅猛，从最发达、次发达国家蔓延到了发展中国家。集装箱运输不但效率高，成本低，而且高度标准化和国际化，迅速被整个物流运输界接受。成为 20 世纪集装箱著名的“运输界的革命”。集装箱运输与传统方式相比，装卸效率更高，货损货差更少，货物旅程更短，物流成本大大降低。更重要的是集装箱运输真正实现了“门到门”的运输。

5.4 低成本战略在装卸搬运职能中的应用

装卸搬运是指物流过程中的仓储物品，在空间发生垂直或水平移动的物理性活动，而在这个过程中为实现物品的移动和定位进行装卸搬运而产生的各种费用是物流中的成本费用，通常通过以下方法降低成本：（1）减少搬运次数，缩短搬运距离，减少搬运次数，缩短搬运距离，也就意味着减少了装卸搬运的作业量，这样不但可以减少装卸搬运成本，而且还能加快物流速度。采取的措施是：装卸搬运设备的参数要和建筑物的参数、特点相匹配；配备适应性强的物流设备；提高装卸搬运作业的组织调度水平；做好车间、库房、铁路专用线、主要通道的布局，缩短作业距离。（2）利用重力因素，实现装卸作业的省力化。充分利用重力和消除重力影响进行少耗用的装卸，即在装卸时考虑重力因素，可以利用货物本身的重量，进行有一定落差的装卸，以减少或根本不耗用装卸的动力。这是合理化装卸的重要方式。（3）实现装卸作业的机械化、标准化。随着生产力的发展，装卸搬运的机械化程度将不断提高。此外，由于装卸搬运的机械能将工人从繁重的体力劳动中解放出来，尤其对于危险品的装卸作业，机械化能保证人和货物的安全，这也是装卸搬运机械化程度不断提高的动力。装卸搬运的标准化有利于节省装卸作业时间，提高作业效率。

5.5 低成本战略在配送职能中的应用

降低企业物流成本，特别是如何降低零售业物流配送中心的物流成本，采取什么模式、策略、方法成为摆在我们面前的一个新课题。做到降低配送成本可以采用以下策略：（1）规范货物分类验收办法，提高收货效率，提升供应商满意度；（2）增强理货环节专业化和标准化程度，提高货区内货物运动速度；（3）强化作业时间管理；（4）推行 6S 现场管理。现阶段，人力成本已成为企业的最大成本。作为现代化配送中心，多添设备少增人，是物流资源配置的基本原则。

低成本战略在流通加工职能中的应用流通加工是一项重要的物流活动，近些年来被广泛应用于企业中。这是因为流通加工的应用能够为企业带来诸多益处，比如可以方便客户消费，更好地满足客户的多样化需求；能够丰富商品的用途，提升商品的价值，从而提升企业的效益等。流通加工之所以成为很多企业青睐的业务策略，往往是因为其在流通加工环节较低的投入会带来企业最终效益的提高，如果流通加工成本过高，就不能实现以较低投入带来较高收益的优势，也不利于物流总成本的降低。因此衡量流通加工合理化的一个关键要点就是成本适中并且能够为企业带来可观的收益。

5.7 低成本战略在物流信息职能中的应用

物流的发展对经济具有很强的推动作用。物流业的转型升级和整合有利于提高重庆物流行业整体竞争力，更好地满足不断增长的社会物流需求。信息共享作为物流发展的一个重要手段。担负起实现物流资源整合的重任。因此，可以通过实现低成本物流环境的策略，使信息共享成为物流产业整合的关键抓手。

6 物流成本管理存在的问题
6.1 物流社会化、市场化程度低，传统物流仍占主体。综观当前我国物流产业的发展状况，全社会的物流活动仍以传统物流为主，专业化、系统化、大规模的现代物流尚未形成。全国来看，现代物流只是在少数发达地区和先进企业中得到了重视和发展。在广大中西部地区和边远省份，现代物流还未真正起步。即使是在经济发达的东部沿海地区，物流的社会化、市场化程度也还很低。由于条块分割、部门分割、缺乏统一规划、重复建设加剧，加上市场发育滞后，全国物流企业处于小、多、散、弱的状况难以形成有效的社会服务网络。

6.2 物流管理不规范，体制障碍限制我国综合性物流体系的建立由于传统观念的影响，我国管理体制的改革要远落后于经济体制的改革。至今，我国物流业仍然是采用分散的或者称为多元的管理方式，管理过程中会涉及多个相关部门。由于体制的不完善，导致各部门的职能不明确，各部门的职能虽有分工但也存在相互交叉的状况，导致物流行业的管理存在条块分割、部门分割、重复建设等一系列的问题。此外，已经形成的社会物流系统与企业物流系统由于在管理目的和管理手段上的不同，二者不能有效地结合以便实现两者协调、健康的发展，这也会对物流合理化产生不利影响。

6.3 物流业发展的法制环境尚未完善，影响我国物流业的发展现代物流业的发展与兴盛依赖于统一、透明、公平和高效率的法律制度环境。目前我国物流业发展的瓶颈之一就是法制环境的不完善，表现在以下三个方面：一是我国现有与物流有关的法律法规多是部门性、区域性规章，往往带有部门或地区保护的色彩；二是物流市场的进入与退出、竞争规则基本上无统一法律法规可循，对社会性的物流服务缺乏有效的外部约束，致使不正当竞争难以避免；三是物流企业的设立会受到种种限制，手续繁琐，专业物流组织策划企业的法律地位尚未得到法律承认等，限制了第三方物流业的进一步发展。

6.4 物流业发展的信息化、自动化程度低，整体物流技术水平低信息系统的一体化需要在买方、卖方和物流第三方的许多实体间移动数据和传递指令，但现行经济体制限制了我国多数企业的物流活动向专业化、信息化方向发展，适应电子商务发展的物流信息系统相对落后，机械化、自动化程度低，整体物流技术水平比较落后。企业对计算机的应用多限于处理日常事务，对物流过程的配送中心选址问题、运输路线的确定及最优库存控制等，大多还处于半人工决策状态；现代化的集装箱、散装运输发展不快；高效专用运输车辆少；汽车以中型汽油车为主，能耗大，效率低；装卸搬运的机械化水平低。大多数企业还只是被动地按照用户的指令和要求，从事单一功能的运输、仓储和配送，很少能提供物流策划、组织及深入到企业生产领域进行供应链的全过程管理，物流增值少。

6.5 物流人才匮乏，物流科学研究亟待加强我国物流人才的奇缺是制约我国物流业发展的一大瓶颈。与国外发达国家相比，我国物流从业人员的素质偏低，他们一般未受到专业的、系统的物流知识教育。我国对物流科学的研究也仅有二、三十年的历史，专门的研究机构较少，在理论上尚未形成适合我国实际情况的科学体系。目前，对企业物流的研究程度比对社会物流研究程度要低，对物流技术的研究水平要高于对物流管理的研究水平。随着人们对市场经济理性认识的不断提高，社会经济发展水平的提高将对中国物流业提出更高的要求，对物流人才的需求会大幅度的增加。

7 我国物流业的优化策略

7.1 创新管理机制。要先完善人才机制，强化物流在人心中的成本意识，在权利一致下，完善人才激励机制。从需要层次理论，结合个人利益与公司利益，推行年薪制，克服月薪制所引导的部分员工短期工作
行为。对贡献突出的人员进行及时奖励。当然，也可适当寻求政府的扶持政策，以促其发展。建立有效的采购控制体系，降低其它采购的费用，特别是要甄选好高品质的采购人员，杜绝人为的高成本采购行为。

7.2 完善管理制度有效的控制物流成本，可以促进企业物流管理的高速发展。传统的会计核算不能提供准确的物流成本信息，这，也不利于管理。物流会计责任是不同级别的管理员和部门应该肩负的责任。以收集报告资料的会计制度，能把成本和责任实体控制有效的结合在一起，把责任分担给个人的原则归集成本。

7.3 用多联动的方法来降低物流成本合理化的降低物流的成本是指物流活动与设施在合理的情况下，用低的成本来进行高质量的活动。物流各个活动成本往往各有所长。物流合理化要根据实际情况来进行规划设计，不能只强调某一个环节的成本，要从企业整体方面考虑。所以设计合理的运营方案不是随便开几个会就能完事，需要对作业系统各个环节的全面调查，包括了运输方式和路线的选择、仓库的选择、配送中心选址等方面，加快物流周转速度，缩短物流的周期，可以有效的减少资金的占用量，降低储存等方面的费用，从而降低物流成本。海尔公司应用零运营资本就是为了加快采购、生产和销售的速度来缩短周期，提高了资金的使用率。最终达到了零运营成本，提高物流效率来降低物流成本的方法是非常可靠的。

7.4 优化流通过程优化流通过程可以全面地降低物流的成本。对中小企业来讲，控制物流的成本不只是企业自己的事，不要单纯的追求企业物流的效率。还要考虑送货过程中物流成本效率化，也是物流建设投资的发展和要求。

7.5 整合物流职能管理随着企业之间的竞争，管理体系也要不断地发展。新的管理体系可以应对客户多方面需求，也可以有效的减少商品的周转时间，真正的做到准确及时的管理。当然，要实现以上的目标，需要企业处理好与其他企业之间的关系。维护好客户和运输实体之间的关系，以整体实现活动的效率化。

7.6 减少退货率。退货成本也是物流成本中的重要部分，它占很大的比重，退货成本之所以叫做物流成本，主要是伴随着退货或产生一系列的费用。

参考文献

**Decision analysis of dual-channel mobile phone recycling based on user preferences**

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**Abstract:**

Though referring to the relationship of competition and cooperation between "Recovery of love" and channel provider, the different preference of consumer to different channel were introduced into the recovery model. It was explored that the effect of recycling preference costs on the recovery price and the efforts of channel service providers. The results showed that the optimal profit of the supply chain leader is influenced by the user's preference cost and the leading player tend to carry out mobile phone recycling business in third-tier cities; Channels always increase service efforts and reduce the difficulty of resuming mobile phones offline. According to the numerical analysis, social welfare gets the maximum when participants are equal in status and the proportion of platform revenue sharing is too large.

**Key words:** consumer preference; supply chain status; recover dual channels; service effort

基于用户偏好的双渠道手机回收决策分析

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**摘要：**

借鉴"爱回收"与渠道商的竞合关系，考虑用户对回收双渠道的不同偏好，构建由回收平台与渠道商组成的回收竞合模型，探讨回收偏好成本对回收价和渠道商服务努力程度的影响。研究发现，供应链主导者最优利润的实现受用户偏好成本的影响，倾向于在三四线城市开展手机回收业务；渠道商总是提高服务努力程度，降低用户线下回收手机难度。算例分析表明；参与者地位均等、平台收益共享比例偏大时社会福利最大。

**关键词：**用户偏好，供应链地位，回收双渠道，服务努力程度

1、引言:

移动互联网技术的发展以及用户更换手机周期的缩短（13个月）催生了爱回收、回收宝、友通商城等电子回收平台，这种新的"互联网+回收"模式不再受时空限制，有效解决了手机定价不规范、用户信息泄露等问题，提高了用户回收的积极性。目前，基于平台的线上渠道已相对成熟，回收空间更多的停留在线下的零售渠道内，各回收平台制定相关措施拓展回收市场。"爱回收"推出"爱机汇"项目，采用众包模式与渠道商（联通、移动、苹果、国美等）合作，渠道商提供一定的回收服务努力，方便用户回收手机，实现了回收平台和渠道商的双赢。因此，"爱回收"拥有直接回收的线上渠道和与渠道商合作的线下渠道，与渠道商形成一种竞合关系，研究基于渠道商服务努力的双渠道回收具有重要意义。


综上所述，引入渠道商服务水平变量，依据消费者偏好理论，利用 Hotelling 模型建立回收效用函数，进而确定回收函数[4][12]；构建第三方网络回收平台与渠道商之间的竞合回收模型。主要研究问题包括：(1) 制定合理的线上、线下回收价格及回收服务努力程度；(2) 用户线上、线下偏好成本对回收价格和回收服务努力程度的影响；(3) 对比分析不同供应链地位下平台、渠道商及供应链利润和消费者、社会福利的大小，得出相关管理启示。

2、问题描述和消费者效用函数的建立

2.1 问题描述

借鉴 Choi 等、Yu 等[13][14]的研究，考虑 3 种不同权力结构（回收平台为 Stackleberg 主导者、渠道商为 Stackleberg 主导者、两参与者地位均等的 Nash 博弈）和消费者对不同回收渠道偏好情况（消费者选择线下渠道回收和线上渠道回收的成本不同）下，研究由一个渠道商和一个回收平台组成的供应链。平台会通过线上渠道直接回收手机，也会利用渠道商的线下门店回收手机。换句话说，平台直接回收即线上渠道，通过与渠道商合作回收即线下渠道。线下渠道回收中，渠道商要提供一定的回收服务，并与平台共享回收收益。基于收益共享原则，第三方平台共享比例 φ 的收益，渠道商共享比例 (1-φ) 的收益；平台决定线上渠道回收价格 b_1，渠道商决定线下渠道回收价格 b_2、服务努力程度 e。如图 1 所示。

![图1 双渠道回收供应链结构图](image1)

![图2 手机回收市场特征](image2)

结合上文描述，引入如下参数：下标 i 表示参与者，i=A 表示回收平台，i=H 表示渠道商；上标 j 表示权力结构情形，j=O 表示回收平台主导，j=M 表示渠道商主导，j=N 表示 Nash 博弈的情况。D 为手机回收需求，π 为参与者收益，如 δ_i^O 表示回收平台主导地位线上渠道回收价格。
另外，假设服务努力成本函数为 $c(e) = ke^2/2$，$\Delta$ 为回收商单位手机回收收益，$k$ 为渠道商服务努力的成本系数。

2.2 消费者效用函数的建立

依据消费者效用理论和 Hotelling 模型构建消费者效用函数，假设 $x$ 是用户选择回收渠道的心理偏好，服从 $[0,1]$ 均匀分布，$t_\mu$、$t_e$ 分别为用户选择线上渠道和线上渠道的偏好成本。一般情况下，一、二线城市用户的综合素质较高，其偏好成本低于三四线城市用户的偏好成本。用户根据回收价格、偏好成本及服务努力程度做出选择，假定用户对回收价的敏感系数为 $1$，对服务的敏感系数为 $\beta$，不失一般性 $t_\mu$、$t_e \in (0,1)$。因此，用户选择线上渠道的效用函数(16)：

$$u_d = b_1 - t_d (1-x),$$

（1）

同理，用户选择渠道商回收的效用函数：

$$u_H = b_2 + \beta e - t_H x_\mu.$$ 

（2）

用户选择两种渠道的成本有差异，回收积极性也不同，根据式 (1)、(2) 得到两种渠道的回收函数：

$$D_d = \frac{t_H + b_1 - b_2 \beta e}{t_H + t_d},$$

（3）

$$D_H = \frac{b_1 + \beta e + t_d - b_2}{t_H + t_d}.$$ 

（4）

从而可得平台和渠道商利润函数如下：

$$\pi_d = \varphi(\Delta-b_2)D_d + (\Delta-b_1)D_a,$$

（5）

$$\pi_H = (1-\varphi)(\Delta-b_2)D_H - \frac{ke^2}{2}.$$ 

（6）

3、三种供应链地位下的决策

3.1 回收平台为 Stackleberg 主导者

回收平台作为整个回收供应链的主导者，优先决定线上渠道的回收价格，渠道商根据回收平台的决策来制定对自己最有利的线下渠道回收价格和回收服务努力程度。利润函数如下：

平台利润函数： $\pi_d = \varphi(\Delta-b_2)D_H + (\Delta-b_1)D_d,$

渠道商利润函数： $\pi_H = (1-\varphi)(\Delta-b_2)D_H - \frac{ke^2}{2}$

由海森矩阵得，当 $(t_d + t_H) > \beta^2 (1-\varphi)/2k$ 时，渠道商利润函数 $\pi_H (b_2, e)$ 是关于 $b_2$ 和 $e$ 的联合凹函数；当 $(t_d + t_H) > \beta^2 (1-\varphi)(2-\varphi)/k(2-\varphi)$ 时，平台利润函数 $\pi_d (b_2)$ 是关于 $b_2$ 的凹函数。利用逆推法求得服务努力程度及线下、线上渠道回收价（令 $A = 2(\Delta t_d + t_H)(\varphi - 2) + \beta^2 (1-\varphi) < 0$）：

$$e^* = \beta (\varphi - 1)(k(t_d + t_H)(\varphi - 2) + \beta^2 (1-\varphi))/kA.$$
\[b_1^0 = \left( k(t_e + t_h)(3t_e + 2t_h + 2A(\varphi - 2)) + \beta^2(1 - \varphi)(2A - t_e - t_h) \right) / A,\]
\[b_1^1 = \left( k\beta^2(3t_e + 4t_h - 2A)(\varphi - 1) + \beta^2(1 - \varphi)^2 + 2k^2(t_e + t_h)(2t_h + A(\varphi - 2) + t_e(1 + \varphi)) \right) / kA.\]

此时，线下渠道和线上渠道的回收量分别为:
\[D_h^0 = -(k(3t_e + 2t_h) + \beta^2(\varphi - 1)) / A, \quad D_h^1 = \left( \beta^2(1 - \varphi) - k(t_e(1 - 2\varphi) + 2t_h(1 - \varphi)) \right) / A.\]

回收平台和渠道商的利润分别为:
\[\pi_D = -(\varphi - 1)\left( 2k(t_e + t_h) + \beta^2(\varphi - 1) \right) \left( k(3t_e + 2t_h) + \beta^2(\varphi - 1)^2 \right) / 4kA.\]

结论1 当 \((t_e + t_h) > T_1\) 时，渠道商能制定出使自己收益最优的决策；当 \((t_e + t_h) > T_2\) 时，回收平台根据渠道商的决策制定使自己收益最大化的决策。回收供应链两参与者最优决策的实现受用户偏好成本之和的影响，只有当用户偏好成本之和高于某一值 \((T_1, T_2)\) 时，才能实现回收平台收益的最优；进一步发现，平台对这一条件要求更高一些 \((T_2 > T_1)\)。

令 \(T_1 = \beta^2(1 - \varphi)/2k, \quad T_2 = \beta^2(1 - \varphi)/k(2 - \varphi).\)

该结果表明：回收平台和渠道商合作的这种回收模式在三四线城市更能体现其价值，因为不发达地区的两种用户偏好成本高于发达地区的偏好成本。因此，供应链两参与者一定要把握好回收区域用户的偏好成本，尤其是平台。尽管渠道商最优利润受到偏好成本的限制，只要达到平台的要求，渠道商自然就可以实现收益最大化。

3.2 渠道商为 Stackleberg 主导者

渠道商作为整个回收供应链的主导者，优先决定线下渠道回收价格和回收服务努力程度，回收平台根据渠道商的决策来制定对自己最有利的线上渠道回收价格。利润函数如下:

平台利润函数: \(\pi_D = \varphi(\Delta - b_h) D_h + (\Delta - b_h) D_1,\)

渠道商利润函数: \(\pi_H = (1 - \varphi)(\Delta - b_h) D_h - ke^2 / 2\)

平台利润函数 \(\pi_D (b_h)\) 是关于 \(b_h\) 的凹函数，当 \(4k(t_e + t_h) - \beta^2 > 0\) 时，渠道商利润函数 \(\pi_D (b_h, e)\) 是关于 \(b_h\) 和 \(e\) 的联合凹函数。利用逆推法求得服务努力程度及线下、线上渠道回收价 (令 \(B = 4k(t_e + t_h) - \beta^2 > 0\)):

\[e'' = \beta(2t_e + t_h) / B, \quad b_h'' = \left( 2k(t_e + t_h)(t_h + 2(t_e + \Delta(\varphi - 1))) - \beta^2(\varphi - 1) \right) / B(\varphi - 1),\]
\[b_h'' = \left( \beta^2(\Delta - t_e - t_h)(1 - \varphi) - k(t_e + t_h)(t_h(\varphi - 3) - 2(2\Delta(\varphi - 1) + t_e(1 + \varphi))) \right) / B(\varphi - 1).\]

此时，线下渠道和线上渠道的回收量分别为:
\[D_h'' = k(2t_e + t_h) / B, \quad D_1'' = (k(2t_e + 3t_h) - \beta^2) / B.\]

回收平台和渠道商的利润分别为:
\[\pi_D'' = (t_e + t_h)\left( 2k\beta^2(2t_e + t_h(3 - 2\varphi)) + \beta^2(\varphi - 1) + k^2((\varphi - 9)t_h^2 - 12t_e t_h(1 + \varphi) - 4t_e^2(1 + 3\varphi)) \right) / (\varphi - 1) B^2,\]
\[\pi_H'' = k(2t_e + t_h)^2 / 2B.\]
结论 2 回收平台总能依据渠道商的决策制定出对自己收益最优的决策，而渠道商能否实现最优，将受到用户偏好成本之和的制约，当且仅当 $(t_a + t_R) > \beta^2/4k$ 时，才能实现最优决策。

回收平台不受用户偏好成本之和的影响，享受到后动优势，但是较高的用户偏好成本之和才对渠道商有利。因此，渠道商作为主导者要清晰的了解市场消费者偏好成本情况，使得外界环境对自己有利；平台只要根据渠道商的决策做出相应的决策。

3.3 两参与者地位均等的 Nash 博弈

假设渠道商与平台势力相当，利润函数如下：
平台利润函数：
$$\pi_a = \varphi(D_a) + \Delta(D_a),$$

渠道商利润函数：
$$\pi_R = (1-\varphi)D_R - \frac{k \epsilon^2}{2}$$

当 $2(k(t_a + t_R) - \beta^2(1-\varphi)) > 2$ 时，平台利润函数 $\pi_a = (b_1, e)$ 是关于 $b_1$ 的凹函数。渠道商利润函数 $\pi_R = (b_1)$ 是关于 $b_1$ 的凹函数。通过求导求得服务努力程度及线下、线上渠道回收价（令 $C = k(t_a + t_R)(\varphi - 3) - \beta^2(1-\varphi) < 0 ）$，
$$\epsilon = \beta(2t_a + t_R)(\varphi - 1)/C,\quad b_1 = \left(\frac{k(t_a + t_R)}{(t_a + 2t_R + \Delta(\varphi - 3)) - \beta^2\Delta(\varphi - 1))}{C}\right),$$
$$b_1^* = \left(\frac{\beta^2(\Delta - t_a - t_R)(1-\varphi) + k(t_a + t_R)(2t_R + \Delta(\varphi - 3) + t_a(1+\varphi))}{C}\right).$$

此时，线下渠道和线上渠道回收量分别为：
$$D_a^N = -k(2t_a + t_R)/C,\quad D_R^N = \left(\frac{\beta^2(1-\varphi) + k(t_a(\varphi - 2) - t_a(1-\varphi))}{C}\right).$$

回收平台和渠道商的利润分别为：
$$\pi_a^N = -\left(t_a + t_R\right)^2(2t_a + t_R)(\varphi - 3) - \beta^2(\varphi - 3)^2/2,$$
$$\pi_R^N = -\left(k(\varphi - 1)\right)(2t_a + t_R)^2\left(2(t_a + t_R) + \beta(2\varphi - 1)\right)/2C^2.$$

结论 3 回收平台总能依据渠道商的决策制定出对自己收益最优的决策，而渠道商能否实现最优，将受到用户偏好成本之和的制约，当且仅当 $(t_a + t_R) > T_i$ 时，才能实现最优决策。与结论 2 类似，不管用户对两种渠道的偏好如何，尽管渠道商的地位不低于回收平台，但其最优收益的实现必将受到用户偏好成本之和的影响。

综合结论 1、结论 2 和结论 3，供应链参与者最优利润的实现对用户偏好成本有一定的要求，其要求程度与供应链参与者地位有关，供应链主导者对偏好成本的要求更高一些。因此，主导者会选择在成本稍高的三四线城市开展手机回收业务，跟随者只要根据主导者的决策进行决策即可。虽然在平台占主导地位时，渠道商对消费者的偏好成本有一定要求，但是平台的相关措施已经满足了这一要求，渠道商不必考虑这一因素。

4. 不同供应链地位下的决策结果分析

结论 4 平台主导下：
（1）渠道商的努力程度 $e$ 随着线下渠道偏好成本 $t_a$ 的增加而增大；
（2）当 $t_a > \beta^2(1-\varphi)/k(2-\varphi)$ 时，渠道商的努力程度 $e$ 随着线上渠道偏好成本 $t_R$ 的增加而增大。
结论 5  道商主导：
（1）渠道商的努力程度 $e$ 随着线下渠道偏好成本 $t_H$ 的增加而增大；
（2）当 $t_H > \beta^2/2k$ 时，渠道商的努力程度 $e$ 随着线上渠道偏好成本 $t_A$ 的增加而增大；当 $0 < t_H < \beta^2/2k$ 时，渠道商的努力程度 $e$ 随着线上渠道偏好成本 $t_A$ 的增加而减小。

结论 6  地位均等：
（1）渠道商的努力程度 $e$ 随着线下渠道偏好成本 $t_H$ 的增加而增大；
（2）当 $t_H > k(3-\phi)/2\beta(1-\phi)$ 时，渠道商的努力程度 $e$ 随着线上渠道偏好成本 $t_A$ 的增加而增大；当 $0 < t_H < k(3-\phi)/2\beta(1-\phi)$ 时，渠道商的努力程度 $e$ 随着线上渠道偏好成本 $t_A$ 的增加而减小。

综合结论 4、结论 5 和结论 6 得出，渠道商提供服务就是解决线下回收手机难的问题，因此只要用户选择线下渠道回收手机的难度增加，渠道商就会采取相关措施提高服务努力程度降低回收难度，不受线上回收手机难易程度影响。例如，渠道商在各大商场周围建立店面，用户在逛商场的同时就会顺便回收手机，这种行为在一、二线城市和三、四线城市都有发生。

线下渠道回收手机难度较大时，若线上渠道回收的难度增加，渠道商就会提高服务努力程度；这是因为线上渠道难度增加，渠道商通过提高服务能够实现吸引用户的目的。线下渠道回收手机难度较小时，若线上渠道回收的难度增加，渠道商就会降低服务努力程度；这是因为线下回收难度小，具有竞争优势，当线上成本增大时强化了这种优势，渠道商就会适当减小服务成本。然而，不同供应链地位下，渠道商对线下渠道回收手机难易的标准不同。

结论 7 （1）平台主导下，用户倾向于选择线下渠道回收手机，线下渠道的回收量大于线上渠道；
（2）渠道商主导下，用户的选择受线下渠道偏好成本的影响：当成本偏大（$t_H > \beta^2/2k$）时，用户选择线上渠道；当成本偏小（$0 < t_H < \beta^2/2k$）时，用户选择线下渠道。

（3）地位均等下，线上、线下渠道偏好成本同时影响用户的选择，当满足一定条件（$t_H = \beta^2/k + (1+\phi)t_A/(1-\phi)$）时，用户对两种渠道的偏好相同。

5、数值分析

为了更好地分析模型，下面对研究结果进行数值分析，包括两个部分：不同供应链地位下的各种利润对比分析、用户偏好成本的影响分析。

5.1 不同供应链地位下的对比分析

回望平台、渠道商及整个供应链的利润受供应链参与者地位的影响，设置具体参数：$t_A = 1/5$, $t_H = 1/2$, $k = 1$, $\beta = 3/4$, $\Delta = 2$, 消费者福利（用户回收手机获得的收益）与社会福利也是供应链效益的一种表现形式，假设消费者福利是单位回收价格与回收量的乘机，则消费者福利函数为：$CW = h_AD_A + h_DA_A$, 社会福利是供应链利润与消费者福利之和，则福利函数为：$SW = \pi_C + \pi_H + CW$. 比较不同供应链地位下，回收平台、渠道商、供应链利润及消费者、社会福利的大小，如图 3 所示。
图3 权力结构对利润及消费者、社会福利的影响

由图3得出，平台利润、供应链利润在渠道商主导时最大，在地位均等时最小；渠道商利润在地位均等时最小，当平台共享比例在某一范围时平台主导时最大，消费者福利在地位均等时最大，在渠道商主导时最小；地位均等时的社会福利总是大于平台主导时的社会福利，平台与渠道商地位均等时，线上渠道与线下渠道竞争激烈，导致平台、渠道商以及供应链利润最小；然而竞争的回收市场环境对用户有利，此时用户获得最大的福利。此外，此供应链具有明显的后动优势，各参与者处于追随者地位时的利润大于处于主导者时的利润大于地位均等时的利润。

进一步探究平台共享比例对各收益的影响，（1）平台主导：随着共享比例增加，平台利润增加，渠道商利润先增加后减少，但是减少量低于平台利润增加量，因此供应链利润增加；消费者福利减少，但是减少量低于供应链利润增加量，因此社会福利增加。 （2）渠道商主导：随着共享比例增加，平台、供应链利润增加，消费者福利减少，渠道商利润和社会福利不变。由此看出，平台利润的增加没有导致渠道商利润的减少，而是由渠道商转移到用户身上了。 （3）地位均等：渠道商利润随着共享比例增加而减少，其他变化趋势与平台主导时相同。

政府关注社会福利，当平台与渠道商地位均等、共享比例偏大时社会福利最大，因此，政府可采取税收、补贴相关政策，使得平台与渠道商实力相当、均衡发展，并且干预共享比例的决策，只是消费者福利会减少，但减幅不大。

5.2 用户偏好成本的影响分析

设置参数：$k = 1, \beta = 3/4, \phi = 1/5, \Delta = 2$，分析用户偏好成本对回收价及渠道商服务努力程度的影响，具体结果如图4.a、图4.b、图4.c所示：
结论 4、结论 5 和结论 6 分别由图 4.a、图 4.b、图 4.c 的第一个图得到了验证。

结论 8（1）当线上偏好成本 $t_a$ 偏小时，线下回收价 $b_x$ 随着线下偏好成本 $t_h$ 的增加先提高后降低；线上偏好成本 $t_a$ 偏大时，线下回收价 $b_x$ 随着线下偏好成本 $t_h$ 的增加而降低。降低回收价意味着放弃这部分市场，当线上偏好成本小、线下偏好成本大（如一线城市）时，线上渠道的竞争优势明显强于线下渠道，渠道商会主动放弃；当线上偏好成本大、线下偏好成本大（如偏远落后地区）时，渠道商也会主动放弃，主要是因为投入大，收效甚微。

结果 9（1）渠道商主导和地位均等时，线上回收价 $b_x$ 随着线上偏好成本 $t_a$ 的增加而降低，也随着线下偏好成本 $t_h$ 的增加而降低。此时，平台地位不高于渠道商，只要偏好成本增加就会放弃此市场。

（2）平台主导时，当线下偏好成本 $t_h$ 偏小时，线上回收价 $b_x$ 随着线上偏好成本 $t_a$ 的增加先降低后提高再降低；当线下偏好成本 $t_h$ 偏大时，线上回收价 $b_x$ 随着线上偏好成本 $t_a$ 的增加而减小。当线下偏好成本小、线上偏好成本大（如普通县城）时，线下渠道的竞争优势明显强于线上渠道，主动让步与线下渠道；平台也会主动放弃线上、线下偏好成本都大的偏远落后地区。

综合结论 8 和结论 9，回收价格偏好成本的增加而减小的情况较多，偏远落后地区手机回收市场仍是空白。偏好成本是可控因素，因此，政府加大补贴力度，平台与渠道商采取相关措施降低用户的偏好成本（例如，线上回收界面清晰简单，减少回收流程操作步骤等），并提高回收价格，开发偏远落后地区的回收市场。
5．结论

本文借鉴零售双渠道模型，从回收平台视角出发，将回收双渠道作为研究对象，同时考虑用户对回收渠道的不同偏好，构建了基于用户偏好的双渠道回收决策模型。研究结果表明：（1）供应链两参与者要想实现利润最大化对偏好成本有一定的要求，并且主导者对偏好成本的要求更高一些，倾向于选择在三四线城市回收手机。 （2）渠道商提供的直接目的就是解决线下回收手机难的问题，只要线下回收手机的难度增加，就会提高服务努力程度降低回收难度；当线上回收手机难度变化时，渠道商根据竞争优势选择不同的服务策略。 （3）政府关注社会福利，需采取税收、补贴等相关政策，并干预平台收益共享比例的决策，使得平台与渠道商实力相当，均衡发展，实现社会福利最大化的目的。（4）为了促进偏远落后地区的手机回收，政府要加大补贴力度，鼓励平台与渠道商采取相关措施降低这一地区用户的偏好成本（例如，线上回收界面清晰简单，减少回收流程操作步骤等），并提高回收价格。

本文的研究还存在一定的局限性，如本文假设用户回收偏好服从简单的均匀分布，现实中的用户偏好可能会服从别的分布。因此，今后可以在本文的基础上做进一步的研究。

参考文献


[4] Li Y J， Xu F C， Zhao X K． Governance mechanisms of dual-channel reverse supply chains with informal collection channel [J]． Journal of Cleaner Production． 2017， 155:125-140．


证明：

结论 1 平台主导，式(6)的海森矩阵

\[
H = \begin{vmatrix}
\frac{2(1-\varphi)}{t_s+t_H} & -\beta(1-\varphi) \\
\beta(1-\varphi) & -k \\
t_s+t_H & t_s+t_H
\end{vmatrix} = 2k(t_s+t_H) - \beta^2(1-\varphi) > 0
\]

式(5) \(\frac{\partial^2 \pi}{\partial b^2} < 0\)，即 \(2k(t_s+t_H)(2-\varphi) - \beta^2(1-\varphi) > 0\)。

结论 2 与结论 3 证明类似。

结论 4

（1）\(\frac{\partial c}{\partial t_H} < 0\)；

（2）当 \(t_H > \frac{\beta^2(1-\varphi)}{k(2-\varphi)}\)， \(\frac{\partial c}{\partial t_s} > 0\)；当 \(t_H < \frac{\beta^2(1-\varphi)}{k(2-\varphi)}\)， \(\frac{\partial c}{\partial t_s} < 0\)。

结论 5 与结论 6 证明类似。

结论 7

（1）\(D_s - D_H < 0\)；

（2）当 \(t_H > \beta^2/2k\) 时，\(D_s - D_H > 0\)；当 \(0 < t_H < \beta^2/2k\) 时，\(D_s - D_H < 0\)；

（3）当 \(t_H = \beta^2/k + (1+\varphi)t_s/(1-\varphi)\) 时，\(D_s - D_H = 0\)。
Track 10: Marketing and Brand Management
An Integrative Framework for Developing China’s Nation Brand

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Topic: Branding & Brand Management in China and other Emerging Markets

Keywords: Nation branding, city branding, corporate branding, soft power

Abstract:

Nation branding is a relatively new but growing area of research. Simon Anholt first coined the term “nation branding” in 1996. Fan (2005, p.6) defined nation branding as “applying branding and marketing communications techniques to promote a nation’s image.” With an improving nation image, a nation could attract more investment capital, tourists, and talented workforce, increase exports, and build cultural and political influence in the world. In an increasingly global competition, a growing number of nations are adopting nation branding strategies such as United Kingdom, Japan, South Korea, Singapore, South Africa, Australia, New Zealand, and most European countries.

China’s global economic power has significantly risen. According to a Pew report (2014), global views of China is positive. However, ratings varies significantly across nations and regions. It is essential for this nation to improve its nation image. This study aims to propose an integrative framework for China’s nation branding.

Theoretical and Practical Background

Nation Branding and Soft Power

Soft power is defined as “the ability to affect others to obtain the outcomes one wants through attraction rather than coercion or payment” (Nye, 2008, p. 94,). A country builds its soft power based on its resources, including: culture, value, and policies (Nye, 2008). Potter (2003) conceptualized nation brands as a form of national soft power. Anholt (2008, p. 23) emphasized the role of nation branding as “a component of national policy, never as a ‘campaign’ that is separate from planning, governance or economic development”. Nation branding will not be successful without government-led collaborative efforts. Nation branding can be used as a strategic tool to define and promote a country’s resources (e.g., culture, value, policies) to domestic and international audience, leading to enhanced soft power.

With the deep rise of China’s military and economic power, Chinese government is aiming to build China’s global soft power. In 2014, Xi stressed: "We should increase China's soft power, give a good Chinese narrative, and better communicate China's message to the world" (Xinhuanet, 2014). Under Xi, China has launched new initiatives such as “the Chinese Dream”, and “The Belt And Road Initiative”. We suggest that China’s national government should lead a synergetic effort of soft power building and nation branding to promote national image.

Nation branding and Country of Origin (COO)

The COO (country-of-origin) effect is defined as the impact of a person’s perception of a country on this person’s evaluation of the country’s products (e.g., Han, 1989, 1990; Larouche et al, 2005). The COO effect has been found to be significantly associated with product categories: French perfume, Scotch Whisky, Swiss watches, and Japanese technology.

In recent years, a growing number of studies have found that the COO effect may work in a reverse direction: a person’s perception of a country’s products may influence this
person’s perception of this country (White, 2012). Take Japan as an example. Consumers perceive Japan as a country with hi-tech image. Therefore, consumers may perceive that products made in Japan have high credibility in technology. In a reverse direction, consumers’ positive perception of products made in Japan may enhance Japan’s country image.

Global consumers have a negative "stereotype" about products made in China: cheap and low quality. This negative COO could influence China’s national image. To improve China’s nation image, Chinese enterprises (especially MNEs) should participate in the nation branding initiative under the leadership of China’s national government. Chinese government emphasized the development of domestic brands in the 13th Five-Year Plan for Economic and Social development (2017, p 62).

"In order to make China a country strong on quality, we will work to see that enterprise quality management is strengthened, the quality of products is improved and brands are elevated, key generic technology problems affecting product quality improvement are addressed, legal protections for trademarks and brands are strengthened, and a number of competitive, well-known brands are created." (source: http://en.ndrc.gov.cn)

Nation branding and City Branding

City brands are building blocks of nation brands. According to a survey by the United Nations (2014), more than half of world’s population lives in urban areas. According to a study by the Brookings Institute and JP Morgan Chase (2016), the world’s 123 largest metro areas with about one-eighth of the global population, generate nearly one-third of the global economic output.

City branding, a young research area, has attracted a growing number of researchers in marketing. City image formulation and communication is a crucial part of city branding. Kavaratzis (2004) proposed a framework of city branding with a multitude of stakeholders’ groups involved. This framework demonstrates all activities in the development of a city (e.g., economic, cultural, social, tourist development) with an ultimate goal of improving residents’ quality of life.

China has six megacities of 10 million people and more than 100 cities of more than one million people. One of China’s premier megacities has long been Shanghai. But, in recent years, Shenzhen has become a tech hub, and Hangzhou, where Alibaba is based, is a rising star in the digital economy. In 2017, The Chinese government announced the construction of a brand new designated economic area: Xiong’an. China intends to create a new Silicon Valley in this area, which is located 130 kilometres between Tianjin and Beijing.

Case Studies

Since the area of our research is relatively less known, we will use ground theory approach to building a framework of China’s nation branding. According to Eisenhardt (1989), richer theories could be generated by multiple case studies instead of single case studies. In this study, we will propose a framework of China’s nation branding by examining cases of South Korea, Singapore, Spain, and Japan.

An Integrative Framework for China’s Nation Branding

People are storytellers. They tell narratives about their experiences in the country, and the meanings that these experiences have for their lives. A nation branding approach emphasizes that all the stakeholders tell stories of the country to the world. A nation branding approach will engage all the actors/stakeholders (e.g., citizens, businesses, government agencies) in the country and take a joint effort to promote the country’s image to the world by telling their narratives.
Further, from the branding point of view, positioning refers to the place that a brand occupies in the mind of the customer and how it is distinguished from products from competitors. To tell a good story about the country, all the stakeholders should understand the core value of the country—nation identity. There is a stream of nation identity literature that focuses on invented tradition. Hobsbawm distinguishes "between the adaptation of genuine old traditions to new situations and the conscious invention of essentially new tradition to meet new needs". Smith (1991) wrote about invented tradition, cultural narratives, and nation identity. China’s new nation identity should be a combination of tradition and innovation.

Lastly, at the Internet age, information spread fast and globally. Anyone with access to the internet is able to create, send, and receive information. That means, any citizen, business, non-profit organization, and government official and agency may send China-related stories to the world anytime anywhere. China should build its nation image (or soft power) by identifying, refining, and promoting its resources with the efforts from all citizens, communities, businesses and organizations—a bottom-up nation branding approach.

This integrative framework is constructed at two levels: top level—nation branding; secondary level—corporate branding (COO) and city branding. The foundation of this framework is all stakeholders’ understanding of China’s nation identity: China’s core competitive advantage—tradition + innovation.

An Integrative Framework for China’s Nation Branding
What really matters? A triumph of brand extension: Evidence from Engro Corporation

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Abstract

The intent of this study is twofold; firstly, to find out the different elements of the brand extension in different category product that influences it, secondly, evaluate the impact of these dimensions on brand extension. The study considered Engro as parent brand. The targeted brand was Engro Foods. A total of two hundred valid responses were collected from Lahore and Sahiwal through self-administered survey. Reliability was tested by using Cronbach’s alpha. The study used descriptive statistics; correlation analysis and regression analysis have been carried out by using SPSS software. Correlation results indicate that all variables; similarity, perceived risk, brand reputation and innovativeness were positively correlated with evaluation of brand extensions. But “brand reputation” was strongly correlated with the evaluation of extensions as compared to other variables. As far as regression analysis is concerned adjusted R² indicates that 48.0% of “Engro” extension was affected by independent variable. The mean score highlighted that “Engro extension” was positively evaluated by customers and have positive attitude towards them on all the variables. The study showed due to strong reputation of parent brand, the Engro unrelated category extension “Engro Foods” was more favorably evaluated by customers.

Keywords: Brand Extension, brand reputation, perceived risk

Introduction

Brand extension is a new way of managing the brand in order to diversify the risk & enhance the value of brand by developing a house of brands. This is most widely used strategy by the companies for new product developments. Companies prefer to extend their brand than introduce a new brand in order to reduce the cost & risk that is associated with launching a new brand. Companies used parent brand as leverage for new product launching that may increase the likelihood of its acceptance. Companies use the image of existing or established brand name when enters in a new market or launching a new product like Virgin Group. Virgin group took a start from retailing and published a music than later on by using the previous
image of brand they entered in new markets and worked in diverse product categories, they moved from music to cola drink, to wedding service and further to airlines.

Managers assume they can exploit the equity of a well known brand when entering new markets, capitalizing on recognition, goodwill, and any positive associations. Do brand extensions influenced by some factors? Yes, factors like perceived risk, perceived similarity, parent brand reputation, consumer innovativeness influence success of brand extensions. What extent these factors influence the consumer evaluation of brand extensions? Greater the similarity of extension with parent brand or categorical fit, well-recognized parent brand, high perceived risk and innovators more positively evaluate the brand extension.

This study is quantitative in nature for which primary data was collected by using non-probability sampling with the help of using self-administered questionnaire. For the sake of data analysis study used SPSS software. The result was interpreted and conclusion was drawn.

**Literature Review**

Keller (2003) defined brand extension as firm uses established brand to introduce a new product. Companies may enter in different product categories with the same brand name in order to leverage the new products. A parent brand name having good reputation facilitates the acceptance of new product (Keller, 2003). Meanwhile, it minimizes the perceived risk associated by customers with new product developments and also reduces the marketing expenses of companies because customers have existing knowledge or well familiar with parent brand (Keller, 2003; Aaker & Keller, 1990). Launching a new product in same parent brand category increase the likelihood of success while in unrelated category risk of failure is involved (Shakeel et.al, 2011). Greater the similarity between the parent and extended category, it increases the likelihood of transference of positive (or negative) affect on the extended brand. Moreover, consumers recognized higher brand personality transferred when a direct naming strategy is used or when the parent brand extends to a high perceived fit product (similar product category). Furthermore, transfer of brand personality is low in low extended fit (unrelated product). Extensions can be used parent brand as leverage but chances of success would be greater for categorical fit product (Angelina et.al, 2012).

Lot of the studies has been found on factors influencing successful brand extensions in different context across different sectors. Park & et al, (1991) conducted a study by considering two factors i-e product feature similarity and brand concept consistency that distinguish between successful and unsuccessful brand extensions. Results indicated that consumer not only get the information about the similarity of the new product features with the original brand, but also take into account consistency between extension and parent brand. Consumers respond positively to such extensions where there is high brand concept consistency and more product feature similarity between extended product and the original brand.

Muinuddin et.al (2009) conducted a study in Bangladesh with the intention of examining the factors contributing towards successful brand extensions. Study used factor analysis, ANOVA for data analysis collected through questionnaire. The findings of the study revealed two factors that influence the consumer perception towards brand extension are similarity and brand affect between original and extended product. Moreover, study also found when consumer knowledge of the brands is high; association with brand might lead the effects of brand affect and category similarity.

Three studies have been found on factors affecting brand extensions in FMCG industry. Franziska et.al (2006) conducted a study in Germany with an aim of finding the drivers of extension success in FMCG industry. The study found the main driver of brand extension success is fit between extended product and the parent brand, followed by marketing support, parent-brand sincerity, acceptance of retailer, and experience of parent brand.
Sarwat Afzal (2013) conducted a study in Pakistan with addition of some factors with an aim of investigating the effect of brand reputation, perceived risk, similarity and consumer innovativeness on the success of brand extension in FMCG products by considering the hypothetical extensions. Researcher has been used multiple regression and correlation analysis in the study. The findings of the study indicated reputation of parent brand and consumers innovativeness have significant impact on success of brand extension. Moreover, the study found the interaction of perceived similarity is positive and significant in related FMCG goods.

While, Hem (2011) conducted a study in Norway with an aim of investigating the impact of brand reputation, perceived risk, consumer innovativeness and similarity on the success of brand extension in three sectors i.e service sector, FMCG and in durable goods. The study has been used descriptive statistics, correlation analysis and regression analysis. The results indicate that image or reputation of parent brand has been found a critical factor in the success of the extension. Moreover, the study found greater the similarity the extension is with the parent brand widely it is accepted by the consumers and consumers who are innovative they positively respond to extension in services sector as compared to durable goods and FMCG. Whereas, study found that perceived risk increase the acceptability of extensions for durable goods and services brands. Extension in a related category is enthusiastically accepted by the customer.

Sundar (2012) conducted a study in India with an aim of examining the factors (parent brand core value, similarity, quality of extension products and brand reputation) responsible for brand extensions and the role of advertisement in the success. Collected data through questionnaire was analysed by using simple percentage method and chi-square. Findings of the study highlighted that perceived similarity and reputation of the parent brand are crucial factor in the evaluation of services brand extensions and advertisement plays a vital role in creating awareness, distinguish one seller products from the other and meanwhile emotionally connect the consumers with brand.

Only few studies have been found on factors influencing successful brand extensions in Pakistan context. This study is not based on hypothetical extensions like previous study (Sarwat Afzal, 2013) done in Pakistan; the current study is based on extension already done and strives to find out up to what extent the investigated factors influenced the related or unrelated extension.

Problem Statement

In order to reduce the risk or cost involved with launching a new product companies extend their brand than launching a new brand. Companies exploit parent brand equity to leverage the new product (Shakeel et.al, 2011), but not all the extensions in related or unrelated category is successful that are leveraged by parent brand. The problem is which factors influence the consumer’s perception of evaluation of brand extensions. This study strived to find out which factors are crucial for consumer while evaluating extensions or play a vital role in the success of brand extensions.

Objectives of the study

Objectives of the present study are:

- To analyze the factors those influencing successful brand extensions.
- To what extent these factors influencing the consumer evaluation of brand extensions.

Variables

Perceived risk
Dowling and Staelin (1994) defined perceived risk as consumer perception of uncertainty and unfavorable consequences from the purchase and use of new product. A brand which extends in different product category from original brand influence the consumer perception of risk. The widely used way of reducing the risk is to trust on parent brand (Derbaix, 1983). A well-recognized brand is a risk reliever and increases the likelihood of product testing (Chernatony et. al, 2003).

Similarity

The extent to which consumer perceived that extension is similar to parent brand (Smith and Park, 1992). Numerous studies found that the greater the similarity between the original and extended category, the higher the chances of transference of positive (or negative) affect to the extended brand (Boush, et al. 1987; Aaker and Keller 1990; Park, et al. 1991; Boush and Loken 1991; Dacin and Smith 1994; Herr, et al. 1996; Keller and Sood 2001/2). Moreover, consumers recognized high brand personality transferred when a direct naming strategy is used or when the parent brand extends to a high perceived fit product (similar product category). Furthermore, transfer of brand personality is low in low extended fit (unrelated product).

Brand Reputation

Brand reputation has been defined in terms of consumer perception “quality related with a brand” (Aaker and Keller 1990; Barone et.al, 2000). Previous studies found that brand perceived to be high in quality can be extended further and is positively evaluated by consumers (Aaker and Keller 1990; Keller and Aaker 1992; Sunde and Brodie 1993; Dacin and Smith 1994; Bottomley and Doyle 1996). Parent brand perceived to be high in quality, increase the chances of acceptability and success of extension, on the other hand brand perceived to be low in quality hurting the extensions (Aaker and Keller 1990).

Consumer innovativeness

Openness to new ideas and willing to purchase new products and services is one of the human personality traits. Rogers (1993) in diffusion of innovation inspected the significance of innovativeness. Only few studies have been done on consumer evaluation of brand extensions. According to Stenkamp and Baumgartner (1992) consumers who are high on dimension of innovativeness are more daring and willing to try new products. As innovative consumers are risk takers than those who are not (Chernatony et. al., 2003). According to Rogers (1993) the prominent feature of innovators is that they feel comfort in risk taking.

Theoretical Framework

![Research Model](image)
Source: Chernatony et.al (2003)

In the research model perceived risk, similarity, brand, brand reputation & consumer innovativeness are being taken as independent variable while brand extension is being taken as dependent variable.

Hypotheses

On the bases of literature review following hypothesis have been developed:

**H1:** Extensions in the similar category with original brand more will be the positive evaluation of brand extension than less categorical fit.

**H2:** The higher the perceived risk associated with the extension category, the more positive will be evaluations of extended brand.

**H3:** The higher the perceived reputations of the parent brand, the more favorable should be evaluations of the brand extensions.

**H4:** The higher the consumers’ innovativeness more will be the positive evaluations of extended brands.

Research Methodology:

**Target Population & Sampling Technique**

The study considered Lahore and Sahiwal as target population. Sample was drawn from the population. Respondents took part in this study were 200.

**Sampling Technique**

The current study used non probability sampling technique for the sake of data collection. Data were collected on convenient basis with the help of self administered questionnaire. Questionnaire was adopted from previous study in order to carry out the survey.

**Data Analyses and Discussion**

The study focused on evaluating the factors influencing successful brand extensions. Engro was targeted for this study. A total of two Hundred responses were received for this study. Data were collected (N=200) from Lahore and Sahiwal using questionnaire on convenient basis by using non- probability sampling technique. Closed-ended questions using 5-point Likert type scale (Strongly Disagree=1, Strongly Agree=5), were adopted as a form of questions in the questionnaire. The first part of the questionnaire contained demographic information of the respondents and second section was based on five variables, a total of sixteen questions were included in order to evaluate to what extent factors influence the success of Engro extension in unrelated category. Finally, correlation, regression and descriptive statistics through SPSS was used to analyze the collected data.

**Findings**

**Reliability Scale**

The tables below are showing the reliability of the scale. As reliability of the items was tested, and all the variables had a Cronbach Alpha value greater than .7 which showed that the scale was reliable and there was consistency in the responses.

**Items reliability**
**Collinearity Test**

The table below revealed that tolerance level (> or equivalent to 0.10) and VIF (below 10) meet the rule of thumb, which means no multicollinearity exists between variables.

<table>
<thead>
<tr>
<th>Sr.no</th>
<th>Variables</th>
<th>Cronbach Alpha Engro</th>
<th>No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perceived risk</td>
<td>.743</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Similarity</td>
<td>.845</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Brand reputation</td>
<td>.789</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>innovativeness</td>
<td>.752</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Brand extension</td>
<td>.825</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variables</th>
<th>Collinearity statistics (Engro)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>Similarity</td>
<td>.719</td>
</tr>
<tr>
<td>Perceived risk</td>
<td>.709</td>
</tr>
<tr>
<td>Brand reputation</td>
<td>.530</td>
</tr>
<tr>
<td>Consumer innovativeness</td>
<td>.733</td>
</tr>
</tbody>
</table>

**Parent brand and their extensions**

<table>
<thead>
<tr>
<th>Parent Brand</th>
<th>Engro Fertilizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Extension</td>
<td>● Foods</td>
</tr>
</tbody>
</table>

**Descriptive statistics**

The respondents were not the same in terms of gender. The female respondents have more strength (N=109) than male (N=91) respondents. The age group of 18-30 years had a higher representation (43%) than the other age group of 31-50 years and 51 or above.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>91</td>
<td>45.5</td>
</tr>
<tr>
<td>Female</td>
<td>109</td>
<td>54.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>18-30</td>
<td>86</td>
<td>43</td>
</tr>
<tr>
<td>31-50</td>
<td>69</td>
<td>34.5</td>
</tr>
<tr>
<td>51 or above</td>
<td>45</td>
<td>22.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>
The table shows mean score as well as standard deviation. An important observation was that subjects have positive attitude towards Engro extension with a mean score of 3.7533 and this happened due to strong reputation of Engro with a mean score of 3.9437 and customers are highly innovative with a high mean score 4.0590. Another observation was that customers perceived that Engro extension was not of similar categorical fit; that’s why it was least on mean score 3.5667 than all other variables.

**Regression Analysis**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Engro Foods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standardized beta coefficients</td>
</tr>
<tr>
<td>Similarity</td>
<td>.29***</td>
</tr>
<tr>
<td>Perceived risk</td>
<td>.17**</td>
</tr>
<tr>
<td>Brand reputation</td>
<td>.326***</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>.109*</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.480</td>
</tr>
</tbody>
</table>

*  p < 0.10  
** p <0.05  
*** p <0.01

The adjusted R-square in the table shows that the dependent variable, brand extension (Engro Foods) was affected by 48.0% due to independent variables i.e similarity, perceived risk, brand reputation and innovativeness. The standardized coefficient indicates that how much change occurs in dependent variable due to change in predictor variable. Among all the variables brand reputation has greater impact on the evaluation of brand (engro β = .326, p=.000) and innovativeness has least impact on brand evaluation (engro β =.109, p <0.10).

**Correlation Analysis**

** P < 0.01
Hypotheses Testing

Hypothesis 1

The correlation result shows the positive relationship between similarity of less categorical fit and extension of Engro in foods ($r = .556$, $p < 0.01$). In the case of Engro, customers more favorably evaluated less categorical fit product. Therefore, it does not support H1.

Hypothesis 2

The correlation results reveal a positive association between perceived risk and overall evaluation of Engro ($r = .480$, $p < 0.01$). As perceived risk increases in new extension categories, yet customers evaluated the Engro extension more favorably because they have trust on parent brand. A well recognized brand is a risk reliever and increases the chances of product testing. Therefore, H2 is supported.

Hypothesis 3

The correlation results highlights a positive relationship between brand reputation and overall evaluation of Engro ($r = .616$, $p < 0.01$). Customers perceived Engro extended products conveyed the same impression as parent brand and due to this, they associate positive things with extended products. Therefore, H3 is accepted based on this, well reputed brand was positively evaluated by customers.

Hypothesis 4

The correlation results shows positive association between consumer innovativeness and overall evaluation of Engro Foods ($r = .422$, $p < 0.01$). Customers seeking new ideas, novelty, surprises and new experience more favorably evaluate Engro extension (perishable goods). Therefore, H4 is accepted based on this, innovative customers positively evaluate the extension.

Conclusion and Discussion

The present study increases our understanding about brand extensions. The success of brand extension depends upon numerous factors. The present study highlighted the factors that have an influence on evaluation of brand extension by considering Engro. The mean score revealed that Engro Foods is positively evaluated on all variables by customers and they have positive attitude towards its extensions. The correlation results depict all the predictor variables are positively correlated with brand extension and these variables play a crucial role in the evaluation of brand extensions. Among all the variables brand reputation has wider impact on the evaluation of brand as proved by regression analysis.

The study has proven that it not always the case, that parent brand increase the acceptability chances of similar categorical fit, but strong reputation of parent brand also increase the likelihood of diverse category extension. Two things comes under consideration as parent brand used as leverage in order to enter in related or unrelated category i-e recognition of parent brand and customer trust on parent. Engro Foods used their parent brand as leverage for its extension and entered in diverse category from fertilizer to foods, due to having strong reputation in market and customers trust on Engro, extension is widely accepted by the customers.

References


[51] langlotz, h. (2008). what are the chances and risk of brand extension strategies and what are crucial success factors for brand extension. 1-18.


Consumers purchase decision towards Private Label Brands: An Empirical Investigation for Select Indian Retailers

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Abstract

The study identifies the key attributes considered by Indian consumers while purchasing Private label Brand (PLBs). It also studies the impact of identified psychographic and demographic attributes of consumers towards PLB purchase decision. The data was collected from 550 respondents through structure questionnaire from the top Indian retailers in Food and grocery and clothing & apparel segment. Initially an Exploratory Factory analysis (EFA) was performed to identify psychographic attributes from consumer survey and different hypothesis framed was tested through multiple regression analysis and Analysis of Variance (ANOVA). The results reveals Brand Consciousness, Price Consciousness, Quality Variability, Store Loyalty and Consumers Self Perception emerged as key psychological attributes followed by Age and Income as the most Significant demographic attributes. Based on the findings PLB retailers were suggested to design an appropriate strategy to capture the market share of Private label brands in Indian organised retail.

Key words – Private labels, Private label brands (PLBs), Store Brands, Consumer purchase decision, psychographic variables, demographic variables, Exploratory Factor Analysis, Multiple regression Analysis(MRA) , Retailers brand, Store loyalty.

1. Introduction

In the current emerging retail market conditions private labels are win-win situation for both consumers and retailers. Consumers expect quality products at reasonable price whereas retailers are expecting higher margin, large variety of merchandise mix and higher bargaining power with their vendor. The private label growth is linked with growth of organised retailing. Retailer’s needs positive response from the consumers to produce private label products. In India retail share of private label products is around 7% compared to only 1% share of private label in china whereas in developed nations such as Europe and UK private label share is around 45% (India retailing, 2014).Observing the trend of growth of private label products across the globe Indian as an emerging economy has a enormous market potential for private label products.

Private label products are generally in house brand, store brand, own label, retailer brand or generics products. These brands are completely owned by the retailer rather than the any other producer or manufacturer. Nowadays Private label products are available in almost every food and grocery categories. According to (Baltas, 1997) private label products are produced by, or on behalf of, retailers and sold under the retailers' own name or trademark through their own outlets. Currently retailers are upcoming with private label by studying the

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consumer needs in premium product categories such as everyday value, health and wellness, and organic and ethical (Collins & Bone, 2008). In a similar way Reliance retails and Food Bazaar are offering a range of Private label products to meet various needs of consumers. The major reasons for retailers to produce private labels is expectation of additional margins as compared to leading national brand, provider wider range of product category and giving large product alternatives to their existing consumers. Nowadays retailers are using private labels to differentiate their store's product range from competitors thereby creating distinctive advantage helping the retailers to improve customer loyalty and profitability.

Consumers in the metro cities are purchasing products in different organised retail formats such as hyper market, super markets, speciality stores etc therefore it has become essential for retailers to understand the choice of consumer in various product categories and provide product alternative which will give better value for money. Consumers are very sensitive to price, however price is not only the single criteria for purchasing the products, primarily in Food & Grocery and Apparels segment of organised retail which has the largest market share of 69 percent and 8% percent (IBEF, 2016). Nowadays consumers are very cautious while they spend money in purchasing any product as they are looking value for money. As already mentioned, different retailers are producing private label as they are expecting more benefit in terms of providing product variety and increasing their profitability therefore retailers are coming up with private label brand in unique product categories which were not brought by them in their supply chain earlier. Hence it becomes important for the retailer to understand the local tastes and preferences of retail consumers by providing top quality private labels which can differentiate them from other stores and become destination stores for consumers. Indian retail is rapidly growing with annual rate of 10 percent therefore private label brand will come into maturity stage from current nascent stage in coming few years to as it can already be seen in European market with having private label penetration almost equal to leading national brands. The current study aims in exploring the key factors considered by Indian consumers in purchasing private label brands and also how socio-demographic factors are going to influence their PLB purchase decision. Current only few studies are available on consumer orientation towards private label products in India. In this light, the research will suggest the key factors considered by PLB consumers to leading Indian retailers so that they can design appropriate strategy to launch private label products in their stores to gain competitive advantage.

2. Literature Review

Consumer attitudes has drastically changed towards private label brands over last few years (Steenkamp & Dekimpe, 1997). As percentage of private label brands are increasing in shopping basket of consumers, various scholars, academician and marketers are attempting to understand and explain the behaviour of consumers’ towards private label brands (Ailawadi et al., 2008). Different academic research on private label brands has explored the various psychographic variables considered by consumers buying private label brand including the studies focusing on price factor and value consciousness (Burton et al., 1998), perceptions of quality (Hoch & Banerji, 1993), brand loyalty and store loyalty (Burton et al., 1998; Ailawadi et al., 2008), deal proneness (Burton et al., 1998; Ailawadi et al., 2001), search and risk assessment and product involvement (Batra & Sinha, 2000). Although psychographics factors are crucial for business practices many consumer focuses on socio demographics while they go for any product or services (McDonald & Dunbar, 1998). Socio-demographics is crucial for managers since it is one of the most readily available information and data is assessable which can be applied to in consumer segmentation issues (Myers, 1967; Diamantopoulos et al., 2003). Unfortunately, even though socio-demographic factors are crucial in overall managerial decision-making (Baltas, 2003), many academic studies reveals uncertain value to socio-demographic characteristics for segmenting and targeting consumers who look for private label brand (Kalyanam & Putler, 1997). Although different researchers have identified the importance of socio demographic factors (Burton et al., 1998; Batra & Sinha, 2000), the concept only briefly described in the overall methodology, analysis and interpretation. This tendency of giving less importance socio-demographic variables is puzzling as consumer while purchasing private label brands give importance to socio-demographic variables such as income, family size and
education and their purchase decisions are influenced. However, researchers have noted that the probable moderating influence of socio-demographics factors is either ignored or examined in an informal way while conducting research on private label brands (Richardson et al., 1996; Burton et al., 1998). This paper studies the relationships between psychographic factors and socio-demographic factors for exploring private label brand consumers in India. The reasons for studying the interrelationship between the impact of psychographics and socio-demographics in understanding private label consumers include the following. First, in last few years many studies (Ailawadi et al., 2001; Ailawadi et al., 2008), have not exactly identify the impact of socio-demographic variables due to the fact that consumers differ in the efforts they put into shopping (Newman & Staelin, 1972). Researchers have studied that consumers in various stages of the family life cycle make different shopping decisions on the basis of their socio demographics. Such differences are important for the marketers since they influence consumers’ response to marketing strategies (Slama & Tashchian, 1985). Second, previous studies did not analyzed how psychographics and socio demographics impact consumer decision-making processes (Hyman et al., 2010). Third, majority of studies on private label brands are conducted in developed nations US. This concern is important as many other countries have a developed significantly huge market for private labels. For instance, the UK is considered the most mature market for private label brands, since the market share of private labels is approximately 42.3 per cent (Griffiths, 2009). Consumer culture studies shows that country-specific factors are extensively dominant in developing the socio-demographic make-up of consumers and their purchase behaviour (Redding, 1990; Shukla, 2010). Hence, results based only on US consumers may not be true in other countries. Holistically, the prior observations gives a strong argument in favour of starting a new look at the moderating influence of socio-demographics and understanding of relationship between the psychographic variables and the consumers response towards private label brands.

For conducting this study it is vital to get an understanding about the evolution and concept of Private labels, their significance, and consumer preferences for brands and store image. It has been identified that (Faria, 1979) price and quality are the two most essential attributes for buy of any products and there is a direct relationship between them. A part from price, quality is another major determinant in consumer buying behavior (Hoch & Banerji, 1993). A Survey led by Private Label Manufacturers Association (PLMA), USA in 1991 uncovers different reasons of purchasing private-label brands by the shoppers. The majority of them want to purchase them due to low-prices. As indicated (Roth, 1995), an important aspect that relates to human consumption is consumers’ income-pattern. At the point when income is restricted, the price sensitive consumers purchase merchandise just to fulfill their most essential and useful needs instead of satisfying hedonic needs. Another study (Rubel, 1995) also concluded that in case of private-label brands both the price and quality are the major purchasing parameters but if the quality offered is same for both private and national brands, then at that moment price becomes the key factor. Past researches have likewise demonstrated that consumers’ level of price-consciousness rises with lower incomes and is higher among the deal-prone consumers who believe less in price-quality associations (Blois, 2000). These price sensitive consumers generally lack awareness about perceived risk, lesser brand loyalty they look more on promotional offers by the stores rather than quality of the product. People with higher income are less price sensitive so they buy more private label brands. On the other hand these private label brands are made for the difficult economic situations when consumer becomes more price sensitive as they want to reduce their budget by reducing their expenditures. However these consumers again pick up and buy national brand once the economy picks up. Consumer judges the quality of the product from their price they have general perception that the low price products are in inferior quality as they are made up of poor ingredients and lacks the required quality standards (Batra & Sinha, 2000). Research had shown that quality is the key factor that drives consumers towards national brands (Holt et al., 2003). While the quality-level do varies from one retailer to another retailer, they were however generally inferior to manufacturers’ brands (Steenkamp et al., 2003).

Finding does not give consensus in this stream of research where the drivers of consumer decision of private label brand choice through researches constantly finds that
Store loyalty plays an important role in the purchase of private label products (Richardson et al., 1996). Shoppers who are loyal to the national brand have a negative attitude towards buying private label products. As the concept of private label brand increased, the academician started identifying the effectiveness from different orientations such as supply chain concept, consumer view points, and retailers or firm perspectives. Within this area of work, consumer research focused primarily upon the association between store loyalty and private label choice (Ailawadi et al., 2008) and the preference of national versus private label brands (Ailawadi et al., 2001). The store atmosphere and store quality positively influenced the perception of PLB's quality. In comparison, the quality provided in store, store convenience, store price/value, have a positive relationship on the affective dimension of the PLB image (Vahie & Paswan, 2006).

In case of private label brands, consumers do not have a strong brand association so it is complex to understand. However, authors have identified store image as an important parameter for store brand quality (Semeijn et al., 2004). Researchers have identified multiple attributes that influence the store image of retailers, such as the variety and quality of products, services, and brands sold; the physical store appearance; nature and service quality of employees; the price levels, intensity, and frequency of promotions; and so on (Sorrenberg & Erasmus, 2008). Consumers tend to be more inclined on extrinsic cues in case of private label brands so the following factors such as display, packing, etc., have to be taken care. Although this will increase the cost of the retailers but they can work on cost related to supply chain to produce more, i.e., play on the volumes to make profit. Also, in case of private label, the role of salesmen becomes increasingly important as they are in direct contact with the consumer and can better convince them.

The overall strategy of the private label success depends on the various factors. The overall strategy designed by the retailer also defines the consumer expectation and what are the factors the consumer considers while coming to conclusion for purchasing any particular brand. Here comes the importance of the brand architecture. Another research work (Esbjerg et al., 2004) adapted (Aaker & Joachimsthaler, 2000) that brand architecture is a concept of retail which defines retailer brand architecture as a retailer's assortment of manufacturer brands, retailer brands, and generic goods. The brand architecture can differ based on two dimensions: the quality of retailer brands and visibility of retailer brands (Esbjerg et al., 2004).

As we saw consumer while selecting the any brands or the store brands consider various factors. Considering the literature as discussed above, some of these factors can be identified as store image (the trust factor), variety of assortments, and quality of products, different options available in national brands; i.e., the type of brand architecture, promotional offers going on, prices, service, salesman's abilities, etc. So, this research has narrowed down on these factors. (Ailawadi et al., 2008) noted that the relationship between store loyalty and private label brand is always questionable. They undertook a study of Dutch grocers to address this gap and found that greater the private label sales drive greater is the overall sales, however, private label consumers are often more loyal to low prices than to an individual retailer. The literature tends to focus more heavily on private label in the grocery sector and cultures other than the USA (Shannon & Mandhachitara, 2005). According to (Mark & Glynn, 2008), quality variability, price consciousness, price-quality relationship, and brand loyalty influence consumer proneness to buy PLBs. In addition, income, qualification, and size of household are moderators of PLB purchasing.

These types of research initiatives will develop a better understanding of private label consumers. Particularly, in this paper, following an extensive review of the literature, hypotheses are developed concerning the links between five psychographic measures (i.e., price consciousness, Brand consciousness, Quality variability, Store loyalty, consumer self-perceptions) and the role of socio-demographic variables (i.e., age, gender, occupation, income, and qualification). The proposed hypotheses are subsequently tested on a sample of India consumers, and understand the importance of various psycho and socio demographic factors on the purchase of private label brands. In addressing the aforementioned issues, this paper makes
the following contributions to the theory and practice of retailing. First, the paper explores the key factors considered by Indian consumer while buying private label brands and secondly how socio demographics of Indian consumer effects the purchase decision of PLB Product provides a more comprehensive understanding of the moderating influence of socio demographic variables on the relationship between consumer psychographics and their attitude towards private label brands. Second, it also highlights the added utility of socio demographics for profiling private label consumers. On the basis of the findings, retailers can use the basics of segmentation and positioning linked with psychography based and demography-based variables to develop effective retailing strategies. The paper is organised as follows. First, we explore the key psychographic factors by conducting the survey among top retailers in India with the help of exploratory factor analysis, secondly this paper studies the impact of explored factors on purchase decision of private label brand by developing hypothesis and performing Multiple regression analysis, Lastly impact of socio demographic factors of India consumers were studied by hypothesis development and performing ANOVA technique Finally the study conclude with a summary of the research findings and the theoretical and managerial implications of this research study.

3. Research Objectives

1. To explore the key factors affecting consumer’s purchase decision towards Private label brands (PLBs) in India.
2. To study the impact of identified psychological and socio demographic factors on Private label brands (PLBs) purchase decision.

4. Research Methodology

Both exploratory and causal research has been used in this study in order to develop the understanding of consumer perspective towards purchase of private label brands’ products. This research is conducted to identify key factors considered by Indian consumer while purchasing private label products from the food & grocery and apparel & clothing segment of Indian retail and further study the impact of these explored factors on PLB purchase decision that will make retailers to understand better insights about the consumer perception in evaluating PLB Products. Also impact of socio demographic factors on purchase decision of PLB products was studied. In this study, data was collected by Survey method in which Structured questionnaire is used on different attributes identified from literature Questions were asked on likert scale of 5 to 1. Total 18 statement were used along with 5 demographic questions on Age, Gender, Qualification, Occupation and Income. Sampling technique used was Stratified Random Sampling in which strata was made of top retailers in food and grocery and clothing and apparel segment. The responses were collected from consumers of NCR Region (Delhi, Noida, Gurgaon, Ghaziabad) who visits mall frequently.
Table 1– Sampling Frame

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Total Distribution</th>
<th>Complete Response</th>
<th>Response %</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOOD &amp; GROCERY</td>
<td>300</td>
<td>220</td>
<td>73.3</td>
</tr>
<tr>
<td>Big Bazaar</td>
<td>100</td>
<td>70</td>
<td>70.0</td>
</tr>
<tr>
<td>Easy day</td>
<td>50</td>
<td>38</td>
<td>76.0</td>
</tr>
<tr>
<td>MORE</td>
<td>50</td>
<td>42</td>
<td>84.0</td>
</tr>
<tr>
<td>Spencers</td>
<td>50</td>
<td>39</td>
<td>78.0</td>
</tr>
<tr>
<td>Vishal MegaMart</td>
<td>50</td>
<td>31</td>
<td>62.0</td>
</tr>
<tr>
<td>APPARELS &amp; CLOTHTINGS</td>
<td>300</td>
<td>230</td>
<td>76.7</td>
</tr>
<tr>
<td>Shopper Stop</td>
<td>75</td>
<td>60</td>
<td>80.0</td>
</tr>
<tr>
<td>Pantaloons</td>
<td>75</td>
<td>50</td>
<td>66.7</td>
</tr>
<tr>
<td>West Side</td>
<td>75</td>
<td>55</td>
<td>73.3</td>
</tr>
<tr>
<td>Reliance Trends</td>
<td>75</td>
<td>65</td>
<td>86.7</td>
</tr>
</tbody>
</table>

Source: Author calculation

As shown in above Table 1 top consumers of top retailers were surveyed. Total 600 questionnaires were distributed in which 550 responses were found suitable and was used in analysis. The response rate of Food & Grocery Consumers was 73.3 percent whereas response rate for Apparels & clothing consumers were 76.7 percent.

Table 2- Sample Characteristics

<table>
<thead>
<tr>
<th>Socio-Demographic Variables</th>
<th>Categories</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (In Years)</td>
<td>18-25</td>
<td>47.5</td>
</tr>
<tr>
<td></td>
<td>25-35</td>
<td>20.0</td>
</tr>
<tr>
<td></td>
<td>35-45</td>
<td>9.3</td>
</tr>
<tr>
<td></td>
<td>45 above</td>
<td>23.3</td>
</tr>
<tr>
<td>Occupation</td>
<td>Service</td>
<td>11.8</td>
</tr>
<tr>
<td></td>
<td>Business</td>
<td>23.6</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td>Self Employed</td>
<td>14.5</td>
</tr>
<tr>
<td>Qualification</td>
<td>Undergraduate</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>43.5</td>
</tr>
<tr>
<td></td>
<td>Post Graduate</td>
<td>48.0</td>
</tr>
<tr>
<td></td>
<td>Doctorate</td>
<td>6.9</td>
</tr>
<tr>
<td>Income(INR/Month)</td>
<td>upto 10K</td>
<td>42.2</td>
</tr>
<tr>
<td></td>
<td>10-20k</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>20-40k</td>
<td>19.3</td>
</tr>
<tr>
<td></td>
<td>Above 40k</td>
<td>33.8</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>61.6</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>38.4</td>
</tr>
</tbody>
</table>
As shown in Above Table 2, Responses were collected from five demographic factors on Age, Occupation, Qualification, Income and gender. 47.5% of consumers are in 18-25 years followed by 20% in 25-35 years, 9.3% in 35-45 year, 23.3% in 45 years and above. Occupation of respondents is as follows 50% are student, 11.8% are service class, 23.6 % are business class and 14.5 % are self employed. Maximum consumers are having Post graduate Qualification is 48 % followed by 43.5 % respondents are graduate, 1.6 % are undergraduate and 6.9% are doctorate. Maximum Income (INR/Month) respondents are 42.2% having income upto 10 thousand rupees per month followed by 33.8% Above 40 thousand rupees per month, approximately 19.3% people are having income between twenty to forty thousand rupees per month and 4.7 % between ten to twenty thousand rupees per month. In gender category, 61.6% are male and 38.4% are female respondents.

5. Data Analysis

Initially Exploratory factor analysis technique was performed to identify the key factors considered by PLB consumers. Kaiser-Meyer-Olkin (KMO) and Bartlett’s Test of Sphericity is conducted before proceeding with factor analysis, there is need to check whether there exists underlying structure between testing variables or not. KMO and Bartlett’s test is performed to support the viability of applying factor reduction to data. Both KMO measure of sampling adequacy and Bartlett’s test of sphericity identify whether application of factor analysis is appropriate or not.

<table>
<thead>
<tr>
<th>Table 3-KMO and Bartlett’s Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</td>
</tr>
<tr>
<td>Bartlett’s Test of Sphericity</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Feasibility of the test - KMO test is used to check the feasibility of the factor analysis. For conducting a factor analysis the Kaiser-Meyer-Olkin Measure of Sampling Adequacy should be greater than 0.7 as in given table KMO is 0.876 which is greater than 0.5 and approx. chi square value is 2922.738 which is high, Therefore Factor analysis can be done on the findings

5.1 Total Variance Explained- This table gives the total variance contributed by each component. In the current study initial eigen value taken for factor analysis is one. Total nine component having eigen value greater than 1 emerged, since the percent variance share of last three components were less than 4% which and the study was to focus on the key factors for PLB purchase decision only major five components are considered in the study which are having eigen value greater than 1 and percent of variance share greater than 4.

<table>
<thead>
<tr>
<th>Table 4- Total Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
</tbody>
</table>
The above table gives the total variance explained. We can see the percentage of total variance contributed by first component is 31.908, by second component 8.230, by third component 7.109, by fourth component 6.186 and by fifth component 5.955. The eigen value for a given factor measures the variance in all the variables which is accounted for by that factor. The ratio of eigen values is the ratio of explanatory importance of the factors with respect to the variables. If a factor has a low eigen value, then it is contributing little to the explanation of variances in the variables and may be ignored as redundant with more important factors. It is also clear from the above table that there are total five distinct components having eigen values greater than 1 from the given set of variables. Eigen value for factor 1 is 3.180 for factor 2 is 2.267, for factor 3 is 1.781, for factor 4 is 1.742 and for factor 5 is 1.720.

5.2 Rotated Component Matrix - In this study orthogonal rotation is used in data reduction compared to oblique rotation which is used to find significantly larger number of constructs. Factor rotation is done to redistribute the earlier factor variance to later ones in order to get more meaningful and interpretable factor structure.

Table 5-Rotated Component Matrixa

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>.726</td>
<td>.249</td>
<td>.032</td>
<td>.093</td>
<td>-.039</td>
</tr>
<tr>
<td>Q2</td>
<td>.707</td>
<td>.248</td>
<td>.105</td>
<td>-.041</td>
<td>.188</td>
</tr>
<tr>
<td>Q4</td>
<td>.684</td>
<td>.157</td>
<td>.085</td>
<td>.240</td>
<td>.138</td>
</tr>
<tr>
<td>Q3</td>
<td>.626</td>
<td>.214</td>
<td>.058</td>
<td>.283</td>
<td>.128</td>
</tr>
<tr>
<td>Q5</td>
<td>.622</td>
<td>.016</td>
<td>.069</td>
<td>.235</td>
<td>.259</td>
</tr>
<tr>
<td>Q18</td>
<td>.558</td>
<td>.177</td>
<td>.436</td>
<td>-.167</td>
<td>.086</td>
</tr>
<tr>
<td>Q13</td>
<td>.137</td>
<td>.713</td>
<td>.225</td>
<td>.224</td>
<td>-.086</td>
</tr>
<tr>
<td>Q11</td>
<td>.201</td>
<td>.702</td>
<td>.055</td>
<td>.113</td>
<td>.182</td>
</tr>
<tr>
<td>Q12</td>
<td>.344</td>
<td>.691</td>
<td>.198</td>
<td>.034</td>
<td>.106</td>
</tr>
<tr>
<td>Q10</td>
<td>.171</td>
<td>.546</td>
<td>-.237</td>
<td>.146</td>
<td>.419</td>
</tr>
<tr>
<td>Q14</td>
<td>.198</td>
<td>.023</td>
<td>.702</td>
<td>.309</td>
<td>.052</td>
</tr>
<tr>
<td>Q15</td>
<td>.061</td>
<td>.225</td>
<td>.687</td>
<td>.165</td>
<td>.149</td>
</tr>
<tr>
<td>Q8</td>
<td>.201</td>
<td>.278</td>
<td>.080</td>
<td>.689</td>
<td>.039</td>
</tr>
<tr>
<td>Q9</td>
<td>.042</td>
<td>.235</td>
<td>.183</td>
<td>.655</td>
<td>.187</td>
</tr>
<tr>
<td>Q6</td>
<td>.447</td>
<td>-.189</td>
<td>.230</td>
<td>.574</td>
<td>.119</td>
</tr>
<tr>
<td>Q17</td>
<td>.119</td>
<td>.020</td>
<td>.468</td>
<td>-.055</td>
<td>.673</td>
</tr>
<tr>
<td>Q16</td>
<td>.132</td>
<td>.089</td>
<td>.306</td>
<td>.157</td>
<td>.664</td>
</tr>
<tr>
<td>Q7</td>
<td>.264</td>
<td>.197</td>
<td>-.209</td>
<td>.205</td>
<td>.614</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
For exploratory purposes, lower level has been used such as 0.4 for the central factor and 0.25 for other factors. Loadings as defined above 0.6 as high and those below as 0.4 low. In any event, factor loadings must be interpreted in the light of theory, not by arbitrary cutoff levels. In above Table, the item loading are in the range 0.546 to 0.726 which indicates the each item is extracted well to be clubbed in respective factors. Six items are clubbed into first component with item loading ranging from 0.558 to 0.726. Four items are clubbed into second component with item loading 0.546 to 0.713. Two items were clubbed into third component with item loading 0.687 to 0.702, three items were clubbed into fourth component with factor loading from 0.574 to 0.698, and three items were clubbed into fifth component with item loading 0.614 to 0.673.

Six items related to price were clubbed into first factor named Price Consciousness, Four items related to brand were clubbed into second factor named brand Consciousness. Two items related to quality were clubbed into third factor named quality variability, three items related to consumer perception were clubbed into fourth factor named consumer self perception and three items related to store were clubbed into fifth factor named store loyalty.

5.3 Multiple Regression Analysis- In the present study the dependent variable identified is PLB Purchase decision and its relationship with various independent variables explored in the research are brand consciousness, price consciousness, quality variability, consumer self perception and store loyalty. The multiple regression analysis is done so as to access the impact of different independent variables price consciousness, brand consciousness, quality variability, consumer self perception and store loyalty on the dependent variable PLB Purchase decision.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.805a</td>
<td>.647</td>
<td>.644</td>
<td>.610</td>
<td>2.042</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), price consciousness, brand consciousness, quality variability, consumer self perception and store loyalty.

b. Dependent Variable: PLB Purchase Decision

This table gives the model summary for the set of Independent and dependent variables. R Square for the model is 0.647 which means that 64.7% of variation in dependent variable(PLB Purchase Decision) is explained by the five independent variables brand consciousness, price consciousness, quality variability, consumer self perception and store loyalty. The Durbin Watson statistic for the model is 2.042. The desired value should be in the range 1.5 to 2.5. Hence assumption that the residuals are uncorrelated is valid. The next table gives the regression coefficients, greater the coefficient larger is the impact of the independent variable on PLB purchase decision and the variable is significant if p value is less than 0.05.

5.4 Hypothesis Testing-

H1- There is a significant Relationship between PLB purchase decision & Brand Consciousness.

H2- There is a significant Relationship between PLB purchase decision & Price Consciousness.

H3- There is a significant Relationship between PLB purchase decision & Quality Variability
H4- There is a significant Relationship between PLB purchase decision & Consumer Self Perception.
H5- There is a significant Relationship between PLB purchase decision & Store Loyalty.

Table 7-Coefficients\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>3.302</td>
<td>.026</td>
<td></td>
<td>126.933</td>
</tr>
<tr>
<td>Price Consciousness</td>
<td>.352</td>
<td>.026</td>
<td>.344</td>
<td>13.519</td>
</tr>
<tr>
<td>Brand Consciousness</td>
<td>.706</td>
<td>.026</td>
<td>.691</td>
<td>27.121</td>
</tr>
<tr>
<td>Quality Variability</td>
<td>.203</td>
<td>.026</td>
<td>.198</td>
<td>7.786</td>
</tr>
<tr>
<td>Consumer Self Perception</td>
<td>.035</td>
<td>.026</td>
<td>.034</td>
<td>1.336</td>
</tr>
<tr>
<td>Store Loyalty</td>
<td>.109</td>
<td>.026</td>
<td>.106</td>
<td>4.170</td>
</tr>
</tbody>
</table>

a. Dependent Variable: PLB Purchase Decision

The final equation that has been considered is:

\[
\text{PLB Purchase Decision} = 3.302 + 0.352 \times (\text{Price Consciousness}) + 0.706 \times (\text{Brand Consciousness}) + 0.203 \times (\text{Quality Variability}) + 0.035 \times (\text{Consumer Self Perception}) + 0.109 \times (\text{Store Loyalty}).
\]

From the above table it is found that contribution of Brand Consciousness is maximum for PLB purchase decision followed Price consciousness, Quality variability, Store loyalty and Self perception. All the developed hypothesis is having significant relationship with PLB Purchase decision as p value is less than 0.05 except Consumer self perception is insignificant as p value is greater than 0.05 which is 0.182.

5.5 Analysis of Variance

Since literature has also identified the effect of socio-demographic profile of consumer on PLB purchase decision hence five hypotheses were developed and One way ANOVA was conducted to identify the influence of different demographic variables such as Age, Gender, Occupation, Income and qualification on consumer PLB purchase decision.

H6- There is a significant Relationship between PLB purchase decision and Age.
H7- There is a significant Relationship between PLB purchase decision and Gender.
H8- There is a significant Relationship between PLB purchase decision and Occupation.
H9- There is a significant Relationship between PLB purchase decision and Income.
H10- There is a significant Relationship between PLB purchase decision and Qualification.
Table 8- ANOVA

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>17.578</td>
<td>4</td>
<td>4.395</td>
<td>2.984</td>
<td>.019</td>
</tr>
<tr>
<td>Within Groups</td>
<td>802.575</td>
<td>545</td>
<td>1.473</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>820.153</td>
<td>549</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>3.386</td>
<td>4</td>
<td>.846</td>
<td>3.642</td>
<td>.006</td>
</tr>
<tr>
<td>Within Groups</td>
<td>126.667</td>
<td>545</td>
<td>.232</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>130.053</td>
<td>549</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>12.832</td>
<td>4</td>
<td>3.208</td>
<td>4.390</td>
<td>.002</td>
</tr>
<tr>
<td>Within Groups</td>
<td>398.259</td>
<td>545</td>
<td>.731</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>411.091</td>
<td>549</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>23.088</td>
<td>4</td>
<td>5.772</td>
<td>3.315</td>
<td>.011</td>
</tr>
<tr>
<td>Within Groups</td>
<td>948.883</td>
<td>545</td>
<td>1.741</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>971.971</td>
<td>549</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Qualification</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>7.526</td>
<td>4</td>
<td>1.882</td>
<td>4.698</td>
<td>.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>218.272</td>
<td>545</td>
<td>.400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>225.798</td>
<td>549</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On the basis of above table, all the demographic variables Age, Gender, Occupation, Income and Qualification have significant relationship on PLB purchase (p<0.05). The F Values of Age is 2.984, Gender is 3.642, Occupation is 4.390, Income is 5.772 and Qualification is 1.882. Since Income and Age is having maximum F value so they can be considered most significant socio demographic factors for Indian PLB Consumers.

6. Conclusion

This study identifies the key attributes that are considered by Indian consumer while making purchase decision for private label brand among top retailers of food & grocery and clothing apparel sector. Initially exploratory factor analysis revealed that five major factors are Price consciousness, Brand consciousness, Quality variability, Consumer Self Perception and store loyalty. Thereafter to understand the impact of identified factor multiple regression analysis was conducted that revealed that Brand consciousness is the most important factor so retailers should focus on branding of private label products and should help in creating good image of PLB products and providing frequent offers, deal and promotion as compared to other brands in the store so that consumer purchase and become use too with PLB products. Second Important factor that emerged was price consciousness which is also found in past studies and also India consumers are very price sensitive therefore retailers should put lower price compared to leading brands in the store. Third important factor is quality consciousness which very important for any product category so retailers should continuously work on improving the quality of private label products so that their image of inferior quality among consumers should change and consumers should consider quality comparable to established brands. Fourth important factor is store loyalty since consumer come to store because of the image store carries and land up in purchasing private label products so retailers should always produce competitive PLB products and should have different variety of products so that they can provide alternatives to their existing consumers. Finally Consumer self perception is another factor in which consumer purchases PLB products according to the opinion which he carries due to his experience from self knowledge and peoples opinion and it varies from product to product and stores to stores. In the study all the demographic factors that is Age, gender, income, qualification and occupation plays a crucial role while the consumer makes PLB purchase decision hence the retailers should also focus on consumer demographics as Indian consumers generally buy products depending upon their income level and also young generation and students are more attracted towards private label product.
Implications of the Study

Private label products are in the retail stores from last few decades but still there is a need to understand the consumer psychology by the retailers and also focus on the consumer socio demographics to increase the market share of private label products in India as the country has huge market potential. This study is important for those retailers who are planning to increase their store brands/private label brands acceptance in the market. This study explores retailers' consumers' attitudes, preferences and buying behaviour towards private label products which will help retailers to devise new strategy for PLB consumers in India. As the future of India organized retail is expecting a tremendous scope compared to developed nations and future in retail will be of PLB products with innovation and differentiation.

7. References


The Comparision of Conventional And Entrepreneurial Marketing: The
Commonalities Study

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Abstract

Entrepreneurial Marketing (EM) is an idea that was produced at the interface between two sciences, marketing in small businesses, right around thirty years prior. While Marketing-Entrepreneurship Interface has pulled in analysts from marketing and business enterprise, as well as from economy, psychological research and human science, the advancement of this build is as yet immature. There is an assortment of definitions, particular standards around there are missing, commonsense instruments are deficiently developed and shockingly there is no binding together hypothesis. Despite the fact that it is for the most part acknowledged that business visionaries carry on diversely in regards to "conventional" marketing, however some of them are extremely fruitful. Without a one of a kind definition endeavors explore endeavors stay deviated and misaligned. Subsequently, the hypothetical advancement is constrained to the distinguishing proof of ideas, generally obtained from other sociologies and the improvement of some reasonable models. In any case, there is a solid need to create instruments, standards and hypotheses to help organizations, particularly new companies and small firms to survive and flourish in an inexorably antagonistic and flighty condition. This article shows a concise history of the advancement of EM idea, an investigation of the most well-known definitions, a correlation with "conventional" marketing, a short review of the most vital ideas developed in the EM and a stock of research papers available.

Keywords: Entrepreneurial Marketing, Resource Based Theory, Network Marketing, etc.

Introduction

The previous two decades have seen a lot of consideration being committed to various key Orientations. This surge of research was activated by the fundamental Market Orientation studies1, 2. From that point forward, the execution advantages of being market-situated have been broadly contemplated. In any case, a few contentions question the regularly expected predominance of Market Orientation and rather propose that effective firms may embrace Market Orientation alongside different Strategic Orientations3. The possibility of various Strategic Orientations embraced at the same time is upgraded in a current investigation of Jones and Rowley4. They propose an applied model of entrepreneurial marketing orientation among small firms, as per which the idea of entrepreneurial marketing ought to expand its extension far from simply marketing to incorporate likewise development, business and client engagement. Other than adding to the current studies on Strategic Orientations, Jones and Rowley's business locales the exploration gap that most examinations on SOs have occurred predominantly with regards to expansive organizations. This paper embraces the investigation of Jones and Rowley as a beginning stage and plans to experimentally test the EMO display, inspect how the EMO develop identify with Marketing execution and whether this connection is directed by market and firm size.

The paper is a rich hypothetical foundation based on which, we have assessed the viewpoints and endeavored to feature the fundamental aspects of Entrepreneurial marketing and how it could help organizations to achieve in the market. Entrepreneurial Marketing changed the conventional marketing and shed light into imperative perspectives like proactively...
of the business enterprises. It roused the organizations to be more creative, thusly towards more prominent upper hands. In the new marketing age, Entrepreneurial Marketing remains as a controlling system for organizations to explore the business opportunities and orientating them in the market achievement.

Review of Literature

Early work in the zone concentrated on the issues related with the overlap between conventional marketing hypotheses and those upheld by business visionaries. Entrepreneurial marketing was seen as marketing procedure in an resource asset obliged and it was maintained that organizations working in an EM setting were not all around served by the hypotheses, procedures and instruments of conventional marketing. In inverse to it, late contributions have comprehended the significance of marketing in EM, for the achievement of new firms.

The interface amongst enterprise and marketing was observed to be a productive concentration for look into, particularly when connected to the marketing conduct of small and medium-sized organizations. With the interface creating as a key research centric in Entrepreneurial Marketing, the examination stream tended to issues, for example, innovativeness, system and instructive issues took after by key issues related with applying Entrepreneurial Marketing hones.

The meaning of Entrepreneurial Marketing and its interface reflect entrepreneurial conduct. Ideas, for example, change new developments and prospects are normally present. One illustration is an early meaning of the interface. "The interface of entrepreneurial conduct and marketing is that where Innovation is conveyed to market. Marketing's part in development, at that point, is to give the ideas, instruments and foundation to fulfill the gap amongst advancement and market situating to accomplish reasonable focused advantages".

As the interface has developed, it is respected Entrepreneurial Marketing to speak to something more intricate than simply supply ideas and instruments to position and make manageable upper hand for new advancements. EM is viewed as a mind boggling process and also an introduction for how business people act at the markets. "EM is a soul, an introduction and also a procedure of enthusiastically seeking after circumstances and propelling and developing endeavors that make apparent client esteem through connections by utilizing ingenuity, innovativeness, offering, market inundation, organizing and flexibility".

As introduced in the reviews, the Evolution of the Entrepreneurial Marketing as historic point and its effect. EM turned out in 1982 at a conference at University of Illinois, Chicago supported by International Council for Small Business and American Marketing Association, two of the biggest expert and scholarly relationship in these fields.

Marketing and Entrepreneurship

Resource Based Theory sets that organizations are formed by the heap of resources that they have accessible to them or can gain. Small businesses have been described as having restricted monetary assets. Consequently it is imperative for them to secure and use an extensive variety of different resources, which they should adjust to their requirements. It is this centrality of resource marshaling and activation that makes entrepreneurial marketing, with its emphasis on resources, a suitable focal point for the thought of independent small enterprises.

The various investigations have recommended that human, monetary, social and different resources are imperative to the activity of independent ventures. We consider each of these thus, incorporating how they show in the specific instance of private ventures. These four resources are utilized to structure the exact period of this investigation and to structure our discoveries and examination.
Human Resources

Numerous examinations have given a blended perspective of the effect of HR on entrepreneurial opportunity and proclivity. McEwan et al find that the enhanced educational achievement of UK-based Indians has brought about them taking an interest as business people in high-development, high-edge segments, for example, data innovation and expert services. Conversely, different examinations locate that expanded educational accomplishment lessens the penchant for business enterprise, as business can offer the profoundly taught more prominent returns. In their investigation of late transients, Jones et al identified that educational level had very little impact on the kind of business framed, with numerous not having the capacity to use their capabilities. Now and again this was because of absence of chance and for others, especially those from outside Europe, absence of acknowledgment of their capabilities. Education has additionally been found to impact the way to deal with marketing embraced by the small business people, with those with more training receiving all the more a relationship and vital way to deal with marketing, including investigating the more extensive financial powers on their endeavors.

A few business people have been observed to be altogether preferred educated over those working comparable organizations, recommending that such organizations may bear the cost of small business visionaries the chance to use their capabilities and experience. Such organizations have likewise been related with constant adapting, frequently by experimentation or watching the exercises of others, proposing that if the business people are deficient with regards to involvement, they might have the capacity to obtain this as their business develops.

Financial Resources

Small business visionaries have been related with subsidizing their organizations with individual back or endowments and credits from loved ones. Now and again this is on the grounds that they see this is a method for decreasing risk and staying away from control from outside suppliers of subsidizing. In any case, in different cases it mirrors the hesitance of customary wellsprings of business back to put resources into independent small companies. Constrained capitalization limits the divisions that such business visionaries can enter to those with low section obstructions, where rivalry is probably going to be generally serious. It might likewise restrict the chance to use HR, since it isn’t conceivable to enter areas, for example, innovation producing, making it hard to use higher science or building capabilities, learning or experience.

A few organizations have been described as modest to set up and work. The expenses of machines, raw material and work have kept on expanding or decline, while usefulness has enhanced. Steady with the private financing of independent small companies, numerous organizations, especially those situated in the house are supported through private sources and the plans of action are intended to decrease the requirement for working capital.

Networking

Networking is thought to be an entrepreneurial marketing instrument, the systems inside which business people and their enterprises are established, these have been found to give precise data and guidance, which can be utilized to take decisions in market and assess the legitimacy of these choices. For instance, enterprises have been found to get to data about clients from their networks and utilize this data to enhance their pricing structures and tailor their correspondences. One reason clarifying why these networks add to the marketing viability of business is that while lacking business related data and learning, such entrepreneurs regularly reach network groups to furnish them with the market data and exhortation they require in the event that they are to build up their business further and advance all through the enterprise procedure. Further it is identified the reason with the limited time and resources which business people and small entrepreneurs have accessible to them.
As business visionaries once in a while have sufficient occasion, resources or the slant to buy statistical surveying reports or look for the guidance of business counsels, they frequently gather market data from their own contacts, ordinarily when under taking different exercises, for example, liaising with vendors. Essentially put, for some business people the discussions they have with individuals they connect with all the time while maintaining their business, constitute the market filtering which they embrace and use to stay up with the latest about conditions and changes in their market. Identified with this, an imperative finding of such research is that the data and exhortation gave to business people from their networks is dependable, solid and can be followed up on. A critical purpose behind this is people giving this data and guidance have been found to impart in excess of an instrumental relationship to the business visionary and additionally their business. All the more normally, they share data and exhortation as well as kinship and trust. Where business people have been found to share this sort of "multiplex" relationship, they are furnished not just with simple, standard access to market data and guidance, yet additionally with data and counsel which they can trust and hence don't need to invest energy approving.

While it has been built up that numerous entrepreneurial businesses don't adjust to the marketing techniques practiced by their regularly bigger, more unyielding contenders, inquire about has discovered networks to add to the item, pricing and limited time choices of business people. By getting to data from their own contacts, business people can keep educated about and distinguish opportunities and react to these in creative ways, regularly including the advancement and presentation of new items. Identified with this, once interest for an item or service is built up by a business visionary, inquire about has uncovered that by encouraging casual associations with clients, items can be constantly audited and adjusted to guarantee that they reliably address the issues, needs and requests of their clients. Given the significance of networks and fruitful networking to entrepreneurial marketing, this region is probably going to be the focal point of numerous future researches contemplates.

Based the past hypothetical foundation, the introduction of EM has affected in making another reasonable system for the organizations. The Entrepreneurial marketing measurements as EM it gets from the combination amongst business enterprise and marketing methods. In this segment we planned to feature that the Entrepreneurial marketing may advance business development:

**Proactive Orientation**

Entrepreneurial firms are persistently looking for better approaches to accomplish upper hand through changes in set up strategies in marketing or manufacturing. Morris et al. (2002) recommended that EM speaks to an alternate recognition and approach in the improvement of the business offer that depends on advancement to make one of a kind incentives. Firms that embrace EM are proactive and inventive, and along these lines either looks to lead clients or drive market instead of responding to or tailing them. Consequently, firms that have received Entrepreneurial Marketing regularly tend to concentrate on the creation and molding of new markets as opposed to serving existing ones. All things considered, EM is in a general sense an open door driven and opportunity-chasing method for making marketing procedure and executing marketing strategies (Morris et al., 2002).

**Innovation**

Creative firms can keep up a stream of new thoughts that can convert into new product and services. The basic to the achievement is innovation and life span of any endeavor. All the more in this way, it is urgent for a business endeavor that means to end up an effective entrepreneurial brand to consider innovation important in light of the fact that it is a basic instrument through which firms secure a place in the aggressive universe without bounds.
Focus on the Customer

An entrepreneurial firm is centered on the requirement for inventive ways to deal with get, hold, and create clients (Slater and Narver, 2000). Focusing on the buyer furnishes the entrepreneurial firm with a learning base of client's necessities.

Utilizing an Opportunity

The acknowledgment and quest for circumstance is a center dimension of entrepreneurial marketing. Business enterprise has been named as the procedure of revelation, assessment, and use of chances. Entrepreneurial opportunities are circumstances in which new merchandise, raw materials, services and arranging strategies can be presented through the arrangement of new means, closures, or means-closes connections.

Risk Management

Business enterprise is related with ascertained hazard taking. This infers a push to distinguish the hazard factors and consequent endeavor to control or moderate those hazard factors. Entrepreneurial marketing has a critical part in overseeing hazard in the entrepreneurial firm.

Value Creation

Inventive value creation is an essential aspect of entrepreneurial marketing, as esteem creation is an essential for exchanges and connections (Morris et al. 2002). On these premise firms may make upper hands based around discrete exchanges with the target market, for a firm to restore and support its upper hand, it must set up and recharge its long haul associations with clients. This can be accomplished through imaginative client establishments that make commonly valuable long haul connections for the firm and its clients.

In light of the above hypotheses, these dimensions of Entrepreneurial marketing feature that business development could be agreeable and that EM remains as a need for guaranteeing it. Creative organizations would have a tendency to be more proactive in the market, build up a careful client relationship; accordingly they would produce real openings.

In addition, on this hypothetical premise consider that concentrating on the client would advance the business possibilities in the market. Seeking after the opportunities at anticipated hazard would be introduced as a test for the business person. Understanding the Entrepreneurial marketing procedures would give higher opportunities to the firm in contrast with the rivals in the new age of marketing. In light of the theories above, we consider that the effect of Entrepreneurial marketing would be starting at a fundamental business development promoter.

Methodology

The purpose behind this examination is to investigate the most basic unexpected challenges confronting entrepreneurial marketing in the UAE and to investigate thoughts and techniques to conquer these issues. The author has utilized the self administrated structured survey to collect data from the respondents. The populace was drawn from 1820 organizations recorded in the Etisalat Yellow Pages. A Random Sampling method was utilized to choose 182 organizations from various kinds of enterprises, with the reaction rate of 37 percent. The respondents for this investigation contained CEOs or proprietors. The hopefuls who were reached and reacted to partake were from various enterprises and nationalities.

The all around organized meeting was led in light of pre developed inquiries asked amid an in-person meet or by telephone. A few people declined to be met, despite the fact that it was expressly informed that this data will be utilized for other purposes and won't be uncovered to anybody, anywhere.
Results and Discussion

Multiple Regression Analysis

Regression is the assurance of measurable connection between at least two or more variables. In straightforward Regression two factors are utilized. One variable (independent) is the reason for the conduct of another (Dependent). At the point when there are more than two independent factors the examination concerning relationship is known as numerous connections and the condition portraying such relationship is called as regression equation.

Regression examination is connected with the inference of a suitable scientific expression is determined for discovering estimations of a needy variable on the premise of independent factor. It is accordingly intended to look at the relationship of a variable Y to an arrangement of different factors X1, X2, X3... ... Xn. the most usually utilized direct condition in Y=b1 X1 + b2 X2 +... ... + bnXn + b0

Here Y is the dependent variable, which is to be found. X1, X2... and Xn are the known factors with which expectations are to be made and b1, b2,... bn are coefficient of the factors.

In this review, the dependent variable is Franchisee Performance; Independent factors are Proactive Orientation, Innovation, Focus on the Customer, Utilizing an Opportunity, Risk Management, Value Creation are examined as takes after:

Dependent variable : Marketing Performance (Y)

Independent variables :
1. Proactive Orientation
2. Innovation
3. Focus on the Customer
4. Utilizing an Opportunity
5. Risk Management
6. Value Creation

Multiple R value : 0.785
R Square value : 0.642
F value : 104.898
P value : <0.001**

Table: 1

<table>
<thead>
<tr>
<th>VARIABLES IN THE MULTIPLE REGRESSION ANALYSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variables</strong></td>
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<td>----------------</td>
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<tr>
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<tr>
<td>Marketing Performance (Y)</td>
</tr>
<tr>
<td>Proactive Orientation (X1)</td>
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<tr>
<td>Innovation (X2)</td>
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<tr>
<td>Focus on the Customer (X3)</td>
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<tr>
<td>Utilizing an Opportunity (X4)</td>
</tr>
<tr>
<td>Risk Management (X5)</td>
</tr>
<tr>
<td>Value Creation (X6)</td>
</tr>
</tbody>
</table>

Note: 1. ** Denotes 1% level of significance
2. * Denotes 5% level of significance
Table above uncovers that the multiple correlation coefficient is 0.785 measures the level of connection between the genuine qualities and the anticipated estimations of the Marketing Performance. Since the anticipated qualities are gotten as a straight mix of Proactive Orientation(X1), Innovation(X2), Focus on the Customer(X3), Utilizing an Opportunity(X4), Risk Management(X5), Value Creation(X6) coefficient estimation of 0.785 demonstrates that the connection amongst alteration and the six autonomous factors is certain.

The Coefficient of Determination R-square measures the goodness-of-fit of the evaluated Sample Regression Plane (SRP) as far as the extent of the variety in the dependent factors clarified by the fitted sample regression equation. In this way the R-square esteem is 0.0642, which implies around 65% of the variety in modification is clarified by the assessed Sample Regression Plane (SRP) that uses the Independent Variables, for example, of Proactive Orientation(X1), Innovation(X2), Focus on the Customer(X3), Utilizing an Opportunity(X4), Risk Management(X5), Value Creation(X6). The R-squared esteem is critical at 1 % level.

The Multiple Regression Equation is:

\[ Y = 2.129 + 0.714X_1 + 0.681X_2 + 0.668X_3 + 0.599X_4 + 0.322X_5 + 0.219X_6 \]

Here the coefficient of X1 0.714 speaks to the incomplete impact of Proactive Orientation on Marketing Performance holding alternate factors as consistent. The assessed positive sign infers that such impact is sure that Marketing Performance would increment by 0.714 for each unit of rise in Proactive Orientation and this coefficient value is not noteworthy at 5% level. The coefficient of X2 is 0.681, which speaks to the halfway impact of Innovation on Marketing Performance by holding different factors as consistent. The evaluated positive sign infers that such impact is sure that Marketing Performance would rise by 0.681 for each unit of increase in Innovation and this coefficient value is critical at 5% level. The coefficient of X3 is 0.668, which speaks to Focus on the Customer on Marketing Performance by holding alternate factors as consistent. The assessed positive sign suggests that such impact is sure that Marketing Performance would increase by 0.668 for each unit of increase in Focus on the Customer and this coefficient value is critical at 1% level.

Here the coefficient of X4 0.599 speaks to the incomplete impact of Utilizing an Opportunity on Marketing Performance holding alternate factors as consistent. The evaluated positive sign infers that such impact is sure that Marketing Performance would addition by 0.599 for each unit of addition in Utilizing an Opportunity and this coefficient value is not noteworthy at 5% level. The coefficient of X5 is 0.322, which speaks to the incomplete impact of Risk Management on Marketing Performance by holding different factors as consistent. The assessed positive sign suggests that such impact is certain that Marketing Performance would increase by 0.322 for each unit of increase in Risk Management and this coefficient value is critical at 5% level. The coefficient of X6 is 0.219, which speaks to the incomplete impact of Value Creation on Marketing Performance by holding alternate factors as steady. The assessed positive sign suggests that such impact is certain that Marketing Performance would addition by 0.219 for each unit of increment in Value Creation and this coefficient value is high at 1% level.

Conclusion

In view of the qualitative approach and the literatures regards to, Entrepreneurial Marketing was conceived as an extension that could fill the gap amongst business and marketing procedures. Entrepreneurial Marketing rose up out of the business need which would lead the enterprise into an exhaustive better market and client based. Entrepreneurial Marketing would impact in unlocking future business openings and as a development promoter. Entrepreneurial Marketing encourages development, as an impetus directs the business through innovative procedures produces blooming chances for what's to come. Part of Entrepreneurial Marketing is a significant one for an effective driving of the enterprise in the new marketing age. In new marketing age, organizations will confront challenges and Entrepreneurial Marketing would remain as an imminent in guaranteeing them business
development and effective market introduction. Through upgrading advancement and applying EM approach they may see higher upper hands and market achievement. Entrepreneurial marketing itself stands like a future approach for guaranteeing achievement in the new period marketing.

REFERENCES


Track 11: Human Resource and Knowledge Management
The Global Process of MNC Knowledge Transfer: A Systematic Literature Review

Huang Binyun  Yang Chen  Liu Mengqi
(School of Business Administration, Jiangxi University of Finance and Economics, Nan Chang, 330013)

Abstract:
In the era of knowledge economy, knowledge transfer, especially the transfer of knowledge between MNCs, has become a hot topic in the research of strategic management and knowledge management of international enterprises. It is of great significance for MNCs to enhance their international competitive advantages. This paper systematically reviews 122 articles on knowledge transfer of MNCs in China Knowledge Net and EBSCO database from 2008 to 2017. It focuses on the positive knowledge transfer from parent company to subsidiaries and constructs the theoretical framework of knowledge transfer of MNCs. The overall process of corporate knowledge transfer is divided into three stages: the investment decision-making stage, knowledge transfer stage and knowledge integration stage. Moreover, this paper analyzes in detail the knowledge transfer behavior of multinationals in all stages to help better understand the knowledge transfer of multinational corporations. It is hoped that it can help enterprise managers to carry out global strategic planning and knowledge management and provide the basis for future scholars' academic research in this field.

Keywords: multinational corporations; knowledge transfer; international competitive advantage; knowledge management; headquarters subsidiary relationship

跨国公司正向知识转移的过程研究

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摘要：
在知识经济时代，知识转移特别是跨国公司母子公司间的知识转移成为当前国际企业战略管理以及知识管理研究中的热点主题。本文聚焦跨国公司母子公司层面的正向知识转移研究，以中国知网和EBSCO数据库2008—2017年的有关跨国公司知识转移的122篇文献为分析样本，基于知识转移研究发展历程中形成的不同理论视角，从跨国公司知识转移的各个阶段，即投资决策阶段、知识转移阶段和知识整合阶段，对相关文献进行阐述和分析，归纳出跨国公司知识转移相关研究的特点及发展趋势，以期为管理者进行全球战略规划和知识管理提供帮助，以及为相关研究者提供借鉴。

关键词：跨国公司；知识转移；国际竞争优势；知识管理；母公司子公司关系

基金项目：国家自然科学基金地区项目“多层次整合视角下工作场所榜样认知和榜样效应的混合方法研究：以产业工人为例”(71672013)；国家自然科学基金地区项目“团队伦理决策的过程机制及影响因素：一项中国情境下的研究”(71562017)；江西省2017年度研究生创新专项资金项目“我国制造业跨国公司逆向知识转移演化路径案例研究：边界扳手视角”(YC2017-S200)。
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一、引言

跨国公司总部与子公司之间的知识转移是国际商务研究中的一个重要课题（Singh等, 2013）。在经济全球化的大背景下，竞争环境日益动态化、复杂化和不确定性，跨国公司为了在这种环境下获得长期的生存和发展，需要进行持续竞争优势的塑造。而Nonaka（1994）指出企业构建持续竞争优势的真正源泉就是知识。Teece（1977）提出了知识转移这一概念，并指出知识转移是一个过程，是个人与个人之间、组织与组织之间以及组织与个人之间知识的发送与接收过程。继Teece之后，知识转移特别是跨国公司母公司与子公司之间的知识转移成为了国际企业战略管理以及知识管理研究中的热点问题，并不断在跨国公司战略管理以及知识管理活动中得到广泛应用，促进了管理学理论的发展，指导着跨国公司知识转移的实践。

国内外学者都曾阐述分析跨国公司知识转移，主要从跨国公司知识转移的影响因素、转移方式、转移对绩效的影响等方面开展研究。关于跨国公司知识转移的研究认为知识侧重于知识转移过程中的某个特定方面或某一特定方面的知识转移过程。例如，国外学者中，Szulanski（1996）立足于组织层面，将知识转移分为四个阶段，即开始阶段、实施阶段、调整阶段以及整合阶段。Davenport和Prusak（1998）立足于主体层面，将知识转移分为知识发送方的传递阶段和知识接受者的利用阶段。国内学者中，张天桥和崔新健（2008）在研究中国企业跨国知识转移的过程中，将知识转移分为搜寻获取阶段、整理传递阶段、整合吸收阶段以及应用创新阶段四个阶段。贾镜渝和赵忠秀（2015）在研究中国企业跨国知识转移过程中，考虑到子公司的进入战略将对知识转移效率产生重大影响，将知识转移分为投资决策阶段、知识转移阶段以及知识整合与创新阶段。

这些研究有助于我们从不同角度认识跨国公司知识转移过程，但是很少认识到知识转移决策直接决定着知识转移的内容和方式，应成为知识转移的一个重要组成部分。深入探索知识转移中的要素及其作用机制，本文在贾镜渝和和赵忠秀（2015）的基础上，梳理国内外文献，进一步探索投资决策、知识转移和知识整合三个阶段本身的发生及其相互依存关系，试图构建一个适用于分析跨国公司知识转移过程的总体框架，为开展相关研究和跨国公司知识管理提供理论依据。

二、样本选择

本文采用文献分析法对跨国公司母子公司之间的知识转移进行系统分析，Petticrew和Roberts（2005）指出文献分析法旨在通过识别、评估和综合分析所有相关研究以回答某一个或一系列特定问题。因此，适用于本文对跨国公司知识转移的总体过程进行研究分析。

学术期刊是学者们发布和交流研究成果的主要平台。本研究以2008—2017年为时间点，所选取的63篇中文文献中，其中62篇为CSSCI及以上期刊上所刊发文章，1篇为《中国人力资源开发》所刊发文章；所选取的59篇外文文献的来源期刊影响因子均大于1且平均影响因子为2.77，以确保所参考文献的质量。中外文献来源期刊汇总结果如表1所示。为了确保研究结果的相对客观、有效及避免遗漏，本研究主要按照2个步骤得到所需样本，具体步骤如下。

14 《中国人力资源开发》作为人力资源开发与管理界最权威和最有影响的专业学术期刊，因此在样本选择中也将其所刊发的该领域的文章纳入本研究范围。
步骤一：在中国知网（CNKI）数据库中采用专业检索模式，以“知识转移”、“跨国公司”以及“子公司”作为关键词进行筛选，共得到 170 篇符合条件的中文文献；同样，在 EBSCO 数据库中，以“knowledge transfer or knowledge flow or technology transfer”、“MNC”以及“subsidiary”作为关键词进行筛选，共得到 219 篇符合条件的外文文献。

步骤二：鉴于经过步骤一的筛选后所得到的结果中仍然会包含于本研究目的不相符的论文。经过研究讨论，采用相关性、实用性、学术性和权威性等原则进行再次筛选，共得到中文文献 63 篇，外文文献 59 篇，合计共 122 篇中外文文献作为本文最终分析的文献样本。

表 1 中外文献来源期刊汇总
<table>
<thead>
<tr>
<th>中文文献来源期刊</th>
<th>篇数</th>
<th>外文文献来源期刊</th>
<th>篇数</th>
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<td>科技管理研究</td>
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<td>Knowledge Management Research &amp; Practice</td>
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<td>Journal of Business &amp; Industrial Marketing</td>
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资料来源：作者整理所得。
图 1 中文文献期刊来源、文献数量和发表时间

资料来源：作者整理所得。
图 2 外文文献期刊来源、文献数量和发表时间

资料来源：作者整理所得。
如上，图 1 为本文所参考中文文献的期刊来源、文献数量和发表时间，图 2 为本文所参考外文文献的期刊来源、文献数量和发表时间。由图 3 可知，总体看来，关于跨国公司知识转移的文献数量各年变化较为平稳，最高 2012 年与 2014 年达到 17 篇，最低 2013 年为 6 篇。可见学术界对于跨国公司知识转移这一主题多年来均保持着一定的热度。

三、跨国公司知识转移的理论基础

知识(技术)转移的概念最早是由 Teece(1977)提出，至今已有 40 年历史。知识转移特别是跨国公司母子公司间的知识转移成为当前国际企业战略管理以及知识管理研究中的热点主题。学者们从不同的理论角度探索了跨国公司知识转移的相关内容。本文在已有文献的基础上对其中具有代表性的理论学派/视角进行了整理，如表 2 所示。
### 表 2 关于跨国公司知识转移的多元化理论基础

<table>
<thead>
<tr>
<th>理论学派/视角</th>
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<td>跨国公司存在机制学派内部化</td>
<td>Buckley 和 Casson；Caves 等</td>
<td>从交易费用的角度解释了跨国公司存在的原因。</td>
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<tr>
<td>跨国公司存在机制学派知识演进</td>
<td>Kogut 和 Zander；叶星星和黄俊</td>
<td>跨国公司的存在并非是由于知识在市场交易中的失效，而是因为跨国公司是一种促进知识跨国界转移的有效工具。</td>
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<td>跨国公司存在机制学派节点角色</td>
<td>Gupta 和 Govindarajan；田泽和陈欣</td>
<td>将母公司和子公司作为跨国公司全球网络中的一个节点，每个节点在知识转移过程中扮演着不同的角色。</td>
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<td>跨国公司知识转移的行为学派知识流特性</td>
<td>Mudambi</td>
<td>将跨国公司的知识流分为三大类群：①根据知识传递单位与知识接受单位在跨国公司内部所处的等级位置不同，将跨国公司内部的知识流分为水平流与层级流；②根据知识传递单位与知识接受单位之间的竞争合作关系，将跨国公司内部的知识流划分为竞争流、合作流和独立流；③根据知识转移的目的，将跨国公司内部的知识流分为移植流、替代流和整合流。</td>
<td></td>
</tr>
<tr>
<td>跨国公司知识转移的行为学派知识转移过程</td>
<td>EI-Sayed；Szulanski</td>
<td>根据沟通理论，将跨国公司知识转移分为：知识从源单位流出，通过知识转移机制的中介作用，最终流入目标单位。</td>
<td>立足于组织层面，将知识转移分为四个阶段，即开始阶段、实施阶段、调整阶段以及整合阶段。</td>
</tr>
<tr>
<td>跨国公司知识转移影响因素视角影响因素</td>
<td>Gupta 和 Govindarajan；</td>
<td>影响子公司的知识流出与流入的因素有：流出/入单元知识存量的价值、流出/入单元的激励意向和传输渠道的多寡。</td>
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<tr>
<td>跨国公司知识转移的工具视角</td>
<td>知识转移工具</td>
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<tr>
<td>Hippel; Szulanski;</td>
<td>影响知识转移的因素主要有：知识的特性、知识来源的特性、知识接收者的特性、环境的特性。</td>
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<td>Chini</td>
<td>通过实证研究验证了知识转移能力和组织距离影响知识转移效果。</td>
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<td>Simonin</td>
<td>通过实证研究指出知识模糊性是知识是否能够有效进行转移的重要因素。</td>
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<tr>
<td>徐笑君</td>
<td>研究指出民族文化差异和冲突是影响跨国公司知识转移的重要障碍</td>
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<thead>
<tr>
<th>跨国公司知识转移的工具视角</th>
<th>知识转移工具</th>
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</thead>
<tbody>
<tr>
<td>Truran</td>
<td>将知识转移方式归纳为三类：口语、书面和媒介</td>
</tr>
<tr>
<td>Almeida 和 Grant;</td>
<td>将知识转移方式归纳为三类：人际沟通、编码传播和内嵌转移。</td>
</tr>
<tr>
<td>Davenport 和 Prusak;</td>
<td>将知识转移方式归纳为五类：面对面的会议；茶水间和谈话室；研讨会与开放式论坛；伙伴合作或师徒传承；电子科技</td>
</tr>
<tr>
<td>关涛</td>
<td>知识转移工具可归纳为制度性转移工具和人际转移工具</td>
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</tbody>
</table>

资料来源：根据于鹏和白丹（2011）《跨国公司内部知识转移的理论评述》一文整理所得。
1. 跨国公司存在机制学派

在早期有关跨国公司知识转移的研究中，一些学者从经济学的角度分析了跨国公司的存在及进行知识转移的原动力，将跨国公司知识转移归结为跨国公司进行对外投资的根本动因。根据时间先后顺序以及前提假设的不同，存在机制学派的相关研究可以分为立足于内化的研究与立足于知识演进的研究。其中，前者主要认为跨国公司之所以存在是因为交易费用；后者则认为跨国公司之所以存在是因为跨国公司是有效促进知识进行跨国界转移的工具，而不是因为知识在市场交易中的失效。

作为最早研究跨国公司知识转移的代表性学派，其在一定程度上对跨国公司存在的原因进行了解释，并指出知识转移是跨国公司对外直接投资的根本动因。但是，该学派仅从整体上将知识转移作为跨国公司的存在动因进行研究，并未更加深入地探讨与研究跨国公司知识转移的特性、转移路径以及具体过程等。

2. 跨国公司知识转移行为学派

与跨国公司存在机制学派相比，该学派将知识转移本身作为其研究对象，主要研究跨国公司知识转移行为。分析知识发送者、知识接收者、知识本身各自的特性，以及三者的相互关系和互动过程等。

虽然该学派开始以跨国公司知识转移行为作为主要研究对象，但是，一方面仅局限于对知识转移行为的表面性描述，未深入、细致地探讨与研究其内在机理；另一方面大多仅是对跨国公司知识转移行为的静态分析，未能较好地揭示其总体过程；此外，研究主要以母公司或子公司作为最小分析单位，主要分析组织之间的知识转移行为，未能有效对组织内部个体单位的知识转移行为进行研究。

3. 跨国公司知识转移的影响因素视角


该学派较多采用理论假设与实证检验相结合的方法对跨国公司知识转移进行研究与分析，因而更加具有真实性和指导意义。但由于不同的模型，一方面各自研究视角存在一定的差异，另一方面各自的侧重点也各异，难以构建一个涵盖全部影响因素的模型。

4. 跨国公司知识转移的工具视角

跨国公司知识转移对于跨国公司提升其竞争优势具有重要的作用，日益受到学术界以及社会的关注。但是跨国公司知识转移面临着诸多挑战，如地域、文化等。因此，学者们开始从实践的角度出发，探究跨国公司的知识如何有效进行转移，并提出了相应的转移工具与途径。目前，
立足于这一视角的研究根据知识的特性主要可以分为两类：适用于显性知识进行转移的工具，如：编码传播等；适用于隐性知识进行转移的工具，如：人际沟通等。

过去的40年中，学者们对于跨国公司的知识转移已有了相对丰富研究成果，立足于不同理论视角的探讨与实证检验为跨国公司知识转移的研究提供了多元化的理论基础。但是，随着跨国公司知识转移研究日益成熟，这一主题要获得进一步发展，不得不面临重大挑战：第一，如何有效整合跨国公司知识转移的多元化理论研究视角，以使其研究成果更加全面、深入；第二，随着跨国公司知识转移研究的纵深化，如何同时兼顾理论创新与实证检验；第三，如何兼顾跨国公司知识转移的“前因”与“后果”，构建一个适用于分析跨国公司知识转移总体过程的框架，为开展相关研究和跨国公司知识管理提供理论依据。

目前，大多数学者在研究跨国公司知识转移的过程中侧重于对转移过程的某个特定方面进行研究，如：知识转移发生的方式、原因、影响因素等。极少数学者（Tseng, 2015; Pérez-Nordtvedt等，2008; 贾镜渝和赵忠秀，2015; 张天桥和崔新健，2008）将跨国公司的知识转移作为一个总体过程进行研究分析。然而，跨国公司知识转移现象是一个完整的过程，在研究中应对其转移的总体过程和背景进行分析。

因此，本文在现有理论视角的基础上，聚焦跨国公司母-子公司层面的正向知识转移，兼顾跨国公司知识转移的“前因”与“后果”，将跨国公司的知识转移作为一个总体过程进行研究分析，按照对跨国公司知识转移的阶段划分系统梳理跨国公司知识转移的相关研究，总结有关跨国公司知识转移的前因、行为和后果，以有助于更好地理解跨国公司知识转移。

四、跨国公司母子公司之间知识转移的总体过程分析

通过整理与分析上述文献，发现大多数学者在研究跨国公司知识转移的过程中侧重于对转移过程的某个特定方面进行研究，如：知识转移发生的方式、原因、影响因素等。极少数学者（Tseng, 2015; Pérez-Nordtvedt等，2008; 贾镜渝和赵忠秀，2015; 张天桥和崔新健，2008）将跨国公司的知识转移作为一个总体过程进行研究分析。然而，跨国公司知识转移现象是一个完整的过程，在研究中应对其转移的总体过程和背景进行分析。

Perez-Nordtvedt等（2008）和Tseng（2015）等研究认为以下因素影响知识转移的程度：知识发送者（母公司）；知识接收者（子公司）；转移机制（直接机制和间接机制）；知识本身的特性（主要是复杂性和隐含性特点）。图4对传统的跨国公司知识转移进行了总结，知识转移的接收者是子公司，知识转移的发送者是拥有要转移知识的母公司。但是，大多数关于知识转移的研究集中于发送者与接收者之间的关系，接收者本身、发送者本身或者所转移知识的类型，未能同时探讨跨国公司知识转移所有相关因素。因此，应加强对知识转移总体过程的研究，以丰富该领域研究。
传统的跨国公司母子公司之间的知识转移流程

立基于文献研究目的以及现有文献研究的基础上，将跨国公司知识转移总体过程共分为三个阶段：投资决策阶段、知识转移阶段和知识整合阶段（如图5所示）。

1. 投资决策阶段

关于知识转移前的投资决策阶段，所参考文献涉及的内容大多与子公司的进入战略选择有关。Buckley等（2003）认为知识转移是由子公司进入战略和形成知识转移的条件所决定的。跨国公司进入战略选择可分为四种：并购、绿地、独资和合资（Hennart和Park，1993；Cui和Jiang，2009）。通过文献整理，以下分别从四种进入战略对跨国公司知识转移产生的影响进行归纳与总结。
（1）并购。通过并购形成的母子公司关系中，一方面，母公司为了更好地管理子公司，会外派母公司的相关人员进入子公司进行管理活动，从而产生知识转移过程（李京勋等，2012）；另一方面，跨国并购的一个重要动因是并购双方或其中一方希望通过知识转移所带来的协同增效（Li等，2016；杨军敏和徐波，2013）。


（2）绿地。如果通过绿地行为形成的母子公司关系，意味着跨国公司新建分支机构，此时跨国公司的整合程度较高，运营中会获得更多的控制力，而这种控制力将使得跨国公司之间的知识转移更加有效。此外，绿地行为形成的母子公司关系中，子公司往往较为依赖母公司的知识库，这将有利于知识转移过程，推进母公司将知识转移到子公司（陈怀超和范建红，2015；吴晓云和陈怀超，2011）。

（3）独资。通过独资形成的母子公司关系，首先，跨国公司在各东道国的分支机构中占有更多的股权，这有利于促进政策、方案的执行和命令的反馈；其次，由独资形成的母子公司关系中，跨国公司有着较强的控制力以及执行力，有利于推进跨国公司母子公司之间的知识转移（陈怀超等，2014；陈怀超和范建红，2015；胡玲和金占明，2012；易加斌等，2012）。


3. 知识转移阶段

如前所述，通过文献整理分析可知，对于跨国公司知识转移大多数研究可以分为为什么母公司的知识是有价值的，知识怎么样进行转移，什么类型的知识将得以转移，为什么所转移的知识对子公司是有价值的，以及知识转移中其他尚未研究清楚的问题（Becerra等，2008）。本文所分析的122篇文献都侧重于对知识转移过程的某阶段进行研究（详情请参阅附录），现按照知识转移过程中的四个要素，即知识发送者、知识转移机制、知识本身以及知识接收者四个方面进行具体分析。

（1）母公司：知识发送者。基于国际化经济理论，在分析跨国公司知识转移的原因时，研究往往侧重于知识的发送者（母公司）和接收者（子公司）的位置。学者们立足于知识转移过程中发送者（母公司）的研究内容有：为什么母公司的知识是有价值的；为什么母公司要进行知
知识转移。

母公司的知识之所以是有价值的，是因为母子公司的分工与定位、支配与从属关系决定了母公司所拥有的知识一般是基于所有权优势的在当地具有竞争力的技术和先进的管理理念（刘明霞和于飞，2015；丛聪和徐枞巍，2010）。与某些参与者或某种特定背景下的知识库存有所不同，这些知识是子公司无法获得的。


其次，立足于母公司层面：知识管理机制（黄蕊和李朝明，2014；Lupton和Beamish，2014）。

3. 间接机制

4. 在研究激发或破坏知识转移的间接机制上，大多数学者侧重于从知识发送方的“转移意愿”，“转移动因”，“转移能力”“与”转移机会”和知识接收方的“吸收意愿”与“吸收能力”等方面进行研究分析。


（3）知识本身。基于知识演进视角，Pérez-Nordtvedt等（2008）认为知识转移的决定因素包括知识的价值、知识的稀缺性以及知识的不可替代性。然而，在知识转移的过程中另一个需要考虑的问题是知识的可转移性。王娟茹和朱焕亮（2014）等认为知识转移能力应根据知识的特性，即隐含性、专有性和复杂性进行分析。


（4）子公司：知识接收者。如图 5 所示，学者们立足于知识转移过程中接收者（子公司）一方，从新兴市场企业的追赶策略或者基于知识基础观的绩效提升等方面进行研究分析：为什么子公司需要母公司所转移的知识或者为什么母公司所转移的知识对子公司是有价值的？

一方面，研究新兴市场企业的许多学者认为，跨国公司越来越多地寻求对外直接投资，以提升其全球竞争力（Li 等，2016；李婷婷和李艳军，2014；胡玲和李占明，2012；徐笑君，2010；张晓燕，2010）。在这一过程中：


② 当子公司在知识转移中获得更高竞争优势之后，其战略地位将得到进一步提升，从而获得母公司更高质量的知识（胡玲和金占明，2012）。

另一方面，康青松（2015）指出当母公司向子公司转移其特有的技术、知识与经验时，将有利于子公司提升其技术水平和组织管理能力以及克服各种不利因素，从而获得所期望的绩效。


3. 知识整合阶段
大部分学者侧重于研究知识转移对绩效的影响或是知识转移所带来的好处，如图 4 所示（Singh 等，2013；Li 等，2014；Pérez-Nordtvedt 等 2015）。跨国公司进行知识转移的动机取决于跨国公司将知识转移给子公司后所获利益的多少（Tseng，2015；易加斌等，2009）。然而，相对于知识转移阶段的研究，关于知识整合阶段的研究较少。

一方面，Pérez-Nordtvedt 等（2015）将知识转移的有效性和效率与绩效建立正向联系，将有效性定义为实现期望的结果，将效率定义为期望的时间和成本范围内获得的期望结果。但是，关于绩效的定义和如何衡量上，学者们大多使用文献中通过调查研究所得来的感性指标（Singh 等，2013）。在衡量知识转移的绩效方面学者们没有达成共识。例如，Li 等（2014）认为组织绩效是知识转移产生的绩效的代理向量，而 Belderbos 等（2013）在研究中使用了更具体的指标，用生产率测量国际知识转移。

另一方面，Lee 等（2008）提出跨国知识转移并不总是有益的问题，知识转移与创新绩效之间的关系是“非线性的，其中包括扩张性增长的一部分，在这一部分中增量成本最终可能超过增量效益”。Lind 和 Kang（2017）指出虽然知识转移将会给子公司，乃至跨国公司总部带来极大的利益，但是“知识流入的数量绝不等于所获收益，研究必须考虑到所转移知识的价值”。


结论与展望 1. 主要结论

本文通过对来自中国知网和 EBSCO 数据库 2008—2017 年的有关跨国公司知识转移的 122
篇文献进行分析得出，知识转移是一个复杂的过程，因此应该根据其所有组成部分和更广泛的背景进行分析。本文在此已有文献进行梳理的基础上，将跨国公司知识转移总体过程总共分为三个阶段：即投资决策阶段、知识转移阶段和知识整合阶段，并得出了以下结论。

（1）从总体过程来看，跨国公司知识转移实际上并不是一个线性过程，而是一个具有复杂性与互惠性的过程，其中母子公司之间不断进行互动和相互交流知识，这些知识既包括显性知识又包括隐性知识。然而，大多数研究知识转移这一现象的学者侧重于对知识转移过程中某一具体方面的研究，如：为什么来源于母公司的知识是有价值的；如何更好地进行知识转移等。然而，对知识转移某一具体方面进行研究不利于分析知识转移的总体过程。

（2）从各阶段来看：

① 在投资决策阶段中，并购、绿地、独资与合资四种不同的进入战略对跨国公司知识转移将会产生的不同的影响，但是其作为知识转移总体过程中最重要的组成部分，却是研究最少的。

② 在知识转移阶段，知识转移由发送者到接收者，在这一过程中必须要强调并关注知识发送者的“转移意愿”、“转移动机”与“转移能力”，以及知识接收者的“吸收意愿”与“吸收能力”；组织的文化背景、信任程度、管理机制以及所转移知识本身的特点等。

③ 在知识整合阶段，大多数学者是基于定量方法（主要是调查）研究知识转移对创新与绩效的影响或是知识转移所带来的好处，而忽视了对结果变量的探究。

通过本文跨国公司母子公司之间知识转移的总体过程进行研究分析，以期能够更好地理解跨国公司知识转移，为企业管理者进行全球战略规划与知识管理提供帮助，并为今后学者在该领域的学术研究提供依据。

2. 研究局限

本文的研究存在一定的局限性：① 本文虽对122篇文献进行了较为系统地分析，但在分析前通过对文献的刊发年份、期刊类型、数据库来源等进行了筛选，使得本文对于跨国公司知识转移这一主题的分析未能详尽；② 为便于说明与分析，本文仅考虑从跨国公司母公司向子公司一方的单向知识转移，而跨国公司母-子公司之间的知识转移应该是多向的，包括子公司向母公司的知识转移、子公司之间的知识转移等。

3. 未来展望

通过对文献的梳理与总结，关于跨国公司知识转移的研究可以从以下几个方面进行进一步探究：

① 可以注重对投资决策阶段的研究，考虑个体、团队、组织、社会等各个层面的影响因素及其相互之间可能存在的中介、调节作用等，将并购、绿地、独资和合资四种不同的进入战略对知识转移所造成的影响进行对比性研究，为跨国公司选择合适的进入战略提供一定的指导，从而促进知识跨国界的有效转移。

② 需继续深入挖掘知识转移阶段的内在机理，并从动态视角分析跨国公司知识转移过程所表现出的演化路径，揭示跨国公司知识转移路径形成的一般规律，从而为跨国公司进行知识转
移行为提供有效指导。

参考文献


The Relationship between Knowledge Hiding and Employee Creativity: Task Independence as a Moderator

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Abstract:

In the era of knowledge economy, knowledge hiding phenomenon is ubiquitous in organizational practices. Most existing researches focus on the negative impact of knowledge hiding on teams, knowledge-hiders, and knowledge seekers. This article based on the Conservation of Resource Theory, from the perspective of knowledge power, discussed the mechanism of knowledge hiding on employee creativity. Meanwhile, this paper introduced task interdependence to test different effects of knowledge hiding on employee creativity under different task characteristics, and proposed the hypothesis that knowledge hiding has the potential to increase employee creativity.

Keywords: knowledge hiding; knowledge power; task interdependence; employee creativity

知识隐对员工创造力的影响机制研究——基于任务互依性的调节效应

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摘要：

知识经济时代，知识隐藏现象普遍存在于组织实践，且现有研究大都关注知识隐藏对团队、知识隐藏者、知识寻求者的负面影响。本文基于资源保存理论视角，从知识权利角度出发，探讨了知
识隐藏对员工创造力的影响机制，同时引入任务互依性，检验不同任务特征下知识隐藏对员工创造力的不同影响，并创新性提出知识隐藏有提高员工创造力的可能性。

关键词：知识隐藏；知识权利损失；任务互依性；员工创造力

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引言

试图以下情境：在一个不强调员工合作的组织氛围中，员工各守其职、各司其职，合作互助的创新工作成果只对其中一人的绩效考核有效，即不强调团队绩效，这无形中在组织内形成鼓励竞争的氛围。在该种氛围下，面对他人的知识请求，员工出于保护自己核心竞争力的需求，往往会隐藏知识，应用自己独有的知识想方设法独立创新，这在一定程度上提高了个人的创造力，对组织而言，也可以促进创新成果数量的增长，且减少了组织内部“搭便车”的现象。基于此现象，本研究尝试提出知识隐藏在特定的任务特征中有可以提高员工创造力的可能性。

然而，现有研究大多聚焦于知识隐藏的负面效应。理论界与实务界在知识隐藏会负面影响组织绩效这一问题上已经达成共识，尤其对于知识型组织，知识隐藏会破坏员工心理契约，不利于员工合作，直接影响组织绩效。

也有一些学者认为，知识隐藏会促进员工主动离职行为；如Cerne等（2014）的研究表明，知识隐藏会引发员工之间的“不信任循环”，进而影响员工创造力。Serenko & Bontis（2016）的研究表明，知识隐藏会促进员工主动离职行为；周健明等（2016）的研究表明，知识隐藏对团队知识存量产生负面影响，进而降低团队新产品开发绩效。

然而，根据社会信息加工理论，人类是适应性的有机体，会根据环境所提供信息的不同来调整自己的态度与行为。这说明了组织氛围对员工特定行为的塑造起着重要作用。知识是依赖于情境及其应用者的，脱离使用情景和使用者来对知识进行评价和测量都是不充分的。且知识隐藏的概念界定者Connelly等（2012）明确指出，知识隐藏不是一个负面的行为，它可能会产生积极的结果。基于以上分析与论述，本文旨在探讨知识隐藏是否可以通过知识权利保留进而提高员工创造力，以及任务互依性是否可以调节知识隐藏与员工创造力之间的关系。

一、知识隐藏与员工创造力

1. 知识隐藏概念界定

知识隐藏（Knowledge hiding）的概念由Connelly于2012年首次提出，是指个人在面对他人的知识请求时故意保留或隐瞒知识的行为。它并不总是欺骗性的，不是负面的行为，也可能出于积极的意图（比如保护机密或第三方利益），产生正面的结果。Connelly等（2012）进一步解释了解析了知识隐藏的维度，认为知识拥有者可以采用装傻隐藏（playing
dunb）、回避隐藏（evasive hiding）、合理隐藏（rational hiding）三种知识隐藏策略。所谓装傻隐藏，是指知识隐藏者假装对相关知识不了解，该维度带有欺骗性质；回避隐藏指隐藏者提供不正确的信息或者误导性的答案，即使没有意图这样做，该维度也涉及欺骗性质；合理隐藏不一定涉及欺骗，该种情况下，隐藏者可以提供不能透露所需知识的正当理由，如保密、第三方不允许等。

知识隐藏是知识管理领域的新兴概念，一经提出便引起了学术界与实务界的极大关注。但在该概念提出以前，人们早就注意到了该种现象，只是称呼不同。比如 Argote与 Ingram（2000）提出的“知识保留”现象，与知识隐藏有异曲同工之处，虽然人们早就注意到了该现象，但是真正的研究是近几年才开始的。Argote与 Ingram为了更清晰地了解知识隐藏的内涵，将其与类似概念进行区分比较是必要的。

第一，知识隐藏≠知识分享欠缺（lack of knowledge sharing）。同为关注组织成员知识流动的问题，知识隐藏与知识共享并非是相对的概念，两者相关但不同。首先，知识隐藏强调在面对知识请求时的故意隐藏行为，属于被动应答；而知识共享不仅包括被动给予，还包括主动给予。其次，虽然从行为方面，两者有相似之处，但从动机不同。知识隐藏是隐藏者的有意为之，如假装不知道或有意拖延，背后的动机包括贪婪、自私、懒惰等。而知识共享欠缺可能是由于员工本身不具有所请求的知识，并非有意为之。

第二，知识隐藏≠知识囤积（knowledge hoarding）。知识囤积与知识隐藏有一定程度的重叠，它是指累积知识的行为，可能会在以后分享。知识隐藏与知识囤积都包含保留知识的行为，但是，知识隐藏是针对别人的知识请求有意隐瞒知识，而知识囤积是指知识的积累，积累的这些知识并不仅取决于别人的需要。由此可见，知识隐藏的有意性及其方法策略使其与知识囤积有着根本差异。第三，知识隐藏≠反生产工作行为（counterproductive workplace behaviors）。反生产工作行为是指对组织及其成员产生有害影响的行为，而知识隐藏行为并不一定意在造成伤害，员工进行知识隐藏可能出于保护自己或同事（避免伤害别人的心情），另外，反生产工作行为直接指向组织或个人（如盗窃），而知识隐藏则是为了响应知识请求者才发生的。此外，还有学者将知识隐藏与工作场所侵犯行为、社会破坏、工作场所不文明行为、欺骗行为等概念进行了区分。可见，虽然知识隐藏和工作场所其他行为之间存在一些概念上的重叠，但是我们认为知识隐藏是一个独特的概念，它扩大了我们对知识转移的理解。

2. 知识隐藏与员工创造力

创造力研究始于20世纪50年代，对于其定义，尚没有统一的观点。但目前学者普遍认为个体层面的创造力指个体为了完成任务目标而提出新颖、切实可行的想法、理念与思路。Amabile（1988）首次界定了个体创造力的组成成分，并被后来学者广泛引用（约4000次），他认为个体创造力包括三个构成要素：领域相关技能（domain-relevant skills）、创造力相关技能（creativity-relevant skills）与内在任务动机（intrinsic task motivation）。领域相关技能包括实际的知识、技术技能、相关领域特殊的天分、解决问题的原则、态度、审美标准等，这些知识和技能可以通过正式的或者非正式的培训获得，知识、经验和技能越丰富，用于创新的“原材料”就越多。正如 Newell和 Simon（1972）所描述的，这些知识、经验和技能的组合就是问题解决者“可能的方案选择网络（network of possible wanderings）”。创造力的相关技能主要包括个体人格特征、风险取向、创新经验、社交技能、灵活性等人格特质因素，该技能可通过培训获得。个体通过学习创新想法生成的经验，可以形成自己的创新思想策略，内在任务动机指个体
对承担任务的兴趣大小、是否满意等，领域相关技能与创造力相关技能决定一个人可以做什么，内部动机决定个体从事创新任务的意愿与努力程度大小。


H1：知识隐藏与员工创造力显著正相关。

二、知识权力损失的中介作用

福柯的权利论认为，“知识是权力体系中与权力伴生的权杖”。[33] 知识在个体间的转移伴随着权利的转移，知识转移过程存在权利损失与权利保留。[34] 关于知识管理的文献指出了知识权力丧失是知识分享的关键障碍，因为知识被认为是权力的来源。[35] 知识贡献者可能担心他人知道了他所知道的知识，会使自己失去权利与价值，潜在的知识贡献者如果觉得保留知识可以让他们获益更多的话，他们也可能会脱离知识交流。[36] 基于此，本文提出如下假设：

H2：知识隐藏与知识权力损失显著负相关。


H3：知识权力损失与员工创造力显著负相关。
三、任务互依性的调节作用

任务互依性（task interdependence）是团队形成的原因之一。它指单个团队成员需要其他团队成员提供信息、材料和协作才能完成任务的程度。在不相互依赖的情况下，一项任务完全可以由一人来完成，相反，高度相互依赖的任务需要团队成员之间的广泛的人际互动，彼此交流认识与想法，形成高质量的成果与方案。[37] 任务互依性是一个重要的任务情景变量，是团队合作的基础之一，可以影响任务完成的效率。[38-40]


有学者认为，任务互依性是指组织成员任务执行过程中的行为方式，不同的行为方式会对任务执行结果产生不同的影响。[46] 任务互依性较强时，组织在工作时间与顺序上需要紧密配合，任务的顺利完成需要团队成员之间互相提供信息、材料与支持，知识与资源的共享是必不可少的。此时，根据相互依存理论，知识权利较高的人通常不会隐藏与任务相关程度较高的知识。因为员工很难找出隐藏的理由，如果被发现会受到同事的批评。[47] 而当任务互依性较高时，员工之间的互动交流频繁，故意的知识隐藏行为很可能被同事发现。[48] 因此，这种情况下员工可能会被惩罚，因为这有悖于他们的职责。[49] 而知识的分享使员工自身知识权利受损，在组织中的独特性与核心竞争力相应下降，从而有影响员工创造力的可能性。而当任务互依性较低时，知识分享取决于自身、同事与领导的监督与评价。因此，员工往往会为了保持自身核心竞争力实施知识隐藏行为，基于社会比较理论，员工之间相互竞争、并驱争先，有利于激发员工创造力。综上所述，本文做出如下假设：

H4：任务互依性在知识权利与员工创造力之间起到调节作用。
H4a：任务互依性高会弱化知识权利与员工创造力之间的正相关关系；
H4b：任务互依性低会强化知识权利与员工创造力之间的正相关关系。

综合而言，本研究的框架如图 1 所示：

![图 1 研究框架](image)

四、研究结论与讨论
该研究的创新点主要体现在以下几个方面：第一，Connelly等（2012）明确指出知识隐藏不是一个负面的行为，它可能会产生积极的结果。但是目前理论界与实务界都将目光放在知识隐藏的负面效应上。本文基于资源保护理论，从知识权力的角度出发，认为知识隐藏有利于员工知识权利的保留。而知识权利是员工自身独特性与优势的体现，员工独自拥有创新的“原材料”在一定程度上有利于维护员工创造力。因此本文创新性提出了知识隐藏有提高员工创造力的可能性。第二，根据社会信息加工理论，人类会根据环境所提供信息的不同来调整自己的态度与行为。本研究讨论了任务互依性对知识隐藏与员工创造力之间影响路径的调节作用。分别讨论了高任务互依性与低任务互依性下，知识权利与员工创造力之间关系的强弱变化。

在理论层面，以往的研究主要关注员工创造力需要人际互动、合作创新的一面，忽视了知识这一员工创造力的人力资本要素。在知识经济时代，知识是创新的原材料，谁掌握了知识，谁才拥有创新的自主权。本文基于资源保存理论、相互依存理论、社会比较理论，刻画了知识隐藏对员工创造力的作用路径，丰富了知识隐藏结果变量领域的研究。本文认为，知识隐藏在一定程度上有利于员工知识权利的保留，而知识权利有利于组织内员工创造力的维持与提升。此外，还检验了任务互依性对知识权力与员工创造力之间的调节作用。在实践层面，知识作为人力资本的构成要素，该研究将目光转移到了知识隐藏在特定任务情境下的积极作用。有利于企业管理者进一步认识知识隐藏现象，扭转“知识隐藏”色变的局限认识，提醒其不要盲目抑制知识隐藏行为。要根据组织任务特征合理认识与控制知识隐藏现象。

作为一项理论分析研究，本文还可以进一步完善：第一，本文只在理论上对知识隐藏对员工创造力的影响路径进行了探讨，没有实际组织调研、数据收集与分析。未来研究可通过具体的案例研究来具体描述知识隐藏与员工创造力之间的关系。第二，新理论模型的正确与否，也需要后续实证研究和基于企业现实数据的实证研究来提升对本研究提出的相应观点的支持力度。其次，现有研究大多关注知识隐藏的负面影响，未来还需正视企业中普遍存在的知识隐藏现象。继续探讨知识隐藏在特定情形下的积极效果。

参考文献：
独立董事参与度对 CEO 超额薪酬影响研究—基于深度与广度的双元视角

刘鑫，张雯宇

摘要：本文基于中国上市公司独立董事制度为政策背景，从深度和广度双元角度检验了独立董事参与度对 CEO 超额薪酬的影响。本文以 2008—2015 年中国沪深 A 股的 2274 家上市公司为样本，通过多种检验方法到以下结论：独立董事任期所反映的参与深度对 CEO 超额薪酬具有抑制效应；独立董事兼职企业数量所反映的参与广度对 CEO 超额薪酬具有促进效应。本文的研究结论表明，在中国上市公司独立董事任期硬性规定的约束下，独立董事任期的延长有助于促进董事会监督职能的有效发挥；而兼职多家企业的独立董事则会因为精力不足、监督动机受到其社会网络的抑制而削弱董事会监督职能。

关键词：独立董事，CEO 超额薪酬，参与深度，参与广度。

一、引言

委托代理理论指出，内部经理人会利用对企业的控制权通过在职消费、超额薪酬等方式来为自己谋求私利（Grinstein and Hribar, 2004; Jensen and Meckling, 1976）。在股权分散时，缺乏有效制衡的经理人可能通过干预薪酬契约的制定过程获取高额薪酬，本身就形成一种特定的代理问题（Bebchuk and Fried, 2003; Core et al., 1999）。因此，作为现代公司重要的公司治理机制，董事会一项重要的职能在于监督内部经理人对薪酬契约制定过程的干预减少 CEO 超额薪酬降低代理成本。已有大量研究运用 CEO 超额薪酬作为衡量董事会发挥监督职能的指标：一方面，从组织结构来看，董事会下设专业委员会中的薪酬委员会专门负责 CEO 薪酬的制定和监督，因而 CEO 超额薪酬具有衡量董事会监督职能的有效性；另一方面，从可获性来看，大量研究证明，董事会监督职能越强，CEO 越不易达到获取个人超额薪酬的目的（Boyd, 1994; Main et al., 1995）。


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基于以上论述，本文将CEO超额薪酬作为董事会监督职能的反映，利用2008—2015年中国沪深A股上市公司的数据，检验了独立董事的参与“深度”和“广度”如何影响了董事会的监督职能。我们的研究发现，独立董事的参与“深度”显著降低了CEO超额薪酬，提升了董事会的监督职能；独立董事的参与“广度”显著增加了CEO超额薪酬，降低了董事会的监督职能。

区别于以往研究，本文可能的研究贡献如下：第一，从CEO超额薪酬的角度丰富了独立董事对董事会监督职能影响的研究。以往有关独立董事相关研究主要集中在其咨询职能，探讨其对公司价值、战略决策或违规行为的影响。本文将CEO超额薪酬作为董事会监督职能有效性的反映，从深度和广度两个维度分析了独立董事参与对董事会监督职能的影响，丰富了CEO超额薪酬影响因素研究，同时深化了独立董事履行监督职能的研究。第二，以中国独立董事的特有制度为背景论证了独立董事任期和兼职对董事监督职能的影响。与西方国家不同，中国独立董事任期不得超过6年，这一制度对独立董事履行监督职能的过程和动机具有重要的影响。本文则从心理和动机的角度，分析了在6年任期制度约束下的独立董事参与深度和广度如何影响了其监督职能的履行，拓展了中国制度背景下的独立董事研究文献。第三，本文的研究结论有利于中国上市公司正确理解独立董事任期和届期独立董事对公司治理所发挥的作用，有助于优化董事会结构、提高聘任独立董事的科学性。

二、理论分析与研究假设

（一）独立董事参与“深度”与董事会监督职能

独立董事深度参与董事会的经营决策可以使其深入了解公司优势和资源、了解公司独有信息，从而减少自身外部性所引发的信息不确定性进而有助于董事会有效发挥监督和咨询的职能（Cornelli et al., 2013）。一方面，随着其任期增长，独立董事对公司独有信息和所处环境的掌握更加准确、全面，因此相关经验更丰富、决策能力更强对包括CEO在内的高管人员不当行为有更专业的甄别能力（Finkelstein et al., 2009）。Nikos（2003）提出董事成员的“专家化假设（expertise hypothesis）”：随着董事会成员任期增长标志着他（她）经验更为丰富、专业度增强、胜任性提升，对董事会的贡献度提高进而促进董事会职能有效发挥（Nikos, 2003）。另一方面，随着独立董事任期的增加，其在公司的话语权增加，在公司管理层做出损害股东利益、违背公司价值最大化的企业目标时，独立董事更有信心和能力提出反对意见，从而在主观上增强了董事会的监督职能。所以，独立董事任期所反映的参与深度的增大能够更深入的了解、形成更为专业的监督能力提升董事会监督职能有效性，因此有助于遏制CEO的超额薪酬。

413 家公司为样本，研究得出“任职时间长的独立董事更倾向于批准那些对管理层有利而对股东不利的提案”（Zajac and Westphal, 1996）。所以，基于“管理者友好”假设，任期较长的独立董事从主观上更有容忍CEO超额规定自己薪酬的意愿，从而放弃对CEO寻租行为的监督和控制进而形成“合谋”，降低董事会的监督职能。

那么在中国上市公司中，独立董事的参与深度是有助于减少CEO超额薪酬提升董事会的监督职能还是降低董事会监督职能的有效性引发更高的CEO超额薪酬呢？Levinger 和 Snoek (1972) 提出了解释亲密关系影响因素的互赖模型指出亲密关系形成的三个必要因素：1）长时间频繁互动；2）关系中包含不同种类的活动活事件；具有很多共同兴趣；3）双方对彼此具有很大的影响力（Levinger and Snoek, 1972）。依据以上理论基础，本文从时间和频率两个维度来分析中国上市公司独立董事与CEO能否在沟通或者其他方式的互动过程中形成亲密关系继而合谋。一方面，从时间维度来看，我国证监会对独立董事6年最长任期（3年为一个任期）的限制束缚了独立董事与CEO之间形成长期、稳定的亲密关系。中国公司独立董事制度与西方独立董事制度在有关独立董事任期的规定方面有着鲜明的差异：从表1中，我们可以看出，西方公司事实上对独立董事的任期并没有明确的界定。一方面，“管理层友好”假设中提出独立董事和CEO形成亲密关系继而“合谋”是基于西方独立董事制度提出的。毫无疑问，独立董事和CEO在长达10年甚至以上的沟通和互动中形成亲密关系的可能性比较大。另一方面，对于任期届满日期的确定性会影响独立董事与CEO形成亲密关系动机的强弱程度。心理学相关研究证明，人们更倾向于为长期的、没有明确结束日期的人际关系投入更多精力和关注度（Nosofsky, 1986；Schumacher, 2013）；相反，短期的、临时的、有明确期限的关系则会削弱人们投入精力和关注建立亲密关系的动机。所以，中国上市公司独立董事制度关于独立董事任期最长不得超过六年的明确规定显著降低了独立董事和CEO构成合谋的可能性。

表1主要国家和地区独立董事任期规定

<table>
<thead>
<tr>
<th>独董任期规定类别</th>
<th>国家或地区</th>
<th>任期规定具体描述</th>
<th>发文机构</th>
</tr>
</thead>
<tbody>
<tr>
<td>有明确的任期限制</td>
<td>中国</td>
<td>连续任期最长不得超过6年</td>
<td>中国证券监督管理委员会</td>
</tr>
<tr>
<td>带条件的任期限制</td>
<td>印度</td>
<td>不超过6年，不可连任3届</td>
<td>印度公司政府事务部</td>
</tr>
<tr>
<td>无具体规定和要求</td>
<td>英国</td>
<td>超过9年进行独立性说明</td>
<td>财务报告理事会</td>
</tr>
<tr>
<td></td>
<td>法国</td>
<td>超过12年进行独立性说明</td>
<td>Afep-Medef</td>
</tr>
<tr>
<td></td>
<td>中国香港</td>
<td>超过9年进行独立性说明</td>
<td>香港交易所</td>
</tr>
<tr>
<td></td>
<td>新加坡</td>
<td>超过9年进行独立性说明</td>
<td>新加坡交易所</td>
</tr>
<tr>
<td></td>
<td>澳大利亚</td>
<td>超过10年进行独立性说明</td>
<td>ASX公司治理委员会</td>
</tr>
<tr>
<td></td>
<td>美国</td>
<td>无任期规定</td>
<td>NYSE、NASD</td>
</tr>
<tr>
<td></td>
<td>加拿大</td>
<td>无任期规定</td>
<td>OSCB、多伦多证券交易所</td>
</tr>
<tr>
<td></td>
<td>日本</td>
<td>无任期规定</td>
<td>东京证券交易所</td>
</tr>
<tr>
<td></td>
<td>韩国</td>
<td>无任期规定</td>
<td>韩国证券交易所</td>
</tr>
<tr>
<td></td>
<td>印度尼西亚</td>
<td>无任期规定</td>
<td>国家治理委员会</td>
</tr>
</tbody>
</table>

资料来源：参考陈冬华（2016）研究并手动收集整理所得

另一方面，从频率的维度来看，我国独立董事参与董事会决议的现状使独立董事与CEO的交往频率低下，难以形成心理同化，从而很难建立并维持相对稳定的亲密关系。社会心理学研究
发现，人际间频繁的交往会影响个人的内心活动，而这种影响在每日交往、连续交往的情况下尤为显著 (Bakker and Xanthopoulou, 2009)。相反，低频率交往由于很难刺激脑隔核发挥作用形成多巴胺受体而近似抑郁的心理效应，从而抑制亲密关系的形成 (朱维莉，2016)。而中国上市公司中，独立董事制度流于表面，独立董事普遍存在“不在状态”的情况 (李海舰和魏恒，2006)。独立董事在董事会参与度较低与管理层争论提出反对意见、主动性差，不积极就企业战略及发展相关主题与内部高管人员频繁互动，这使得独立董事难以与 CEO 形成深入的亲密关系。另外，中国上市公司中有 80% 存在着跨省独立董事，70% 以上拥有距离公司 150 公里以外的董事 (罗进辉等，2017)。这种地理距离阻碍了独立董事与包括 CEO 在内的内部高管人员进行高频率人际互动进而形成亲密关系。所以，基于时间和频率两个维度的分析，我们认为，中国上市公司中独立董事很难与 CEO 形成“合谋”关系。

基于以上分析，本文认为，由于中国上市公司对独立董事 6 年任期的特殊规定以及现有独立董事制度实施现状，独立董事任期提升所反映的独立董事参与深度加强凸显的是对董事会监督有效性的增强效应，而非提升独立董事与 CEO 形成“合谋”关系的可能性继而削弱董事会监督职能。董事会监督职能的增强意味着 CEO 谋求私利行为受到遏制，因而 CEO 超额薪酬降低。由此，本文提出假设 1：

H1：独立董事的参与深度对 CEO 超额薪酬具有负效应。

（二）独立董事参与广度与董事会监督职能

独立董事往往是具有专业技术能力或是高级专业职称的专家学者，他们所具有的知识、专长和技能形成了其人力资本的稀缺性。在现阶段中国资本市场尚不具备独立董事人才库的背景下 (谭劲松等，2003)，具有稀缺人力资本的独立董事往往会兼职多家上市公司，成为连锁董事。依据卢昌崇和陈仕华 (2009) 的研究，约有 72.13% 的公司至少有一位连锁董事 (卢昌崇和陈仕华，2009)，而 2013 年中组部下发的“18 号文件”引发了“官员独立董事”的离职潮 (李勇和朱禁弢，2014)；2015 年教育部下发文件禁止高校处级以上领导干部担任上市公司独立董事，引发了“高校独董”的闪辞潮 (劳佳迪，2015)。这一系列的政策限制导致独立董事供给的结构性减少 (陈冬华 等，2017)，使其人力资本的稀缺性进一步凸显，进而引发了独立董事兼任多家上市公司的情形愈加普遍。从表 2 中我们很明显可以看出，上市公司越来越多聘请了兼职的独立董事，而独立董事兼任多家公司的现象也变得越来普遍。

表 2 A 股上市公司兼职独董年度分布

1 依据 Bakker 和 Xanthopoulou (2009) 的研究，亲密关系的建立在每日发生人际交往且在每天交往 3 次、连续持续四天的发生的情况下较为显著。
2 冲突的出现和解决也是促进人际交往的途径之一 (Weingart et al., 2015)。
数据来源：国泰安CSMAR数据库的“人物特征系列”。

独立董事兼职所反映的独立董事参与广度对董事会监督职能的发挥具有双重效应。国内学者郑志刚等（2017）运用“能力假说”和“精力假说”为框架以往研究对这种双重效应的研究观点（郑志刚等，2017）。基于能力假说的观点认为，独立董事广泛参与不同公司董事会的决策与监督一方面可以使其积累监督经验，通过相似工作的数量积累和不同工作的视野拓宽来达到能力的“质”的飞跃（Clements et al., 2015）。独立董事兼职现象为其管理董事会增加了协同效应，独立董事可以将从其他类似公司董事会中的管理经验带到该公司，从而增加董事会监督职能（Field et al., 2013）。相反的，独立董事兼职数量过多会通过多重效应减少对该企业的勤勉，从而降低该企业董事会的监督职能执行效率（马如静等，2015）。在董事会出席率方面，由于多家企业兼职而忙碌董事需要将精力分摊到每个任职企业之间，很难保证足够的董事会出席率（Jiraporn et al., 2009），从而降低董事会监督职能和对企业战略决策的支持职能（Min and Chizema, 2015）。因此，独立董事参与广度会对董事会监督职能产生负效应。

那么在中国上市公司中，独立董事参与的广度如何影响了CEO超额薪酬呢？对CEO薪酬有效的监督必须要获取对CEO能力和努力的准确信息（Boyd, 1994），独立董事要获取这些信息就要保证与CEO进行频繁互动并投入时间精力加以观察。诚然，独立董事兼职多家企业可以对CEO决策科学性、经营能力、领导才能进行横向比较有助于增强其对CEO对企业绩效贡献的评估能力，从而对CEO的超额薪酬产生抑制效应。但是，针对中国上市公司独立董事参与度较低、反对意见提出严重不足的现状（陈睿等、2015；李俊强和徐丹，2016；郑志刚等，2016），由于每家企业所面临的行业情境、历史过往并不相同，最长任期为6年的独立董事作为外部董事很难基于外部比较对CEO薪酬提出有说服力的反对意见。以往研究更多的证明了，独立董事兼任多家企业可以通过资源获取、信息交换、运用网络关系影响企业并购决策（韩洁等，2014）、提升企业创新绩效（段海艳，2012）、影响公司财务决策（陈运森和郑登津，2017）或防范财务风险以及降低企业被诉讼的法律风险（王文姣等，2017）。可见，基于能力假说的独立董事兼职所反映的参与广度主要体现在增强董事会对财务、法律以及战略决策层面的监督和咨询职能。另一方面，独立董事一般本身具有全职工作（会计师、律师、高校教师等），兼职多家企业会因为精力和时间的分摊而减少对一家企业的精力投入，从而抑制其监督职能的发挥。而近年来“官员独董”和“校友独董”的政策性离职，独立董事的供给大幅度减少，使得独董连锁兼职的数量激增（陈冬华等，2017），有效兼职比例下降（许楠和曹春方，2016）。这种独立董事资源供给不足会进一步导致个别独立董事兼职过多企业，造成对每家企业精力分配不足，对CEO超额薪酬缺乏监督。另外，中国上市公司连锁独立董事中异地任职情况极为普遍，高达70%。Alam et
研究成果证明独立董事所在城市与公司总部的地理距离越近，CEO 非正常离职与公司业绩的敏感度越高；(Alam et al., 2014)。参与度更广的独立董事不可避免分布在不同地域、不同城市的兼职企业，这导致了其奔波于多地精力受损、履职的地理距离倍增因而进一步削弱了其监督职能的有效发挥。

与此同时·参与广度拓展·兼职多家企业会明显削弱独立董事对 CEO 进行严格监督的动机·动机是独立董事履行监督职责过程中的重要问题(唐雪松等., 2010)，作为有限理性的决策主体·独立董事会在权衡自身利弊的基础上选择加强或弱化其监督行为。Fama(1980),Fama 和 Jensen(1983)指出，独立董事会受到人力资本市场的激励或约束·具有整体考虑良好履约表现向外界传递声誉的动机·有助于自身职业前途(Fama, 1980; Fama and Jensen, 1983)。但同时，独立董事也可能为了保证自身席位安全性或规避财富损失弱化其监督作用的发挥。Harford(2003)的研究发现，在接管过程中·目标企业独立董事可能为了自身利益而抵制接管要约影响广大股东的收益。原因在于独立董事可能由于接受要约而失去目标企业的席位遭受损失(Harford, 2003)。在我国缺乏有效的独立董事人力资源供给和公开的独董声誉传递机制的背景下，独立董事主要席位主要由控股股东或外部人决定(谭劲松,2003；赵子夜,2014)。中国上市公司关于独立董事 6 年最长任期的规定，意味着独立董事为了能够在任期结束后能够在其他企业求职到席位必须考虑到原任职企业管理层对其评价的影响。如果任职企业的 CEO 受到了独立董事严格的监督而对其产生消极评价必然对其未来获得其他公司任职机会产生负面影响·独立董事参与广度越宽·兼职企业越多·任职企业 CEO 之间的社会关系网络越强。特别是同一行业内企业兼任的独董·信息传递速度越快·范围越广·在这种情况下·兼职多家的独董监督“严苛”、“不易合作”的“名声”会在包括 CEO 在内的经理人的圈层中迅速传播·这会对其未来的职位机会、薪酬收益产生巨大负面影响。所以，由于其兼职多家企业间经理人之间存在的网络联系·为避免在 CEO 群体中产生不良印象·参与度更广·兼职更多的独立董事会弱化对 CEO 薪酬的监督以保证在 6 年最长任期结束后获得其他公司的任职机会。

基于以上分析，随着独立董事参与广度的拓展·兼职企业的增多·独立董事精力分配不足发挥监督职能的有效性遭到削弱。同时，参与度更广的独立董事必须面对兼职企业的 CEO 相互之间的社会网络，为争取任期结束后获得其他公司任职机会·独立董事对 CEO 超额薪酬监督动机受到抑制。由此，本文提出假设 2：

H2：独立董事的参与广度对 CEO 超额薪酬具有正效应。

三、数据与变量描述

(一) 样本选取

响，对数据在 1%和 99%进行了 winsor 处理，经过以上处理，共获得 2274 家公司 10038 笔观察值。财务相关数据来自于 WIND 和 CSMAR 数据库，独立董事任期、连锁任职等数据来自于 CSMAR 上市公司数据库。

（二）变量设计

随着经济全球化的发展，越来越多的国内上市公司明确提出了 CEO 的职位设置。对未明确提出的 CEO 职位的公司，参考国内研究的普遍做法（刘鑫和薛有志, 2015, 2016; 饶育蕾等., 2012; 严若森和钱晶晶, 2016），本文将总经理定义为公司 CEO。本文要进行两部分的实证分析：第一步要构建模型计算出 CEO 的超额薪酬；第二步构建模型检验独立董事参与深度与广度对 CEO 超额薪酬的变化。

1. 关于 CEO 超额薪酬的测度

关于度量 CEO 薪酬的方法本文参考 Ang et al.(2003) 和 Brick et al.(2006)提出的方法，将 CEO 超额薪酬界定为剔除由经济因素和 CEO 自身因素决定的 CEO 薪酬正常水平后的回归残差值。参考 Brick et al.(2006) 和郑志刚（2012）的研究，模型中被解释变量为 CEO 的年度货币薪酬（CEOpay），模型中经济因素相关变量包括托宾 Q（tobinq），公司业绩水平（ROA），公司近 3 年 ROA 平均值（av_roa），股票收益率（eps），公司主营业务收入（sales），员工规模（employee），公司财务杠杆水平（lev），有形资产比率（tangible），公司成长情况（grow）。CEO 特征因素包括，CEO 年龄（age），性别（gender），任期（tenure），CEO 是否为内部来源（internal），当年是否发生 CEO 继任（ceo_new）。关于 CEO 超额薪酬测算的相关变量定义列示于表 3 的 PanelA，在第 4 小节进行 CEO 超额薪酬的度量。

2. 关于独立董事参与深度和广度对 CEO 超额薪酬影响相关变量

（1）独立董事参与深度
运用独立董事任期（odtenure）作为独立董事参与深度的替代变量，取公司当年独立董事任期的平均值。

（2）独立董事参与广度
运用独立董事兼职数量（interlock）作为独立董事参与广度的替代变量，取公司当年独立董事兼职其他公司数量的平均值。

（3）相关控制变量
参考 Kim et al.(2014)研究，本文选取了可能对 CEO 超额薪酬产生影响的因素作为控制变量，CEO 两职兼任（dual），CEO 持股情况（ceoequity），董事会持股情况（directorequity），董事会规模（boardsize），董事会独立性（independ），自由现金流（cashflow），成长收益情况（tme），公司规模（size），董事会召开次数（meeting），产权性质（soe），股权集中度（top1），股权制衡（Ibal）。

关于独立董事参与度对 CEO 超额薪酬影响的相关变量的定义列示于表 3 的 Panel B。

表 3 主要变量定义表
<table>
<thead>
<tr>
<th>变量名</th>
<th>变量代码</th>
<th>变量含义及说明</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel A</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO 薪酬</td>
<td>ceopay</td>
<td>CEO 当年现金薪酬总和的自然对数</td>
</tr>
<tr>
<td>托宾 Q</td>
<td>tobinq</td>
<td>公司当年的托宾 Q 值（市场价格/重置成本）</td>
</tr>
<tr>
<td>公司业绩水平</td>
<td>roa</td>
<td>公司当年总资产收益率</td>
</tr>
<tr>
<td>平均业绩水平</td>
<td>av_roa</td>
<td>t-1 年至 t-3 年的 ROA 平均值</td>
</tr>
<tr>
<td>股票收益率</td>
<td>eps</td>
<td>股票每股收益率</td>
</tr>
<tr>
<td>公司主营业务收入</td>
<td>sales</td>
<td>主营业务收入的自然对数</td>
</tr>
<tr>
<td>员工规模</td>
<td>employee</td>
<td>员工人数的自然对数</td>
</tr>
<tr>
<td>公司财务杠杆水平</td>
<td>lev</td>
<td>资产负债率</td>
</tr>
<tr>
<td>有形资产比率</td>
<td>tangible</td>
<td>有形资产占总资产的比率</td>
</tr>
<tr>
<td>公司成长情况</td>
<td>grow</td>
<td>公司当年销售规模与去年销售规模相比的增长率</td>
</tr>
<tr>
<td>CEO 年龄</td>
<td>age</td>
<td>CEO 的年龄</td>
</tr>
<tr>
<td>CEO 性别</td>
<td>gender</td>
<td>虚拟变量，男性取值为 0，女性取值为 1</td>
</tr>
<tr>
<td>CEO 任期</td>
<td>tenure</td>
<td>CEO 在任的时间</td>
</tr>
<tr>
<td>CEO 是否为内部提升</td>
<td>internal</td>
<td>虚拟变量，CEO 为内部提拔取值为 1，否则为 0</td>
</tr>
<tr>
<td>CEO 是否发生继任</td>
<td>ceo_new</td>
<td>虚拟变量，当年发生 CEO 继任为 1，否为 0</td>
</tr>
<tr>
<td><strong>Panel B</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>独立董事任期</td>
<td>odtenure</td>
<td>独立董事任期的平均值</td>
</tr>
<tr>
<td>独立董事兼职数量</td>
<td>interlock</td>
<td>独立董事兼职其他企业数量的平均值</td>
</tr>
<tr>
<td>CEO 兼任</td>
<td>dual</td>
<td>虚拟变量，CEO 兼任董事长则取 1，否则取 0</td>
</tr>
<tr>
<td>CEO 持股情况</td>
<td>ceoequity</td>
<td>CEO 持股比例</td>
</tr>
<tr>
<td>董事会成员持股情况</td>
<td>directorequity</td>
<td>董事持股比例</td>
</tr>
<tr>
<td>董事会规模</td>
<td>boardsize</td>
<td>董事会人数</td>
</tr>
<tr>
<td>董事会独立性</td>
<td>independ</td>
<td>董事会中独立董事人数比例</td>
</tr>
<tr>
<td>自由现金流</td>
<td>cashflow</td>
<td>自由现金流/上一期总资产</td>
</tr>
<tr>
<td>成长收益情况</td>
<td>tme</td>
<td>账面市值比，即账面价值与公司市值的比值</td>
</tr>
<tr>
<td>公司规模</td>
<td>size</td>
<td>公司总资产的自然对数</td>
</tr>
<tr>
<td>董事参与程度</td>
<td>meeting</td>
<td>每年召开的董事会议次数</td>
</tr>
<tr>
<td>产权性质</td>
<td>soe</td>
<td>虚拟变量，国有为 1，否则为 0</td>
</tr>
<tr>
<td>股权集中度</td>
<td>top1</td>
<td>第一大股东持股比例</td>
</tr>
<tr>
<td>股权制衡</td>
<td>lbal</td>
<td>第一大股东与第 2-5 大股东持股比例的比值</td>
</tr>
</tbody>
</table>

（三） 主要变量的描述性统计

表 4 报告了主要变量的描述性统计，从表 4 中能够看出在样本期内，CEO 的薪酬水平具有较大的差距，标准差达到了 0.774，在样本期内我国上市公司 CEO 的平均薪酬水平从 2008 年的 435,081.5 元增加到了 2016 年的 792,969 元，7 年间增长了近一倍，高于同期业绩增长的速度。

1 数据来自于本文对样本企业的统计，这一数据与德勤公司披露的中国上市公司高管薪酬报告“中国上市公司 2014 年总经理平均薪酬为 74.2 万元，2015 年为 78.7 万元”基本一致。
独立董事的平均任期均值为 2.734 年，中位数为 3.25 年，最大值为 6 年，这意味着独立董事一般都会完成一个任期（3 年）。样本期内中国上市公司独立董事平均兼职数量为 1.933 家，中位数为 1.76 家，这说明独立董事兼职的现象比较普遍。独立董事平均兼职（其他企业）数量最小数量为 0 家，即有上市公司的全部独立董事并没有兼职其他公司。平均兼职数量最大为 4 家，依据证监会关于独立董事的指导意见中规定“一人最多担任 5 家上市公司的独立董事”，说明样本中有上市公司的全部独立董事都达到了证监会有关规定的最上限。而且，不同上市公司间独立董事平均兼职数量差异比较明显，标准差达到了 0.926，这也说明我们研究独立董事参与广度对 CEO 超额薪酬的影响提供了可能。其他变量的统计结果与以往研究基本保持一致（王琨和徐艳萍, 2015；郑志刚等., 2012；郑志刚 等., 2017）。

表 4 主要变量的描述性统计

<table>
<thead>
<tr>
<th>变量</th>
<th>均值</th>
<th>标准差</th>
<th>中位数</th>
<th>最小值</th>
<th>最大值</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEOpay</td>
<td>13.13</td>
<td>0.774</td>
<td>13.14</td>
<td>10.87</td>
<td>15.15</td>
<td>10038</td>
</tr>
<tr>
<td>Tobinq</td>
<td>2.168</td>
<td>2.009</td>
<td>1.583</td>
<td>0.202</td>
<td>11.95</td>
<td>10038</td>
</tr>
<tr>
<td>Roa</td>
<td>0.0370</td>
<td>0.0550</td>
<td>0.0330</td>
<td>-0.191</td>
<td>0.206</td>
<td>10038</td>
</tr>
<tr>
<td>Av_roa</td>
<td>0.0430</td>
<td>0.0490</td>
<td>0.0400</td>
<td>-0.134</td>
<td>0.204</td>
<td>10038</td>
</tr>
<tr>
<td>Eps</td>
<td>0.315</td>
<td>0.423</td>
<td>0.240</td>
<td>-0.932</td>
<td>2.020</td>
<td>10038</td>
</tr>
<tr>
<td>Sales</td>
<td>16.60</td>
<td>1.676</td>
<td>16.20</td>
<td>11.40</td>
<td>20.60</td>
<td>10038</td>
</tr>
<tr>
<td>Employee</td>
<td>7.657</td>
<td>1.298</td>
<td>7.651</td>
<td>3.912</td>
<td>10.86</td>
<td>10038</td>
</tr>
<tr>
<td>Lev</td>
<td>0.472</td>
<td>0.212</td>
<td>0.473</td>
<td>0.0600</td>
<td>1.000</td>
<td>10038</td>
</tr>
<tr>
<td>Tangible</td>
<td>0.935</td>
<td>0.0780</td>
<td>0.958</td>
<td>0.557</td>
<td>1.000</td>
<td>10038</td>
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（四）CEO 超额薪酬的度量

采用 Ang et al.(2003) 和 Brick et al.(2006) 提出的方法，运用以下模型 (1) 式来估计经济因素和 CEO 的特征因素对 CEO 薪酬的解释效应。然后来计算回归残差值来作为 CEO 超额薪
酬的度量：

\[ \text{CEOpay}_{i,t+1} = \alpha + \beta X_{i,t} + \theta Y_{i,t} + \text{Industry} + \text{Year} + \epsilon_{i,t} \quad \text{模型 (1)} \]

其中，\( \text{CEOpay}_{i,t+1} \) 为第 \( i \) 个企业 \( t \) 期 CEO 的薪酬水平（取自然对数）；\( X_t \) 为由第 \( i \) 个企业 \( t \) 期影响下一期（\( t+1 \) 期）CEO 薪酬的经济因素构成的向量；\( Y_t \) 为由第 \( i \) 个同期影响 CEO 薪酬的 CEO 个人特征构成的向量。\( \text{Industry} \) 和 \( \text{Year} \) 分别控制产业和年度固定效应，\( \epsilon_{i,t} \) 为误差项。本文同时使用了控制产业和年度的稳健最小二乘法（OLS）和面板效应的固定效应（Fixed Effect）两种方法进行了估计，回归结果列示于表 5。

表 5 CEO 超额薪酬度量结果

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<th>固定效应</th>
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<td></td>
<td>系数</td>
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<td>tobinq</td>
<td>0.00479*** (0.00124)</td>
<td>0.0106** (0.00471)</td>
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<tr>
<td>roa</td>
<td>0.316** (0.136)</td>
<td>0.420*** (0.102)</td>
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<tr>
<td>av_roa</td>
<td>0.175** (0.0743)</td>
<td>0.0860*** (0.0136)</td>
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<td>eps</td>
<td>0.372*** (0.0244)</td>
<td>0.167*** (0.0273)</td>
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<td>常数项</td>
<td>10.93*** (0.209)</td>
<td>10.28*** (0.317)</td>
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</table>

年度/行业控制 | 控制 |
<table>
<thead>
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<th></th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Adj_R^2</td>
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<tr>
<td>F</td>
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</table>

注：括号中数字为标准误，*** p<0.01，** p<0.05，* p<0.1。从表 5 可知，OLS 回归结果和固定效应回归结果差异并不明显。从结果可以分析，CEO 薪酬与企业上一期的市场业绩（托宾 Q）和财务业绩（roa）显著正相关。上市公司市值、经营规模和销售增长对于 CEO 的薪酬也有正向促进作用。在 CEO 个人特征方面，年龄的、任期更长的、内部提拔的 CEO 有更高的薪酬；而公司发生 CEO 继任事件对 CEO 薪酬具有负效应。考虑到固定效应模型对减轻内生性问题的潜在作用，同时通过 \( F \) 检验可以确定固定效应模型相比于 OLS 模型有更好的解释性，因此本文基于固定效应测算出 CEO 超额薪酬（Excess_CEOpay）作为被解释变量构建回归模型。

（五）独立董事参与度对 CEO 超额薪酬影响回归模型设定

为检验假设 1，我们设定回归模型（2）：

\[ \text{Excess_CEOpay}_{i,t+1} = \alpha_0 + \alpha_1 \text{odtenure}_{i,t} + \alpha_2 \text{dual}_{i,t} + \alpha_3 \text{ceoequity}_{i,t} + \alpha_4 \text{directorequity}_{i,t} + \alpha_5 \text{boardsize}_{i,t} + \alpha_6 \text{independ}_{i,t} + \alpha_7 \text{cashflow}_{i,t} + \alpha_8 \text{me}_{i,t} + \alpha_9 \text{size}_{i,t} + \alpha_{10} \text{meeting}_{i,t} + \alpha_{11} \text{roe}_{i,t} + \alpha_{12} \text{top1}_{i,t} + \alpha_{13} \text{bal}_{i,t} + \sum \text{Industry/Year} + \epsilon_{i,t} \quad \text{模型 (2)} \]
为了检验假设 2，我们设定回归模型（3）：

$$
Excess_{CEOpay_{i,t+1}} = \beta_0 + \beta_1\text{odtenure}_{i,t} + \beta_2\text{composite}_{i,t} + \beta_3\text{directorequity}_{i,t} + \beta_4\text{independ}_{i,t} + \beta_5\text{meeting}_{i,t} + \beta_6\text{size}_{i,t} + \beta_7\text{ceoequity}_{i,t} + \beta_8\text{cashflow}_{i,t} + \beta_9\text{Ibal}_{i,t} + \beta_{10}\text{top1}_{i,t} + \beta_{11}\text{dual}_{i,t} + \sum Industry/Year + \varepsilon_{i,t}
$$

模型（3）

另外，值得注意的是，Brick et al. (2006) 强调，依据残差估计的 CEO 超额薪酬实际是一个相对的概念，而非确切数值。基于这种思想，本文参考郑志刚等 (2012) 的研究，设定 Logit 回归模型。将依据模型（1）计算的 CEO 超额薪酬大于零的取值为 1，小于零的取值为 0，将这一虚拟变量（Excess_dum）作为被解释变量带入 Logit 二值回归模型。

实证结果及分析

（一）相关性分析

表 6 列示了各变量之间的 Pearson 相关系数矩阵。从表 6 可看出，CEO 超额薪酬（Excess_CEOpay）与独立董事平均任期（odtenure）显著负相关；与独立董事兼职公司平均数量（interlock）显著正相关；在一定程度上支持了本文假设。其他控制变量方面，CEO 超额薪酬（Excess_CEOpay）与 CEO 持股（ceoequity）、董事会持股（directorequity）、董事会独立性（independ）显著负相关；第一大股东持股比例（top1）、股权制衡（Ibal）显著负相关。同时，CEO 超额薪酬（Excess_CEOpay）和董事会规模（boardsize）、董事会召开次数（meeting）、公司规模（size）显著正相关。表 6 初步报告了相关关系，与以往国内关于 CEO 超额薪酬影响要素相关研究基本一致 (冯根福等，2011; 乐琦和蓝海林，2009)。另外，可以从中变量和控制变量之间的相关系数均明显低于经典文献中 0.7 的共线性阈值（Mason and Lind, 1999; Pelled et al., 1999），因此可断定各变量之间并不存在明显的严重共线性，不会对后续回归结果产生显著影响。

（二）回归分析

表 7 报告了混合 OLS 回归、固定效应回归和 Logit 二值回归模型的检验结果，从结果上看，三种估计方法得到的实证结果并没有实质性差别。模型（2）的三种估计方法中，独立董事平均任期（odtenure）与 CEO 超额薪酬（Excess_CEOpay）在 1% 水平上显著负相关，这说明独立董事任期的增加所反映的独立董事参与程度和独立性有助于公司独立性与信息透明度的提高，从而抑制 CEO 超额薪酬，加强董事会的监督职能，这与 Kim et al. (2014) 关于独立董事任期对监督职能影响的研究结果基本一致 (Kim et al., 2014)。本文假设 1 得到支持。模型（3）的三种估计方法中，CEO 超额薪酬（Excess_CEOpay）与独立董事兼职数量（interlock）在 1% 水平上显著正相关，这说明独立董事兼职数量会提高 CEO 的超额薪酬，由于其自身精力被分配于不同地理位置的兼职单位所分散；同时，独董考虑到任期结束后未来席位的可得性对兼职企业有印象管理的考虑，因此兼职数量会削弱董事会的监督职能，CEO 超额薪酬增加，因此本文假设 2 得到验证。

从控制变量的回归结果来看，在 OLS 模型中，CEO 两职连任（dual）和 CEO 超额薪酬在 1% 的水平上显著正相关，在 FE 和 Logit 模型中也存在显著的正相关，这说明 CEO 两职连任会通过提高 CEO 权力为其获取超额薪酬提供有利条件，表示董事会开会频次（meeting）和 CEO
超额薪酬（Excess_CEOpay）在 1%的水平上显著正相关，这表明董事会更加频繁有助于 CEO 和董事会成员形成相互妥协和彼此支持的关系，这一定程度上导致他们形成亲密关系削弱董事会监督的职能。有可能诱发 CEO 通过薪酬寻租的现象，这与 Kilduff 等（2006）的研究结果基本一致(Kilduff et al., 2006)。资产负债率（lev）与 CEO 超额薪酬显著负相关，说明负债率更高的情况下 CEO 超额薪酬更低。账面市值比（tme）与 CEO 超额薪酬显著正相关。另外，国有产权虚拟变量（soe）和 CEO 超额薪酬显著负相关。这说明相比于非国有上市公司，国有上市公司的 CEO 薪酬由于存在政策、体制等方面的制约，超额薪酬较少。Ibal 与 CEO 超额薪酬显著负相关，表明存在可以发挥制约作用的多个大股东的情况下，有助于提高董事会的监督降低 CEO 超额薪酬，这与以往研究结果基本一致(Maury and Pajuste, 2005)。
### 表 6 Pearson 相关性分析

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<td>0.020*</td>
<td>-0.021**</td>
<td>0.057**</td>
<td>-0.020*</td>
<td>0.141***</td>
<td>0.235***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>soe</td>
<td>-0.00900</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.204***</td>
<td>0.166***</td>
<td>-</td>
<td>0.0130</td>
<td>0.110***</td>
<td>0.171***</td>
<td>0.00200</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>top1</td>
<td>-0.020**</td>
<td>0.023**</td>
<td>0.041***</td>
<td>-</td>
<td>-0.026**</td>
<td>-0.093***</td>
<td>0.024**</td>
<td>0.031***</td>
<td>0.0110</td>
<td>0.146***</td>
<td>0.267***</td>
<td>-</td>
<td>0.150***</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ibal</td>
<td>-0.040***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.196***</td>
<td>0.0140</td>
<td>0.017*</td>
<td>0.0140</td>
<td>0.167***</td>
<td>0.130***</td>
<td>-</td>
<td>0.076***</td>
<td>0.522***</td>
<td></td>
</tr>
</tbody>
</table>

注：***p<0.01，**p<0.05，*p<0.1
表 7 独立董事参与度对 CEO 超额薪酬影响的回归结果

<table>
<thead>
<tr>
<th>Excess_CEOpay</th>
<th>模型（2）</th>
<th>模型（3）</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>混合OLS</td>
<td>固定效应</td>
</tr>
<tr>
<td>odtenure</td>
<td>-0.0397*** (0.00456)</td>
<td>-0.0437*** (0.00347)</td>
</tr>
<tr>
<td>interlock</td>
<td>0.0753*** (0.0229)</td>
<td>0.0511* (0.0266)</td>
</tr>
<tr>
<td>dual</td>
<td>0.0753*** (0.148)</td>
<td>-0.342 (0.218)</td>
</tr>
<tr>
<td>ceoequity</td>
<td>0.0753*** (0.148)</td>
<td>-0.342 (0.218)</td>
</tr>
<tr>
<td>director equity</td>
<td>-0.0959 (0.00511)</td>
<td>-0.000586 (0.00868)</td>
</tr>
<tr>
<td>boardsize</td>
<td>-0.107 (0.167)</td>
<td>-0.205 (0.215)</td>
</tr>
<tr>
<td>independ</td>
<td>-0.176*** (0.0464)</td>
<td>-0.0752 (0.0707)</td>
</tr>
<tr>
<td>lev</td>
<td>-0.00416 (0.00752)</td>
<td>-0.0106* (0.00564)</td>
</tr>
<tr>
<td>cashflow</td>
<td>0.0526*** (0.0101)</td>
<td>0.0199* (0.0116)</td>
</tr>
<tr>
<td>tme</td>
<td>0.0286*** (0.00224)</td>
<td>0.00772*** (0.00240)</td>
</tr>
<tr>
<td>meeting</td>
<td>-0.0762*** (0.0228)</td>
<td>-0.0419* (0.0232)</td>
</tr>
<tr>
<td>soe</td>
<td>0.0774 (0.0629)</td>
<td>0.0418 (0.131)</td>
</tr>
<tr>
<td>top1</td>
<td>-0.00499*** (0.00115)</td>
<td>-0.00140 (0.00131)</td>
</tr>
<tr>
<td>Ivbal</td>
<td>10038</td>
<td>10038</td>
</tr>
<tr>
<td>Adj_R²/Pseudo R²</td>
<td>0.181</td>
<td>0.154</td>
</tr>
<tr>
<td>Chi²/F</td>
<td>20.25***</td>
<td>2.66***</td>
</tr>
</tbody>
</table>

注：括号中数字为标准误，*** p<0.01, ** p<0.05, * p<0.1。

五、进一步检验与讨论

（一） 内生性问题的解决

1. 独立董事任期内生性问题的解决：工具变量两阶段回归

董事会职能发挥越有效则企业业绩越好同时 CEO 的超额薪酬得到抑制，这样的企业就更倾向于延长独立董事任期，这可能形成互为因果（reverse causality）的内生性问题。为了解决这一内生性问题，需要引入
一个外生变量与独立董事任期相关而与 CEO 超额薪酬不相关的工具变量。本文选取独立董事平均年龄（odage）作为工具变量（Instrumental Virable,IV），主要基于以下考虑:一方面，显而易见，独立董事更年长证明在任时间更长，同时，独立董事年龄越大，经验越丰富，对企业越了解，连任的可能性越大。第二，考虑到人力资源市场上普遍趋势—年长的职员更不情愿跳槽(Dixon, 2003; Ng and Feldman, 2010)，更年长的独立董事更倾向于在同一家企业继续任职延长其任期。所以，独立董事年龄和任期是高度相关的；而独立董事平均年龄作为一个外生变量和 CEO 超额薪酬并不存在相关性。基于以上分析，独立董事平均年龄（odage）是一个可接受的工具变量。

表 8 列示了两个阶段的回归结果。从第一阶段的回归模型可以看出，独立董事的平均年龄(odage)和独立董事任期(odtenure)在 1%水平显著相关，这说明了工具变量的合理性。在第二阶段回归中，本文分别用了 2SLS，工具变量固定效应和工具变量 Probit 模型（因变量为 Excess_dum），从回归结果来看，独立董事平均任期(odtenure)和 CEO 超额薪酬(Excess_CEOpay)在 1%的水平上显著负相关，支持了本文的假设 1；其余变量的结果与表 7 呈现的结果并无显著差异。

<table>
<thead>
<tr>
<th>变量</th>
<th>Stage 1: 2SLS</th>
<th>Stage 2: Excess_CEOpay</th>
</tr>
</thead>
<tbody>
<tr>
<td>odage</td>
<td>0.0427*** (0.00257)</td>
<td>-0.180*** (0.0364) -0.0630*** (0.0156) -0.235*** (0.0481)</td>
</tr>
<tr>
<td>odtenure</td>
<td>-0.0603*** (0.0156)</td>
<td>-0.235*** (0.0481)</td>
</tr>
<tr>
<td>dual</td>
<td>0.0709*** (0.0264)</td>
<td>0.0487* (0.0268) 0.0820** (0.0373)</td>
</tr>
<tr>
<td>ceoequity</td>
<td>-0.438*** (0.141)</td>
<td>-0.292 (0.208) -0.837*** (0.226)</td>
</tr>
<tr>
<td>directorequity</td>
<td>-0.212** (0.0863)</td>
<td>0.237 (0.191) -0.271** (0.131)</td>
</tr>
<tr>
<td>boardsize</td>
<td>0.0124** (0.00527)</td>
<td>0.00537 (0.00875) 0.0137* (0.00815)</td>
</tr>
<tr>
<td>independ</td>
<td>-0.142 (0.170)</td>
<td>-0.153 (0.204) 0.0325 (0.260)</td>
</tr>
<tr>
<td>lev</td>
<td>0.00382 (0.0146)</td>
<td>0.0108 (0.0128) 0.00482 (0.0270)</td>
</tr>
<tr>
<td>cashflow</td>
<td>-0.00701 (0.0272)</td>
<td>-0.0120** (0.00573) -0.0244 (0.0150)</td>
</tr>
<tr>
<td>tme</td>
<td>0.00282 (0.0118)</td>
<td>-0.0110 (0.0138) -0.0268 (0.0172)</td>
</tr>
<tr>
<td>meeting</td>
<td>0.0293*** (0.00232)</td>
<td>0.00828*** (0.00229) 0.0325*** (0.00344)</td>
</tr>
<tr>
<td>soe</td>
<td>-0.0177 (0.0264)</td>
<td>-0.0109 (0.0247) 0.00701 (0.0407)</td>
</tr>
<tr>
<td>top1</td>
<td>-0.0322 (0.0655)</td>
<td>0.0318 (0.129) -0.0944 (0.0988)</td>
</tr>
<tr>
<td>Ibal</td>
<td>-0.00211*** (0.000778)</td>
<td>-0.000752 (0.000907) -0.00144 (0.00137)</td>
</tr>
</tbody>
</table>

年度/行业: 控制 控制 控制 控制
2. 独立董事兼任的内生性问题：Heckman 自选择模型

表 8 Heekman 自选择第一阶段回归结果：企业选择兼职独立董事的 Probit 模型回归结果

<table>
<thead>
<tr>
<th>变量</th>
<th>系数</th>
<th>标准误</th>
</tr>
</thead>
<tbody>
<tr>
<td>interlock_m</td>
<td>0.502***</td>
<td>(0.0527)</td>
</tr>
<tr>
<td>size</td>
<td>0.0623***</td>
<td>(0.0146)</td>
</tr>
<tr>
<td>tme</td>
<td>-0.0296*</td>
<td>(0.0177)</td>
</tr>
<tr>
<td>grow</td>
<td>-0.00792</td>
<td>(0.00799)</td>
</tr>
<tr>
<td>boardsize</td>
<td>0.103***</td>
<td>(0.0115)</td>
</tr>
<tr>
<td>independ</td>
<td>2.726***</td>
<td>(0.313)</td>
</tr>
<tr>
<td>ceo_new</td>
<td>-0.0344</td>
<td>(0.0384)</td>
</tr>
<tr>
<td>firm_age</td>
<td>-0.0252***</td>
<td>(0.00281)</td>
</tr>
<tr>
<td>soe</td>
<td>-0.143***</td>
<td>(0.0365)</td>
</tr>
</tbody>
</table>
常数项       -3.059***       (0.337)  
行业/年份                      控制    
N                  10038    
$\chi^2$              249.10***    
Pseudo $R^2$            0.198

注：括号中数字为标准误，*** p<0.01, ** p<0.05, * p<0.1。

表8呈现了Heckman自选择模型的第一阶段回归结果，从回归结果上来看，工具变量同行业其他公司独立董事兼职（平均）数量的均值（interlock_m）与观测公司是否聘请兼职的独立董事（busydirector）在1%水平上显著正相关，这意味着，同行业其他公司的独董兼职数量越多，观测公司越可能聘请兼职独董。这同时证明了工具变量具有一定解释力。另外，我们可以发现公司规模（size），董事会规模（boardsize），董事会独董占比（indpend）对公司是否聘请兼职独董具有正效应。这意味着，公司规模越大，董事会人数越多，独立董事所占比例越高则公司聘请兼职的独立董事的可能性也更高。公司成长性（tme），公司年龄（firm_age）和公司国有产权虚拟变量（soe）对公司是否聘请兼职的独立董事具有负效应。这说明，公司的市账比越高，公司成立时间越长，公司为国有性质则公司聘请兼职独立董事可能性更低。表9呈现了Heckman自选择模型的第二阶段回归结果，我们可以发现，逆米尔斯比率（imr）的回归结果显著，这说明自选择导致的内生性问题确实存在有必要在回归模型中加以控制。回归结果显示，独立董事兼职数量作为独立董事参与度的代理变量与CEO超额薪酬显著正相关，这说明独立董事兼职多家公司会导致CEO超额薪酬的提高，支持了本文假设2。

表9 Heckman自选择模型第二阶段回归结果

<table>
<thead>
<tr>
<th>Excess_CEOpay</th>
<th>模型 (3-1)</th>
<th>模型 (3-2)</th>
<th>模型 (3-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>变量</td>
<td>混合OLS</td>
<td>固定效应</td>
<td>Logit</td>
</tr>
<tr>
<td>imr</td>
<td>-0.0803***</td>
<td>-0.0930***</td>
<td>-0.0683*</td>
</tr>
<tr>
<td></td>
<td>(0.0139)</td>
<td>(0.0117)</td>
<td>(0.0397)</td>
</tr>
<tr>
<td>interlock</td>
<td>0.0636***</td>
<td>0.0454***</td>
<td>0.136***</td>
</tr>
<tr>
<td></td>
<td>(0.00874)</td>
<td>(0.00759)</td>
<td>(0.0251)</td>
</tr>
<tr>
<td>dual</td>
<td>0.0805***</td>
<td>0.0616***</td>
<td>0.156**</td>
</tr>
<tr>
<td></td>
<td>(0.0213)</td>
<td>(0.0209)</td>
<td>(0.0608)</td>
</tr>
<tr>
<td>ceeoequity</td>
<td>-0.426***</td>
<td>-0.318**</td>
<td>-1.495***</td>
</tr>
<tr>
<td></td>
<td>(0.138)</td>
<td>(0.146)</td>
<td>(0.395)</td>
</tr>
<tr>
<td>directorequity</td>
<td>-0.107</td>
<td>-0.0156</td>
<td>-0.157</td>
</tr>
<tr>
<td></td>
<td>(0.0709)</td>
<td>(0.0860)</td>
<td>(0.202)</td>
</tr>
<tr>
<td>boardsize</td>
<td>0.0112**</td>
<td>0.00766</td>
<td>0.0219</td>
</tr>
<tr>
<td></td>
<td>(0.00476)</td>
<td>(0.00589)</td>
<td>(0.0136)</td>
</tr>
<tr>
<td>independ</td>
<td>0.00213</td>
<td>-0.0124</td>
<td>0.260</td>
</tr>
<tr>
<td></td>
<td>(0.156)</td>
<td>(0.165)</td>
<td>(0.445)</td>
</tr>
<tr>
<td>lev</td>
<td>-0.160***</td>
<td>-0.0917*</td>
<td>-0.365***</td>
</tr>
<tr>
<td></td>
<td>(0.0430)</td>
<td>(0.0486)</td>
<td>(0.123)</td>
</tr>
<tr>
<td>cashflow</td>
<td>-0.0231***</td>
<td>-0.0113**</td>
<td>-0.0340</td>
</tr>
<tr>
<td></td>
<td>(0.00700)</td>
<td>(0.00502)</td>
<td>(0.0250)</td>
</tr>
<tr>
<td>tme</td>
<td>0.0450***</td>
<td>0.0273***</td>
<td>0.0603**</td>
</tr>
<tr>
<td></td>
<td>(0.00933)</td>
<td>(0.00913)</td>
<td>(0.0268)</td>
</tr>
<tr>
<td>meeting</td>
<td>0.0259***</td>
<td>0.0117***</td>
<td>0.0486***</td>
</tr>
</tbody>
</table>
### 表 1

<table>
<thead>
<tr>
<th></th>
<th>(0.00208)</th>
<th>(0.00197)</th>
<th>(0.00603)</th>
</tr>
</thead>
<tbody>
<tr>
<td>soe</td>
<td>-0.0696***</td>
<td>-0.0412**</td>
<td>-0.108*</td>
</tr>
<tr>
<td></td>
<td>(0.0211)</td>
<td>(0.0193)</td>
<td>(0.0602)</td>
</tr>
<tr>
<td>top1</td>
<td>0.0630</td>
<td>0.0149</td>
<td>0.00589</td>
</tr>
<tr>
<td></td>
<td>(0.0586)</td>
<td>(0.0751)</td>
<td>(0.167)</td>
</tr>
<tr>
<td>Ibal</td>
<td>-0.00451***</td>
<td>-0.00204*</td>
<td>-0.00719**</td>
</tr>
<tr>
<td></td>
<td>(0.00107)</td>
<td>(0.00106)</td>
<td>(0.00306)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>行业/年度</th>
<th>控制</th>
<th>控制</th>
<th>控制</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>9748</td>
<td>9748</td>
<td>9748</td>
</tr>
<tr>
<td>Adj_R²/Pseudo R²</td>
<td>0.136</td>
<td>0.135</td>
<td>0.151</td>
</tr>
<tr>
<td>F/ Chi²</td>
<td>24.93***</td>
<td>4.07***</td>
<td>163.32***</td>
</tr>
</tbody>
</table>

注：括号中数字为标准误。*** p<0.01, ** p<0.05, * p<0.1。

基于以上对两方面内生性问题的处理和稳健性检验，结果表明本文的回归结果：独立董事参与深度抑制 CEO 超额薪酬；独立董事参与广度促进 CEO 超额薪酬，并不会受到内生性问题的干扰。

（二） 变量设计方式的稳健性检验

本文所使用的独立董事任期采用的是独立董事在任的平均任期(otdenure)。但是，在一个公司中，独立董事任期可能并非平均分布，不同独董之间任期会有差异。例如，A 公司的 3 个独立董事任期差异较大；其中 1 个连任，而另外 2 个刚刚上任；而 B 公司 3 个独立董事则都是在任 2 年；这两个公司虽然独董平均任期区别不大，但显然两家公司独董任期情况和产生的影响存在明显差异。类似的，本文的独立董事平均兼职数量（interlock）也存在这个问题：该指标无法刻画出同一公司独董间兼职数量的差异。例如，A 公司独董每人兼职 2 家公司，B 公司独董其中一人兼职 4 家公司，其余独董并无其他公司兼职；虽然 AB 两家公司独董平均兼职数量可能一致，但显然两家公司独董兼职的情况存在明显差别(郑志刚 等., 2017)。未解决这一问题，本文将主要的解释变量加以调整。考虑到中国上市公司对独立董事任期 6 年的强制性规定，这里将独立董事参与深度的代理变量设定为观测公司中当年任期超过 3 年独立董事人数比例（senior）。同时，本文将表示独立董事参与广度的代理变量设定为观测公司中当年兼职其他公司的独立董事人数比例（interlock_ratio）。将以上两个变量带入到模型 (2) 和模型 (3) 中进行回归，结果列示于表 10。
### 表 10 核心变量替代性指标稳健性检验结果

<table>
<thead>
<tr>
<th>变量</th>
<th>模型(2-1)</th>
<th>模型(2-2)</th>
<th>模型(2-3)</th>
<th>模型(3-4)</th>
<th>模型(3-5)</th>
<th>模型(3-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>混合 OLS</td>
<td>固定效应</td>
<td>Logit</td>
<td>混合 OLS</td>
<td>固定效应</td>
<td>Logit</td>
</tr>
<tr>
<td>senior</td>
<td>-0.0316*** (0.0091)</td>
<td>-0.0352** (0.0148)</td>
<td>-0.0243** (0.0112)</td>
<td>0.0665*** (0.00809)</td>
<td>0.0422*** (0.00838)</td>
<td>0.144*** (0.0232)</td>
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研究结论与启示

本文从中国上市公司独立董事有关规定出发，基于深度和广度两个层面分析了独立董事的参与对公司CEO超额薪酬的影响机制，并对2008-2015年中国A股上市公司进行了实证分析，得到了以下结论。第一，独立董事任期反映了独立董事参与深度，随着任期的增长，独立董事对公司经营情况了解更为深入，发挥监督和咨询职能更为专业，有助于提升董事会职能有效性从而抑制CEO超额薪酬。同时，由于中国对独立董事任期不得超过6年的硬性规定，独立董事由于任期增长而与CEO形成“合谋”关系，导致CEO超额薪酬的可能性降低。第二，独立董事兼职企业数量反映了独立董事参与的广度，随着兼职企业数量的增多，独立董事对兼职企业投入精力不足导致监督职能有效性降低，从而提高了CEO超额薪酬。同时，兼职企业数量的增多意味着独立董事发挥监督职能时受到更广的社会网络的影响，为了争取未来其他公司的兼职机会，独立董事对CEO超额薪酬监督动机遭到削弱，促进了CEO超额薪酬。

在经济全球化、产品周期日益缩短的当今经济社会，公司保持自身的竞争优势在很大程度上取决于公司治理有效性，而董事会作为公司治理的重要机制之一，代表了公司治理的效率。因此，本文的研究结论对优化董事会结构与制度提升董事会监督职能具有一定重要启示意义。第一，本文从CEO超额薪酬的角度上证明了关于独立董事任期限制性规定的合理性。进一步试验的部分也证明了：公司中长期任职的独立董事人数比例也有助于提升董事会监督职能降低CEO超额薪酬。因此，公司应采取有效措施保证独立董事的稳定性，延长其任期。第二，本文从CEO超额薪酬的角度上证明了独立董事参与广度对董事会监督职能的负效应。
兼职多家公司的“明星”独立董事具有卓越能力而盲目增加这种独董在董事会的比例。另外，有关监管当局也有必要整顿独立董事寻求地理位置分散的兼职行为，以免独董由于跨地区的高额监管成本进一步减少在某一家公司董事会中的精力投入。

主要参考文献


Research on The Ingratiation Behavior of The Subordinates in Organization

Abstract:

This paper combined with the research of domestic and foreign scholars are reviewed the connotation and characteristic of the subordinate ingratiation behavior, found the subordinate ingratiation behavior refers to the subordinate to use a series of strategies to get boss's approval, to improve their attraction in interpersonal communication, includes four dimensions: self-expression, compliance, compliment others, giving the other party, at the same time, the measurement of ingratiation behavior of the staff to the comb. This article analyzes the subordinate ingratiation behavior before the dependent variable and its influence on the organization and individual, for individuals, leadership and organization respectively presents the corresponding management measures, and the research direction of the ingratiation behavior in the future in our country are discussed in this paper.

Keywords: Ingratiation; The subordinates are ingratiating; Management measures

组织中下属逢迎行为研究述评

周正 1 肖小虹 2

摘要:

本文首先结合国内外学者的研究回顾了下属逢迎行为的内涵和行为特征，发现下属逢迎行为是指下属运用一系列的策略来获取上司的认可，旨在提高在人际交往中自身吸引力的行为，包含四个维度：自我表现、观点遵从、恭维他人、施惠对方，同时对下属逢迎行为的测量也进行了梳理。之后，本文又分析了下属逢迎行为的前因变量和其对组织和个人产生的影响，对于个人、领导和组织分别给出了相应的管理对策，并对下属逢迎行为在我国未来的研究方向进行了探讨。

关键词：逢迎；下属逢迎；管理对策

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1. 引言

《宋论·仁宗》：“不能逢迎揣摩，以利其诡遇。”冯梦龙《东周列国志》第七十一回：“时朝中有个佞臣唤做梁邱据，专以先意逢迎，取悦于君。”逢迎行为作为一种讨好上司的技能，在古代就已经被人们频繁利用，以清朝真实故事为原型改编拍摄的现代电视剧《铁齿铜牙纪晓岚》中，贪官和珅的逢迎行为被塑造的淋漓尽致。

在我国，受到古代传统文化的影响，领导者和下属之间普遍存在“上尊下卑”的现状，致使逢迎行为成为在当代中国下属对领导采用最多的一种人际影响策略[1]，某些逢迎行为的不恰当使用给同事和企业带来了严重的伤害，而有些适当逢迎也会给组织带来一定程度的积极影响。下属逢迎行为目前在我国的研究还处于起步阶段，国内对于下属逢迎行为的研究仍处于概念引入期，系统性思考以及实证研究等工作目前相对比较
少。本文将对国内外有关下属逢迎行为的文献进行综述，对下属逢迎行为的概念、下属逢迎的形成以及下属逢迎行为对组织可能造成的影响进行梳理，并结合中国本土情景对下属逢迎行为的未来研究进行展望，希望可以引发更多读者和研究人员的思考，对后续的研究提供一定的参考。

2. 下属逢迎行为的相关概念

印象管理，也叫自我呈现，是美国著名的社会心理学家欧文·戈夫曼（Erving Goffman）通过系统的观察和分析于1959年提出的理论。他认为每个人在生活中都扮演不同的角色，这个角色是一种细致的语言或非语言的行为选择，每个人一生的主要任务就是通过扮演许多不同的角色来塑造其社会形象来提升社会地位[2]。而逢迎行为就是组织中最具有代表性的印象管理。

逢迎行为是指下属运用一系列的策略来获取上司的认可，旨在提高在人际交往中自身吸引力的行为，具体表现为顺从、阿谀奉承、帮助他人等[3]。Kumar&Beyerlein将组织内逢迎行为分成四个维度：自我表现、观点遵从、恭维他人、施惠对方[4]。自我表现是指为了让领导对自己产生积极的印象而通过各种渠道来迎合自己的领导，观点遵从是指下属迎合领导某些公开的观点和目标，恭维他人是指一定程度上去刻意的赞美领导，表示对领导工作上或者生活上的关心，施惠对方是指下属通过精神上或者物质上施惠领导的方式，从而使领导产生心理亏欠的感情，使其在下属和领导之间产生互利的上下级关系。

我国学者张喆等认为逢迎行为是指工作中看起来很真诚，但却试图影响他人判断的行为[5]。单志汶等基于平衡理论认为，由于领导和下属间有着先天的权力差距，领导对某一行为或者事件的情感往往占据着主导地位，下属为了赢得领导对自己的认同以达到升职的目的，常常表现出与领导相同的情感取向，其中最常用的方法就是逢迎行为[6]。刘超等按照逢迎行为发生的场景，区分了职场内逢迎和职场外逢迎。职场内逢迎是指员工在规定的工作时间内对领导产生逢迎的行为，而职场外逢迎更多指的是在非工作时间内的非正式场所，下属表现出对领导的生活、私人需求等表示关心的行为，例如逢年过节送礼问候等[1]。黄维德等认为组织内迎合行为分为自我聚焦和他人聚焦迎合行为，并在中国情境下将“自我表现”维度划分成“彰显道德”和“彰显能力”两个子维度[7]。

通过上述文献可以看出，学者们已经对下属逢迎的一些特征进行了归纳总结和提炼，在一定程度上对下属逢迎的方式和行为特征有了初步的共识。但是目前学术界对下属逢迎的维度划分和量表的使用还未有统一的定论。

3. 下属逢迎行为的测量

逢迎行为在领导力行为研究中已经初步系统化，但是在测量方面还没有取得统一的进展。国内外的专家和学者还未形成统一的测量指标。

最早由国外学者Kumar&Beyerlein开发的量表MIBOS，包括自我表现、观点遵从、恭维他人、施惠对方四个维度，共计24个题项[4]。Lee等开发的逢迎行为量表包含八个题项，包含“当我需要某些东西的时候，我会表现的很好”，“为了得到其他人的喜欢，我会采取奉承的方式”，“我会赞扬他人，使他们站到我这一边”等，该量表的信度系数较高，达到0.840。Westphal和Bednar对逢迎行为量表进行了修订，包含了六个题项，包
括“我会对上级在工作中所表达出的观点表示赞同”、“尽管上级没有需要，我还是会主动向上级示好或提供帮助”等，该量表的信度系数为 0.83[^8]。

国内学者徐群将逢迎行为的“自我表现”、“观点遵从”、“恭维他人”、“施惠对方”四个维度分成两个方面，"自我表现"称为“自我聚焦逢迎行为”，其他三个维度称为“他人聚焦逢迎行为”，并结合中国本土情境下创造性的将自我聚焦逢迎行为拆分成“彰显能力”和“彰显道德”两个维度，开发出相应的量表[^9]。刘超等将逢迎行为区分为两个方面：职场内逢迎和职场外逢迎，并重点探讨了职场外逢迎的影响，开发出职场外逢迎的量表，包含“逢年过节，我会给领导送红包和礼品，以拉近与领导的距离”、“工作之余，我常通过各种方式向领导嘘寒问暖，以显示自己的友好”等共计七个题目，该量表具有良好的信度为 0.88[^1]。

尽管近年来国内外的学者们在测量下属逢迎行为方面作出了一些有价值的探索，但是在统一使用量表方面还未达成一定的共识，尤其是结合中国本土情境开发出来的部分量表还有待更多的实证研究来验证其在各种情境下的有效性和可靠性。

4. 下属逢迎行为的影响因素

结合国内外学者的研究，下属逢迎行为受很多因素的影响，其中包括领导因素、人口特征因素及社会文化因素等其他因素。

1. 领导因素。国内学者廖建桥等指出自恋型领导通常会透过短暂的装模作样来维持自尊感，但是这种夸张感在真实世界中无法持久，因此自恋者必须借着别人的赞美来维持这种不稳定的自尊[^9]。因此在自恋型领导身边不乏一些善于逢迎的下属，他们通过逢迎以求赢得领导的好感，从而获得更多的晋升机会，杨洁等研究认为自恋型领导在面对员工提出的不同实现组织发展战略目标方案时，更加倾向于那些比较迎合他们需要和利益的方案，自恋型领导在不认同员工的建议时，主要是看员工提出的建言是否逢迎他们，并得出结论：自恋型领导对员工的促进性建言有显著的正向影响[^10]。

2. 社会文化因素。印象管理理论认为个人使用行为来交流一些关于自己的信息，旨在建立、维护或提升个人在别人眼中的形象[^11]。中国是一个以“关系”为导向的社会，受到传统文化的影响，领导者会根据“关系”的密切程度，将下属划分为“圈内人”和“圈外人”，领导对下属的印象好坏也会随着这种关系而受到一定的影响，大量的实证研究都已经证实，“圈内人”获得晋升的可能性越大，而逢迎行为就是建立良好“关系”重要手段之一，因此，中国社会的“关系”文化也是造成下属逢迎行为产生的重要原因之一。

3. 人口特征因素。人口特征也和下属逢迎行为密切相关。国内学者陈启山等指出组织逢迎行为中恭维他人与工龄负相关，施惠对方与年龄和工龄负相关[^12]。如果工作时间越久的人，在组织中的资历就越高，因为他们认为没有去恭维的必要，从而他们很少去恭维自己的上司。同样对于组织中年龄和工龄较大的下属来说，他们越不会去施惠自己的领导，该研究还认为在组织中男性的观点遵从、恭维他人和施惠对方均高于女性[^12]，组织中的男性相对于女性来说，更能够迎合领导需要和期望从而做出逢迎行为，从而获得上司的青睐以达到晋升等目的。
综上所述，目前的研究文献从领导因素、社会文化因素和人口特征因素等几个方面对下属逢迎行为的原因进行了大量的研究。从文献研究者可以看出，随着社会的不断进步，外部环境对下属逢迎行为的影响越来越大。逢迎行为作为一种双面组织特征因素，是否能在组织中发挥多大的作用，是发挥积极的作用还是消极的作用，都与下属所处的组织环境和社会环境密切相关。

5. 下属逢迎行为的作用

逢迎作为一种组织社交影响行为，受到了国内外专家学者的重视，关于逢迎行为对个人和组织的作用也是众说纷纭。本文将根据国内外各专家学者的研究，结合中国本土情境文化，分开探究逢迎行为的积极作用和消极作用，希望可以给管理界的研究人员部分启示。

一. 积极作用

1. 职业晋升或加薪。由于领导者的时间、精力和资源都是有限的，他们不可能对所有的员工都给予同等对待。因此会选择符合其角色要求的下属成为“圈内人”，而这些下属可以享有领导更多的资源和支持。获得这些资源和支持的重要方式就是逢迎，有研究表明迎合行为作为一种获得资源的互动行为，可以获得对自身有利的资源，这些资源可以帮助下属获得职业的成长。因此下属逢迎行为带来最直接的积极作用就是可以带来自身职场的加薪或者职业的晋升。

2. 促进形成良好工作环境。在人际互动过程中，人们都试图与周围的人保持良好的人际关系，而逢迎是调整人际关系的重要手段之一。适当有效的逢迎行为通过展现良好的自我，增加他人对自己的吸引力，从而营造出良好的工作环境。

3. 有效应对负向领导行为。刘军等指出对于高政治技能的下属来说，采取逢迎行为可以弱化辱虐管理与情绪耗竭之间的联系，以及弱化辱虐管理与离职倾向之间的联系。高日光等通过实证研究得出：当下属具有较高宜人性的时候，下属逢迎能显著减少上司的破坏性领导行为。

二. 消极作用

1. 造成领导决策偏误。我国学者倪国华等以贝叶斯决策理论为基础，构建出一个制度体系模型来模拟威权体制的决策过程，得出下属汇报信息逐级向上级先验信息靠拢，最终因为逐级放大的“揣摩逢迎偏误”引发领导严重的“决策偏误”，给组织带来灾难性的后果。

2. 员工情绪耗竭。我国学者陈岩等通过实证研究分析得出向上逢迎行为对情绪耗竭有着正向影响。为了使逢迎行为得到领导的信任和资源以获得事业上的成功，下属必须耗费大量的时间和精力。在适当的时间、恰当的方式以及适度的程度对领导逢迎，这种长期大量的情绪劳动必定会造成员工的情绪耗竭，有研究表明，情绪耗竭会降低员工的工作满意度，从而降低组织工作绩效，对组织造成消极影响。

总结以上研究可以得出，不同的下属进行逢迎行为不一定会取得同样的效果。只有那些政治技能相对较高，能够精通人际关系交往以及善于察言观色的人才能依靠逢迎行为达到自身所追求的利益和目的。而对于那些不善于逢迎或者过度逢迎的下属来说，逢迎不仅不能达到自身追求的目的，反而会引起一些不良的后果。
6. 下属逢迎行为的管理策略

逢迎行为作为一种人际交往中必不可少的方式，在以“关系”为导向的中国现代社会，更应该引起学者的研究和重视，适当的逢迎对组织和个人来说，不仅是晋升的助推器，也是提升组织工作环境氛围的润滑剂，而不恰当或过度逢迎不仅会对组织造成严重的破坏，还会违反国家规定的法律法规，甚至诱发犯罪。因此对于个人、领导和组织来说，用好和管理好逢迎行为已经成为当下组织最应该关心的话题。

1. 对于个人来说，逢迎行为作为处理职场关系的润滑剂，确实可以给个人带来好处，但是这种好处是建立在逢迎行为的潜在动机是考虑他人的感受并旨在为他人带来好处的基础上才等得到显著效果的。但是不恰当或者过度的逢迎，会给领导者留下虚伪、谄媚的形象，领导一旦感知出逢迎背后的虚伪动机，进而产生排斥甚至是厌恶的主观感觉，从而会适度的远离和排斥逢迎的下属。因此对于下属来说，掌握熟练的政治技能和良性动机是确保逢迎行为可以得到效果的基础，同时要适度逢迎。

2. 对于领导而言，必须要具备能够分析下属逢迎背后动机的技能，一旦领导对下属的揣摩逢迎行为做出错误的判断和解读，很有可能会做出错误的决策，给组织带来难以想象的灾难。在注重关系和人情的中国来说，许多逢迎行为都发生在职场外，例如逢年过节送礼问候、关注领导的私人需求等。作为领导，要把控好自身的行为准则，加强自身道德水平建设，在法律法规允许的适当范围内，把握好下属的逢迎行为。

3. 对于组织而言，适度控制组织中的逢迎行为是保证组织健康持续发展的基础。下属不恰当的逢迎或过度逢迎会造成组织中其他员工的心理不平衡，影响组织公平感，降低其他员工的工作绩效。过度逢迎也可能会造成手握权力的领导徇私枉法、滥用职权。因此，组织应该建立起公平公正公开的晋升机制，完善组织监督制度，优化组织中对于晋升和其他重大议题的决策机制，对于滥用权力的行为要严厉禁止，将权力锁在牢笼里。

7. 未来研究展望

从以上文献综述的梳理中可以看出，虽然对下属逢迎行为的研究仅仅才有几十年，而且主要的研究成果都集中在最近十几年期间。从研究现状看，下属逢迎行为虽然引起了国内外各学者的重视，但是还未形成完整的研究体系，通过对国内外现有的一些研究成果进行梳理总结，认为我国从事下属逢迎行为的研究至少可以从以下几个方面入手。

1. 下属逢迎行为的测量研究。从现有文献可以看出，适度的逢迎可以给组织和个人带来积极的影响，而过度逢迎会给企业带来灾难性的破坏，因此对下属逢迎进行准确的定量评价就显得十分重要。目前国内外大多数的实证研究都是采用国外的量表，虽然该量表在国外已经多次检验有效，但是在中国这样一个传统性较高，谦逊含蓄的东方国家，这些指标是否可以准确的来自不同国家逢迎值得考量。对于国内部分学者开发出的不同的下属逢迎行为量表，在信度和效度上是否得到了真正的检验，是否可以结合中国国情开发出符合中国特色统一有效的量表也是未来我们要思考的问题。

2. 下属逢迎行为的前因变量研究。现有研究认为自恋型领导可以诱发下属进行逢迎行为。组织中的“关系”文化也会让下属进行逢迎，是否还有其他的一些领导特质、社会文化、人口特征等因素可以对下属逢迎造成影响。对下属逢迎行为产生的动机还需要做更加的深入研究，要结合多理论、多角度、多层次进行探讨。
对于我们了解员工的组织行为有着重大的意义。

3. 下属逢迎行为的结果变量。目前国内外学者对下属逢迎行为产生的影响主要集中在晋升、应对辱虐管理、应对破坏性领导、降低工作绩效等方面。逢迎是否还会影响其他领导行为和组织中的其他行为还有待学者们进行进一步的探讨。另外针对下属逢迎造成的积极影响和消极影响也需要我们去寻求更多的边界条件，客观的分析这两种影响之间的临界点。

4. 下属逢迎行为的调节变量。当前国内的学者已经证实下属的的宜人心和政治技能等都会对逢迎行为造成重大的影响，在当今经济社会高速发展的新时代，是否有会涌现出一些其他的组织行为因素对逢迎产生影响，这也是引发我们去思考的重大话题。

5. 对下属逢迎行为的管理体制。下属逢迎行为作为一种组织中最常见的人际互动方式，存在于政府、企业、学校等各行各业中，不恰当的逢迎合给组织、企业甚至国家带来严重的后果，政府部门以及公司企业已经制定了相当严格的防治措施，为什么还是会有大量的人去实施逢迎行为，甚至铤而走险走上犯罪的道路，对于员工行为的引导教育和领导权力的管控，这些都需要引发中国管理界更多的思考。

参考文献
Track 12: Knowledge Management and Innovation
Knowledge Management and innovation in Western Mexico SMEs. An empirical study

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Abstract

Knowledge Management (KM) is gaining attention and acceptance by organizations in search for competitive advantages. Building on the Knowledge Management Theories (KMT), a conceptual research model was developed to determine the influence of Knowledge Management practices on Firm Innovation Capacity, from the perspective of top managers of Mexican SMEs. Structural Equation Modeling (SEM) techniques were used for the empirical determination of the relationship between these factors. Based on a survey of 213 firms, the statistical results indicate that Mexican executives rate knowledge capture as the most important KM practice for improving innovation, followed by Knowledge Application, Knowledge storage and Knowledge dissemination.

Keywords: Knowledge Management, Innovation capacity, SEM, SMEs

Introduction

Knowledge management (KM) is increasingly recognized within manufacturing firms as a critical approach that can be leveraged to attain competitive advantage and superior performance. Based on the principles of KM, organizations worldwide develop and implement KM initiatives to improve the efficiency of business processes, increase the productivity and quality of their services, and find new solutions and products for their customers (Nguyen & Mohamed, 2011). Moreover, in technological settings, innovation is usually a direct outcome of KM effectiveness (Darroch & McNaughton, 2002; Du Plessis, 2007) as well as being one of the main objectives for knowledge-creating companies in their pursuit of competitive advantages (Nonaka & Takeuchi, 1995). The essence of KM with respect to innovation is that it provides a framework for management in their attempt to develop and enhance their organizational capability to innovate. Cohen and Levinthal (1990) label this as absorptive capacity. It defines the ability of an organization to recognize the value of new external information and knowledge, assimilate, and apply them, and this ability is critical in determining an innovative result. Expanding this idea, Fiol (1996) claimed that the potential of organizations to generate innovation outcomes is dependent on the previous accumulation of knowledge that they have absorbed. However, there are few studies that address the relationship between KM and innovation. For instance, Johannessen et al. (1999) argued, at a theoretical level, that a high degree of innovation presupposes organizational learning systems, which develop, integrate and use knowledge in the practical context. Hall and Andriani (2003) studied managing knowledge associated with interorganizational innovation, and identified knowledge gaps in innovative firms.
Literature review

The study of KM can be traced up to the origins of the Theory of the Firm (TF) and the pioneering attempts of some of the different economic theories included in the TF that explain and predict the nature of the company or corporation, including its existence, behavior, structure and relation with the market. Since then strategy was identified as a fundamental part of the efforts of the top management and information and the knowledge as clearly essential. Nevertheless in the academic works of those times, little efforts are observed aiming at the comprehension of the organizational or managerial knowledge or per se (Spender and Grant, 1996). It was only until the 1960s that the neoclassical theory of the firm was seriously challenged by alternatives such as managerial and behavioral theories. The behavioral approach, developed in particular by Richard Cyert and James G. March of the Carnegie School, emphasizes how decisions are made within the company and goes well beyond neoclassical economics (Cyert and March, 1963). As proposed by Spender and Grant (1996), the beginning of this paradigm shift in the study of the firm towards what should be known and the way in which knowledge is acquired begins with the pioneering work of Simon (1947) in his critique of economic rationality and its attempts to link organization and economy, and continue with the works of Michael Polanyi (1962) and those of other philosophers and psychologists like Jerome Bruner who focused on studying the nature of human knowledge and its relationship with human action. It is then from the beginning of the XXth century, that different economic theories have studied knowledge and its management as an interesting and important factor for the generation of competitiveness and value. According to Penrose (1959), "economists have, of course, always recognized the dominant role played by the increase of knowledge in the economic process". How to acquire and use knowledge is considered from different perspectives. For example, Marshall (1965), a classical economist, argues that capital is largely shaped by organization and knowledge, and states, "knowledge is our most powerful production engine". The Austrian school of economics of Hayek and Schumpeter, meanwhile, analyzed the importance of knowledge in economic matters. Hayek (1945) classified knowledge into scientific knowledge and specific or contextual knowledge, while Schumpeter (1951) emphasized the importance of combining explicit knowledge. In fact, Schumpeter pointed out the importance of knowledge combinations for the development of new products, production methods, and organization management. Penrose (1959), focused on studying the growth of companies individually through the use of mental models to assess their strengths and weaknesses. Barnard (1938) synthesized the scientific and humanistic visions of Knowledge and the importance of behavior in KM processes. Polanyi (1966) emphasized the importance of knowledge of non-linguistic behavior or mental process, thus defining the tacit point of view. March and Simon (1958), built a scientific theory for problems solution and decision making based on the concept of 'limited rationality', including human thought in its model. Porter (1980, 1985) developed a framework for the competitive analysis of business competitive advantage, but it was Drucker (1993) who suggested the term 'knowledge society' and the role of the worker in this society. In this sense, Quinn (1992) established the key points for the configuration of intangible values (technological knowledge).

Knowledge and the learning capacity of a firm represent a solution for many organizations that suffer an accelerated technological change. Argyris and Schon (1978) defended the need for an organization to adapt to changes with two types of learning: one-loop double-loop learning. Senge (1990) proposed 'the learning organization' as a new paradigm. At the same time, Prahalad and Hamel (1990) offered a new approach to competitiveness based on resources as competences, skills, abilities and strategic assets.

Is in the 80s, when culture and its relationship with knowledge construction and its connection with learning were studied first. Schein (1985) argued that culture is a learned product derived from a group experience and Pfeffer (1981) defines organizations as systems of shared meanings and beliefs. From Nonaka and Takeuchi, (1995) the organizational culture is visualized through the beliefs and knowledge shared by the members of the firm: 'As we seek to discover how organizations create new products and new internal processes, the importance of a new concept is defined: knowledge' (Nonaka & Takeuchi, 1995).
Theoretical background

The Knowledge-Based Theory of the firm

The Knowledge-Based View of the Firm (KBV) considers knowledge the most strategically significant resource of a company, argue that as knowledge-based resources are generally difficult to imitate and socially complex, the heterogeneous knowledge capacities of a firm are the principal determinants of a competitive supported advantage and corporate top performance (Conner, 1991; Grant, 1996). Knowledge is embedded and carried out through multiple entities, including organizational culture and identity, policies, routines, documents, systems and employees. This perspective is based on the resource-based view of the firm (RBV) initially promoted by Penrose (1959) and later expanded by others (e.g., Barney 1991, Conner 1991, Wernerfelt 1984). Nevertheless RBV treats knowledge as a generic resource. It does not distinguish between different types of knowledge-based capabilities. Skills and competencies, however, have their foundation in knowledge. It is around this belief the KBV has been formalized (Grant, 1996 & 1997, Spender & Grant, 1996).

The KBV is different from other theoretical approaches that emphasize the role of organizational factors in the production of competitive advantage (RBV and the dynamic capabilities based-view, DCV) it focuses on internal organization and recognizes the firm as a complex organization that encompasses multiple individuals (Grant, 1996, 109), it is mainly interested in identifying the essential productive resources (knowledge) and examining how these resources can be acquired, protected and valued (Spender, 1996), is based on the cognitivist perspective on knowledge that assumes that knowledge can be handled with strict procedures, defined policies and actions (Von Krogh, 1998). It is based on a constructivist vision of knowledge, which assumes that knowledge can not be completely controlled, but can only be managed by creating favorable conditions (Von Krogh, 1998). It focuses on how knowledge resources are used and coordinated (Spender, 1996).

Knowledge Management

KM is defined as "a cycle of processes to identify, transfer, store and disseminate knowledge in order to reuse, inform, share and learn this knowledge throughout the organization" (Wang, 2007, p.30). Nonaka (1991) claims that in today's highly competitive climate, where the only certainty is uncertainty, knowledge is considered the main differentiating factor for success in business. Several authors appreciate it as the competitiveness cornerstone (Carlucci, Marr & Schiuma, 2004; Davenport, 1998, Drucker, 1993; Hall, 1993; Nonaka, & Takeuchi, 1995; Stalk, Evans, & Shulman, 1992). As a result of the acknowledgment of knowledge as a strategic resource on which the company's competitive success is based, extensive literature on KM has been developed over the last decade, notable for the mixture of its approach, both practical and academic. Literature now reports two different generations of KM, and some authors claim that third-generation approaches to KM are emerging (Firestone & McElroy, 2003; Gorelick & Tantawy-Monsou, 2005; Metaxiotis, Ergazakis, & Psarras, 2005; Scholl et al., 2004).

A review of this literature reveals numerous interpretations of KM due to the wide range of interests and perspectives (Carlucci & Schiuma, 2006; Schiuma, Lerro & Sanitate; 2008). Consequently, there is considerable ambiguity in the terminology, which has led to a fragmented dialogue on the subject (Bollinger & Smith, 2001). However, two main features of KM emerge from its various definitions (Beijerse, 2000; Lee & Yang, 2000; Quintas, Lefrere, & Jones, 1997; Ruggles, 1998; Sveiby, 1997; Teece, 2000). These characteristics are important in order to understand the relevance of knowledge management within an organization. The first characteristic refers to the management facet of KM and deals with how to manage the firm's knowledge. It reflects the dynamics of KM as a set of processes related to the use, development, renewal and creation of knowledge value (Wiig, 1997). The second is more concerned with the organization of KM and implies a more static notion of knowledge as an asset that affects the value of the firm's ability to generate value (Carlucci & Schiuma, 2006). Previous studies have proposed key dimensions for KM models that include acquisition, dissemination and application of knowledge (Chen & Mohamed, 2006; Fahey, Srivastasa, Sharon & Smith, 2001; McAdam & Reid, 2001).
Knowledge Management and Innovation

As management in organizations becomes modern, value of knowledge increases (Carneiro, 2000; Du Plessis, 2007; Halawi, Aronson & McCarthy 2005; Hung, Lok, Ya-Hui & Wu, 2008). Carneiro (2000) claims that knowledge becomes progressively more useful because management has previously experienced the value of creativity, which transformation of one form of knowledge into another depends on. Nonaka (1991) states, "When markets change, technologies proliferate, competitors multiply and products become obsolete overnight, successful companies are the ones that consistently build knowledge and disseminate it throughout and the firm and quickly incorporate in itself new technologies and new products ". Bontis, Dragonetty, Jacobsen, and Roos, (1999) argue, "Knowledge is the current engine of business life". The ability to create wealth in a firm is based on the knowledge and skills of its people (Savage, 1990). Nowadays, many companies see themselves as learning organizations that pursue the goal of continually improving their knowledge assets (Senge, 1990). This means that knowledge assets are key strategic levers for managing business performance and continuous innovations of a firm (Boisot, 1998; Marr & Schiuma, 2001; Mortensen, Bukh, Larsen, & Johnson, 2002; Quinn, 1992). Organizations are being pushed to create self-propelled internal processes for innovation of products and processes that keep them ahead of their competition (Ahuja & Novelli 2011). According to Saeida, Nejati et al., (2007), "In order to generate a climate for innovation in an organization, creativity must develop within; employees must learn to manage creativity and not inhibit it. Organizations should encourage creativity and support new ideas by creating a business environment where employees express their ideas and are willing to share their knowledge and, as the most valuable knowledge is in the minds of employees, it has to be transferred to the operations. The company must be open to innovations". In the process of creating innovation, creativity becomes ingenuity and invention that are translated into innovation that, after being developed, is applied. The implementation of innovations and competitiveness development is a function dependent on KM, especially if the necessary conditions are created in the modern business environment (Sedziuviene & Vveinhardt, 2010).

Research model and hypotheses

There are several empirical studies on KM and innovation. Abbas (2011) demonstrated through a regression analysis applied to 500 Pakistani SMEs that knowledge and familiarity with KM, human capital, external capital, social capital and organizational capital show a positive relationship with the firm's sustained growth. Harsh (2010), developed a three-dimensional model for KM in which the dissemination and transmission of knowledge about new available technologies, the technical literature on modern machinery and the contact details of raw material suppliers as well as the details of buyers proved extremely important and essential for performance improvement, firm growth and competitive position enhancement. Iftikhar et al. (2010) studied the status of KM practices in SMEs in developing countries and examined the factors that influence the adoption of KM. His study suggests that KM practices create profitable prospects for SMEs in developing countries. Kureshi (2009) showed that Pakistani SMEs have limited resources derived from their own nature, and that in this scenario; KM becomes a distinctive source of competitive advantage. He found that KM practices lead to better decision-making, improved response time, improved utilities and better productivity. Chen and Huang (2009) confirmed through a quantitative study that KM capacity plays a major role in supporting and driving innovation. Their findings generate evidence that KM plays a moderating role between strategic human resources and innovative performance. In his empirical study, Kagiri (2008) proved that organizational competence depends on the KM strategy and that this strategy depends on organizational competence in a symbiotic relationship that generates a virtuous circle of performance. In a qualitative study, Balestrin et al. affirm that SMEs, due to their limited financial and human resources, develop interest in linking with a great variety of networks and associations (2008). Mohannak (2007) and Timonen and Ylitalo (2007) developed a more exhaustive study to explain the creation of organizational knowledge by transforming the SME's knowledge generation processes derived from internal endogenous processes, towards an exogenous multidirectional process that includes the networks of the business environment. Desouza and Awazu (2006) state that successful SMEs are those that leverage their knowledge effectively and efficiently in order to compensate for their deficiencies in
traditional resources such as machinery, labor and capital. Through a series of case studies and qualitative interviews, Harveston explored the use of Knowledge Management Systems (KMS) and found that these systems are capable of drastically reducing costs by increasing communication and eliminating unnecessary steps in business processes (2005). Menkhoff et al. (2004) found that by locating and capturing innovative ideas and other strategically important KM practices used by technical staff in problem solving, SMEs can improve their innovative capacity, the quality of their services and response time. From the above, the following hypotheses can be established, (See Figure 1). In this work, it is assumed that innovation improvement can be measured through expansion of markets, CRM enhancement, new products and services development, flexible manufacturing and innovation development, betterment of customer services and eliminating duplication in R&D efforts.

Figure 1
Research Model

H1: The activities to capture external and internal knowledge improve innovation capacity in SMEs.
H2: The activities to disseminate knowledge a within the company improve innovation capacity in SMEs
H3: The activities of knowledge transfer improve innovation capacity in SMEs
H4: The activities of knowledge storage improve innovation capacity in SMEs
H5: The activities of knowledge use and application improve innovation capacity in SMEs

Research Method

To test the hypotheses proposed, a questionnaire was developed to measure the constructs in the research model and all questionnaire items were measured on a 5-point Likert-scale, with 5 equivalent to "strongly agree" and 1 to "strongly disagree." We implemented an online survey, which was run through the Survey Monkey website. Survey respondents were random selected among SMEs top-level executives in Western Mexico, using the SIEM database. SIEM stands for 'Sistema de Información Empresarial
Operationalization of Variables and Questionnaire Design

The operational items used to measure KM practices (Knowledge acquisition, dissemination, transfer, storage and application) and innovation capacity (market increase, CRM improvement, new product and services development, flexible manufacturing and innovation development, improvement of customer requirements and elimination of duplicate R&D) constructs are presented in Table 1. To measure knowledge management practices, the measurement scales developed by Saini (2015) were used for each of the five KM processes. Reliability of the Saini (2015) measurement scale of the construct was a Cronbach’s alpha of 0.72, which indicates a satisfactory internal consistency and reliability. To study the effect of KM practices on innovation, six innovation items were measured. Table 1 also shows the sources for the operationalization of these variables. The reliability of the measurement scale of the innovation construct according to the study of Saini (2015) was of a Cronbach’s alpha of 0.70, which indicates a satisfactory internal consistency and reliability.

Table 1

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Measurement Variables</th>
<th>Source</th>
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<tbody>
<tr>
<td></td>
<td>KA2. Our company captures knowledge from public research institutions, universities and government laboratories.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KA3. Our company dedicates specific resources for the acquisition of internal knowledge of experienced workers and managers.</td>
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</tr>
<tr>
<td>Knowledge dissemination</td>
<td>KD1. Our company encourages employees to participate in task projects with both internal and external experts.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KD2. Our company develops an organizational culture oriented to promote the dissemination of knowledge.</td>
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<tr>
<td>Knowledge transfer</td>
<td>KT1. In our company, problems, flaws and working methods are discussed openly and become experience to avoid repeating same problems in the future.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KT2. In our company regular meetings are held to discuss professional projects.</td>
<td></td>
</tr>
<tr>
<td>Knowledge storage</td>
<td>KS1. In our company databases of good manufacturing practices, lessons learned and lists of experts are updated on a regular basis.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KS2. Our company has testimonial documentation of lessons learned, training manuals, good work practices and relevant technical literature.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KS3. In our company, information systems storage and knowledge are constantly updated.</td>
<td></td>
</tr>
<tr>
<td>Knowledge application</td>
<td>KA1. We encourage people to access and use information and knowledge stored in our information systems.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>KA2. We have policies aimed at keeping employees better prepared and knowledgeable.</td>
<td></td>
</tr>
<tr>
<td>Market increase</td>
<td>MI. Our KM practices have increased the number of geographic markets it serves.</td>
<td>Rohana (2009)</td>
</tr>
</tbody>
</table>
Discussion of Data Analysis and Results

To assess H1 to H5, a Structural Equation Model (SEM) was utilized. Our analyses followed Anderson and Gerbing’s (1988) two-step approach where by the estimation of a confirmatory measurement model precedes the simultaneous estimation of the structural model, as described next.

The Measurement Model

Confirmatory factor analysis was performed using EQS 6.2 to confirm the variables measuring the constructs in the model. Reliability of the measurement model was examined by calculating Cronbach’s alpha coefficient for each of the constructs separately. We also report the composite reliability and AVE of the constructs because it is generally acknowledged that composite reliability is a better measure of scale reliability than Cronbach’s alpha coefficient (Bagozzi and Yi, 1988). Table 2 shows that the alpha coefficient value for all the constructs is greater than 0.7, except for Knowledge application, this value is considered to be acceptable for the constructs to be reliable (Hair, Black, Babin, Anderson and Tatham, 2006). The composite reliability values of all the constructs are greater than 0.6. Following recommendations from Bagozzi and Yi (1988), this further strengthens our assessment of reliability for all the measured constructs. The measurement model indicates an adequate model fit of the data (Bagozzi and Yi, 1988, Bearden, Sharma and Teel, 1982, Bentler, 1990). (Satorra Bentler \( \chi^2 = 173.131, df = 120; NFI = 0.882; NNFI = 0.948; CFI = 0.960; MFI= 0.894 and RMSEA = 0.043\).

Convergent validity

Convergent validity was examined by calculating Cronbach’s Alpha, Composite Reliability Index (Raykov, 1997), the average variance extracted (AVE) and factor loadings of the items on respective constructs in the model (Fornell & Larcker, 1981). Table 2 shows that all the measurement variables had significant loadings onto the respective latent constructs (p<0.05) with values ranging between 0.615 and 0.920. Composite Reliability ranged from 0.710 to 0.856 while Cronbach’s Alpha ranged from 0.648 to 0.841. In addition, the AVE for each construct is equal to or greater than 0.50, but for two of the constructs ('Knowledge acquisition band 'Innovation capacity' witch close to the minimum). Following the rule that accepts validity when at least two of the three indexes fall above minimum values, results support the convergent validity of all of the constructs.

<table>
<thead>
<tr>
<th>CRM improvement</th>
<th>CRM. Our KM practices have improved the management of relationships with our consumers.</th>
<th>AlHawari et al. (2008), Shanks and Tay (2001)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New products and services</td>
<td>NPS. Our KM practices make it easier to develop new products and services.</td>
<td>De Souza and Evaristo (2004), Brockman and Morgan (2003)</td>
</tr>
<tr>
<td>Flexible manufacturing and innovation</td>
<td>FMI. Our KM practices help us to increase flexibility and innovation in our manufacturing processes.</td>
<td></td>
</tr>
<tr>
<td>Improved fit to customer requirements’</td>
<td>ICR. Our KM practices allow us to improve the adaptation of our products and services to the requirements of our consumers.</td>
<td>De Souza and Evaristo (2004), Brockman and Morgan (2003)</td>
</tr>
<tr>
<td>Elimination of duplicate R&amp;D</td>
<td>DRD. Our KM practices help us avoid duplication in our research and development efforts.</td>
<td>Czarnitzki and Wastyn (2009)</td>
</tr>
</tbody>
</table>
Discriminant Validity

Discriminant validity was assessed in three ways. First, Fornell and Larcker (1981) suggest that discriminant validity is established if a latent variable accounts for more variance in its associated indicator variables than it shares with other constructs in the same model. To satisfy this requirement, each construct’s average variance extracted (AVE) must be compared with its squared correlations with other constructs in the model. Table 3 shows that all of the AVE values are greater than the inter-construct squared correlations. Second, to test whether the inter-construct correlation was significantly different from unity, we used the chi-squared difference tests (Anderson & Gerbing, 1988). Anderson & Gerbing, (1988) suggest that the parameter estimate for two factors be constrained to 1.0 (constraint model) and compared to a model where this parameter is freely estimated (unconstrained model). This test was run for all the possible pairing of constructs in the study. In all the cases the unconstrained model, with the drop of one degree of freedom, returned a chi-square value at least 3.8 lower than the constrained model, proving that the two factor solution provides a better fit to the data, and discriminant validity between all the combination of two is supported at p < 0.05 level of significance. Third, Bagozzi, Yi, and Phillips, (1991) and Torkzadeh, Koufteros and Pflughoeft (2003), propose a confidence interval test to analyze discriminant validity, this mean to compute the confidence interval of the paired correlations. If the value of 1 is not included within the computed confidence interval, we can say discriminant validity is supported. Table 3 also shows the confidence interval values for all of the paired correlations. Overall, we believe measurement scales utilized are reasonably reliable and valid.
Table 3

<table>
<thead>
<tr>
<th>Divergent validity</th>
<th>KA</th>
<th>KD</th>
<th>KT</th>
<th>KS</th>
<th>KU</th>
<th>IC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge acquisition</td>
<td>0.498</td>
<td>0.460</td>
<td>0.083</td>
<td>0.171</td>
<td>0.130</td>
<td>0.069</td>
</tr>
<tr>
<td>Knowledge dissemination</td>
<td>0.61/0.29</td>
<td>0.552</td>
<td>0.187</td>
<td>0.137</td>
<td>0.176</td>
<td></td>
</tr>
<tr>
<td>Knowledge transfer</td>
<td>0.59/0.28</td>
<td>0.44/0.22</td>
<td>0.705</td>
<td>0.125</td>
<td>0.230</td>
<td>0.169</td>
</tr>
<tr>
<td>Knowledge storage</td>
<td>0.48/0.24</td>
<td>0.49/0.26</td>
<td>0.43/0.25</td>
<td>0.500</td>
<td>0.100</td>
<td>0.128</td>
</tr>
<tr>
<td>Knowledge application</td>
<td>0.51/0.24</td>
<td>0.50/0.22</td>
<td>0.49/0.16</td>
<td>0.46/0.16</td>
<td>0.626</td>
<td>0.323</td>
</tr>
<tr>
<td>Innovation capacity</td>
<td>0.36/0.15</td>
<td>0.56/0.31</td>
<td>0.61/0.30</td>
<td>0.53/0.21</td>
<td>0.45/0.10</td>
<td>0.498</td>
</tr>
</tbody>
</table>

The Structural Model and Hypotheses Testing

The structural model is the second stage and last step in the SEM approach. This model integrates and correlates all factors to the KM construct. The proposed hypotheses were tested using structural equation modeling using EQS 6.2. Results indicated an adequate model fit with a significant chi-square statistic (Bagozzi and Yi, 1988, Bearden, Sharma and Teel, 1982, Bentler, 1990). (Satorra Bentler χ² = 173.131, df = 120; NFI = 0.882; NNFI = 0.948; CFI = 0.960; MFI= 0.894 and RMSEA = 0.043) also indicated an acceptable fit of the structural model with the data. Table 4 shows the parameter estimates of the structural model. Seven of the hypotheses were supported. Results show that the path coefficients between Knowledge acquisition → Innovation capacity, Emotional support → Innovation capacity, Informational support → Innovation capacity, Emotional support → Innovation capacity, are positive and significant at p < 0.05 while the path Knowledge transfer → Innovation capacity, is not significant p < 0.05 supporting H1, H2, H4 and H5. Hence, four linear relationships in the model were supported.

Table 4

<table>
<thead>
<tr>
<th>Estimated path coefficients</th>
<th>Hypothesized paths</th>
<th>Path coefficients</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge acquisition → Innovation capacity</td>
<td>0.615*</td>
<td>H1 (Accepted)</td>
<td></td>
</tr>
<tr>
<td>Knowledge dissemination → Innovation capacity</td>
<td>0.181*</td>
<td>H2 (Accepted)</td>
<td></td>
</tr>
<tr>
<td>Knowledge transfer → Innovation capacity</td>
<td>0.043</td>
<td>H3 (Not Accepted)</td>
<td></td>
</tr>
<tr>
<td>Knowledge storage → Innovation capacity</td>
<td>0.220</td>
<td>H4 (Accepted)</td>
<td></td>
</tr>
<tr>
<td>Knowledge application → Innovation capacity</td>
<td>0.301*</td>
<td>H5 (Accepted)</td>
<td></td>
</tr>
</tbody>
</table>

Research limitations, implications and future research directions

There are some limitations of this research, which needs to be considered while interpreting our research findings. First, these findings need to be qualified with some cautionary notes due to several limitations of the research design: this study was based on a “snap-shot” questionnaire instead of a longitudinal study. The quantitative analyses was developed from psychometric measures obtained by a self-reporting questionnaire, which allowed an empirical test of the proposed model based on statistical significance. No intent was developed to investigate deeper into the different types of knowledge (tacit, explicit) that firms value the most. Therefore, investigating on the different types of knowledge captured, transferred, disseminated, and used and the way this processes are accomplished, could provide valuable additional information.

Conclusions

Knowledge Management has been considered as one imperative management approach in new era of knowledge-based economy. Utilizing knowledge power that a firm has leads to higher performance
through innovation. It is generally acknowledged that innovation serve as the firm’s lifeline for continuous survival and effectiveness. It is fundamental for managers and researchers to evaluate what factors contribute to being innovative organizations. This study shed the light that KM leads to innovation.

References


The Research on the Technology-driven Reconstruction Path of Consumers, Goods and Scene of New Retail --Take Hema Fresh as an Example

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Abstract:

The concept of "new retail" proposed by Alibaba is gradually getting recognized and being practiced by the world-leading e-commerce enterprises and traditional retailers, further, it will result in the reconstruction of retail formats around the world. This research quotes the new retail wheel theory stating that the technology is the fundamental force driving reconstruction of retail formats. It also states that the reconstruction of new retail formats includes explicit factors and implicit factors. New retail is based on implicit big data and mobile Internet technology as the prerequisite and the related new derivative technologies such as support, which integrates e-commerce and offline entities from the three technical levels namely cloud, Internet and terminal users’ devices respectively to build an omni-channel marketing strategy. Consumer, goods and scene are the three dominant elements of restructuring new retail formats, which evolve together and match each other to create a new consuming phenomenon with the support of new technology. Afterwards, through the new typical retail format "Hema Fresh" initiated by Alibaba, the paper systematically analyzes the new technologically-driven restructuring path of new retail formats and forecasts the future research.

Keywords: new retail; reconstruction; path

Introduction

The chairman of the Alibaba Group, Jack Ma for the first time publicly spoke about the concept of "new retail" in October 2016. He stated that the pure e-commerce era would end soon and the future retail business would include online, offline and modern logistics. Subsequently, the General Office of the State Council of People's Republic China issued the Opinions on Promoting the Innovation and Transformation of Physical Retailing (The general office of the State Council [2016] No. 78) on November 11(General Office of the State Council.Opinions of the General Office of the State Council, 2016), which clarified the guiding ideology and basic principles for promoting innovation and transformation of physical retail formats. It also specified the policies regarding adjusting the business structure, innovating the model of development, cross-border integration, optimizing the development environment and strengthening political support. The Opinion publicly emphasis integrating online and offline retail: "Establishing standards and competition rules that contribute to integration and development, guiding the physical retail industry to gradually improve the level of informatization, and combining the advantages such as offline logistics, service and experience with online customer flow, capital flow, information flow to expand omni-channel layout with intelligence and network". At 2016 Ali Fest, Zhang Yong, chief executive officer of Alibaba Group, provided further explanation of the "new retail" concept: it is driven by big data and represents a global change of consumers, goods and scenes forming a new value and consumption experience.

As we tell about global markets, the U.S. e-commerce giant Amazon announced the acquisition of Whole Foods, the nation’s largest natural and organic food chain store, for 13.7 billion dollars on June 16, 2017. On January 23, 2018 the offline retail store Amazon Go which is ran without any humans working as cashiers was put into operation. The store is an example of combining offline shopping experience and online retail technologies. Another traditional offline retail giant, Walmart is also developing its offline strategy. In 2016, Walmart acquired several e-commerce websites namely Jet.com, Moosejaw, Hayneedle
and ShoeBuy as an effort to expand its online services and transforming the business model from traditional physical retail to a combined online and offline platform. Chinese domestic market has multiple competitors. Alibaba bought into Suning cloud business for 28.3 billion yuan on August 2015, and during the next three years Alibaba cooperated with Intime Group, Sanjiang Shopping Club, Brilliance Group, the New Huadu Supercenter, Sun Art Retail Group, etc. Numerous offline players started cooperating with Alibaba, changing their traditional supermarket and department shops launching a new global marketing strategy in order to achieve multi-scenario coverage and intelligent marketing of omni-links, omni-medias, omni-data and omni-channels. As the largest competitor to Alibaba, JD also speeds up its layout development and proposes the new concept of unbounded retail. It breaks the boundaries between manufacturers, brands and platform providers through consumers, scenarios, supply chain and marketing, fully integrates the flow of data and promotes the overall industrial efficiency. On April 2017, JD announced that it plans to open 1 million JD convenience shops nationwide. In August, JD’s first flagship 3C products offline smart shops, JD House put into operation. After that, JD teamed up with Tencent to jointly the launch of the "JD-Tencent Unbounded Retail Solution" for online and offline brands, aiming providing a comprehensive set of solutions for brand owners to effectively establish brands, enhance marketing effectiveness and customer experience. On January 4, 2018, its first offline fresh supermarket 7FRESH was put into operation. In addition, other retail companies around the world also actively collaborate to develop their own new retail economic model. The series of practices shows once again that the concept of new retail has been recognized by leading domestic and foreign e-commerce and traditional retailers, triggering the structure change of retail formats around the world.

Theoretical and Reference Review

The Theory of New Retail Wheel

The Creation of Education Quality Assessment Systems as a key to Innovation Approaches in Higher Education

Two factors still affecting quality negatively are the lack of quality evaluation and corruption, the latter of which is mainly linked to inducements paid to enter university and obtain diplomas. This practice can only undermine the attitude of students and the value of university diplomas, which are no longer seen as the guarantee of academic standards. A number of initiatives have been taken in the modernization of their higher learning institutions. Most governments are, however, committed to education reforms, stressing the fact that education is an important factor of economic and social prosperity.

Most Central Asian countries have taken up these challenges and initiated ambitious education reforms, developed new policy reforms, and started to redefine the missions of their education system to be in line with the requirements of a modern society. However, initial expectations about the transformation of the educational systems have largely failed to materialize. Higher education legislations are being adjusted to the new socio-economic environment, and strongly influenced by developments taking place in Europe. Each country is of course following its own pace: some countries are more advanced and have heavily invested in education and training; some have less resources to invest the modernization of higher education systems. A lot of emphasis has been put on curriculum reform. There is without a doubt a need to modernize curricula, which are rigid, centrally determined, overloaded, not adapted to the needs of the labour market, inflexible and cover a narrow scope. But curricular reform can only be considered as an entry point for reforms, not an end in itself; it has to be accompanied by the proper structural reforms of the systems. This is a considerable challenge. The challenges currently confronted by these HEIs do not exist in isolation from broader economic, technological and educational expectations from the use of ICTs in the world at large. One can observe the existence of a strong technological and economic push for HEIs to adopt e-learning strategies in the Central Asian region. This is driven, partly, by the requirement of industry for lifelong learning and the influence of a process of global change. Simultaneously, there is a localized attempt to raise awareness among HEIs of the pedagogical issues that underpin good teaching and learning practice, stimulated by the creation of accreditation programs and related topics.
The problem of the harmonization of national education quality control systems and development of common approaches has appeared to be difficult to accomplish. Educational systems of European countries have too many differences starting from principles of educational management to aspects, which at first sight do not directly concern higher education (for example, national languages, histories, cultures, traditions in teaching and training).

Fundamental differences have developed in a certain groups of countries, which may be presented as the Anglo-Saxon model and the Continental model. The first model includes the education systems of Great Britain, Ireland and partly that of the Scandinavian countries. They may be characterized by a high level of autonomy of higher educational facilities, independence from government controls and also a significant share of private ownership in the education system. The continental model is used in such countries as France, Germany and the Russian Federation, where state ownership prevails in the education system and educational facilities have limited autonomy with governments exercising centralized financial and academic control.

Many European countries have their own traditions and wide experience in the creation of education quality assessment systems (for example, Great Britain, the Netherlands, and France).

The various assessment models differ in purposes, approaches, methods and assessment results. Other countries (for example, Germany, Italy and Denmark) have just started forming such systems under the influence of the Bologna Process.

In some countries, the main purpose of quality assessment is the perfection of educational processes, for example, in France, Great Britain, the Netherlands and the Scandinavian countries; while in other countries purposes may be assistance to the international recognition of programs (Germany), informing the public about deserving educational facilities (Estonia) comparison with other education facilities and programmes (Great Britain, Latvia) and the establishment of accreditation status (Eastern-European countries, including the Russian Federation).

In European countries, approaches to assessment are also different: it may refer to the assessment of an establishment as a whole (institutional assessment), which has been introduced in the majority of countries of Western and Eastern Europe; or the assessment of separate subjects or directions of an educational establishment. Accordingly, assessment systems have different forms: accreditation, audit and higher assessment.

Results of quality assessment procedures may be both confidential and accessible to the public; recommendations for educational establishments on perfection as well as confidential comments and ratings based on assessment results may influence the financing and confirmation of educational establishments, the change of their status and image promotion.

Due to political and economic changes in Europe, a tendency of the integration of educational systems is observed during the last few years. Higher educational institutions, which have been exposed to comprehensive government control, obtain more autonomy (the continental model), and, on the contrary, in the countries with traditionally weak influence of government control (Anglo-Saxon model) independence of higher educational institutions are more and more limited, but these processes are developing slowly. Simultaneously, under the influence of the Bologna process, accreditation agencies are created in Germany, Austria, Denmark, Sweden and Italy, and the education quality assessment system is being transformed in other countries.

Thus, today education quality assessment systems have been developed in the majority of European countries. However, the integration process does not come with the challenge to unify these systems. On the contrary, in order to effectively apply accumulated experience and available resources, a
network structure has been established which unites bodies responsible for external assessment of higher education quality on a voluntary basis – the European Association for Quality Assurance in Higher Education (ENQA). It was created to develop common approaches and conduct joint research on the integration of educational programmes.

All three countries in CA are ready to develop internal and external quality assessment systems in order to develop relevant national standards. Taking the lack of the relevant experience, knowledge, expertise and methodology in QA into account, many universities are highly interested in learning and implementing the best practices of their European Union colleagues and establishing a network for information exchange and recognition.

Quality of education in CA is a major debated issue nowadays. Despite the efforts from Europe, the United States and Russia in providing instruments of co-operation and reform, quality has depreciated in a number of universities since 1991. The importance of the quality of education is specifically stressed by Ministries of Education.

In Kyrgyzstan at present the system of higher professional education unites 47 higher educational institutions (HEI) including 32 state and 15 non-state institutions, 41 independent structural departments, 16 branches of local HEIs and 10 branches of foreign HEI. The total number of students of all HEIs (full-time, distant, and evening) is 236,900 and the number of educators is 13,500. Recently, the enhancement of higher education quality has been one of the most important problems. Within the system of higher professional education there are systems of state certification (attesting) and licensing carried out by the state authority – the State Inspection on Licensing and Accreditation under the Ministry of Education and Science of the Kyrgyz Republic. However, the methods of quality assessment used by this public body are more quantitative than qualitative, lacking the characteristics of an internal system of checking the quality of specialists. As a result, the present external system of QA does not motivate HEIs to establish essential valuable internal systems of quality insurance. Universities are obliged to introduce QA departments. However, a strategy on improving the quality of education does not exist. This initiative as well as lifelong learning is to be addressed in a new frame of alignment with the Bologna process. The system of government financing has improved dramatically since the introduction of the National Testing System in 2002. The idea is that the system administers a universal admission test in all regions of the Kyrgyz Republic, which is free of charge and is open to all perspective students (high school graduates) willing to apply for a government scholarship supporting their studies. Top scorers are awarded government scholarships (as well as stipends). Before, universities were allocated quotas by the government and independently distributed their shares of government scholarships. Despite the fact that the former system was highly criticized for discrimination, corruption, and ineffectiveness, the National Testing System improved the access of young people from remote districts to free education.

Another latent issue in the world of higher education concerns accreditation. Although the National Strategy for Higher Education Development assumes the creation of accreditation bodies, independent from the government, Kyrgyzstan has never had independent accreditation. There has been a debate about it since 2001; however, nothing has been done to promote independent accreditation yet. The respondents of social surveys have stressed the importance of establishing a branch system of quality insurance of higher professional education, which would be based on common methodological approaches. They also have underlined the necessity of arranging experimental bases to work out and implement the system of quality management on the basis of HEIs and academic and methodological unions. However, there is no methodology on establishing such systems in the national system of higher education at the national or HEI level. At present, HEIs have to work out such systems independently. This outcome turns out to generate financial and time expenses.

Thus, we can observe that the problems preventing the process of implementing the systems of quality insurance in HEIs in Kyrgyzstan and CA are linked to the lack of methodology on establishing the system adopted to the national educational standards; the lack of specialists authors; the lack of financial
means and, above all, the lack of knowledge of top managers in the field of quality management in addition to underestimating the practical benefits of implementing the systems of quality management in HEIs.

One of the most important concerns is that curricula in most universities suffer from overloading and an irrational allocation of classes. In many respects they remain poorly structured and do not reflect students’ needs. In principle, most existing curricula have not been adapted to the expectations of potential employers at all. With the exception of economics, business, and few others, courses are taught in the same manner as at the beginning of 1991. The contents of courses have undergone little change. As I mentioned before, the labour market and the educational services are in many respects isolated from each other. The existing state educational standards are too rigid and do not allow new approaches to developing academic programs. It is worth mentioning, that the Ministry of Education and Science is flexible and often recognizes academic programmes that although do not conform to state standards, bear real market value. At a time of widening relations with European HEIs, and high desire from students to get a diploma recognized worldwide, HEIs are motivated to establish independent accreditation structures and an external system of quality insurance. This fact has been testified by numerous projects in the data field realized by HEIs and NGOs of the Kyrgyz Republic. Therefore, in 2007 the Education Network Association together with the Ministry of Education and Science of the Kyrgyz Republic and by support from “Soros-Kyrgyzstan” Foundation implemented the project “Higher Education Reforming of the KR” realized by the consortium of HEIs of Kyrgyzstan, Italy and Slovakia on establishing quality departments in HEIs of Kyrgyzstan.

Despite some national specifics, the introduction of contemporary quality assurance systems has many common characteristics within the Central Asian countries. The currently existing traditional systems, methods and criteria of quality assessment and control do not satisfy higher education in most countries of Central Asia. All countries highlight their openness and intention to orientate their higher education system towards European frameworks and standards in QA in particular those set by ENQA, adapted to the specific characteristics of national systems.

In Kazakhstan, great efforts have been made in recent years to reform Kazakhstan’s education system to meet the needs of a modern competitive economy. This review considers how far these efforts have succeeded, and what still needs to be done in the higher or tertiary education sphere.

A National Accreditation Center (NAC) has been created by the government of the Republic of Kazakhstan. The mission of NAC is to conduct institutional and specialized accreditation of HEIs, the notification, and recognition of certificates; to make contribution to the development of higher education quality. Today in Kazakhstan the main objectives we can cite include the realization of a programme, according to which Kazakhstan would be among the 50 most competitive countries of the world; the implementation of an accreditation model harmonized with international quality assurance practice; and the approval of the high standards of the quality of education of Kazakhstan, developing educational programmes to increase the competitive capacity of the national system of higher education.

In Tajikistan the reformation of the educational system in general and higher education in particular is under way and the country faces many difficulties relating to its demographics, the financing of the education system, the insufficiency of the legal-normative framework, the conditions of transition to the market economy. The Ministry of Education of Tajikistan has worked out the main priorities in reforming the Higher Education in the Republic of Tajikistan (Strategic Directions of Long-term Reforms of Educational System of Tajikistan for 2004-2015). The strategy identifies education quality enhancement as one of the key priorities. Other crucial strategies are to provide transparency and efficient management in the education and to introduce credit technologies.

For Tajikistan, the emphasis is put on the development of a framework for qualifications.

In general, there is a crucial need in all CA countries for the creation and development of quality assurance systems to enhance the quality of education. Quality enhancement, in higher education in
particular, has become official policy declared at the government level in most CA countries. It is included in the country development strategies and is one of the national priorities set up by Tempus for Kyrgyzstan and Tajikistan. Our key focus is on the development of national QA systems (internal and external level to get recognition and accreditation). However, the present challenge of QA system development in CA is that we can find it at different levels across countries. There were several initiatives in CA in the enhancement and assessment of the quality of education with some different approaches and in different areas. These initiatives offered systematic work at the national level and inside universities except for Kazakhstan where the National QA Centre was set up under the Ministry of Education and some legislative basis for the accreditation and QA was developed. In the other CA countries some projects and initiatives formed the basis for the future systematic work at the national and later on at regional and international levels. For instance, in Kyrgyzstan research and preparation work for the development of internal QA system model has been started by the Education Network Association with the support of the Ministry of Education and international partners. In Tajikistan there were several projects that covered some parts of QA but not systematically. In Turkmenistan there is not any information about such initiatives. An important fact is that the levels of QA system development in Central Asian countries are quite different; another one is that a joint Tempus project is being implemented with Central Asian HEIs, hopefully creating adequate and sustainable internal and external QA systems at the national levels and providing exchange and recognition within the network. Despite the fact that the recognition of accreditation agencies and their co-operation with national authorities is yet to come, we believe that the Central Asian Network of Quality Assurance will lay the foundations for an accelerated process of the independent accreditation and recognition of studies and quality assurance by non-governmental agencies.

Innovation approaches to higher education is an inevitable result of the globalized and knowledge based economy of the 21st century. The intersection of the logic of globalization and other pressures facing central Asian universities make a reconsideration of international programs and strategies. Exchanges, university linkages, patterns of mobility, and international and regional arrangements among universities are all changing.

Conclusions

The reform of higher education for the Central Asian countries in transition will have direct impact on various aspects of the development of innovation approaches to higher education, from the recognition of diplomas and degrees abroad through the improvement the quality of education to the better integration into the market economy in a new political and economic environment by learning from international experience. Institutions of higher education that actively strive for academic excellence in Central Asia will serve as the main promoters of access to European educational and research opportunities.

Thus, it is important for higher educational institutions to create favourable conditions for their transition to the European system of transfer of credits, to improve and introduce modern models and methods of university management in the area of the organization of educational processes, personnel administration, financial management and the planning of activities of educational institutions. This research enables the author to make the following conclusions: Central Asian higher education institutions need 1) improved university governance and elimination of corruption (transparency, student’s participation in decision-making, creating institutes of independent accreditation agencies), 2) developed infrastructure, 3) access to the European and American electronic libraries and appropriate and sustainable technology, and information, 3) integration into the international educational space through building innovative higher education partnerships between American, European and Central Asian universities, 4) creation of successful models of public-private partnerships, 5) introduction and implementation of the main objectives of the Bologna Process combining traditional and international experience. These changes will raise the role of universities as the innovative engines and centres of knowledge and effect on the development of innovation approaches to Higher Education in Central Asia.
References

The Challenges of Innovation Approaches to Higher Education in Central Asia

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Abstract

This paper focuses on the Bologna Process and its influence on higher education as one of the tools to increase its quality. Quality of education, which is one of corner stones of the Bologna Process, is multivariate concept, which comprises all its functions and types of academic activities. Quality of education and educational co-operation is important in the development and strengthening of stable, peaceful and democratic societies. Knowledge is a fundamental component for social and human growth and indispensable to consolidate the consciousness of citizenship. Knowledge gives citizens the necessary competences to face the challenges of the new millennium, together with an awareness of shared values and belongings to a common social and cultural space.

This research enables the author to make the following conclusions: Central Asian higher education institutions need 1) improved university governance and elimination of corruption, 2) developed infrastructure, 3) integration into the international educational space through building innovative higher education partnerships between American, European, and Central Asian universities, 4) introduction and implementation of the main objectives of the Bologna Process with combination of traditional and international experience. These changes will raise the role of universities as innovative engine and the center of knowledge and effect on the development of innovation approaches to Higher Education in Central Asia.

Introduction

The collapse of the Soviet Union had a strong impact on the education of each of the four countries (Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan) in Central Asia, particularly higher education which was more fully integrated across the Union primary and secondary education. For the education system as a whole independence has invoked both prosaic questions about infrastructure and human resource availability and difficult issues such as its contribution to the economy, its role in building a national identity – closely related to social and economic values.
Today politicians of the most developed countries of the world understand the role and significance of education, considering it as the primary factor of social and economic progress. Maintaining a high education level is the major condition of stable development of any country. Experts of the Organization of Economic Cooperation and Development (OECD) emphasize that basic economic growth long-term rates in the OECD countries depend on the support and expansions of knowledge ... For the last two decades in many OECD countries the real growth of the added value in the sectors based on knowledge has stably exceeded economic growth rates. "The process of globalization accelerates these tendencies ... Comparative advantages of the countries are less and less determined by natural resources or cheap labour. They are more and more determined by technical innovations and competitive application of knowledge ... today, the economic growth is in the same process of knowledge accumulation as the process of capital accumulation."

Despite their common origin, each higher education system in Central Asia today is evolving its own national education environment and which consist of three dimensions. First, higher education is part of a national education system and responds to the demands of secondary education. Second, education is closely related to and influenced by the labour market. In a market economy graduates sell their skills to employers in contrast to command economies where ministries often sponsor undergraduates and then place them in a predetermined department. Now the labour market is in flux. Not only are employers, particularly private and foreign employers, demanding different skills – for instance, management rather than engineering, but production structure has changed dramatically. The number of large manufacturing firms has fallen and existing producers face competition from technologically sophisticated imports based on consumer choice rather than producer decisions. These changes have been understood and adsorbed by leading universities and undergraduates, increasing demand for law, the social and information sciences at the expense of education and engineering. Third, national competitiveness requires an economy that can produce and sustain a broad range of skills associated with science and technology. During the Soviet era, it was the national academies and not universities that undertook most scientific research and technologies related to large manufacturing companies. Many countries, particularly in Eastern Europe, have attempted to integrate Academies into higher education as a way of reducing costs and bringing research closer to the market and so increasing their competitiveness for globalization. These three dimensions –the national education system, labour market demands and international competitiveness are the determinants of higher education in each of the Central Asian countries.

To make higher education a dynamic force for these economies and societies, two steps are important. First, the higher education system must increase the number of enrolled tertiary students. Given the current conditions in the four Central Asian countries, the full potential will only be satisfactory achieved by founding autonomous independent colleges and universities.

The second step for a dynamic and successful tertiary sector is, as implied, the creation of fully autonomous educational institutions. At present, there are a range of quasi-autonomous arrangements that continues some aspect of bureaucratic centralization, limiting the potential possibilities of public and private education. The set of relations appears to very similar that described by Janos Kornai in that "...the bureaucracy behaves ambivalently toward the private sector in the reform phase. Sometimes it reassures and assists it and sometimes it undermines its confidence and hinders its operation. The ambivalence may take the form of the support for the private sector in one branch of the bureaucracy coupled with the obstruction of it in another, or of an alternation of periods favourable and unfavourable to the private sector."

There is another step that has become increasingly important for the growth and learning of tertiary education institutions internationalization and the presence of foreign universities in the four countries. These not only represent historic (Russian) or cultural (Turkey) ties but together with the USA or European universities examples of modern universities (curricula, approaches), which are possibly
helpful as examples to the national institutions. They also provide links - one of their major selling points, which could act as competitive motivation to local institutions.

**Internationalization of Higher Education in Developed Countries**

Traditionally, higher education has been more open internationally than most sectors because of its immersion in knowledge spreading across national boundaries in line with the basic freedoms of the single Market: the free movement of capital, goods, services, and persons. Economic and cultural globalization has imposed new challenges on the system of higher education. Every research university is part of a single worldwide network and as a result research is more internationalized than ever before.

In an analysis of mission statements from universities throughout the world global themes tend to dominate and the majority of universities in industrialized countries address the issue of increased international integration and the emergence of a so-called "global community". Research universities are intensively linked within and between the global cities that constitute the major nodes of networked world. Key analyses of internationalization in higher education point to a broad range of international dimensions in higher education. According to Knight "internationalization is changing the world of higher education, and globalization is changing the world of internationalization".

The terms of internationalization have been applied to several themes such as the physical mobility of students, academic staff, and occasionally administrative staff, obviously the most visible international activity which is in the forefront of programs aiming to promote internationalization. The recognition of study achievements across borders is a second major theme which is clearly linked to the first one: the results of studies in one country accepted as equivalent to what is expected to be studied in another country. Various programmes for the support of student mobility were established with the hope that cognitive enhancement would be accompanied by attitudinal change: a growing "global understanding", more favourable views of the partner country, a growing empathy with other cultures, etc.

Yang argues that "internationalization lies in an understanding of the universal nature of the advancement of knowledge" that is based on the common bonds of humanity, while Knight underlines that internationalization of higher education should help enhance students' competencies and create a culture or climate on campus that promotes and supports international and intercultural understanding.

The approach of Kondakci, Van de Broecke and Devos emphasizes that internationalization "is not simply a issue of managing student mobility but an issue of strategic transformation of the Higher Education institutions". They further argue that perceiving internationalization as a managerial issue, which touches structural-functional domains of the organization, and conceptualizing it as an organizational change process is a necessary first step toward successfully developing international dimension into core functions of higher education institutions.

Knight presented a typology of four approaches in order to elaborate on the approaches to internationalization:

- **Activity approach** (building an international student body, developing or joining exchange programmes);
- **Competency approach** (change in the knowledge, skills, interests, values, and attitudes of different groups of in the organization);
- **Ethos approach** (developing a culture and climate which facilitates internationalization) and
- **Process approach** (developing international aspects not only into the academic but also the managerial aspects of the organization).
The internationalization of higher education in the Central Asian countries has been developed within different frameworks indicating a less systematic or strategic approach under the umbrella of changes from a transition economy into a market economy. Internationalization must support the integration of third countries into the developed economic community. Internationalization has many benefits for higher education in EU candidate countries during its transitional period, but it raises a lot of challenges as well. Providing innovation does not exclude of inherent risks (e.g. inadequate level of institutional adjustment to technological requirements, resistance to change, lack of trained staff, lack of identification of necessary pedagogic skills, etc.). In developing regions, not only the consequences of lagging funds and obsolete educational systems create a fundamental imbalance which is visible in the form of poorly equipped learning facilities, brain drain of academic staff, declining research output, high graduate unemployment due to outdated and irrelevant curricula unaware of the real world demands.

Insufficient resources, outdated hardware, incompatible software and poor Internet access can also be justifications for poor operational management.

More attention is now paid to the need to increase the overall quality of education, and become more closely involved with the developments of the Bologna process.

**The Role of the Bologna Process**

The Bologna process aims at establishing a European higher education area. The Bologna declaration accepted by the Ministers of Education almost of thirty European countries in June 1999 is aimed at the formation of the all-European higher education space and securing leading global positions for European higher education institutions. The given declaration says, “We should thoroughly control the rise of competitive capacity of the European higher education system in the world. Vitality and efficiency of any civilization are evaluated, in fact, by attractiveness of its cultural values, i.e. level of impact on other countries. We should be confident that the European higher education system possesses that level of attractiveness in the world that corresponds to the significance of our prominent cultural and scientific traditions.”

What did the Ministers who signed the Bologna declaration want?

I think that they were looking for the following three things:

1. To start a process of convergence in the structures of higher education, in its architecture;
2. To consider measures that would build trust between their educational systems or create understanding for a start;
3. To build something that would increase the attractiveness of their higher education systems, which would make them understandable for people to come in from other parts of the world and bring their own experience and their own perspective to Europe.

These ideas are about an external dimension to the Bologna process, and a way of making simpler and more comprehensible structures to bring people in. The Bologna Process was not an easy process for Europe. In almost every country there have been difficulties, sometimes-political difficulties, sometimes difficulties with academics, which do not see why they should change the patterns of teaching that they are comfortable with. Difficulties were sometimes with students who do not see as much security in the new structures as in the old ones.

Therefore, the Bologna declaration proclaimed six basic purposes for the creation of the European higher education zone and the promotion of the European higher education system worldwide, namely:

- Introduction of two cycle trainings (bachelor-master);
• Introduction of credit hours to measure working hours spent by students to study educational programs;
• Introduction of the all-European supplement to diplomas for securing employment possibility for European citizens and increasing competitiveness of the European higher education system;
• Education quality control;
• Expansion of student’s mobility;
• Securing appeal of the European education system.

The introduction and application of the main aims of the Bologna Process, both at the national and international levels, are an essential condition and effective way to form an open all-European educational space. Today, 81 percent of European countries entered the Bologna system.

The Bologna process involves the adaptation of a common framework of readable and comparable degrees, the introduction of undergraduate and postgraduate levels, the introduction of credit systems, the promotion of a European dimension in quality assurance, and the elimination of remaining obstacles to the free mobility of students and teachers. Most countries in the region are revising the structure of their higher education degrees, to make it compatible with the recommendations of the Bologna process. Quality is becoming a key aspect of the higher education modernization process, with the development of national standards, the upgrading of certification and accreditation institutions, and the training of local staff on new quality assurance procedures.

The mobility of students is an important purpose of the Bologna Process, which creates a competitive environment for higher education schools. It is the academic mobility of students that enables them to easily move from one university to another during their studies, i.e. the student is not so closely attached to the university where they began studying as they were in the past. Higher education institutions have stopped being a monopolist. The key to the successful maintenance and increase of the number of students at a university is the satisfaction of their demands as consumers of higher education services. Undoubtedly, there will be bigger competition between higher education institutions for maintaining or acquiring new clients. The aspiration of students to receive education of international standards promotes the growth of competition, and this, in turn, stimulates the improvement of the quality of curricula. While analyzing the literature on the Bologna Process, one can see that authors frequently express their reservations saying that the matter is not so much about the quality of education, but about “those mechanisms, procedures and technologies, which secure the level of quality for all high education schools and labour markets that produces trust.” Indeed, in a situation where universities in the Central Asian countries spring up like mushrooms, the inclusion of a bigger number of countries into the Bologna Process brings about a problem of trust in the diploma i.e. the issue of maintaining some formal minimum quality control rather than a problem of education quality.

So, why have the European countries gone through the Bologna process? I think there are a number of things that are driving it, and that they are important for Central Asia as well. First, it is a capacity issue. The European Union is seeking to give experience to a larger percentage of its population. Some have said that 50% of any age group should have higher education experience. That is an enormous number. And it has certain consequences. If you want to get 50% of your young people into higher education, then you have to ask yourself whether a six-year qualification is appropriate. Whether, that is what individuals actually want. Whether there are actual jobs available for so many people with a six-year degree programme. The answer to both those questions is no. There not such jobs available and it is not what most people want. Most people want a greater degree of choice. That is the second element, because our education systems are moving towards the idea that the individual should have a greater degree of choice. This Bologna structure enables individuals to have more choice. Higher education is desirable, but it does cost money. Putting 50% or 35% or 20% of young people through the process of higher education costs considerably more than giving them the choice to opt out earlier if that is what they want. Finally, the EU wanted to align their education structures to the model that was already quite well understood in other parts of the world. The Bachelor, Master, Doctoral systems have provided a way to make their
systems more readable, more understandable, and more attractive. The Bologna process contributes to the development of models of higher education. It develops mutual learning and encourages higher education to contribute to the development of societies, not only in Europe but also in societies elsewhere in the world. It also encourages contacts and links between institutions within Europe and elsewhere in the world. When we develop higher education, we develop society as a whole. If we can create links between institutions, which are already built on links between people, then we will find a way of going forward together, not just in education, not just at universities, but also between the countries of Central Asia, and the countries of the European Union.

The Creation of Education Quality Assessment Systems as a key to Innovation Approaches in Higher Education

Two factors still affecting quality negatively are the lack of quality evaluation and corruption, the latter of which is mainly linked to inducements paid to enter university and obtain diplomas. This practice can only undermine the attitude of students and the value of university diplomas, which are no longer seen as the guarantee of academic standards. A number of initiatives have been taken in the modernization of their higher learning institutions. Most governments are, however, committed to education reforms, stressing the fact that education is an important factor of economic and social prosperity.

Most Central Asian countries have taken up these challenges and initiated ambitious education reforms, developed new policy reforms, and started to redefine the missions of their education system to be in line with the requirements of a modern society. However, initial expectations about the transformation of the educational systems have largely failed to materialize. Higher education legislations are being adjusted to the new socio-economic environment, and strongly influenced by developments taking place in Europe. Each country is of course following its own pace: some countries are more advanced and have heavily invested in education and training; some have less resources to invest the modernization of higher education systems. A lot of emphasis has been put on curriculum reform. There is without a doubt a need to modernize curricula, which are rigid, centrally determined, overloaded, not adapted to the needs of the labour market, inflexible and cover a narrow scope. But curricular reform can only be considered as an entry point for reforms, not an end in itself; it has to be accompanied by the proper structural reforms of the systems. This is a considerable challenge.

The challenges currently confronted by these HEIs do not exist in isolation from broader economic, technological and educational expectations from the use of ICTs in the world at large. One can observe the existence of a strong technological and economic push for HEIs to adopt e-learning strategies in the Central Asian region. This is driven, partly, by the requirement of industry for lifelong learning and the influence of a process of global change. Simultaneously, there is a localized attempt to raise awareness among HEIs of the pedagogical issues that underpin good teaching and learning practice, stimulated by the creation of accreditation programs and related topics.

The problem of the harmonization of national education quality control systems and development of common approaches has appeared to be difficult to accomplish. Educational systems of European countries have too many differences starting from principles of educational management to aspects, which at first sight do not directly concern higher education (for example, national languages, histories, cultures, traditions in teaching and training).

Fundamental differences have developed in a certain groups of countries, which may be presented as the Anglo-Saxon model and the Continental model. The first model includes the education systems of Great Britain, Ireland and partly that of the Scandinavian countries. They may be characterized by a high level of autonomy of higher educational facilities, independence from government controls and also a significant share of private ownership in the education system. The continental model is used in such countries as France, Germany and the Russian Federation, where state ownership prevails in the education system and educational facilities have limited autonomy with governments exercising centralized financial and academic control.
Many European countries have their own traditions and wide experience in the creation of education quality assessment systems (for example, Great Britain, the Netherlands, and France).

The various assessment models differ in purposes, approaches, methods and assessment results. Other countries (for example, Germany, Italy and Denmark) have just started forming such systems under the influence of the Bologna Process.

In some countries, the main purpose of quality assessment is the perfection of educational processes, for example, in France, Great Britain, the Netherlands and the Scandinavian countries; while in other countries purposes may be assistance to the international recognition of programs (Germany), informing the public about deserving educational facilities (Estonia) comparison with other education facilities and programmes (Great Britain, Latvia) and the establishment of accreditation status (Eastern-European countries, including the Russian Federation).

In European countries, approaches to assessment are also different: it may refer to the assessment of an establishment as a whole (institutional assessment), which has been introduced in the majority of countries of Western and Eastern Europe; or the assessment of separate subjects or directions of an educational establishment. Accordingly, assessment systems have different forms: accreditation, audit and higher assessment.

Results of quality assessment procedures may be both confidential and accessible to the public; recommendations for educational establishments on perfection as well as confidential comments and ratings based on assessment results may influence the financing and confirmation of educational establishments, the change of their status and image promotion.

Due to political and economic changes in Europe, a tendency of the integration of educational systems is observed during the last few years. Higher educational institutions, which have been exposed to comprehensive government control, obtain more autonomy (the continental model), and, on the contrary, in the countries with traditionally weak influence of government control (Anglo-Saxon model) independence of higher educational institutions are more and more limited, but these processes are developing slowly.

Simultaneously, under the influence of the Bologna process, accreditation agencies are created in Germany, Austria, Denmark, Sweden and Italy, and the education quality assessment system is being transformed in other countries.

Thus, today education quality assessment systems have been developed in the majority of European countries. However, the integration process does not come with the challenge to unify these systems. On the contrary, in order to effectively apply accumulated experience and available resources, a network structure has been established which unites bodies responsible for external assessment of higher education quality on a voluntary basis – the European Association for Quality Assurance in Higher Education (ENQA). It was created to develop common approaches and conduct joint research on the integration of educational programmes.

All three countries in CA are ready to develop internal and external quality assessment systems in order to develop relevant national standards. Taking the lack of the relevant experience, knowledge, expertise and methodology in QA into account, many universities are highly interested in learning and implementing the best practices of their European Union colleagues and establishing a network for information exchange and recognition.

Quality of education in CA is a major debated issue nowadays. Despite the efforts from Europe, the United States and Russia in providing instruments of co-operation and reform, quality has depreciated
in a number of universities since 1991. The importance of the quality of education is specifically stressed by Ministries of Education.

In Kyrgyzstan at present the system of higher professional education unites 47 higher educational institutions (HEI) including 32 state and 15 non-state institutions, 41 independent structural departments, 16 branches of local HEIs and 10 branches of foreign HEI. The total number of students of all HEIs (full-time, distant, and evening) is 236,900 and the number of educators is 13,500. Recently, the enhancement of higher education quality has been one of the most important problems. Within the system of higher professional education there are systems of state certification (attesting) and licensing carried out by the state authority – the State Inspection on Licensing and Accreditation under the Ministry of Education and Science of the Kyrgyz Republic. However, the methods of quality assessment used by this public body are more quantitative than qualitative, lacking the characteristics of an internal system of checking the quality of specialists. As a result, the present external system of QA does not motivate HEIs to establish essential valuable internal systems of quality insurance. Universities are obliged to introduce QA departments. However, a strategy on improving the quality of education does not exist. This initiative as well as lifelong learning is to be addressed in a new frame of alignment with the Bologna process. The system of government financing has improved dramatically since the introduction of the National Testing System in 2002. The idea is that the system administers a universal admission test in all regions of the Kyrgyz Republic, which is free of charge and is open to all perspective students (high school graduates) willing to apply for a government scholarship supporting their studies. Top scorers are awarded government scholarships (as well as stipends). Before, universities were allocated quotas by the government and independently distributed their shares of government scholarships. Despite the fact that the former system was highly criticized for discrimination, corruption, and ineffectiveness, the National Testing System improved the access of young people from remote districts to free education.

Another latent issue in the world of higher education concerns accreditation. Although the National Strategy for Higher Education Development assumes the creation of accreditation bodies, independent from the government, Kyrgyzstan has never had independent accreditation. There has been a debate about it since 2001; however, nothing has been done to promote independent accreditation yet. The respondents of social surveys have stressed the importance of establishing a branch system of quality insurance of higher professional education, which would be based on common methodological approaches. They also have underlined the necessity of arranging experimental bases to work out and implement the system of quality management on the basis of HEIs and academic and methodological unions. However, there is no methodology on establishing such systems in the national system of higher education at the national or HEI level. At present, HEIs have to work out such systems independently. This outcome turns out to generate financial and time expenses.

Thus, we can observe that the problems preventing the process of implementing the systems of quality insurance in HEIs in Kyrgyzstan and CA are linked to the lack of methodology on establishing the system adopted to the national educational standards; the lack of specialists authors; the lack of financial means and, above all, the lack of knowledge of top managers in the field of quality management in addition to underestimating the practical benefits of implementing the systems of quality management in HEIs.

One of the most important concerns is that curricula in most universities suffer from overloading and an irrational allocation of classes. In many respects they remain poorly structured and do not reflect students’ needs. In principle, most existing curricula have not been adapted to the expectations of potential employers at all. With the exception of economics, business, and few others, courses are taught in the same manner as at the beginning of 1991. The contents of courses have undergone little change. As I mentioned before, the labour market and the educational services are in many respects isolated from each other. The existing state educational standards are too rigid and do not allow new approaches to developing academic programs. It is worth mentioning, that the Ministry of Education and Science is flexible and often recognizes academic programmes that although do not conform to state standards,
bear real market value. At a time of widening relations with European HEIs, and high desire from students to get a diploma recognized worldwide, HEIs are motivated to establish independent accreditation structures and an external system of quality insurance. This fact has been testified by numerous projects in the data field realized by HEIs and NGOs of the Kyrgyz Republic. Therefore, in 2007 the Education Network Association together with the Ministry of Education and Science of the Kyrgyz Republic and by support from “Soros-Kyrgyzstan” Foundation implemented the project “Higher Education Reforming of the KR” realized by the consortium of HEIs of Kyrgyzstan, Italy and Slovakia on establishing quality departments in HEIs of Kyrgyzstan.

Despite some national specifics, the introduction of contemporary quality assurance systems has many common characteristics within the Central Asian countries. The currently existing traditional systems, methods and criteria of quality assessment and control do not satisfy higher education in most countries of Central Asia. All countries highlight their openness and intention to orientate their higher education system towards European frameworks and standards in QA in particular those set by ENQA, adapted to the specific characteristics of national systems.

In Kazakhstan, great efforts have been made in recent years to reform Kazakhstan’s education system to meet the needs of a modern competitive economy. This review considers how far these efforts have succeeded, and what still needs to be done in the higher or tertiary education sphere.

A National Accreditation Center (NAC) has been created by the government of the Republic of Kazakhstan. The mission of NAC is to conduct institutional and specialized accreditation of HEIs, the notification, and recognition of certificates; to make contribution to the development of higher education quality. Today in Kazakhstan the main objectives we can cite include the realization of a programme, according to which Kazakhstan would be among the 50 most competitive countries of the world; the implementation of an accreditation model harmonized with international quality assurance practice; and the approval of the high standards of the quality of education of Kazakhstan, developing educational programmes to increase the competitive capacity of the national system of higher education.

In Tajikistan the reformation of the educational system in general and higher education in particular is under way and the country faces many difficulties relating to its demographics, the financing of the education system, the insufficiency of the legal-normative framework, the conditions of transition to the market economy. The Ministry of Education of Tajikistan has worked out the main priorities in reforming the Higher Education in the Republic of Tajikistan (Strategic Directions of Long-term Reforms of Educational System of Tajikistan for 2004-2015). The strategy identifies education quality enhancement as one of the key priorities. Other crucial strategies are to provide transparency and efficient management in the education and to introduce credit technologies.

For Tajikistan, the emphasis is put on the development of a framework for qualifications.

In general, there is a crucial need in all CA countries for the creation and development of quality assurance systems to enhance the quality of education. Quality enhancement, in higher education in particular, has become official policy declared at the government level in most CA countries. It is included in the country development strategies and is one of the national priorities set up by Tempus for Kyrgyzstan and Tajikistan. Our key focus is on the development of national QA systems (internal and external level to get recognition and accreditation). However, the present challenge of QA system development in CA is that we can find it at different levels across countries. There were several initiatives in CA in the enhancement and assessment of the quality of education with some different approaches and in different areas. These initiatives offered systematic work at the national level and inside universities except for Kazakhstan where the National QA Centre was set up under the Ministry of Education and some legislative basis for the accreditation and QA was developed. In the other CA countries some projects and initiatives formed the basis for the future systematic work at the national and later on at regional and international levels. For instance, in Kyrgyzstan research and preparation
work for the development of internal QA system model has been started by the Education Network Association with the support of the Ministry of Education and international partners. In Tajikistan there were several projects that covered some parts of QA but not systematically. In Turkmenistan there is not any information about such initiatives. An important fact is that the levels of QA system development in Central Asian countries are quite different; another one is that a joint Tempus project is being implemented with Central Asian HEIs, hopefully creating adequate and sustainable internal and external QA systems at the national levels and providing exchange and recognition within the network. Despite the fact that the recognition of accreditation agencies and their co-operation with national authorities is yet to come, we believe that the Central Asian Network of Quality Assurance will lay the foundations for an accelerated process of the independent accreditation and recognition of studies and quality assurance by non-governmental agencies.

Innovation approaches to higher education is an inevitable result of the globalized and knowledge based economy of the 21st century. The intersection of the logic of globalization and other pressures facing central Asian universities make a reconsideration of international programs and strategies. Exchanges, university linkages, patterns of mobility, and international and regional arrangements among universities are all changing.

Conclusions

The reform of higher education for the Central Asian countries in transition will have direct impact on various aspects of the development of innovation approaches to higher education, from the recognition of diplomas and degrees abroad through the improvement the quality of education to the better integration into the market economy in a new political and economic environment by learning from international experience. Institutions of higher education that actively strive for academic excellence in Central Asia will serve as the main promoters of access to European educational and research opportunities.

Thus, it is important for higher educational institutions to create favourable conditions for their transition to the European system of transfer of credits, to improve and introduce modern models and methods of university management in the area of the organization of educational processes, personnel administration, financial management and the planning of activities of educational institutions. This research enables the author to make the following conclusions: Central Asian higher education institutions need 1) improved university governance and elimination of corruption (transparency, student’s participation in decision-making, creating institutes of independent accreditation agencies), 2) developed infrastructure, 3) access to the European and American electronic libraries and appropriate and sustainable technology, and information, 3) integration into the international educational space through building innovative higher education partnerships between American, European and Central Asian universities, 4) creation of successful models of public-private partnerships, 5) introduction and implementation of the main objectives of the Bologna Process combining traditional and international experience. These changes will raise the role of universities as the innovative engines and centres of knowledge and effect on the development of innovation approaches to Higher Education in Central Asia.

References

Emerging Technological Innovation in HRM at Global Level

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Abstract

The objective of this paper is to explore innovative Human Resource practices followed by companies at Global level. One of the major effects of Globalization is workforce diversity which has led to require a strong Human Resource Management in an organization. Technological advancement has changed the way in which organizations operate. Companies like FedEx, Facebook and Netflix have set a benchmark for companies to follow. These practices have proved to be successful as majority of it influences employee engagement & satisfaction. In order to study these Companies, E-Magazines, Web Articles, Online Case Studies, Business websites, Web Journals etc were referred. This paper aims to study different practices followed by top rated companies & how they replaced traditional Human Resource Management into technically advanced Human Resource Management.

Keywords : HRM, innovative practices, organization, technology

Introduction

Technological Innovation concept emphasizes that stimulating knowledge flow is not sufficient to induce technological change and economic performance. There is a need to exploit this knowledge in order to create new business opportunities. (Bell, Lee & Yeung, 2006) has cited Information Technology as a strategic role which not only adds a valuable feature to the HR function but also alters the competencies that define the achievement of HR Managers. Competitiveness has motivated organizations to be anticipatory in dealing with HR problems and to adopt technologically advanced and innovative HR practices (Agarwala, 2003). In this age of rapid innovation and complexity, it is imperative for the firms to make use of technologies for improved Human Resource Management practices and sustainable development. Several authors like (Stroh & Caliguiri, 1998; Tannenbaum & Dupuree-Bruno, 1994) have written about relationship
between swift change in external environment and Innovation in HR. Technical innovation focuses on innovating technology and to use it in firm’s products, services and processes.

According to Anyim (2011) despite the use of technology in today’s modern organization human resources are still relevant and most appropriate resources of the firm. HR being a life line of any organization and mostly accountable for framing organizational structure, the collaboration between the two is highly important (Tripathi & Khushwaha, 2017).

**Literature Review**

Business environment is getting competitive due to national and international competition, scare resources and rapid change in technology. Innovation is important to sustain in this competitive environment which is why Managers and Researchers are intrigued with the innovative practices followed in organizations. According to Kozlowski (1987), Human Resource Management is deeply placed in organizational strategy in order to make innovation easy. Many organizations are using technology to improve the way in which work is done. Due to intensified competition, there is a need of transformation and adaptation on regular basis. Organizations which do not adapt or transform to environment shall not attain competitive advantage in future. Technology when combined with organizations capabilities and skills can yield exceptional results. According to Anyim et al. (2011) HR Managers should be aware about how to increase an organization’s capability to innovate. Many organizations have achieved success by innovating HRM practices, which has changed traditional HRM to Digital HRM. For example, in the research conducted by Svoboda et al. (2001), it can be seen how Deutsche Bank changed their personnel management with the help of information technology making it strategically competent.

Since Artificial Intelligence is known as fourth Industrial Revolution, it is imperative for companies to implement new and advanced practices holistically. In their research in China's hospitality industry, Chang et al. (2011) investigated how companies can promote innovation through Human Resource Practices especially through Selection and Training. Human Resource Management is responsible of creating a culture of innovation and creativity in the organization. Kossek (1987) states that the capability of adapting innovative practices of an organization is determined by practices followed by its Human Resource.

**Discussion**

Anyim et al. (2011) reveals that HR Managers should be vigilant of Human Resource Developments at Local & Global level in order to gain any new opportunity or face threats as the case may be. Every business firm wants to attain enough competitive advantage in order to achieve sustainability. Today’s Global Organizations require new abilities from Human Resource as it requires from various management functions (Briscoe, Schuler & Claus, 2009). HR Managers are now more vigilant about the rewards innovative practices brings along & hence when it comes to implement any new or innovative practice they have become less reluctant and more experimenting than before. HR Managers should collaborate with other departments and become a partner with senior and line managers for executing strategy (Ulrich, 1998). Human Resource Department should become a change agent by creating high performance teams and implementing new technology (Anyim et al., 2011). A study by Ortiz et al. (2009) examines the relationship between Human Resource Practices and Strategic orientation towards innovation.

Due to innovative Human Resource practices, employees are given importance than before. This has given rise to employee empowerment and they are given more freedom now, which in turn yields better organizational results. Human Resource practices that build employee commitment are related to organizational growth (Yeung & Berman, 1997). This paper aims to study the innovative HRM practices at a few diverse companies. There practices and strategies are listed below.

**Netflix**

In one of Harvard Business Review’s article Mr Patty McCord - chief talent officer at Netflix (1998
to 2012), shared its talent management philosophy & how Netflix innovated ‘Netflix Culture Deck’. This innovative thinking served as a benchmark for other companies who earlier did not see recruitment, work culture & compensation been dealt with such innovation.

**Leave Policy/ Honor System.** Initially Netflix had a standard paid time-off policy which later was transformed into formal tracking system which they decided to handle informally. Employees of Netflix were given liberty to take off anytime they found appropriate provided supervisors and employees discussed the same and manage accordingly.

**Travel & Expense Policy.** Netflix eradicated formal travel and expense policy and expected its employees to behave like adults while spending company’s resources considering it as their own.

**Performance Review.** Netflix departed from formal performance reviews and carried out informal 360-degree reviews. Review was kept simple by asking employees to point out things they would like their peers or subordinates to start, stop or continue doing. At Netflix employees have signed feedback in place and also one on one 360 degree feedback which ultimately eradicated the software which was used earlier for the same.

**Compensation Options.** According to Patty Mc Cord ‘there is no reason the HR team can’t be innovative too’. Employees at Netflix are given liberty to choose the percentage of their compensation in Equity form. Their compensation is deducted according to the stock share they opted for. This option is distributed every month at discounted rate with immediate cash options.

FedEx

FedEx was named as one of the 2018 Best Companies to Work For by FORTUNE Magazine and has proved to be successful in all aspects. FedEx’s HR innovation which was complimented by Work Force Magazine is its “philosophy that employees should be doing the kind of work they want to do”. Innovative HPM Practices at the FedEx Corporation:

‘People-Service-Profit’ (PSP) philosophy. Founder and CEO, Smith developed and executed FedEx’s ‘People-Service-Profit’ (PSP) philosophy. The aim of this philosophy was to keep employees satisfied because ultimately employees are responsible to provide best service to customers. This would consequently benefit the organization by generating high profits.

Survey-Feedback-Action Program. This program was aimed at maintaining employee relation and satisfaction which helped management to resolve problems. In order to record employee relations, FedEx provided yearly survey and feedback action program. On the basis of employee’s valuable feedback, management can evaluate problems and find resolutions for the same. Results are later discussed with employees to find out problems and their solution.

Leadership Evaluation and Awareness Process’ (LEAP). FedEx launched a program known as ‘Leadership Evaluation and Awareness Process’ (LEAP) to motivate non-managerial staff and build leadership qualities in order to encourage them to work towards achieving managerial level positions within the company.

Communication System. Apart from formal communication system, Fedex’s communication program included SFA program, fair and non biased treatment procedure and open door policy which aimed at resolving employee disputes and grievances.

Job Change Applicant Tracking System (JCATS). JCATS is an on-line computer job posting
system which permits employees to post for any available job.

**Employee Recognition and Reward Program.** Employees at FedEx are highly motivated as they are awarded for their brilliant work. Employees are given awards like ‘Bravo Zulu’ and the ‘Golden Falcon Award’ to boost their enthusiasm.

Facebook

CEO Mark Zuckerberg managed things in a manner to drive higher satisfaction and greater employee engagement. Innovative HRM Practices followed at Facebook:

**Quantifying Employees.** Facebook quantifies their employees by setting a dollar value of having top performing compared to average ones.

**Varity of Free Refreshments.** Facebook offers not only free but amazing food to its employee. “If you go over the entire list, you are going to feel spoiled by the variety and quality of the menu” - Dr. J. Sullivan, ERE, 2013.

**Fast and Bold.** Management at Facebook encourages its employees to be bold and take risks. Management believes in finishing and executed things faster rather than waiting till they are perfect. They go by their slogan “Move fast and break things.” It encourages its employees to take bold decisions even if they prove to be incorrect some times.

**Innovative Recruitment.** Quoting Miranda Kalinow-ski, Facebook’s head of global recruiting, in an interview with Business Insider (2016): “We want to make sure that we approach recruiting in the same way that we approach the design of the product and the services that we deliver to the world”. Facebook believes in achieving excellence in recruiting. Acqui-hiring is a unique practice followed at Facebook. In this practice they acquire smaller firms for talent search rather than customers or products.

**Holistic Performance Review.** Performance Reviews at Facebook are conducted every 6 months to collect information from Managers and peers. Employees are given access to internal proprietary software which provides teams access to coordinate with each other. Quoting Lori Goler, VP for HR & Recruitment: “It’s a process that is designed to recognize, acknowledge, and show appreciation for people who have done really great work”. Once the information is gathered managers will meet and discuss the findings to validate the information and to know where each one stands. Employees are also asked to evaluate themselves. A Manager concludes the process by providing new opportunities to the team members, scheduling appraisal or compensation talks if required.

**Conclusion**

This study concludes that innovative Human Resource Management practices are inevitable in order to survive in this competitive era and achieve sustainable development. It is not only necessary to have strategic innovation but also in ways the policies and practices are executed. Innovative HR practices when combined with organization’s capabilities results in the achievement of organizational goals and firm’s overall development. New and unique HR methods need to be implemented by companies in order to be more successful, reduce employee retention, pay higher wages, influence employee engagement, provide advanced training and welfare facilities & increase employee commitment.HR practices should be aimed at creating a culture where innovative ideas flow freely which would benefit organization as well as its employees. Innovation in Human Resource Management field such as Organizational Culture, Compensation, Performance Review, Talent acquisition and management, Employee engagement & welfare etc needs to be advanced technologically with new innovative techniques in order to create a niche in building organizational competencies.
References


Track 13: Finance Management and Investment
A Time-Line Study of Finance Management in India from Vedic-Literature, 
Epic, Ethical-Aphorisms, Fable, Three-Centurions, Gandhi and Satyabhakta

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Abstract:
Managing the finance is a mandatory function in every spectrum of life whether it is governing, managing or developing. Without performing this function one is unable to sustain in the world. This function is associated with the industries, corporations, institutions and business and primarily to a man. In daily routine, every one of us comes across with this function. When the finance is managed properly in good way, then it leads to prosperity, growth and development at the personnel, relational, social, national and ultimately at global level. When it is not managed properly, then it is said to be mal-management or mis-management of finance. Basically, finance management deals with the acquisition (earning), maximization, storing and preservation of money and wealth. These functions of finance management are differently dealt by the thinkers in different way. This paper entitled "A Time-line Study of Finance Management in India from Vedic-Literature, Epic, Ethical Aphorisms, Fable, Three-Centurions, Gandhi and Satyabhakta" is an attempt to present these functions of fiancé management in a succinct and through way. This paper will present the notions contained in these documents and thoughts of these great personalities. By its very nature, it is descriptive in its nature.

Keywords: Profitability-Management, Capital-Structure-Planning, Debt-Planning, Multi-Sources of Wealth,, Charity, Ethics of Finance,, Poverty, Prosperity, Bliss.

Introduction:
Finance-management is one of the most important task of every man in this world who resides in any society. Since the beginning of mankind, this function is performed in distinct way. With the development of time, some new additions are made and some were eliminated and some were amended. So, the present paper "A Time-line Study of Finance Management in India from Vedic-Literature, Epic, Ethical Aphorisms, Fable, Three-Centurions, Gandhi and Satyabhakta" has selected the seven different types of personalities who presented their notion upon fiancé management. First one is the Vedic-literature, it comprises of both Vedas and Upanishadas. This literature is considered as sacred in Hinduism. Second is an epic namely Mahabharata written by Vedavyasa. Third is ethical-aphorisms written by Kautilya, he is widely known for his work in ethics. Fourth is a fable namely Panch-Tantra, this work is a landmark in the area of fables in world-history. The next is three-centurions of Bhartrihari, it speaks about love, ethics and renunciation. Sixth is M. K. Gandhi, commonly known as Mahatma Gandhi the father of nation (India) and


**Introduction of Vedic-Literature:** Vedic-literature is the oldest literary-monuments of the world. ¹ It is the most revered literature available to the humanity.² It is composed in Vedic-Sanskrit language and constitutes the oldest-layer of Sanskrit-literature. According to Vedanta and Nyaya school of thought, Vedas are Apauruseya, it means they have not been composed by any particular man or any other agency. According to Mimansa school of thought, Vedas are Shruti³ which means what is heard.⁴ In this way, in Indian thought, Vedas are thought to be both Apaureseya and Shruti. Vedic-literature is traditionally believed to be a direct revelation of cosmic-sound of truth heard by ancient Sages (Rsis) who then translated what was heard into what was understandable by man.⁵ In this way, Vedas are not of divine origin but they were remembered by Sages by transcendental- means and passed-down through their followers.

Etymologically, the term Veda is derived from the root Vid which means “to know.”⁶ It is reconstructed as being derived from the Proto-Indo-European root Yeai d which means “is to see or to know.”⁷ As a noun, the term Veda means knowledge.⁸ Samhita⁹ and Brahmin¹⁰ literature are the two major parts of Vedic-literature. The Samhita constitutes the core and main text of the Vedas and Brahmin-literature supplements and complements them. Pure Brahmin-literature,¹² Aaranyakas¹³ and Upanishadas¹⁴ are the three parts of Brahmin-literature. All of this literature collectively referred as Vedic-literature. There are four Vedas namely, Rig-Veda, Yajur-Veda, Sama-Veda and Atharva-Veda. “Rig-Veda is the oldest extant Indic text and has ten mandals (books) which is a collection of one thousand twenty-eight hymns and ten thousand six hundred verses in all.”¹⁵ Yajur-Veda (Vajasneyi) is primarily written in prose form and it has two major classifications namely Krsna-Yajur-Veda and Sukla-Yajur-Veda. “Rig-Veda is the oldest extant Indic text and has ten mandals (books) which is a collection of one thousand twenty-eight hymns and ten thousand six hundred verses in all.”¹⁵ Yajur-Veda (Vajasneyi) is primarily written in prose form and it has two major classifications namely Krsna-Yajur-Veda and Sukla-Yajur-Veda. Sama-Veda consists mainly of Rig-Vedic verses while a few are independent of Rig-Veda. Atharva-Veda contains verses as well as prose and it is meant for mass recitation.

Financial Management: According to Vedic-literature, wealth shall be multiplied, that is the vow¹⁶ and encourages one to maximize wealth¹⁷ and asserts that one ought to be rich in all respects¹⁸ and have prosperity.¹⁹ Vedic-literature mentions two type of wealth namely, prevalent wealth and potential wealth: prevalent wealth means wealth that is earned already and potential wealth means wealth that is to be earned hereafter.

Profitability Management: Vedic-literature declares that profit shall be earned only through fair means and wealth shall be earned through lawful path²⁰ and genuine labor.²¹

Capital-Structure Planning: Vedic-literature emphasizes that one shall clear all debts. They restrain taking debts from one tainted with sins. They advice one ought not to be debt-oriented in their capital-structure planning. They assert that one shall discharge his debts²² and be free from debts and redeem from debt.²³ Cancellation of debt is mentioned in the Vedic-literature²⁴ as well as they speak about the concept of equity-share-capital in form of equal-partnership through commonality²⁵ and mention about dealers of wealth.²⁶ It is said in the Vedas, one is Guilty of non-payment of debt.²⁷

Wealth Maximization: Vedic-literature speaks about acquisition, maximization and distribution of wealth.

Fair Mode for Wealth Acquisition: Vedic-literature stipulates that wealth has to be earned through fair means and one should put in his best efforts to acquire wealth through ethical and moral-practices. He
has to adopt lawful means for achieving money. Man led by fair paths to riches and tread the sinless path and gather wealth as well as it has to be won by deeds of glory. According to Vedic-literature, one who help others wins wealth. Further, they assert for increase the storage of goods acquired by honest and fair-means and man who is desirous of wealth shall strive to win it by lawful-path.

Wealth Maximization: Vedic-literature inspires and enthuses one to maximize wealth and drive-away poverty. They say, man ought to be a master of abundant riches. Increase of wealth, unfailing thousand fold prosperity and prosperity throughout the year is sought. Further they assert that man ought to rejoice in increase of wealth and unite with increase of wealth.

Multi-Sources of Wealth: Vedic-literature stresses that there should be different sources for augmenting wealth and that it shall be available ceaselessly at all points of time. They encourage one to be having multiple-channels for earning. The doors of wealth shall be unbarred and wealth has to be brought from all sides. There should be unexhausted availability of food-grains and its eaters as well. One shall have an unceasing-supply of grains from a thousand sources.

Social Distribution of Wealth: Vedic-literature asserts that there shall be proper distribution of wealth from the wealthy to poor. The leader is the distributor of wondrous and bountiful wealth. They also condemn those who enjoy wealth without partaking it with others. Wealth should be accumulated through hundred hands and distributed through thousand hands and rich shall satisfy the poor and one who eats alone, is a sinner and one shall not be selfish and consume all by himself. Thus, Vedic literature presents a moral and social-basis for the distribution of wealth from rich to poor.

Enjoyer of Wealth: According to Vedic-literature only accumulating, preserving and increasing is not sufficient for man. In the words of Vedic-literature, one shall not only be possessor of wealth but also be the enjoyer of wealth.

Conservation of Wealth: Vedic-literature advocates conservation of resources to take care of future requirements. Produce fair-wealth for today and tomorrow.

To Eliminate Poverty: Vedic-literature condemns poverty and give clarion to eradicate it. Poverty should be banned.

Conclusion: Thus, Vedic-literature, provide a holistic guideline to manage the finance. Vedic notions on finance motivate one to earn money from lawful paths and enjoy the wealth as well as conservation of wealth. Giving to the appropriate person is essential and it is good, giving to a bad is not the proper management of finance. The complete Vedic notions regarding financial-management can be summarized as follows. It can be used as a guideline for managing finance in every spectrum of life whether personnel, public or government –

1. Earn wealth from good path through industrious labor.
2. Expense according to proper needs
3. Give wealth to others for social-distribution

Vedic literature encourages multi-sources of wealth and emphasize on wealth-maximization. Regarding the circulation of wealth Vedic-literature emphasizes on social distribution of wealth. Vedic-literature presents practical guidelines for finance management by which one can manage finance very well and can live happily, merrily, divinely and completely stress–free.


Introduction of Mahabharata: It is the longest Samskrit epic of world written in India and meaning of title is the great tale of Bharata dynasty. It contains the narration of Bharata's dynasty, tales of the Kaurava and the Pandava princes and Kurukshetra war. It is considered as the fifth Veda and presents four-goals of life (Purusharththa) for a man and these are, righteousness (Dharma), earning money (Artha), fulfilling the desires (Kaama) and liberation from pain, sorrow and suffering (Moksha). Its central
theme is to present Krishna’s hidden divinity and its progressive revelation.\(^53\) It asserts, “whatever is not contained in it, is not to be found anywhere”\(^54\) and its authorship is attributed to Vyasa to Ganesha and he is also an important character in it. According to Brockington, this epic is originated between the eighth century BCE\(^55\) and about fourth century BCE it reached to its final form.\(^56\) There are three redactions of the Mahabharata namely; Jaya, Bharata and Mahabharata. Jaya comprises eight thousand verses and it is attributed to Vyasa; Bharata has twenty-four thousand verses and recited by Vaisampayana and Mahabharata recited by Ugrasrava Sauti contains one lakh verses.\(^57\) In its longest version, it has over one lakh couplets (Slokas) or over two lakh individual verses lines and long prose passages. In sum total, it has one point eight million words.\(^58\) It is four times longer to Ramayana and ten times to Greek epics namely Odyssey and Iliad combined.\(^59\)

**Financial-Management:** For proper financial-management, king should give his wealth in charge of an ascetic\(^60\) because treasury is the root of victory on earth.\(^61\) He ought not to desire to fill it by acting unrighteously or from covetousness. If wealth is acquired in this way then it would be lavished on unworthy-objects.\(^62\) Emphasis is made upon the role of holiness in acquisition of wealth by stating, the garb of holiness may be employed as a hooked-staff or bring down the branch in order to pluck the fruits that are ripe.\(^63\) Mahabharata says, “when prosperity is acquired through unrighteous acts, it is soon destroyed; while which is won by righteous means takes root and descends from generation to generation.”\(^64\) It states that man ought to preserve, increase and spend earned money. Man must act to preserve as well as increase his wealth. If, without earning, he continues to only spend his wealth, even if the amount were as large as a mountain in the Himalayas, it would soon be exhausted. In this way, Mahabharata emphasizes upon increasing the money with the spending of money otherwise the earned money will be finished at some time. Man who has possession of wealth neither gives it away nor enjoys it from greed, saying that he has none\(^65\) goes to everlasting hell. Prosperity proceeds from the peace of mind\(^66\) but it has a distinct-characteristic that it intoxicates even a wise-man.\(^67\)

Mahabharata mentions six-qualities for a king to gain-prosperity and these are “possessed of every accomplishment; self-control; humble; righteous; passions on right rein and not too enquiring”\(^68\) as well as he ought to adopt all arts namely, humility, conciliation, bowing his head and inspiring hope and does two things, namely, first, always acts with prudence and second, adopts measures to suit time and place. These two always produce the highest good\(^69\) and he ought not to do anything that brings infamy\(^70\) as well as ought to do what is agreeable by virtue of his disposition is never shorn of prosperity.\(^71\) He wins great prosperity “by attaching good men to him by gifts, sweet words, heedfulness and purity of behaviour.”\(^72\) That king gets more prosperity who gets troubled with calamity.\(^73\) Mahabharata gives direct clarion that “while in enjoyment of power king ought not to take wealth from those who are weak.”\(^74\) That king is called foolish who pursues profit without driving-away lust and wrath to acquire virtue then he ultimately sacrifices pleasures and profit as well. If a king becomes mindful only about the means of acquiring profit, he never succeeds in acquiring either merit or profit. For acquiring the proper taxes from the mass, Mahabharata says, “as a man desirous of milk never obtain any by cutting off the udders of a cow, similarly, a kingdom inflicted by improper taxes never yields any profit to the king. He who treats a cow with tenderness always obtains milk from it.”\(^75\)

So, an intelligent king ought to “milk the kingdom after the analogy of the calf. If the calf be permitted to suckle, it grows strong and can bear a heavy burden. If, on the other hand, the cow can be milked too much, the calf becomes lean and fails to do much service for the owner. If the king, notwithstanding his great wealth, is desirous of more, he should be like a bee gathering honey from flowers. Little by little, it should be taken from the subject and by this means he should be shorn of wealth. The demand should be gradually increased till it assumes a fair proportion.”\(^76\) Further, Mahabharata suggests that king should not covet the wealth of others but give what is due. According to wise man, man ought to mistrust that man who desires other’s wealth that man is enemy.\(^77\)

**Financial-Management from Ethics of Vidura:** In the Ethics of Vidura, Vidura says, accessing of immense wealth is the ocean of happiness.\(^78\) Man who wants to attain prosperity ought to avoid these
six-qualities namely; sleep, drowsiness, fear, indolence, anger and procrastination. He mentions two misuses of honestly earning namely, “making gifts to unworthy and second is refusing to worthy.” He says, prosperity takes its birth in good-deeds and it grows in consequences of activity and acquires stability owing to self-control. In this way, Vidura emphasizes on self-control for the stability of prosperity and suggests wealth ought to be acquired honestly. In his words, “none is more heartless than a wealthy person who enjoys fine food and clothing without distributing wealth among his or her dependents.”

**Conclusion:** In this way, it can be said that money should be earned honestly by performing the good-deeds and sense-control is necessary to make it stable and it must be distributed among dependents. Finance should be managed in the righteous way and there are certain qualities by which man can become prosperous. He ought to earn, spend and save money and earn it in the righteous-way and he ought to collect the tax from the masses and ought not to covet the wealth of others. Mahabharata present the ethics of finance-management in reference to a king and Vidura emphasize on managing the finance in personnel-reference. Vidura presents six-qualities for one who wants prosperity and he emphasizes on the notion that earning should be based on honest and worthy deeds.


**Introduction of Kautilya:** Kautilya is commonly known as Chaanakya and Vishnugupta and his time line is 370 BCE to 283 BCE. “He was born in the Canaka village of the Golla region, to a brahmana named Canin and his wife Canesvari and he got name Chaanakya. He was a great scholar in Vedas.” He died as a result of conspiracy by Subandhu and burned alive. He was a professor of economics and political science at Takshashila University, a philosopher and royal advisor. He is credited for defeating powerful Nanda empire and establishing Maurya empire. He was chief advisor to both Chandragupta and his son Bindusara. He is famous for his two works namely, Artha-Shaastra and his ethical aphorism. Artha-Shastra mainly emphasizes upon economics and political science and his ethical aphorism presents ideal management of life. He used these aphorism to groom Chandragupta and other selected disciples in the art of ruling a kingdom. His works were lost near the end of the Gupta dynasty and not discovered until 1915.

**Financial-Management:** Kautilya mentions that money is powerful, troubleshooter, true relative and supreme. It is powerful because it protects dharma; troubleshooter because during bad days and hard-times it overcomes hurdles easily; true-relative (Bandhu) because when man loses money then he loses woman, friends, relatives and servants; and when he regains it, they all return; supreme because it is driving force in the world of man and who has money makes friends and relatives, he is treated as the real man, money makes him wise man and he lives a life of luxury and honor; and ego is developed when man gains riches.” In this way, Kautilya glorifies money.

He highlights the nature and character of money and says “money which is like bride of an orthodox family meant for the use of one man is no good. It is good only if it is like a prostitute available to every man who wants it.” In this way, Kautiliya emphasizes upon use of money to every man in a very easy manner. For becoming happy in terms of money in trading, man ought to be bold without hesitation (shameless) and wise man must always keep in mind the thought how does he earn and spend; and for a well planned and organized life man must earn and save money. Further, he says, a wise person must not reveal on others, the loss of money. In this way, man has to manage the earning, saving and spending of money. There are three means to manage the earned money namely, spending, circulation and charity and last stage of money is destruction.
Earning: According to Kautilya money comes from proper path. He says that home is blessed where money is wages of honesty; and man who values wealth of others not more than rubbish has found the truth. He mentions three places where prosperity (Laxmi) descends, namely, where stupid man is not honored, where grains are stored safely and where man does not quarrel. Commenting upon relation between man and money, Kautilya says, “there is no man in this world, who is completely satisfied with the amount of money he has got, more he gets money more he desires for. It is a hunger and thirst that never get satisfied and never get quenched.” He gives direct clarion that money not to be earned by four sources namely, exploiting others, causing pain to others, working against the interests of dharma and begging before enemy, and man who earns money through unjust means is lowliest of the low; and he is better dead than living. If man earns money from unjust means then that “money remains only for ten years, at the most. In the very beginning of eleventh year it perishes including capital and gains.” In this way, Kautilya emphasizes upon earning through lawful path by following the path of dharma and without exploiting others.

Saving: About saving he says, man ought to save little by little. “As drop by drop a pitcher gets filled. In the same way, a little by little collection of money, money is stored.” In sum total, it can be said that by storing little man can store a huge.

Spending: It is honoring the money and spent money is useful and not spent money is useless. For proper management of spending money, he emphasizes on foresight upon budgeting than overspending, if a man does so then his destruction is certain.

Debt: Kautilya says, A father who leaves behind unpaid debts is the enemy of his children.

Charity: It is one of the natural propensities of man and result of great penance and man who does not use money in charity then he loses it in various ways and during charity man ought to be full of kindness and mercy. Kautilya mentions two characteristics of charity namely, firstly, giving charity to rich man is meaningless and secondly, give charity to noble man only.

Circulation: Regarding the circulation of money, Kautilya says, earned money must be spent to keep it in circulation and it ought to be used in protective way. He compares circulation of money with “water of pond that has inflow and outflow systems for keeping water clean.” So, man ought to protect money for its cleanliness. The money which is with others is of no use. In the hour of need such money doesn’t help.

Destruction: About destruction of money, Kautilya says, it causes grief even to a wise man and man who has conflicts (envy) with others then it causes destruction of his money (wealth). Further Kautilya says, a great tragedy befalls on a man whose money is usurped by cousins.

Managing the Poverty: Kautilya says, a moneyless man is not poor if he had got the riches of learning. A man who has no learning is the poorest even if he has the money. According to Kautilya, poor person is barren, orphan and feeling less and poor man desires for money and poverty burn a man without fire and silently eat him. and poor are in virtual hell as well as poor are jealous of rich ones. Further, he says, patience makes poverty bearable and when poverty strikes, man ought not to live with kith and kin. For the management to eliminate poverty, Kautilya says, an industrious person can never be poor.

In this way, Kautilya presents above mentioned means of financial management. In regards of profit maximization, he emphasizes upon doing good to others, in his own words, “man whose hearts warms up to desire of doing good for others gets blessed with riches.” Regarding a greedy man about money, Kautilya says, he is not truthful and ought to be won over by offering of money.
Conclusion: Kautilya glorifies money by calling it powerful, troubleshooter, true-relative and supreme. It is earned through lawful path. He presents his notion upon earning, saving, spending, charity, circulation and destruction of money. When money is destructed it causes grief and for proper profit-maximization, emphasis is made upon doing good to others but budgeting should not be overspend.


Introduction of Panch-Tantra: Panch-Tantra is based on an older oral-traditions and includes animal-fables that are as old as man is able to imagine, authored by Pandit Vishnu Sharma. Its exact period of composition is uncertain and according to Santhini, it is estimated from 1200 BCE to 300 AD and for Joseph Jacob, it is 300 BCE. It includes five discourses namely, loss of friends; winning of friends; crows and owls; loss of gains; and imprudence. According to analysis of various recensions, geographical features and animals described in stories; Kashmir is birthplace of Panch-Tantra. According to prelude of Panch-Tantra, there was a king namely Sudarshan who ruled kingdom, whose capital was Mahilaropya. Though king himself was both scholar and powerful ruler but his three sons, namely, Bahushakti, Ugrashakti and Anantashakti were all dullards. King despaired of his three prince’s inability to learn and approached his ministers for counsel. During consultation with ministers, he found that instead of teaching them scriptures and texts, they should somehow be taught wisdom inherent in them, and an aged scholar namely Pandit Sharma was the man to do it. Then, he was invited to the court, and he accepted task of making them wise in ways of politics and leadership within six months. After that, he chose a distinct way to educate them and that is of stories. The stories of Panch-Tantra communicates the essence of diplomacy, relationships, politics, management and administration.

Financial-Management: Pandit Sharma says, there is no thing that can’t be achieved by money; means not an end; it is like Kalpa-tree (Kalpa-Vriksha) that fulfills need of man; powerful element in completing action; man becomes powerful and rich man is considered as learned man and other man wants to have friendship with him; it keeps man enthusiastic; man insults others and talks with superiority; due to money, relatives behaves with affection, he is counted as best man and considered as learned; with a prosperous man even his rivals behaves gently; it makes non-honourable into honourable; non-accessible place into accessible place and non-respected man into a respected man; as the sun is illuminator like that Laxmi (money) lights the quality of man. In this way, Pandit Sharma glorifies money and reproaches it on the basis of earning, preserving and spending. He emphasizes upon managing finance because man of money is robbed everywhere. In this way, Pandit Sharma emphasizes upon financial management and involves three steps namely achieving/earning, consumption/spending and destruction of money.

According to him, an intelligent man efficiently earns money and mentions six paths for earning livelihood in this world, namely, begging, servicing, merchandising, educating, money-lending and business. Out of these six paths, business is the best means of earning. Man ought to try to achieve and earn it by his own efforts (Purushartha), but he ought not to live without it among his brothers; it (Laxmi) traces out man to reside who has seven characteristics namely, industriousness, enthusiasm, active, skilled, non-addictive, brave, grateful and has good friends. Pandit Sharma says, for earning money, man does not think over do’s and don’t’s; criticizes the non-criticized and becomes devotee and praises low man; serves that man who has money whether he is miser (Kraapan), not of high family, criticized by true man. During earning emphasis is made upon contentment (Santosha). After earning money it has three stages, namely, charity, consumption and destruction and these stages are cyclic in nature.

Charity: About charity, Pandit Sharma says, it is the most important prosperity, man ought to make it because prosperity remains in this world only and regarded as good quality and should be made to suitable man according to time, space and with power of discrimination then it fructifies into bliss (Aananda) and criticizes begging.

Consumption/Spending: According to Pandit Sharma, money remains for consumption for a little time, compares collected money with the collected water and says as the collected water smells badly
likewise man ought not to accumulate it but consume it; its consumption is its security. negates its amass (Sanchaya) and says man ought to spend his collected money very slowly like man who intakes prescribed medicines and does not intake them hastily. In this way, Pandit Sharma emphasizes upon spending money slowly and slowly like medicine but not to store it.

Destruction: Man who neither makes charity nor consumes then last stage of money is only destruction. It is destructed by misconduct of man.

Further, Pandit Sharma emphasizes upon social distribution of money and says, money which is like bride of an orthodox family for the use of only one man is of no good; it is good if it is like a prostitute available to everyone who wants her; regarding capital debt planning, he says, man ought to repay his debt then he does not get sorrow (Dukkha); about profit maximization, Pandit Sharma says, trust is the most important factor and man ought not to trust three types of man, whose nature, family background and power is unknown. For him, religious (Dharmik) man regards money of others as a piece of sand.

**Conclusion:** Pandit Sharma glorifies money by calling it powerful and emphasizes upon notion that an intelligent-man earns efficiently and mentions six paths for livelihood and out of them business is the best. Man ought to achieve/earn money through industriousness and money (Laxmi) automatically comes to man who possess seven-qualities and man ought to be full of content about earned money. Pandit Sharma speaks about social distribution of money, capital debt planning and profit-maximization.


**Introduction of Bhartrihari:** Bhartrihari was a Samskrit author, poet and philosopher. He is famous for his Shatak-Traya (three centurions) that comprises about hundred couples each and authored Vakayapadiya on Samskrit grammar and linguistic philosophy. His Shatak-traya consists of three thematic compilations on moral conduct (Neeti), love (Shringara) and dispassion (Vairagaya). Out of these three, first deals with state of world, power of wealth, haughtiness of kings, futility of greed and vicissitudes of fate; second deals with love and woman; and third deals with verses on renunciation. The English-Samskrit scholar Barbara Stoler Miller translated them by the name of first, among fools and kings; second as passionate encounters; and third as refuge in the forest respectively. They deal with a different aesthetic mood (rasa) and written in short verses and quality of poetry is aphoristic. There are so many manuscripts of these centurions and they widely vary in matters of numbers of verses. D. D. Kosambhi presents two hundred verses that are common to all. In this context, Miller says, despite the variations in content, theme is similar in every manuscript. These three centurions display the depth and intensity of Bhartrihari’s renunciation as well as vacillation between the pursuits of fleshly desires and of the Aatma. In this way, it reveals two conflicts experienced between a profound attraction to sensual beauty and the yearning for liberation from it, and shows how “most great Indian art could be at once so sensuous and so spiritual.” In this way, Bhartrihari presents the importune of both types of happiness gained through physical contact of senses and of spiritual wisdom gained through yoga.

**Financial-Management:** Bhartrihari says that all good qualities rests in possession of money and man who has possession over wealth is considered as nobly born, wise, qualified, good speaker as well as personate fit to be seen and without money, even good thing is like a straw. For Bhartrihari, possession of money changes behaviour of man in a moment. When man gets wealth, he reckons whole world as straw. Foolish and narrow-minded wealthy man has no control over his tongue. For proper financial management, Bhartrihari says, man should manage money in charity and enjoyment of pleasures otherwise it is destructed. These are three stages of money. Bhartrihari says man ought to be contended and not to show supplicant attitude towards rich man uselessly. He says as, “a pitcher takes in a equal quantity of water from well as ocean."
Conclusion: Bhartrihari glorifies money and presents its utility in good-management. He presents the supremacy of finance and emphasize on the three ends of money viz. charity, enjoyment of pleasures and destruction. He emphasize on personnel level and mentions one ought to be content in reference to finance. In this way, it can be concluded that having or owing the great prosperity is a goal for each and every one but having only the great money is not the last goal for a man as well as for a nation.


Introduction of Gandhi: Mohandas Karamchand Gandhi was born on 2 October, 1869 and raised in a Hindu merchant caste-family in coastal Gujrat, India and trained in law at the Inner Temple, London; and assassinated by Nathuram Godse on 30 January 1948 by firing three bullets into his chest at point blank range. His birthday second October is commemorated as the international day of non-violence.

Financial-Management: For achieving the wealth, Gandhi focuses on the co-operation of poor and asserts “the rich cannot accumulate wealth without the co-operation of the poor in society.” Explaining the true wealth, Gandhi says, “is the good he (man) has done to his fellowmen.” Zeal and work both are important for Gandhi to increase the wealth. Gandhi believes in adoption of fair means to earn wealth. Gandhi is not against earning more. He says, “I would allow a man of intellect to earn more, I would not cramp his talent but the bulk of his greater earnings must be used for the good of the state, just as the income of all earning sons of the father goes to the common family fund. They would have their earning only as trustees.” Thus, Gandhi speaks about the earning through the talent; and the earned money should be used for the good of all through the trusteeship. Gandhi emphasizes upon equal distribution and explains it, “equal distribution is that each man shall have the wherewithal to supply all his natural needs and no more just as the elephant needs a thousand times more food than the ant but that is not an indication of inequality.

Conclusion: Gandhi emphasizes on co-operation for finance management and for wealth-maximization emphasis is made upon work and zeal. He stresses on the purity of means to acquire and maximize wealth. He emphasizes upon social-distribution of money through trusteeship. Thus Gandhi gives a moral and ethical basis to finance-management


Introduction of Swami Satyabhakta: Swami Satyabhakta born on 10 November, 1899 at Shahpur, Sagar district, Madhya-Pradesh, and died on 10 December, 1998 at Wardha, Maharashtra. His real name was Darbarilal. He presents a syncratic and rationalistic philosophy. He is worldly known for his works, Satyaamrita, Nirtivaadi Artha-Shastra, Satyeshwar, Surajya:Kyaa, Kyu aur Kaise, Surajya Ki Raah and Swarajya Kaisa.

Financial-Management: Satyabhakta accepts the inconsistent nature of money and asserts that it is essential because of this a rich man becomes a poor and a poor man can become rich. Satyabhakta asserts that there ought not to be dishonesty and crookedness in earning the money. It means man ought to follow the path of honesty and truth to earn the money.

According to Satyabhakta, every man ought to do something to earn the livelihood, because food and other items are essential for every man to maintain his existence. Livelihood does not means prosperity or ownership but it means to expend the power for public-welfare and service; and true livelihood is that livelihood, when man serves more to others and takes little from others. Man who does not earn livelihood, is a free-eater. Man ought to labor for the earning the livelihood, in this context, Satyabhakta presents the vows – (i) earn livelihood honestly; (ii) not to be extravagant; (iii) do not become a miser; (iv) serve the parents humbly; and (v) will not impose the burden of earning money on others except the proper cause.
Satyabhakta presents the concept of non-extremist economics to sort out the problems of economics and mentions its main characteristics – (i) it emphasizes upon collective responsibility, collective-system, lack of unemployment, justice in the price of labor; (ii) it focuses upon individual freedom and self-inspiration; (iii) villagism is obsolete; (iv) it eliminates capitalism; (v) it does not consider capitalists as sinners; (vi) pay the compensation for the things that has been taken from others on the name of nationalization; (vii) it makes the employees partners that benefits both employees and owners; (viii) it increases the production; (ix) it makes everyone is employed in work; (x) it highlights the practicability; (xi) economic problems are not sorted out by the changing of heart; and (xii) charity does not sort out the economic problems. According to Satyabhakta, the aim of life is not the collection of money but it is the happiness. Money is one of the most important means of happiness. According to Satyabhakta, on the behalf of value of money, it can be of five types: (i) money has best value when it is earned with honesty and work and used for the welfare of others; (ii) money has moderate value when it is earned honestly and spent on self and family-members; (iii) money is less value when it is earned with dishonestly and spent in the public-welfare; and (iv) money is de-valued when it is earned dishonestly and not spent for public welfare but spent on himself.

Swami Satyabhakta presents eighteen points for the economic plan – (i) society (government) is responsible for the employment of every man; (ii) use the high-machinery to produce more commodities that are useful to maintain the life; (iii) either sale out the produced products or distribute them among laborers; by this man will not be able to collect money and it will be circulated; (iv) man will be free to become a business-man and for appointing employees if he can find them; (v) does not take anything from some one without paying compensation to that man; (vi) man have the ownership on his home and other things; (vii) ban the sales-tax, income-tax, border tax in states; (viii) ban the satta, there ought to be the sameness of prices; (ix) foreign trade should be in the hands of government. (x) the area of farming ought to be big in size and there ought to be the sangheekaran of that; (xi) type of labor, time, labor, place, and work, wages and payments ought to be pre-determined at national level; (xii) economic-system ought to be such that employs more men, increases the production, and distributes more. (xiii) rate of rupees and essential commodities ought to be fixed; (xiv) rate of foreign exchange ought to be proper (xv) farming and important industries of nation should be nationalized (sangheekaran); (xvi) use of engineering and mechanical methods in production-system; (xvii) increase the equality of gender; and (xviii) there will be lack of servants for the home-services; so there ought to be the production of machinery for the works of home and these machines should be publicized among the society.

Swami Satyabhakta mentions seven causes for the prosperity of a nation: (i) natural property; (ii) high means; (iii) constructive cleverness; (iv) saving of public-labor in production; (v) lack of unemployment; and (vi) inter-national trade.

Swami Satyabhakta mentions eleven reasons for the poverty (i) lack of labor; (ii) non-availability of labor; (iii) giving up of livelihood; (iv) non doing of work; (v) non-co-operation; (vi) labor of producing none-sense; (vii) non-productive labor; (viii) labor of sun; (ix) labor for producing a little; (x) collection of non-production; and (xi) unequal distribution.

Nationalization (Sangheekaran): According to Satyabhakta, the idea of nationalization sorts out the problems of owners and provide justice to the laborers and increases their self-esteem. Speaking about the structure of nationalization, Satyabhakta mentions ten-points: (i) the ownership of materials of factory will be of the owners and share-holders and it will be their property; they will not get profit on that but will get interest of three to four percent; (ii) laborers will not get the remuneration; but they will get the share out of profit after eliminating the expenses; (iii) the profit will be according to their share and will be divided among them; (iv) the profit will be calculated after eliminating the total expenses made upon – interest, wages of land, expenses of electricity and water, expenses of labor welfare; after that the remaining profit will be divided; (v) owner or managing-directorate who will perform the task of supervising, his payment will be determined in parts; (vi) there will be a committee of five members; out of these, two will be from owners and shareholders side, two will be from laborer side, and one will be the determinant representative. This committee will supervise and perform the task of checking the accounts,
listen the complaints of both owners and laborers, recruit the eligible and fire the incapable. The members of the committee may be less if the factory is small in size; (vii) the pre-determined remuneration will be given either weekly or monthly; (viii) if some laborer will not want to be shareholder in the factory then he will be recruited at fix payment-rate; he will not have relation with the profit and loss of organization; nor have the right to participate in the management; but he will vote in the selection of committee members; his payment will be deducted if the income will be low of the organization (ix) there will be a general meeting annunally in that meeting both owners and laborers will participate and annual-report will be presented there. there laborers will have the right to ask a question ; and (x) if both owners and laborers will want then the amount of interest can also be determined in parts.

Satyabhakta says nationalization (sangheekaran) has five consequences – (i) eliminates the problems of shrikes because laborers are now equal to the laborers; (iii) eliminates the problem of increasing wages; (iv) increases production; (v) laborer will be happy after becoming partner in business and it will enhance their self-esteem and self-dignity.

According to Satyabhakta, charity ought to be made to: (i) those who are completely dedicated to the work of social welfare, leading society towards right path; (ii) those who have grown so old now and served public-welfare in past and are now without family; (iii) charity for public-utility like construction of schools, inns, digging wells, construction of parks, roads, distribution of good literature. When charity is made to other-men than the above mentioned men; then it becomes a sin. According to Satyabhakta, there are three types of charity:

**Sattva-Charity:** It is the charity of conscience (discrimination-power); transforms an animal-shaped man into a real truthful man and it is of highest order as well as sorts out the problems of sorrow in the life of man. Its result is stable and eliminates the disease from the root; it is decided according to the situations of time (age); Jesus, Rama, Krishna, Buddha, Marx and other leaders are examples of the man who made sattva charity.

**Rajas-Charity:** In this type of charity, men are collected to sort-out some special type of problem and examples of this charity include the national-revolution and it results in the achievement of new rights.

**Tamas Charity:** In this type of charity, only help is made to the seeker and includes the examples of making charity to beggars.

These three types of charity can have nine variants; (i) sattva in place of sattva; (ii) rajas in place of rajas; (iii) tamas in place of tamas; (iv) saattva in olace of rajas ; (v) rajas in place of tamas; (vi) sattva in place of tamas; (vii) rajas in plac of sattva; (viii) tamas in place of rajas; and (ix) tamas in place of sattva. According to Satyabhakta, charity does not solve the problem of economic-disequilibieium. He criticizes the land-charity and property-charity.

According to Satyabhakta, every economic-system ought to fulfill these five conditions - (i) increase production; (ii) employ more men in work; (iii) stability in division of labor; (iv) no direct up and downs in he prices of essential things; and (v) decrease the tendency of collection of money, and develop the tendency of circulation of money. Swami Satyabhakta also presents guide-line to sort out the economic problems and it has eight points: (i) there ought to be a price-controlling system at national-level; (ii) fix the rate of money for every worker from sweeper to president; (iii) calculate the overall production of land for three-to four year make an average to maintain the prices; (iv) fix the remuneration of laborer according to the policy of how to distribute the produced production; (v) increase the production and every worker ought to work necessarily 275-300 days; (vi) provide good home, clothes, jars, furniture etc. to laborers in place of remuneration, it will raise their living standards and laborer will work enthusiastically and become prosperous; (vii) there ought to be a nation-wide system to provide employment to man and men to the organizations; (viii) the working hour and quantity of work ought to be pre-determined and systematic.
Conclusion: Satyabhakta accepts inconsistent nature of money, emphasizes on earning livelihood by ever one and stresses upon ethical basis of earning livelihood. He presents practical guideline for an individual to follow in life about fiancé management. He presents the concept of non-extremist economics to sort out the problems of economics as well as presents an economic plan; highlights the causes for the prosperity of a nation, and mentions the reasons for poverty. He presents the concept of nationalization for the proper fiancé management in a nation and accentuates upon charity and presents its classification.

References:

[1] Radhakrishnan, Sarvapalli, The Idealistic View of Life, P. 34
[6] Jho, Chakradhar, History and Sources of Law in Ancient India, P. 59
[10] Apte, Sanskrit English Dictionary, P. 34
[11] Ibid., P. 456
[12] Ibid., P. 567
[13] Ibid., P. 567
[14] Ibid., P. 100
[16] Taitteriya Upanishad iii-9
[17] Taitteriya Upanishad iii-10
[18] Taitteriya Samhita i-6-6
[19] Taitteriya Upanishad i-4
[20] Rig-Veda Samhita x-31-2
[21] Rig-Veda Samhita x-34-13
[22] Mahanarayana Upanishad xxix-8
[23] Rig-Veda Samhita x-127-7
[24] Rig-Veda Samhita vi-61-1
[25] Rig-Veda Samhita x-191-3
[26] Rig-Veda Samhita i-90-2
[27] Atharva Veda Samhita vii-117-1
[28] Vajasneyi Madhyammdina Samhita v-36
[30] Rig Veda Samhita vi-19-10
[31] Rig Veda Samhita iv-50-9
[32] Vajasneyi Madhyammdina Samhita i-9
[33] Rig Veda Samhita x-31-2
[34] Rig Veda Samhita v-55-10
[35] Taitteriya Samhita iii-38
[36] Taitteriya Samhita iii-3-9
[37] Taitteriya Samhita i-6-6
[38] Rig Veda Samhita ix-45-3
[39] Rig Veda Samhita vii-72-5
[40] Atharva Veda Samhita vii-142-3
[41] Rig Veda Samhita xvii-2
[42] Vajasneyi Madhyammdina Samhita xxx-4
[44] Rig Veda Samhita x-117-5
[45] Rig Veda Samhita x-117-6
[46] Rig Veda Samhita x-117-6
[47] Taittiya Upanishad iii-7 to iii-9
[48] Rig Veda Samhita vi-71-6
[49] Rig Veda Samhita x-76-4
[52] Datta, Amaresh, The Encyclopedia of Indian Literature (Volume Two) 1.12.161
[53] Sattar, Arshia, transl. 'The Ramāyaṇa by Valmiki' P. 696
[54] Mahabharata 1/62
[58] Amartya Sen, The Argumentative Indian Writings on Indian Culture, History and Identity P. 46
[59] Spodek, Howard. Richard Mason., The World's History P.229
[60] Mahabharata, translated by Ganguly, 8/LXXXVI/P. 189
[61] Ibid., 8/CVI/P. 230
[62] Ibid., 8/ LXXXVII/157
[63] Ibid., 8/LXIX/P. 152
[64] Ibid., 2/74
[65] Ibid., 3/32, 311
[66] Ibid., 2/15
[67] Ibid., 3/180
[68] Ibid., 8/LVI/P.114
[69] Ibid., 8/LXX/P. 156
[70] Ibid., 1/CXLII/P. 300, 301
[71] Ibid., 8/LXIX/154
[72] Ethics of Vidura, I/101, 102, 103
[73] Ibid., 1.83
[74] Ibid., 1/64, 83
[75] Ibid., 3.51
[76] Ibid., 3/51, 70
[77] Ibid., 5//33
[78] Agarwal, S. K., Towards Improving Governance P. 17
[82] Kautilya, Neeti-Sutra 5/9
[83] Ibid. 1/6
[84] Ibid. 15/5
[91] Ibid. 7/15
[92] Ibid. 1/6, 7; 5/9; 7/15; 15/5; 16/4
[93] Ibid. 14/3; 16/12
[94] Ibid. 4/18
[95] Ibid. 4/18; 7/2; 14/19
[96] Ibid. 4/5
[97] Ibid. 12/1
[98] Ibid. 12/13
[99] Ibid. 2/3; 12/1, 13
[100] Ibid. 3/21
[101] Ibid. 16/13
[102] Ibid. 16/11
[103] Ibid. 8/1; 12/4
[104] Ibid. 15/6
[105] Ibid. 12/19
[106] Ibid. 8/15, 16
[107] Ibid. 12/17
[108] Ibid. 6/10
[109] Ibid. 11/1
[110] Ibid. 12/14
[111] Ibid. 2/2
[112] Ibid. 11/18
[113] Ibid. 2/2; 11/1, 18; 12/2, 14
[114] Ibid. 5/16; 8/4
[115] Ibid. 7/14
[116] Ibid. 16/20
[117] Ibid. 1/4
[118] Ibid. 1/4; 10/11
[119] Ibid. 8/9
[120] Ibid. 10/1
[121] Ibid. 4/14
[122] Ibid. 5/18
[123] Ibid. 2/14
[124] Ibid. 7/17
[125] Ibid. 5/6
[126] Ibid. 9/14
[127] Ibid. 10/12
[128] Ibid. 3/11
[129] Ibid. 17/14
[130] Ibid. 6/11; 11/5
[131] Lessing, Doris, 'Problems, Myths and Stories' P. 13
[134] Tiwari, Shubha, Children and Literature P. 27
[136] Sharma, Pandit Vishnu, Panchtantra, 1/2-8; 2/89, 90, 94; 5/8
[137] Ibid., 1/174; 2/124
[138] Ibid., 1/430; 2/122
[139] Ibid., 1/2, 111
[140] Ibid., 1/217; 2/122, 137; 4/80; 5/22
[141] Ibid., 2/142, 164
[142] Ibid., 2/159, 160
[143] Ibid., 2/157
[144] Ibid., 1/159; 2/72, 166, 169
[145] Ibid., 2/89, 120, 154, 155
[146] Ibid., 1/180
[147] Ibid., 1/234; 2/25, 147; 3/239; 5/36
[148] Ibid., 1/435
[150] Ingalls, Daniel Henry Holmes, (Ed.) 'Sanskrit Poetry from Vidyakara’s Treasury’ P. 39
[152] Coward, Harold G., Bhartrihari P. 45
[154] Ingalls, Daniel Henry Holmes, (Ed.) 'Sanskrit Poetry from Vidyakara’s Treasury’ P. 39
[156] Ingalls, Daniel Henry Holmes, (Ed.) 'Sanskrit Poetry from Vidyakara’s Treasury’ P. 39
[157] Neeti Shataka, 39, 41
[158] Ibid., 40
[159] Ibid., 45
[160] Vairagaya Shataka, 59
[161] Neeti Shataka, 43
[162] Ibid, 49
[163] Singh, Khushwant, India: An Introduction, P. 161
[164] Ibid, P. 163
[165] Dutt, Yashwant Gandhi: Father of India, P. 2
[166] Prabhu, R. K. Rao, Mind of Mahatma Gandhi, P. 271
[168] Ibid, VII/P. 26, 272
[169] Ibid, VII/P. 47; Prabhu, R. K. Rao, Mind of Mahatma Gandhi, P. 68
[170] Satyabhakta, Swami, Satyeshwar, 80
[171] Ibid, 360
[172] Ibid, 70
[173] Ibid, 86
[174] Ibid, 110
[175] Ibid, 271
[176] Satyabhakta, Swami, Nirtivaadi Artha-Shaastra, Introduction P. v
[177] Ibid, P. 119
[178] Satyabhakta, Swami, Mulya Badlo, P. 52-53
[179] Satyabhakta, Swami, Nirtivaadi Artha-Shastra, P.12
[180] Ibid, P. 40
[181] Ibid, P. 28-29
[182] Ibid, P. 58
[183] Ibid, P. 61
[184] Ibid, P. 83
[185] Ibid, P. 83
[186] Ibid, P. 84
[187] Ibid, P. 86
[188] Ibid, P. 87
[189] Ibid, P. 85
[190] Ibid, P. 84
[191] Ibid, P. 85-86
[192] Ibid, P. 85, 87
[193] Ibid, P. 85, 88
Bibliography

Dictionaries:
Williams, Monier, Monier-Williams Sanskrit Dictionary Motilal Banarsidas, Delhi 1996

Encyclopedia:
Datta, Amaresh, The Encyclopedia of Indian Literature Vol. II
Kapoor, Subodh, The Indian Encyclopedia Cosmo Publications, 2002

Sanskrit-Books:
--------- Atharva Veda Samhita, (trans.) T. H. Griffith
--------- Mahanarayana Upanishad, (trans.) Swami Vivekanand
--------- Taitteriya Samhita, (trans.) Max Muller
--------- Taitteriya Upanishad, (trans.) Swami Vivekanand
--------- Vajasneyi Madhyamadina Samhita, (trans.) Max Muller
Bhartrihari, Shringara-Shataka (trans.) Baabu Haridas, Haridas and Company Pvt. Ltd. 11th Ed. 2007
Kautilya, Complete Chaanakya Neeti (trans.) by Vishwamitra Sharma, Manoj Publications 16th Ed. 2012
Kautilya, Chanakya-Neeti Chaukhambaa Prakashan, Delhi. 2000
Vedavyasa, Mahabharata (trans) by Ganguli, Kisari Mohan, Munshiram Manoharlal Publishers 1896
Vidyakara, Sanskrit Poetry from Vidyakara’s Treasury (trans.) Daniel Henry Holmes Ingalls, ed.Harvard University Press 1968

Books:
Dutt, Yashwant Gandhi: Father of India, Allied Publishers, New Delhi. 1965
Govindan, Santhini, 71 Golden Tales of Panchatantra, Unicorn Books, 2007
Harold, G. Coward, Bhacchhari Twayne Publishers 1976
Jho, Chakradhar. History and Sources of Law in Ancient India Aashish Publishing House, Delhi 1987
Matilal, Bimal Krishna The word and the world: India’s contribution to the study of language Oxford University Press. 1990
Padhy, K. S. Indian Political Thought PHI Learning Pvt. Ltd., 2011
Radhakrishnan, S., The Idealistic View of Life Allen and Unwin 1937
Sattar, Arshia (transl. The Ramāyaṇa by Valmiki Viking 1996
Satyabhakta, Swami, Mulya Badlo, Satyashram Wardhaa, 1972
Satyabhakta, Swami, Nirtivaadi Arthashastra, Satyashram Wardhaa, 1954
Satyabhakta, Swami, Satyeshwar, Satyashram Wardha, 2001
Srinivasan, P. T. History of the Tamils from the Earliest Times to the Present Day 1929
Tiwari, Shubha, Children and Literature, Atlantic Publishers & Distributors, 2006
Van, Buitenen ‘The Mahabharata – 1; The Book of the Beginning. Introduction Authorship and Date’
Vas, Luis S.R., and Vas, Anita, Secrets of Leadership: Insights from the Pancha Tantra, Pustak Mahal, 2004
Vittachi, Nury The Kama Sutra of Business Management Principles Wiley India Pvt. Ltd. 2007

Journals:

Srinivasan, P. K. Kautilaya: Indian Economist Journal of Indian History University of Kerala. 1949. p. 211
Approach in Modeling Abnormal Returns

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ABSTRACT

We examine the distribution of the stock returns for the acquiring firm and the corresponding market index. We find that significant non-normal distributions exist in a large number of acquiring firms. We use two robust regressions to examine the reliability of the standard OLS market model and find that no significant abnormal gain or loss in selected windows when all sample deals are included for analysis. However, positive abnormal returns appear in almost all selected windows when analysing deals in financial service industry, and negative abnormal returns appear in almost all selected windows when analysing deals in non-financial industries. Selection of the model and formation of the sample affect the results.

Keywords: Event study, Mergers, Acquisitions, Brazil, Robust regression

1. Introduction

The goal of mergers and acquisitions is to add value to firms and to increase wealth of shareholders. One way to assess if the mergers and acquisitions (M&A) can create value is to examine abnormal returns around the announcement day of the M&A deal. Event study methodology is commonly used to estimate the abnormal returns which measure the gain or loss of related firms involved in the M&A deals. Prior studies for developed markets report that target firms gain significantly (e.g., Dos Santos, Errunza, & Darius, 2003; Jarrell & Poulsen, 1983) and acquiring firms remain unclear in terms of wealth effects (e.g., Bradley, Desai, & Kim, 1988; Jarrel, Brickley, & Netter, 1988; Morck, Shleifer, & Vishny, 1990). Among emerging markets, the BRIC nations of Brazil, Russia, India, and China are hotspots for M&A activity. Those four nations account for 60% of all emerging market deal activities. In Asian emerging markets, Chinese and Indian acquiring firms on average gain significantly (e.g., Ma, Pagán, & Chu, 2009, 2010). However, studies on wealth effects of Brazilian acquiring firms are relatively few comparing with the extensive array of M&A studies in major emerging markets such as China and India.

In this paper we analyze a sample of mergers and acquisitions announced and completed during the January 1, 2010 to December 31, 2014 period. We aim to investigate how the Brazil stock market reacts to the announcement of M&A deals by examining abnormal returns of the acquiring firms on days within event window. Existing studies use standard ordinary least square (OLS) market model to estimate expected normal returns, but rarely check for normality of observations (stock returns) in estimation window. This paper applies a different approach to examine wealth effects of M&A on the acquiring firms. To examine if the key assumption of using standard OLS model is met, we conduct a normality test for the daily stock returns on acquiring firm and corresponding market index in each deal. We then use the standard OLS market model and two different robust regressions to examine the reliability and consistency of the statistical results. While most prior studies use samples either exclude deals in financial industry or including all deals, we form the sample deals in three different groups: a group including all deals, a group including deals in non-financial industry, and a group including deals in financial industry only. We examine the differences of the results using the three set of samples.
When comparing the results of the three different regressions, we find that the mean differences between the standard OLS and the robust regressions are statistically significant. The standard OLS market model produces smallest average negative abnormal returns than those of the two robust tests.

We find that no significant abnormal gain or loss in selected windows when all sample deals are included in calculating abnormal returns. When dividing the sample into two subsamples, deals in financial service industry and deals in non-financial industries, we find that positive abnormal returns appear in almost all selected windows in financial service industry and negative abnormal returns appear in almost all selected windows in non-financial industries.

We structure the paper as follows. Section 2 reviews the relevant literature and develop hypotheses. Section 3 provides a description of data and methodology. Section 4 analyzes of results. Section 5 discusses main findings and managerial implications.

2. LITERATURE REVIEW AND HYPOTHESES

2.1 Market Model and Distribution of Observations

The effectiveness of the standard OLS market model has been scrutinised under different conditions using observations from a variety of stock markets. It appears that most researchers generally agree with the conclusion that the standard OLS market model is well-suited in an event study when modelling normal returns (e.g., Fee & Thomas, 2004; MacKinlay, 1997; McWilliams & Siegel, 1997). However, much research in finance focuses on the developed or efficient markets, and the market conditions are most likely to be consistent with assumptions of theoretical models. This characteristics of more efficient markets may not exist in emerging markets (Bekaert & Harvey, 2002). As noted by Bekaert & Harvey (2003), emerging markets have long posed a challenge for finance, and standard models are likely inappropriate to address the specific circumstances arising in these markets. LeBaron and Samanta (2005) also state that stock returns in emerging markets demonstrate more systematically excess kurtosis than those in developed markets.

Theoretically, normal distribution and homoscedasticity (or equal variance) are two important assumptions for using standard OLS regression models (such as the standard market model) for inference or prediction (See, e.g., Gujarati, 2006). If the assumptions are not true, we may need an alternative robust regression to address the problematic data. We therefore examine the distribution of the stock returns for the acquiring firm and corresponding market portfolio in each deal and develop the following hypotheses.

- Hypothesis 1. Stock returns of the bidding firm has a non-normal distribution.
- Hypothesis 2. Stock returns of the market portfolio has a non-normal distribution.

In case the distributions of the stock returns in Brazil stock market are significant non-normal, alternative regression methods, such as robust regressions, are needed to address the problem data. As noted by Gujarati (2006), the other unbiased statistical methods may outperform the standard OLS if the distribution of observations is not normal and/or the outliers are severe.

2.2 Robust Regression and Bootstrap Quantile Regression

Robust regression includes a variety of different techniques, each with advantages and disadvantages in addressing "non-ideal" data. In this study, we select two varieties of the robust regression: the iteratively reweighted least squares (IRLS) procedure and the bootstrapping quantile regression with standard errors (BSQ regression). IRLS is used as a way to mitigate the influence of outliers in an otherwise normally-distributed data set. BSQ regression is a method that can be trusted without looking into the impact of outliers in y or x and in cases where heteroscedasticity is suspected.
The first IRLS iteration begins with OLS. Any observations so influential as to have Cook’s D values greater than 1 are automatically set aside after the first step. Next, weights are calculated for each observation using a Huber function, which downweights observations that have larger residuals. Then, weighted least squares (WLS) is performed. After several WLS iterations, the weight function shifts to a Tukey biweight, tuned for 95% Gaussian efficiency.

The standard OLS and the IRLS procedure share the same assumption that the error distribution is homoscedastic. Regression results may not be trustworthy if the assumption is violated. BSQ regression releases the assumption of homoscedasticity. Thus, in order to find how the outlier data set and heteroscedasticity affect estimate of abnormal returns, we run BSQ regression and compare its results with those of the OLS regression and the IRLS regression.

In calculating abnormal returns for acquiring firms in Brazil market, it is most likely that the standard OLS market model does not act as stable as it does in most existing studies that often use data from developed stock markets. We examine the stability and reliability of the standard OLS market model using the two varieties of the market model. We develop following hypotheses.

- Hypothesis 3. There is a difference between the abnormal returns using the standard OLS market model and the abnormal returns using the IRLS regression.
- Hypothesis 4. There is a difference between the abnormal returns using the standard OLS market model and the abnormal returns using the BSQ regression.

### 2.3 Financial Service Industry

Financial theory indicates that the price of a firm’s stock can be estimated by discounting expected free cash flow generated by the firm. Given that the expected higher economic growth in emerging markets leads to higher future cash flows for most firms, we examine whether there are statistically significant positive abnormal returns for acquiring firms in Brazilian stock market. We expect that the Brazilian stock market, like Asian emerging markets, reacts positively to announcement of M&A deals in all industries. We develop following hypothesis.

- Hypothesis 5. There is a positive abnormal return on acquiring firms in selected event windows.

Financial service industry is different from other industries in two aspects. First, it is strictly regulated by government to ensure financial stability, public trust, and confidence of national economy. Second, corporations in financial service industry have unique characteristics in financial statements relative to those for manufacturing and service companies. With those distinctive features, the corporations bear risks that are on average far less than those of other industries. Investors may, therefore, expect that regulators intervene to correct problems before, during, and after M&A deals occur in the financial service industry. Consequently, the market reaction to M&A deals related to the financial service industry should be less pronounced than for other firms. Thus, regulatory differences associated with the financial services industry partly explain why deals in financial service segments (SIC codes between 6000 and 6999) are removed from data samples of many M&A studies (e.g., Berger & Ofek, 1995; Lang & Stultz, 1994; Lins & Servaes, 2002). M&A activities in the financial service industry are often discussed separately (e.g., Delong, 2001, 2003; Dymski, 2002, Färe, Fukuyama, & Weber, 2010). However, little research has been conducted to empirically assess whether there are any abnormal return differences between M&A deals in the non-financial industries and M&A deals in the financial service industry. We develop following hypothesis.

- Hypothesis 6. There is an abnormal return difference between the non-financial industries and the financial service industry in selected event windows.

In addition to test the hypothesis, we also examine the reliability of the results using robust market models.
3. DATA AND METHODOLOGY

3.1 Data

We extract mergers and acquisitions deals from Thomson SDC Platinum Mergers and Acquisitions Database, a database from Thomson Financial. The daily stock price of acquiring firms is obtained from the DataStream database. All deals in our sample meet the following criteria.

1) The acquiring firm is registered in Brazil Stock Exchange.
2) The transaction is announced and completed during the January 1, 2010 to December 31, 2014 period.
3) The acquiring firm is active and has daily stock price data in DataStream.
4) Daily stock price data have the minimum number of observations of 160 trading day prior announcement day.
5) The acquiring firm seeks to own at least 50% of target firm’s share when the deal is completed.
6) When the same acquiring firm announces multiple deals on same day, only one deal is selected.

Only 135 deals meet the criteria and are included in the final sample. Table 1 describes the distributions of transactions by year and industry. There are 40 deals announced in 2010 and 11 deals announced in 2014. Over the five years period, acquiring firms in 32 deals are in financial service industry and 103 deals are in non-financial service industries.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of deals</th>
<th>Financial, insurance, and real estate*</th>
<th>Other industries**</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>40</td>
<td>13</td>
<td>27</td>
</tr>
<tr>
<td>2011</td>
<td>35</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>2012</td>
<td>33</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>2013</td>
<td>16</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>2014</td>
<td>11</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>135***</td>
<td>32</td>
<td>103</td>
</tr>
</tbody>
</table>

*     SIC code of acquiror’s primary business is between 6000 and 7000, including 6000.
**   SIC code of acquiror's primary business is below 6000 or higher than 7000.
***  135 deals include 106 within county deals and 29 cross-border deals.

3.2 Methodology

For stock returns of the acquiring firm and its corresponding market portfolio in each deal, we conduct a normality test for skewness, kurtosis, and both the statistics considered jointly. The normality test uses 150 observations of daily return in an estimation window. According to Campbell, Andrew, and MacKinlay (1997), the estimation window in an event study analysis could range from 120 days to 210 days. A long estimation window could begin with an estimation starting 300 days prior to the event and terminating 40 days or 50 days prior to the event (e.g., Fee & Thomas, 2004; Shahrur, 2005). The choice of the estimation window often determines the quantity of asset price history needed for the event study. An excessive quantity
of missing data for asset price histories either leads to the exclusion of certain events or needs a shorter estimation window. As a compromise, many studies with a long estimation window also require at least 100 trading days within the window. We select the estimation window in which each deal must have 150 trading days and be terminated six trading days prior to the announcement day regardless of when the estimation window begins.

The event window could be the event day and is often expanded to multiple days. The event window usually includes one day after the announcement day because this will capture the market reaction if the announcement occurs after trading hours. The event window can also include one day prior to the announcement day because this will capture the market reaction to possible information leakages before the official deal announcement. Accuracy (predictive power) will be lower when more days are included in the event window due to the possibility of confounding effects from other market events. We report daily abnormal returns from day -2 to day +2 and cumulative abnormal returns on windows (0, +1), (-1, +1), and (-2, +2).

The standard OLS market model (Equation 1) assumes a linear relation between the return of any security and the return of the market portfolio index.

\[ R_{it} = \alpha_i + \beta_i R_{mt} \quad (1) \]

Where \( R_{it} \) and \( R_{mt} \) are the returns on security \( i \) and the market portfolio, respectively, during period \( t \). With the estimates of \( \alpha \) and \( \beta \) from Equation (1), a "normal" return is predicted for the days within the 5-day event window. The difference between the actual return and the predicted normal return is defined as the abnormal return (AR). We calculate the abnormal return using the following equation:

\[ AR_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mt} \quad (2) \]

Where
- \( AR_{it} \) is the abnormal return for firm \( i \) on day \( t \), and
- \( R_{it} \) is the actual return for firm \( i \) on day \( t \).

We run the above market model with three different specifications: the standard OLS regression, the IRLS regression, and the BSQ regression. We obtain three sets of expected normal returns and abnormal returns based on the three different specifications and both Equations (1) and (2). Based on the abnormal returns for each firm, we calculate mean abnormal returns on the selected event windows.

4. EMPIRICAL RESULTS

4.1 Normality Test

Table 2 presents the results of the normality tests. The normality tests include a skewness test, a kurtosis test, and a joint skewness-kurtosis test. Each test provides a significance level (p-value) of rejecting normality. As reported in Panel A, at the 0.1% significance level, 21% (= 29/135) of acquiring firms have stock returns rejecting the normality in skewness, 33% (= 45/135) of acquiring firms have stock returns rejecting the normality in kurtosis, and 31% (= 42/135) of acquiring firms have stock returns rejecting the normality in both statistics considered jointly. At the 1% significance level, the number of acquiring firms rejecting the normality increases from 29 to 38 in the skewness test, from 45 to 60 in the kurtosis test, and from 42 to 59 in the joint test. At the 5% significance level, the number of acquiring firms with non-normal distribution increases to 53 in the skewness test, 80 in the kurtosis test, and 82 in the joint test. The results support Hypothesis 1.

Panel B shows results of the normality test for corresponding market returns. At the 0.1% significance level, 5% of deals have index returns rejecting the normality in skewness, 18% of deals have index returns rejecting the normality in kurtosis, and 16% of deals have index returns rejecting the normality in the joint
test. When changing the significance level to 1% or 5% from 0.1%, we find that more deals have index returns rejecting the normality in skewness, kurtosis, and joint test. Market returns in 37% of deals appear significantly non-normal in the joint test of normality at the 5% level. The results support Hypothesis 2.

**Table 2: Frequency of deals rejecting normal distribution at different levels of significance**

<table>
<thead>
<tr>
<th>Significance level</th>
<th>$p &lt; 0.001$</th>
<th>$p &lt; 0.01$</th>
<th>$p &lt; 0.05$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A: Test for returns of acquiring firm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>29</td>
<td>38</td>
<td>53</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>45</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>Joint</td>
<td>42</td>
<td>59</td>
<td>82</td>
</tr>
<tr>
<td>Panel B: Test for returns of market portfolio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>7</td>
<td>25</td>
<td>33</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>24</td>
<td>39</td>
<td>47</td>
</tr>
<tr>
<td>Joint</td>
<td>21</td>
<td>31</td>
<td>50</td>
</tr>
</tbody>
</table>

**4.2 OLS and Robust Regressions**

Table 3 reports the mean abnormal returns for days within a 5-day window in regard to three different regressions when all deals are included for analysis. As reported in Panel A, stock markets on average react negatively to mergers and acquisitions in all selected windows except day +2 when using standard OLS market model. None of the abnormal returns is statistically significant at conventional level. However, the nonparametric Wilcoxon signed-rank test for the median of the abnormal returns indicates that the medians are significant below zero on the announcement day. As reported in Panels B and C, positive abnormal returns appear in more selected windows when using robust regressions. Four selected days and windows appear positive abnormal returns using IRLS regression. Six selected days and windows appear positive abnormal returns using BSQ regression. None of the abnormal returns is statistically significant at conventional level. The results do not support Hypothesis 5.

**Table 3: Abnormal returns for selected windows with different regressions**

<table>
<thead>
<tr>
<th>Event window</th>
<th>AAR (%)</th>
<th>$t$-Statistic</th>
<th>Signrank Test (Z score)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A: Abnormal returns using OLS standard market model</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td>-0.30</td>
<td>-1.57</td>
<td>-0.97</td>
</tr>
<tr>
<td>-1</td>
<td>-0.14</td>
<td>-0.53</td>
<td>-0.52</td>
</tr>
<tr>
<td>0</td>
<td>-0.09</td>
<td>-0.35</td>
<td>-2.39**</td>
</tr>
<tr>
<td>1</td>
<td>-0.08</td>
<td>-0.33</td>
<td>0.25</td>
</tr>
<tr>
<td>2</td>
<td>0.15</td>
<td>0.50</td>
<td>-0.66</td>
</tr>
<tr>
<td>(0, 1)</td>
<td>-0.18</td>
<td>0.57</td>
<td>-0.93</td>
</tr>
<tr>
<td>(-1, +1)</td>
<td>-0.32</td>
<td>-0.81</td>
<td>-1.00</td>
</tr>
<tr>
<td>(-2, +2)</td>
<td>-0.46</td>
<td>-0.88</td>
<td>-1.50</td>
</tr>
<tr>
<td>Panel B: Abnormal returns using IRLS regression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td>-0.22</td>
<td>-1.16</td>
<td>-0.48</td>
</tr>
<tr>
<td>-1</td>
<td>-0.05</td>
<td>-0.19</td>
<td>-0.08</td>
</tr>
</tbody>
</table>
Table 4 reports the differences between mean abnormal returns obtained from three different regressions when all samples are included for analysis. The standard OLS regression produces a mean abnormal return that is significantly smaller than those of the IRLS and the BSQ regression. The mean differences between the two robust regressions methods are significant on 2-day window, 3-day window, and the 5-day window. The results support Hypothesis 3 and Hypothesis 4.

Table 4: Difference of abnormal returns among three regressions

<table>
<thead>
<tr>
<th>Event window</th>
<th>OLS – IRLS</th>
<th>OLS - BSQ</th>
<th>IRLS - BSQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
<td>-0.08***</td>
<td>-0.15***</td>
<td>-0.07</td>
</tr>
<tr>
<td>-1</td>
<td>-0.09***</td>
<td>-0.14***</td>
<td>-0.04</td>
</tr>
<tr>
<td>0</td>
<td>-0.10***</td>
<td>-0.11***</td>
<td>-0.01</td>
</tr>
<tr>
<td>1</td>
<td>-0.12***</td>
<td>-0.17***</td>
<td>-0.05</td>
</tr>
<tr>
<td>2</td>
<td>-0.07***</td>
<td>-0.06***</td>
<td>0.02</td>
</tr>
<tr>
<td>(0, 1)</td>
<td>-0.21***</td>
<td>-0.27***</td>
<td>-0.06**</td>
</tr>
<tr>
<td>(-1, +1)</td>
<td>-0.30***</td>
<td>-0.41***</td>
<td>-0.11*</td>
</tr>
<tr>
<td>(-2, +2)</td>
<td>-0.46***</td>
<td>-0.62***</td>
<td>-0.16*</td>
</tr>
</tbody>
</table>

The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

To examine the difference between mergers and acquisitions in financial service industry and non-financial service industry, we divide the sample into two subsamples, one includes deals in financial service industry and the other includes deals in non-financial service industries. We compute the abnormal returns of acquiring firms in the subsamples and the difference of the abnormal returns between the subsamples. As
reported in Table 5, acquiring firms in financial service industry experience positive abnormal returns except day -2 using standard OLS market model. Acquiring firms in non-financial industries experience negative abnormal returns except day +2 using the standard OLS regression and the IRLS regression. As noted in Panel A, the negative abnormal returns in the non-financial industries are statistically significant in 3-day and 5-day windows. The difference of the abnormal returns between the financial service industry

**Table 5: Difference of abnormal returns between industries**

Abnormal returns are estimated using the basic OLS regression and two varieties of robust regression, IRLS, and BSQ. Difference of the abnormal returns between financial and non-financial industries are reported below. Unpaired t-test is employed when comparing the mean differences.

<table>
<thead>
<tr>
<th>Event window</th>
<th>Financial service industry</th>
<th>Non-financial industries</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A: Abnormal returns using standard OLS market model</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td>-0.03</td>
<td>-0.38</td>
<td>-0.35</td>
</tr>
<tr>
<td>-1</td>
<td>0.25</td>
<td>-0.26</td>
<td>-0.51</td>
</tr>
<tr>
<td>0</td>
<td>0.34</td>
<td>-0.23</td>
<td>-0.57</td>
</tr>
<tr>
<td>1</td>
<td>0.50</td>
<td>-0.27</td>
<td>-0.77</td>
</tr>
<tr>
<td>2</td>
<td>0.20</td>
<td>0.13</td>
<td>-0.07</td>
</tr>
<tr>
<td>(0, 1)</td>
<td>0.85</td>
<td>-0.49</td>
<td>-1.34*</td>
</tr>
<tr>
<td>(-1, +1)</td>
<td>1.09</td>
<td>-0.76*</td>
<td>-1.86**</td>
</tr>
<tr>
<td>(-2, +2)</td>
<td>1.27</td>
<td>-1.00**</td>
<td>-2.27*</td>
</tr>
</tbody>
</table>

Panel B: Abnormal returns using IRLS regression

<table>
<thead>
<tr>
<th>Event window</th>
<th>Financial service industry</th>
<th>Non-financial industries</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
<td>0.02</td>
<td>-0.29</td>
<td>-0.31</td>
</tr>
<tr>
<td>-1</td>
<td>0.36</td>
<td>-0.18</td>
<td>-0.54</td>
</tr>
<tr>
<td>0</td>
<td>0.44</td>
<td>-0.13</td>
<td>-0.57</td>
</tr>
<tr>
<td>1</td>
<td>0.65</td>
<td>-0.16</td>
<td>-0.81</td>
</tr>
<tr>
<td>2</td>
<td>0.29</td>
<td>0.20</td>
<td>-0.09</td>
</tr>
<tr>
<td>(0, 1)</td>
<td>1.09</td>
<td>-0.29</td>
<td>-1.38</td>
</tr>
<tr>
<td>(-1, +1)</td>
<td>1.45*</td>
<td>-0.47</td>
<td>-1.92*</td>
</tr>
<tr>
<td>(-2, +2)</td>
<td>1.75</td>
<td>-0.56</td>
<td>-2.31</td>
</tr>
</tbody>
</table>

Panel C: Abnormal returns using BSQ regression

<table>
<thead>
<tr>
<th>Event window</th>
<th>Financial service industry</th>
<th>Non-financial industries</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
<td>0.02</td>
<td>-0.20</td>
<td>-0.22</td>
</tr>
<tr>
<td>-1</td>
<td>0.38</td>
<td>-0.13</td>
<td>-0.51</td>
</tr>
<tr>
<td>0</td>
<td>0.47</td>
<td>-0.13</td>
<td>-0.60</td>
</tr>
<tr>
<td>1</td>
<td>0.69*</td>
<td>-0.11</td>
<td>-0.80</td>
</tr>
<tr>
<td>2</td>
<td>0.29</td>
<td>-0.18</td>
<td>-0.47</td>
</tr>
<tr>
<td>(0, 1)</td>
<td>1.16</td>
<td>-0.23</td>
<td>-1.39*</td>
</tr>
<tr>
<td>(-1, +1)</td>
<td>1.54**</td>
<td>-0.36</td>
<td>-1.90**</td>
</tr>
<tr>
<td>(-2, +2)</td>
<td>1.86</td>
<td>-0.38</td>
<td>-2.24*</td>
</tr>
</tbody>
</table>

The symbols * and ** denote statistical significance at the 10% and 5% levels, respectively.
and the non-financial industries is statistically significant in 2-day, 3-day, and 5-day windows. Panel B in Table 5 reports that positive abnormal return in 3-day window is 1.45% using IRLS regression for financial service industry. Panel C reports a similar 3-day gain of 1.54% using BSQ regression for financial industry. The highest gain in financial industry appears in 5-day window using BSQ regression. However, the gain of 1.86% is not significant at conventional levels of significance. The results partly support Hypothesis 6.

### Table 6: Difference of abnormal returns by industry using three regressions

Based on difference of industries, difference of the abnormal returns among three different regressions are reported below. Paired t-test is employed when comparing the mean differences.

<table>
<thead>
<tr>
<th>Event window</th>
<th>OLS - IRLS</th>
<th>OLS - BSQ</th>
<th>IRLS - BSQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A: Difference of abnormal returns in financial service industry using different regressions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td>-0.04</td>
<td>-0.05</td>
<td>-0.01</td>
</tr>
<tr>
<td>-1</td>
<td>-0.12***</td>
<td>-0.14***</td>
<td>-0.02</td>
</tr>
<tr>
<td>0</td>
<td>-0.10***</td>
<td>-0.13***</td>
<td>-0.03</td>
</tr>
<tr>
<td>1</td>
<td>-0.15**</td>
<td>-0.19***</td>
<td>-0.04</td>
</tr>
<tr>
<td>2</td>
<td>-0.09**</td>
<td>-0.10**</td>
<td>-0.01</td>
</tr>
<tr>
<td>(0, 1)</td>
<td>-0.24***</td>
<td>-0.32***</td>
<td>-0.07</td>
</tr>
<tr>
<td>(-1, +1)</td>
<td>-0.36***</td>
<td>-0.45***</td>
<td>-0.09</td>
</tr>
<tr>
<td>(-2, +2)</td>
<td>-0.48***</td>
<td>-0.59***</td>
<td>-0.11</td>
</tr>
<tr>
<td>Panel B: Difference of abnormal returns in non-financial service industry using different regressions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2</td>
<td>-0.09***</td>
<td>-0.18**</td>
<td>-0.09</td>
</tr>
<tr>
<td>-1</td>
<td>-0.08***</td>
<td>-0.14***</td>
<td>-0.05</td>
</tr>
<tr>
<td>0</td>
<td>-0.10***</td>
<td>-0.10**</td>
<td>-0.01</td>
</tr>
<tr>
<td>1</td>
<td>-0.11***</td>
<td>-0.16***</td>
<td>-0.06</td>
</tr>
<tr>
<td>2</td>
<td>-0.07***</td>
<td>-0.04</td>
<td>0.03</td>
</tr>
<tr>
<td>(0, 1)</td>
<td>-0.20***</td>
<td>-0.26***</td>
<td>-0.06</td>
</tr>
<tr>
<td>(-1, +1)</td>
<td>-0.28***</td>
<td>-0.40***</td>
<td>-0.11</td>
</tr>
<tr>
<td>(-2, +2)</td>
<td>-0.45***</td>
<td>-0.62***</td>
<td>-0.08</td>
</tr>
</tbody>
</table>

The symbols ** and *** denote statistical significance at the 5% and 1% levels, respectively.

Table 6 reports the difference of abnormal returns using three different regressions by industry, financial service industry and non-financial service industries. As noted in Panel A, in financial service industry, abnormal returns estimated by standard OLS regression are smaller than those estimated by both robust IRLS and BSQ regressions. The differences are statistically significant in all selected windows except day -2. The differences of abnormal returns estimated by the two robust regressions are not significant at conventional level of significance in all selected windows.

As reported in Panel B, in non-financial industries, using the standard OLS results the lowest abnormal return relative to those of using robust regressions. The differences are significant in all selected windows.
except day +2 between the OLS and the BSQ regressions. Using two robust regressions does not result significant difference of abnormal returns in all selected windows.

5. DISCUSSIONS AND CONCLUSIONS

We extract a data set of mergers and acquisitions deals in Brazil market. We examine the distribution of the stock returns for the acquiring firm and the corresponding market index in each deal. The kurtosis test and the combined skewness and kurtosis test demonstrate that the majority of acquiring firms have non-normal distribution of daily stock returns. We conclude that assumptions of the standard OLS model are violated and robust regressions are needed to examine the efficacy of the standard OLS market model. We find that no significant abnormal gain or loss in selected windows when all sample deals are included in calculating abnormal returns. When dividing the sample into two subsamples, deals in financial service industry and deals in non-financial industries, we find that positive abnormal returns appears in almost all selected windows in financial service industry and negative abnormal returns appears in almost all selected windows in non-financial industries.

When comparing the results of the tests using different regressions, we find that the mean differences between the standard OLS and the robust regressions are statistically significant. The standard OLS market model produces smallest average negative abnormal returns than those of the two robust regressions.

The findings of this research suggest that the results of prior studies (Brown & Warner, 1980, 1985; Dyckman, Philbrick, & Stephan, 1984) may not hold in actual event studies in the M&A of Brazil stock market. The researchers’ prior studies show results for data that are randomly selected from all securities and from developed stock markets, whereas event studies typically have data that are characteristically non-representative of the emerging markets. The standard OLS market model overestimates the expected normal returns and underestimates the abnormal returns when the assumption of normal distributions is violated.

The significant mean differences generated by the standard OLS and robust regressions imply that severe outliers and non-normal distributions of stock price returns exist for acquiring firms in Brazil market. Statistical analysis using the standard OLS market model does not provide statistically stable and reliable expected normal returns and abnormal returns. An additional relatively stable measure of the expected normal return is needed in this case.

Portfolio managers and researchers should be cautious in pooling deals to increase sample size. It is likely the pooling combined deals in different industries with different characteristics leads to misleading conclusion. When we interpret the results and findings from the existing studies, we need to consider whether the assumptions are violated and the models are appropriate to the data and problems. Failure to do so may lead to untrustworthy conclusions.

REFERENCES


A Strategic Investment Analysis Framework – Using Facebook as a Case Study

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Key words: business strategy, business model, investment analysis, Facebook, social media

Abstract:
This article intends to analyze Facebook as an investment object using the framework of strategic investment analysis. Strategic investment analysis is defined here as the approach of using the company’s competitive advantage and growth potential, combined with the valuation analysis as major criteria for investment. I go through a four-step analysis: 1) business quantitative screening, 2) business model analysis, 3) valuation analysis, and 4) macroeconomic environment check, in order to evaluate the investment worthiness of a company. After the analysis, I conclude that Facebook still has a long runway ahead, and its current valuation is still low compared to its full potential, thus making it a good candidate for strategic investment. The contribution of this research is that it provides a framework of how to evaluate a company’s worthiness for the purpose of strategic investment, and can be used by academics and practitioners alike.

As of the close of March 18, 2018, Facebook’s stock price stood at $185.09, almost five times the IPO price of $38 on May 18, 2012 about six years ago. Its market capitalization surpassed 500 billion dollars. Given this remarkable growth, the purpose of this article is to evaluate whether Facebook still has more potential in the upward movement of its stock price. Ben Graham, the father of value investing and mentor of Warren Buffett, has rightfully pointed out that the key difference between investing and speculation lies in the establishment of intrinsic value and margin of safety. Therefore, the central task of this paper is to come up with the intrinsic value of the Facebook stock and thus the margin of safety of the investment at the current stock price.

In Step One – business quantitative screening, we screen the key financial ratios of a stock in order to establish it as a preliminary investment candidate. In this step we look at a number of things: 1) revenue growth over the past five years to assess its trend of growth; 2) operating profit margin and its change in the last five years to assess its profitability; 3) Price Earnings ratio (PE) to assess if the stock is overly expensive. In the Facebook case, we see that Facebook achieved 42.7% annual growth in revenue in the five years before March, 2018, thus showing great trend of growth. Its operating profit margin rose from 35.65% in 2013 to 49.70% in 2017, which is a good sign of its profitability. Lastly, its PE was 34.34 as of March 18, 2018. Even though this PE is much higher than the stock market average of about 15 over history, given Facebook’s growth potential, this is still acceptable and warrant further study. Therefore, after Step One, we decide Facebook is a worthy candidate for strategic investment and proceed to Step Two. Even though there are quite a few other statistics, we mainly focus on the three most pertinent numbers for growth companies here to keep it simple and manageable.

Past trend is no guarantee of future success. Having a good trend of growth in the last five years is a good yet insufficient sign, and we need to examine the business model of the company in order to qualitatively assess the power and future potential of its business model. In Step Two, we mainly look at three things: 1) competitive advantage as shown in market share; 2) future potential in industry growth;
3) company’s cost and profit structure. In the case of Facebook, first of all, it’s very clear that Facebook has achieved a dominant position in the social media market, and this position is still strengthening with Facebook’s aggressive acquisition strategy of most competitors. Secondly, future growth potential in this industry remains strong. We know Facebook’s major source of revenue comes from online advertising, which is seeing no sign of slowing down. Thirdly, Facebook as a social media platform, its platform model offers it very low cost and high profitability, with economy of scale that is likely to keep strengthening its profitability in the future. Therefore, Step Two further strengthened our confidence in Facebook as a viable candidate for strategic investment, and the next step we move to valuation analysis.

Step Three is a critical step in the strategic investment analysis process, because no matter how attractive a company is and how high its future growth will be, an investment can only turn out to be fruitful if the investor did not over pay in the purchase price. Therefore, it is essential to establish the intrinsic value of the company and its stock, and thus make sure we achieve a margin of safety between the intrinsic value and the purchase price – purchase price needs to be below the intrinsic value. Ben Graham pointed out that intrinsic value and margin of safety are not accurate numbers, and suggested allowing for plenty of room in the margin of safety to protect against future uncertainties, rather than cutting it close. In this step, we mainly focus on three things to establish the intrinsic value and thus margin of safety: 1) PE as compared to company growth rate as assessment of whether stock is over-priced; 2) Discount Cash Flow (DCF) analysis to assess the approximate intrinsic value; 3) market cap comparison to gauge company’s growth potential. First of all, Peter Lynch the legendary mutual fund manager of Fidelity Magellan Fund, proposed using the PE/growth rate (PEG) as a rough rule of thumb, and regard a company with a PEG ratio less than 1 as fairly valued. In Facebook’s case, if we use PE Ratio without NRI on Mar 18, 2018 34.34 divided by the 5-year average EBITDA growth rate is 63.50%, Facebook’s PEG for Mar 18, 2018 is 0.54.

Second, even though DCF analysis can be very sensitive to errors in assumptions such as predicted growth rates in future and discount rate and should not be taken as a precise measurement, it can offer us some cross check as to the intrinsic value of the stock. Using the DCF Calculator on Gurofocus.com, and under the relatively reasonable assumptions of 20% growth in the next 10 years, and 10% growth in the 10 years after that, with a 5% discount rate, we arrive at the fair value of $387.78 for the Facebook stock. This stock value, as compared to $185.09, offers us considerable future downside protection of stock price.

Lastly, we would like to use market cap comparison as the final word in this valuation analysis. We know that Google and Facebook are the two biggest players in the online advertising market. Sheryl Sandberg, Facebook’s COO, once predicted Facebook would become nine times as large as Google, because Google’s advertising only focus on the later stage when users already know what they want and are searching for it while Facebook advertising can also target the earlier demand generation stage and help companies build brand awareness. This is very valuable to companies and has great potential in market size. In addition, Google mainly use search based online advertising through clicks, while Facebook use both clicks and impressions. A customer doesn’t even have to click Facebook’s ads for Facebook to make money. Plus, Facebook’s ability to offer marketers to target customers with certain characteristics also offers considerable advantage. Given that Facebook has more weapons at its arsenal, we think Facebook will eventually become much larger than Google. Google as Mar 18, 2018 had a market cap of $764b, and if Facebook will become only two times as large as Google, that will be three times Facebook’s current market cap.

Step Four deals with macroeconomic environment and make sure we are not in a market environment that is poised for imminent crash. Here we look at three things: 1) market direction, 2) interest rate, and 3) VIX index. As of March 2018, stock market has become more volatile after a long stretch of bull market, and yet is in no crash territory. Interest rate is poised for gradual increase, however not expected to affect market too much due to its gradual nature. VIX index hit a high over 30 in February 2018 but has come down to around 20 in March, suggesting that market may not be as peaceful as in the past years but also probably not in panic mode either.

Therefore, after this four-step analysis, I conclude that Facebook still has a lot of potential and is a good investment candidate even at its current price of $185, around five times over the IPO price 6 years ago.
Track 14: Finance Management and Investment
To Analyze for the Way of How to Achieve Sustainable Development in Developing Countries

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2.School of Management, Xi’an University of Science and Technology

Abstract:

Sustainable development is related to the future of mankind, and it is a new road for social development that safeguards the fundamental interests of mankind. In recent years, some developing countries have achieved rapid economic development, but it comes with the continual deterioration of resources and the environment. Therefore, how developing countries coordinate the relationship between economic growth and environmental protection to achieve sustainable development has become a problem that needs urgent solution. This paper discusses the relationship between economic growth and environmental quality through environmental Kuznets curve, and puts forward the possibility of deformation in the application of the curve in developing countries. It elaborates on the challenges faced by developing countries in implementing sustainable development strategies and proposes corresponding solutions to these problems in order to provide certain ideas for the further implementation of sustainable development strategies in developing countries.

Key words: sustainable development; economic growth; sustainable countries

发展中国家实现可持续发展的途径分析

李红霞19  郭小飞20

摘要：

可持续发展关乎人类的未来命运，是维护人类根本利益的社会发展新道路。近年来，部分发展中国家实现了经济的飞速发展，但随之而来的则是资源环境的不断恶化。因此，发展中国家如何协调经济增长与环境保护之间的关系从而实现可持续发展成为一个亟待解决的问题。本文通过环境库兹涅茨曲线论述了经济增长与环境质量之间的关系，提出了该曲线在发展中国家应用中变形的可能性。详细阐述了目前发展中国家实施可持续发展战略所遇到的挑战，并就这些问题提出了相应的解决对策，以期为可持续发展战略在发展中国家的进一步实施提供一定的思路。

关键词：可持续发展；发展中国家；经济增长

引言

随着生存环境的不断恶化，环境治理的成本越来越高，难度越来越大。人们对于环境重要性的认识日益加深，可持续发展问题成为当今世界各国发展经济同时关注的重点问题。目前，发达国家的经济已经实现了充分发展，在科技、国民环保意识等方面有着显著的优势，也因为很大程度上缓解了其环境与资源问题，而发展中国家则面临着加快经济增长速度与减少对生态环境的破坏的两方面的压力。近几十年来，一些发展中国家实现了经济的迅速增长，但很大程度上是走西方发达国家经济发展的“先污染后治理”的老路，经济增长的同时出现了诸多的环境问题，又因为对环保缺乏足够的认识、技术水平低、资金匮乏等因素使得这些问题愈加严重，经济增长与环境保护之间的矛盾尤为突出。[1]

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但毋庸置疑的是，人类社会的生存与发展离不开经济增长，而遵循自然规律，保护生态环境，则是实现可持续发展的必然要求。因此，对于广大发展中国家而言，如何实现在推动经济发展的同时，又能解决环境问题，成为必须面对和解决的重大课题。

一、经济增长与环境质量的关系

随着经济与社会的发展，有限的环境资源面临着来自人类许多方面的巨大的需求压力，经济增长与资源利用的矛盾越来越突出。自 20 世纪 90 年代以来，经济增长与环境质量之间的关系就受到了国内外无数学者的持续关注。1995 年，普林斯顿大学的经济学家 Grossman 等人在实证研究的基础上提出了环境库兹涅茨曲线（EKC）假说，引起了国际上很大反响。该假说认为环境质量与经济增长之间呈现一种倒“U”型的曲线关系（如图 1 所示），一般称该曲线为“环境库兹涅茨曲线”。

该曲线说明：在经济初步发展时期，由于经济发展水平较低，工业化程度较低，环境遭到破坏的程度也较低；随着工业不断扩张并加速发展，资源消耗增加，经济发展水平提高，环境污染也由低到高；当工业化程度达到一个临界点时，环境恶化程度也随之到达峰值；随着人均收入的进一步增加，后工业化时代到来，经济发展水平得到提高，环境问题的重要性也由大多数人认可，并将付出巨大代价用于环境治理和改善，经济增长与环境质量的关系呈现正向的相关性，环境污染逐渐降低。这实际上反映的是经济发展水平所对应的不同的环境状况，也反映了发达国家的“资源—产品—污染”的经济发展历史轨迹：在发展过程中，人们毫不节制地提取利用地球上的资源，又把工业产生的污染排放到自然环境中；粗放地利用资源，依靠持续不断地消耗资源来实现经济的增长。发达国家的发展历程表明：传统的经济增长模式虽然促进了物质财富的增长和人类的发展，但却导致了自然环境的难以恢复的恶化与资源的极大浪费。

环境库兹涅茨曲线反映了发达国家经济增长与环境质量发展的历史轨迹，对发展中国家则是预示一种未来，也就是以经济发展为首要任务的发展中国家必然要面对经济发展与环境恶化并存的局面。但这种局面是不可避免的吗？发展中国家的环境质量也注定会下降到峰值才能逐步改善吗？

答案是否定的。第一，环境库兹涅茨曲线的后半段数据多由发达国家得来，由此，结论的普适性还有待进一步证实；第二，目前全世界不发达国家占多数，发展中国家当前面临的处境和曾经发达国家的情况有非常明显差异，将现有的结论生搬硬套进去或许会失去说服力。如果发展中国家能及时意识到环境保护的重要性，尽早实施“边发展，边治理”的发展道路，重视污染治理技术的创新，加强环保法律体系的建设，或许可以让环境库兹涅茨曲线的峰值得到一定程度的降低，进而促使国内经济发展与环境资源协调发展，经济发展也会由于环境质量的改善而提高。

二、发展中国家可持续发展面临的挑战

当前，世界各国都开始将可持续发展作为未来经济与社会发展的重心。然而，与发达国家相比，发展中国家在实施可持续发展战略时面临着更加突出的问题和更加崎岖的道路。
（1）经济发展水平较低，贫困地区较多。

发展中国家的贫困是一种大众贫困，贫困人口的数量及比重比发达国家多得多、高得多。[3]发展中国家
的贫困地区较多，而这些地区在纯粹生存的需求下，大多数依靠传统的粗放式的资源利用方式来实现经济的
增长，在绿色科技以及清洁能源利用等方面的资金投入也相对较少，因此会造成长期的污染、土壤的侵蚀以
及资源的严重消耗，而这三者反过来又会进一步加剧贫困。然而，如果不发展，国家的生存也岌岌可危，人
民群众的生活得不到保障，可是发展又会带来资源的损耗、环境的恶化和气候变化，这些环境问题如果不能
解决又会阻碍经济社会的发展进程，导致贫困问题解决不了，造成恶性循环（如图2）。

图2 贫困与环境之间的关系

发展中国家若要实现可持续发展就必须打破这一循环，利用绿色生产技术以及科学的管理方法等将发
展带来的环境和社会后果降到最小，实现经济增长和环境保护协调发展，而这显然需要我们不懈的努力。

（2）人口的急剧增长。

随着生产力水平的提高和劳动者生活质量的提高，发展中国家人口的死亡率大大降低，与此同时，人口出
生率却每年都保持着较高的增长速度。人口的过快增长，会给资源环境带来巨大压力，阻碍经济发展。[4]在
这种情况下，人口与生态退化之间的恶性循环不断往复，加剧了环境污染破坏与资源浪费，又更损害了环境
的再生更新能力和后代人利益。

（3）环境意识较为落后；

发展中国家的人民大部分都还保留着传统的经济增长观，仍然将经济水平的增长看作是发展的核心。环
境与资源仍然被作为改造利用的对象；追求眼前利益而不顾长远利益，追求局部和个体利益而不顾整体利益，
追求当代人利益而不顾后代人利益等意识仍十分浓厚。[5]

（4）科技落后导致产业结构落后，资源利用方式不合理；

发展中国家的科技水平普遍落后，绿色生产难以开展，传统的资源利用效率低、环境污染大的产业结构
仍然占主体地位，在这种条件下追求发展就一定会加剧对资源的浪费和自然环境的破坏。如果科技水平不能
提高，这个问题就无法解决。

（5）发达国家与发展中国家之间存在矛盾。

发达国家和发展中国家在可持续发展方面一直存在争议。发达国家通过其在技术和资本方面的有利条件，
通过跨国企业和产业转移等方式利用发展中国家煤炭、石油、劳动力等资源，把资源消耗较大、污染严重的
产业往发展中国家进行转移，加剧了当地资源的破坏。不仅如此，发展国家对发展中国家做出的资金与
技术支援的承诺大多没有兑现，使发展中国家实施可持续发展受到限制，一些发达国家以“环境标志”等为手段，在国际经济贸易合作中将发展中国家排除在外，这些手段很大程度的阻碍了发展中国家的可持续发展道路。

三、发展中国家可持续发展的实施途径

虽然发展中国家实现可持续发展的路途布满荆棘，但可持续发展战略的实施在于维护人类的根本利益，功在当代，利在千秋，势在必行。由于各国经济发展水平有一定差异，国情也不同，故可持续发展的实现方式也不尽相同，但总的来看，发展中国家实现可持续发展的途径如下：

第一，坚持经济发展优先的原则。对发展中国家来说，坚持经济发展优先的原则是发展中国家环境与经济协调发展，从而实现可持续发展的生命线。如果发展中国家的经济发展停滞不前，其可持续发展道路上的种种障碍就不能被消除，“贫困污染”的恶性循环就不能被打破。环境治理和环境保护能力的提升必须要以经济的增长为基础。在此基础上，发展中国家要想实施可持续发展，就不能一味的追求经济增长的数量和速度，而是要着眼于经济增长带来的效益高低。经济效益越高，资源的利用率就越高，资源的耗损越少。在提高经济效益的同时，也要注意社会效益的提升。完善社会分配制度，使公众得到相对公平的收入分配，提高生活质量，增强公众的环保和可持续发展意识。最后，必须提高发展的环境效益。经济发展与环境保护之间具有相辅相成的特点。经济发展促进环境保护意识的加强，环境保护刺激了经济的快速发展。目前，发展中国家应该采取必要的措施来合理的利用资源，减少不必要的损耗并在此前提下努力发展经济，提升国家的环境治理能力。以较小的环境损失换取高效的经济增长，让发展中国家的经济和社会发展逐步向可持续发展的方向靠近，使生态环境与经济以及社会协调发展。

第二，减缓人口增长速度，开发人力资源。控制人口的增长和开发人力资源相互联系。人力资源不同于自然资源，它是最活跃、最积极的主动性生产要素，是创造和积累物质财富、开发和利用自然资源，它具有主观能动性、两重性、时效性和人的潜能的无限性。发展中国家要控制人口增长，开发人力资源，就必须做到：

1. 采取加大计划生育力度、提高结婚年龄、给妇女提供工作机会、提高妇女地位等措施来降低人口出生率，控制人口增速。

2. 完善对于劳动力市场的管理，大力发展劳动密集型产业，增加就业机会，尽量避免劳动力闲置的情况。

3. 增加对于人力资本的投资，大幅度提高教育经费占的比重，增加人力资本投资强度。进一步扩大高等教育规模、类型和形式，提高教育质量，培养规模巨大的高质量人才队伍，为可持续发展战略的实施奠定强大的社会主体基础。

第三，推进产业结构调整，大力发展绿色产业。发展中国家应把握住当今世界产业结构调整与环保产业迅速发展的机遇，切实转变经济增长方式，坚持调整优化产业结构、地区结构和城乡结构，着力抓好产业结构这个关键，以实现可持续发展为目的，全面调整与之目的不匹配的经济结构，淘汰那些污染严重、资源需求量大、效率低的生产工艺、科技和产品，淘汰市场供应严重饱和、对环境造成严重破坏的衰退企业，更加重视环保产业的发展，促进新兴科技与环保产业的深度融合，对自然环境的影响程度作为一个国家或地区发展产业时的一个重要指标，将环保产业培育发展成为先导性、支柱性产业，使环保产业成为发展中国家新的经济增长点。

第四，加强政府的经济调控力度。发展中国家的政府必须具有促进可持续发展的作用，具有能够在国际交往中的应对能力。首先，政府应该逐步减弱对经济的干预，转而重点提升行政和管理水平，以此来更好的协调经济发展与资源利用和环境开发的关系，集中精力指导社会发展。其次，政府要加强在可持续发展方面的国际合作。环境保护与治理不是以一国之力可完成的，需要世界各国共同的努力才能实现。发展中国家在学习发达国家先进的环保科技和环境治理经验，吸引更多的外资参与国内市场，加速经济的增长，也要防止发达国家的污染严重的产业的转移，为国家的可持续发展战略提供一个良好的发展氛围。最后，政府
应制定各种调节经济发展的政策，减少经济波动可能带来的损失，引导私有企业的经济行为向可持续发展的转变。

第五，完善环境法规体系，加强环保法制建设与执法力度。把可持续发展的新价值观贯彻到法律中，给予自然环境与人类同等条件和力度的保护。进一步加强环境保护法律法规的建设。追究破坏环境的行为的刑事责任，明确对此类行为的惩处方法，用法律的手段保护自然环境。限制企业及个人对环境资源的开发利用，以严格的量化规定来防止资源的滥用。各级行政机关应对在其管辖区域内发生的因其错误决策导致的环境破坏与污染事故以及资源严重浪费现象等阻碍可持续发展的恶性事件负责，有关责任人员及领导必须严肃处理，追究其行政及刑事责任，以此来督促政府机关敬忠职守、科学和依法执政，保证国家政策得到有效实施。最后是大力加强环保执法力度。加强国家司法裁决的公正性，尽量使司法系统脱离行政权力机关，形成一套独立的体系，避免司法裁决受到行政干预，增强环保执法的效果。与此同时，应加强对环保与可持续发展思想的宣传，增强人民群众的环保意识，从而充分发挥人民群众的监督作用，通过社会监督机制来实现对各种破坏自然环境、滥用资源的行为更全面的监督。不仅如此，社会监督机制同样可以监督政府机关的施政过程，避免滥用权力、贪污腐败等现象的出现。

第六，深入在环保技术方面的创新研究。新型的清洁生产技术和资源利用技术可以保证在尽量少的资源浪费和环境破坏的前提下保持经济的增长。发达国家的科技创新在全球处于领先位置，而这也为其可持续发展奠定了基础。发展中国家若想加快可持续发展进程，就必须要总结发达国家的经验，重视环保科技的创新，减少环境污染，促进产业结构往服务业、制造业等自然资源利用量较少的产业的调整，从而实现可持续发展。

四、结论
可持续发展的思想，为发展中国家解决经济发展与环境保护之间的矛盾指引了一条光明的道路。随着可持续发展战略的持续进行，发展中国家对于赖以生存的自然资源和生态环境将会越来越重视，这将促使发展中国家改变传统的经济增长模式，实现经济发展的可持续发展。但可持续发展是一项重大的工程，涉及到生活的方方面面。这就决定了它是一项系统工程，必须通过协调各种具体的政策及具体的措施来逐步推进。从本文的分析可以看出：发展中国家要想实现可持续发展，要以经济发展为前提，采取控制人口增长，提升人口素质；调整产业结构；加强政府对经济的宏观调控作用；完善环保法制；加快技术创新等具体策略和措施，通过整个国家民族的共同努力来达到目的。尽管发展中国家要实现可持续发展，需要我们万众一心，朝着一个方向努力，可持续发展的时代终将到来。

参考文献：
Investigation of micro-enterprise's entrepreneurial environment in China

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Abstract:
With the continuous developing of the world economy, economic globalization has become the mainstream of the current era, and the face of the world has changed as well. This change is mainly reflected in the promotion of the overall rise of developing countries. In this complex environment where both opportunities and challenges exist, micro-enterprises have become the main driving force for the growth of national economies in developing economies. With the wave of "mass innovation and entrepreneurship," the entrepreneurial environment has increasingly become the core of the development of micro-enterprises. A good entrepreneurial environment is conducive to alleviating employment pressure and is of great significance to the further development of developing economies. Therefore, from the perspective of the developing economies, this paper studies the micro-enterprise's entrepreneurial environment, and finally puts forward recommendations and conclusions.

Keywords: Developing economies; Micro-enterprise; Entrepreneurial environment

我国微型企业的创业环境研究
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摘要：
随着世界经济的不断进步,经济全球化成为当今时代的主流,世界面貌也在随之改变,这一改变主要体现在促进了发展中国家的整体崛起上。在这种机遇与挑战并存的复杂环境下,微型企业已成为发展中经济体国民经济增长的主要动力。而伴随着“大众创新、万众创业”的浪潮推进，创业环境愈发成为微型企业发展的核心。良好的创业环境有利于缓解就业压力，对带动发展中经济体的进一步发展具有重要的意义。因此，本文从发展中经济体的角度出发，对微型企业创业环境进行研究，最终提出建议和结论。

关键词：发展中经济体；微型企业；创业环境

0 引言

随着当今世界的发展，科学技术正在飞速进步，经济全球化浪潮席卷各个国家，世界经济一体化步伐也不断加快。任何一个经济体都不可避免的与其他经济体有或多或少的联系与合作，这对于发展中经济体来说，是机遇也是挑战。在当前形势下，任何经济体都不可能置身事外，在外界的推动力以及自身内部需求的共同作用下，发展中经济体实现了整体大崛起。在这种环境下，新生代力量已逐渐成长，发展中经济体的微型企业对其国民经济发展所占的地位越来越重要，成为经济发展不可或缺的重要动力。而此时，发展中经济体中微型企业创业环境就显得尤为重要。良好的创业环境会促进微型企业的发展，带动国民经济的进步，从而提升发展中经济体的整体经济水平和国际实力。本文将以中国为例，对发展中经济体微型企业创业环境进行研究。

1 发展中经济与发展中经济体

经济是指生产社会关系的总和，经济体是指对某个区域的经济组成进行统称和划分，而发展中经济体则是指工业化程度大幅增长的经济体。当前，各个经济体之间都展开了紧密的合作，共享有利资源，从而促进经济增长，其中表现最为突出的是发展中经济体的整体壮大。而我国作为联合国的重要成员，已成为发展中经济体崛起的重要组成部分。
在全球经济快速发展的进程中，发展中经济体起着不可或缺的作用。而发展中经济作为工业化发展进程中的一个重要组成部分，其突出特点是不平衡性，从而影响其发展的各个方面。通常来说，发展中经济体原本处于落后的农业经济阶段，正在转型进入工业化阶段实现腾飞。一般来说，在发展中经济体的初步发展阶段，经济中的各个行业和各个方面都会出现大幅度且快速增长，整体呈现出高速发展的态势。随着进一步发展，个别产业增速变缓，甚至出现衰退现象，而主要产业仍保持良好的增长速度，这使得各产业经济面貌呈现出不同，从而产生经济地位的不同，整体也不再均衡，形成不平衡发展。这便产生发展中经济的不平衡性。

发展中经济的基本特征有以下几点：快速增长、二元结构、资金短缺、农业困难。发展中经济体在快速发展的过程中，各种资源都将出现短缺的情况，而资金短缺将会成为其最突出的问题。在这种情况下，经济体应当采取加大出口的政策，赚取外汇从而缓解资金短缺问题。与此同时，农业困难也是其主要问题，发展中国家经济在发展阶段，存在着农业技术落后、资源大量浪费、劳动力效率低下等一系列问题。面对大量的人口，落后的农业只能选择过度开发，生态由此破坏，对未来的全面发展造成了严重影响。而工业正在迅速发展，这使得不平衡状态进一步加深，此时发展中经济体应当积极引进先进技术，实行结构调整，提高劳动效率，增强环境保护意识，从而实现全面发展。

我国作为世界上最大的发展中经济体，目前仍处于发展阶段，社会正在发展的不平衡状态中并存在着很多问题，例如创业政策的不完善导致小微企业创业存在困难等。在世界经济一体化的进程中，我们应把握良好机遇，与其他国家积极合作并学习其先进的技术经验，使得自身得到全方位多维度快速发展，从而进一步提高国际地位。

2 微型企业

2011年7月，工业和信息化部、国家统计局、国家发改委和财政部四部门研究制定了《中小企业划型标准规定》，明确相关问题。规定指出，中小企业划分为中型、小型、微型三种类型，具体标准根据企业从业人数、营业收入、资产总额等因素结合行业特点制定。农、林、牧、渔业营业收入50万元以下的为微型企业；工业从业人员20人以下或营业收入300万元以下的为微型企业；软件和信息技术服务业从业人员10人以下或营业收入50万元以下的为微型企业；房地产业营业收入100万元以下或资产总额2000万元以下的为微型企业。顾名思义，微型企业整体规模较小、资金较少且循环周期较短。

我国小微企业具有以下特点：第一，规模较小、成本较低，融资渠道非正式；第二，敏感脆弱，易受外部环境变化影响，但具有顽强的生命力；第三，企业组织结构不明确，上下级界限模糊，管理内容相对缺乏；第四，劳动密集度高，经营模式简单；第五，发展不平衡，与中型企业的发展存在一定的差距。与大中型企业相比，小微企业在技术、市场和管理能力弱，”小、低、散、弱“仍是其主要特征[1]。

小微企业在在我国社会中具有重要的作用：

（1）增强创新能力，促进经济发展

小微企业是我国技术创新的主要载体和经济增长的重要推动力量[2]，创办小微企业有利于实现创新链与产业链的有效衔接，将科技成果转化为现实生产力[3]。研究表明，小微企业数量占我国各类企业总数的97%以上的，正逐渐成为我国经济增长和技术创新的新引擎[4]。在企业的发展过程中，创新是不可或缺的关键环节，只有不断进行创新，才能在快速发展的社会中立于不败之地。创新能力的提高能够推动企业的发展，进而促进社会的进步和我国整体实力的发展。

（2）提供就业岗位，减缓就业压力

目前，随着服务水平的不断提高，我国的就业形势日趋严峻，越来越多的大学生面临“毕业即失业”的艰难处境。为了解决这一问题，国家制定了多种创业带动就业的政策，包括大学生自主创业优惠政策，“大众创业，万众创新”计划等。在这些政策的号召下，大学生创业愈发普遍，使得我国小微企业数量呈现喷发式增长。
微型企业在促进就业方面的作用不仅体现在总量方面，更体现在增量方面，微型企业逐渐成为城市新增就业机会的主要提供者[5]。微型企业的创建源源不断地为社会提供了更多的就业机会[6]，充分引领了“一人带动一片岗位”的潮流，提供了多种多样的就业岗位，提高就业率，增加市场竞争，有效缓解了就业压力。

（3）构建良好平台，增长个人能力

微型企业为资金不多、经验不足的创业者提供了一个良好的平台，可以使创业者从创业以及日后经营管理的过程中通过专家指导、同行竞争以及对实际业务的操作中获取充足的经验，这些经验不仅适用于经营企业，还适用于经营品牌、人脉等多个方面，创业者将会从中受益匪浅。通过微型企业这个平台，使得一大批有所作为的企业家脱颖而出。企业家属于稀缺资源，拥有一支具有较高素质的企业家人才队伍，将会极大地提升我国企业的国际竞争力[7]。

（4）提高个人收入，改善经济状况

在传统形态下，劳动者只能通过有限的途径在有限的范围内择业，在这种情况下企业还会对劳动者进行筛选，这使得劳动者的择业空间不断缩小。而微型企业虽然规模较小，但却为劳动者提供了更加多样化、自由化的就业渠道，使劳动者不再拘泥于时间与空间的限制。微型企业最直接的作用是使劳动者拥有稳定的经济来源，进而增加收入，提高生活水平，这也成为劳动者创办微型企业的最大原因。发展微型企业为很多处于贫困边缘的人们提供了经济保障，成为改善贫困状态的有力途径，从而为我国消除贫困的目标做出贡献。经济水平提高，贫富差距缩小，将增强人民的生活幸福感，从而促进社会和谐发展。而稳定和谐的社会又会为经济发展提供坚实基础，从而形成一个完整的、良性循环的经济体系。

3 我国微型企业的创业环境

创业不是单一的个体行为，而是与多方面因素紧密相关的，是一个需要不断与外界进行互动的复杂过程。在此过程中，创业环境的作用十分重要，创业的成功或失败，都与创业环境有着十分紧密的联系。

环境是指人类生存的空间以及空间中可以直接或间接影响人类生活和发展的各种自然因素。而创业环境的概念与之类似，可以直接或间接影响创业行为的各种因素的集合体，都可称之为创业环境。良好的创业环境不仅需要多方面的共同努力，还需要长期的维护与支持。相比过去，我国的创业环境已经得到了一定程度的优化，但仍存在一些不合理之处，这使得微型企业在发展面临阻力。下面将对我国目前的创业环境所存在问题进行具体分析。

（1）政策体系不完善，可操作性不强

随着我国经济水平的提高，微型企业在国民经济发展中的作用愈发重要，国家对微型企业的关注度也越来越高，不断颁发新的法律法规和优惠政策，使法律体系得到不断完善。但仍旧存在一些的问题：第一，政策还未形成完整的体系，总体来看具有一定的应急性。第二，相关部门对政策的宣传不够到位，使得很多创业者对优惠政策缺乏了解或解读不准确，从而影响了政策的有效性。第三，政策不够全面，大部分支持政策是针对微型企业的前期发展制定的，缺少对中后期政策的倾斜。第四，政策的可操作性与实际执行情况较差，由于大部分政策都只制定相关原则，而没有上升到法律层面，缺乏强制性，从而造成可操作性较差，落实困难。第五，配套设施不够完善，虽然有关部门出台了相关法规和政策，但相应配套缺失，人员服务意识较弱，难以提供具有针对性的服务，限制了微型企业的快速发展。第六，行业竞争环境还有待公平，单靠市场机制不能有效满足微型企业的发展需求[8]，创业者们的合法权益难以得到保障。

（2）资金匮乏，融资困难

创建企业不仅需要饱满的热情，更要拥有充足的资本，物质基础是创业成功的最基本要素。创业初期，创业者需要大量的资金进行周转，且周转期较长。虽然政府已经出台相关政策要求银行放宽对微型企业的贷款条件，但初创阶段的微型企业规模较小，存在财务制度不健全、信用等级较低、风险评估体系不
完善、缺乏商业担保等一系列问题。银行无法评估微型企业的经营前景，出于对资金安全和成本效益等问题的考虑，银行通常会选择发放贷款给信用等级较高的大型企业，而不会选择给微型企业发放大额长期贷款。即使发放贷款，微型企业的贷款手续繁琐且金额较小，国家优惠政策难以落实，这使得微型企业在融资方面遇到了极大困难。而民间资本规模相对较小，民间借贷机构可持续发展仍存在制度障碍[9]，加之缺乏有针对性的贷款市场，使得微型企业往往会面临资金匮乏的问题，而资金链一旦断裂，微型企业将很难继续生存。微型企业融资渠道单一，资金匮乏，已成为亟待解决的重要问题。

（3）科技水平相对滞后，创新能力不足
科学技术是第一生产力，微型企业想在快速发展的社会中拥有立足之地，必须具备一定的核心技术，从而提高绩效。而我国目前的微型企业在技术创新等方面存在一定的困难。一方面，微型企业自身的技术水平有限，如果为了适应外界市场的快速发展而进行技术创新，需要投入大量的人力物力和财力，这对规模有限的微型企业来说无疑是一个巨大的挑战，并且可能存在一定的风险和滞后性，即使通过向高校购买专利来获取技术，也是一笔高昂的费用，而且将其转化为适应企业发展的技术同样需要花费一定的时间和成本。另一方面，政府尚未出台相关的支持政策，难以调动企业的创新热情。目前我国的微型企业在技术创新上依旧大量依靠外界提供帮助，自身专利权较少，这在一定程度上限制了微型企业的发展。

（4）人才资源匮乏，吸引力不足
在微型企业创办过程中，人才是不可或缺的。在初创阶段，微型企业在规模较小、技术落后、经验匮乏等一系列的不利条件下，反而对人才的需求更大、要求更高，此时企业所需的各类人才就很难得到满足，尤其是技术型人才和管理型人才，更是极为缺乏。另一方面，由于成本等问题，企业所需要的广告服务得不到保障，中介平台上微型企业的信息较少，宣传力度小，导致微型企业知名度较低。这一系列的不利条件使得微型企业人才资源匮乏，自身的吸引力不足也会导致人才流失严重，这是制约微型企业发展的重要因素。

（5）缺乏教育指导，社会认同度低
大多数创业者都是初次尝试创建微型企业，自身经验不足，而相关部门又缺乏相应的教育指导，这使得创业者在面对突发状况时，难以及时做出合理的抉择。同时，创业者在遇到问题时存在盲目性，这可能会导致企业错失良机，阻碍发展进步。同时，微型企业由于其一系列的特殊性，规模较小、存在感低、社会关注度低，大众难以了解其发展前景，所以在一定程度上对其有所偏见，从而在个别方面形成差别待遇，影响微型企业的发展和壮大。根据我国社会的传统观念，人们更倾向于选择稳定的“铁饭碗”工作，而缺乏相应的创新精神，这使得本就优势不足的微型企业面临着更大的挑战。

4 我国微型企业创业环境问题的解决对策

作为发展中经济体的代表，我国的创业环境还存在着一系列问题，这些问题都直接或间接地影响着微型企业的发展，因此，优化创业环境对我国经济的发展具有重要意义。本文提出以下几点具体措施。

（1）健全政策体系，完善配套服务
完善的政策服务能够为微型企业的成长保驾护航，对促进微型企业的发展具有十分重要的推动作用[10]。第一，相关部门应构建完善的政策体系，听取各方建议，提高决策效率，因地制宜，有针对性的出台相关规章制度，使微型企业在遇到问题时有法可依。第二，加强政策宣传力度，对于利好政策应积极普及宣传，提高公众知名度和关注度，可以建立相关专业平台来提供服务，减少创业者对政策解读有偏差的情况，避免盲目性。第三，扩大政策覆盖面，相关部门不仅要将关注点放在微型企业发展的前期阶段，同时应给予中后期足够的政策倾斜，使创业环境平稳和谐。第四，完善相应的配套设施，同时提高人员的服务意识，健全辅导机制，形成完整的链条，减少冗余拖沓的情况，做到“需有所供，求有所应”，提高解决问题的时效性。

（2）拓宽融资渠道，加大资金支持力度
首先，政府应当根据小微企业的自身特点，出台相关政策鼓励银行对小微企业放贷，例如给予一定的优惠补贴，为小微企业提供信用担保等，放宽贷款条件，降低小微企业的贷款难度，简化贷款手续，为小微企业提供充足的资金。其次应拓宽融资渠道，开发灵活的融资方式，进行多样化融资，可以大力发展企业担保公司，鼓励个人、民间资本的发展，降低市场准入门槛，培育新生力量。最后应完善金融体系，建立专业的创业基金，优化科研经费占比，针对小微企业融资需求降低申请条件，对小微企业进行资金扶持。可邀请理论界、产业界及相关中介机构的专家对这些小微企业的市场潜力和发展前景进行再评估，并从中选出优秀项目，设立财政专项资金进行二次评估，起到良好的模范带头作用。还应转变商业银行经营理念，增强服务小微企业的意识。

（3）支持科技创新，增强技术能力

首先，应当鼓励小微企业与高校、研究所等科研机构的合作，及时根据市场变化进行创新，提高适应率和转化率，集中利用资源，减少不必要的成本损耗。其次，鼓励小微型企业加强与国内外同行业企业之间的技术合作，不断整合内外资源实施商业模式联合创新。在拥有类似需求的情况下，吸收借鉴优秀企业的先进经验，实现共同创新成果实现双赢。同时，小微企业仍需明确自身的创新主体地位，从多方合作中寻求适合自身发展的创新道路，把握市场方向，积累经验和经验，完善内部管理，培养适应性人才，例如加强内外培训，提高企业团队的整体竞争力，实现自我创新。最后，国家和地方政府应当对小微企业给予相应的支持，如专利保护，鼓励龙头企业的创新活动设立技术服务平台等，提高小微企业的创新能力。

（4）加强观念引导，营造良好氛围

环境的影响是潜移默化的，良好和谐的环境为小微企业的学习和创新活动的开展提供了基本保障，因此政府部门应致力于优化地方创业环境，为创业企业的成长塑造一个健康有利的氛围。由于小微企业的创业者大都经验不足，相关部门应对小微型企业及创业者培训予以足够的重视。同时，长期的传统观念已深入人心，政府应当对大众观念进行引导，倡导创新精神，鼓励交流合作，培养积极向上的社会文化氛围，例如举办创业大赛，通过新闻媒体等渠道对创新创业进行宣传，加大金融知识的普及力度，使人们能够更加认同小微型企业，也使创业者后顾之忧，为小微企业的创新活动提供一个和谐公平的良好氛围。

5 结论

本文通过对我国小微企业的研究，得出以下结论：

（1）小微企业是我国经济发展的重要动力。随着经济水平的发展，经济主体的形式越来越多样化。而小微企业的快速发展为我国缓解了严峻的就业形势，提高了创新能力，成为拉动经济增长的重要动力。

（2）企业是创新的主要载体。只有不断加强技术创新，才能使企业立于不败之地。应强调核心技术在当前形势下的重要性，给予创新足够的重视，各方相互协作，提升技术创新水平，从而促进我国经济的整体发展。

（3）我国小微企业的创业环境仍存在很多问题。政策、法规、文化等方面均不够完善，这在很大程度上限制了小微企业的创新发展。对于这些问题，本文提出了相应的解决对策，为发展中经济体优化小微企业的创业环境提供了思路。

参考文献

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Can Environmental Information Disclosure Increase Corporate Value: Empirical Evidence from Chinese Listed Companies

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Abstract

China is now in a serious environmental situation and faces many complicated environmental problems. The producing and operating activities of companies are highly related to environment, resulting in rising public concerns about environmental performance and environmental information disclosure of companies. But the level of environmental information disclosure is low. I selected samples of heavy pollution industry listed under Shanghai Stock Exchange and Shenzhen Stock Exchange that joint CSR index constituent stock. After applying empirical analysis, the result shows a significant positive correlation between the quality of the disclosure of the environmental information and the enterprise value. And the timeliness of the disclosure of the environmental information and corporate value are positively correlated but not significant. The conclusion provides a good reason for companies to voluntarily disclose more environmental information. It is also vitally important for the advancement in environmental protection and sustainable development in China.

Key words: Environmental information disclosure; Corporate value; Heavy pollution industry

环境信息披露能否为公司价值增加砝码？——基于我国上市公司的经验证据

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摘要

目前我国所处的环境形势十分严峻，所面临的问题也很复杂。企业的生产经营活动与环境息息相关，因此企业环境保护表现与环境信息的披露受到各方的关注，但我国企业环境信息披露水平仍较低。本文运用实证分析，选择构成上交所社会责任指数和深交所责任指数的重污染行业企业作为样本，研究环境信息披露质量与披露及时性对公司价值的影响，证明了披露质量与公司价值两者之间存在的显著正相关关系，而披露及时性与公司价值正相关但不显著。该结论为引导企业自愿积极披露环境信息提供了充分的理由，为相关研究提供了我国市场上的数据佐证。同时，为政府完善企业环境政策及企业自身优化战略决策提供了经验证据支持。

关键词: 环境信息披露；公司价值；重污染行业

引言

伴随我国经济高速发展，环境问题也随之愈演愈烈。环境污染已严重制约了我国经济的健康发展。现阶段，我国80%以上的环境污染来源于企业的生产经营活动（沈红波等，2012），企业作为资源、能源的主要消耗者与环境问题的主要制造者（唐国平、李龙会，2013），对环境保护负有不可推卸的社会责任（彭研、岳金桂，2016）。能否在创造社会财富的同时有效地控制环境污染直接影响到社会经济的可持续发展。因此，企业在环境保护上的社会责任也越发受到政府和社会公众的关注，同时也会越来越受到投资者、债权人等公司财务信息使用者的关注，进而可能会影响到公司的价值。

从企业环保的立法机制来看，我国从2008年5月实施《环境信息公开办法(试行)》第十九条国家鼓励企业自愿公开的环境信息，到2014年国家《环保法》的全面修订要求“重点排污单位应当如实公开其主要污染物名称、排放方式、排放浓度和总量……接受社会监督”对环境保护责任及其披露的要求进一步加强，促使公司在财务上必须给出更为积极和有效的责任履行回应。2016年底，国务院正式印发了“十三五”生态
环境保护部陈吉宁部长在2017年全国环境保护工作会议上的讲话中明确指出，要修订《环境信息公开办法（试行）》，推进企业环境信息公开，完善企业信息公开平台。由此可见，国家对企业环境保护及环境信息披露的重视程度和管理决心。同时可见环境信息披露的透明度、质量与水平是体现企业社会责任的履行情况和环保意识的重要指标。

由上述两段背景分析，展开逻辑思考。环境信息披露的透明度、质量与水平是企业社会责任的重要指标，而企业的社会责任也越发受到资本市场上投资者和债权人等的关注，那么很可能对企业价值造成影响，也就是说环境信息披露的质量和及时性很可能与企业价值存在着某种影响关系。而从现有研究来看，我国的研究起步较晚，集中于环境信息披露理论框架的分析与构建、环境信息披露的现状和国有企业的环境信息探查上，类似相关研究较少。我国这方面的研究还处在待研究阶段，并未形成共识，还需要大量研究和数据加以探究和佐证。所以本文以企业环境信息披露的质量和及时性两方面出发，选择构成上交所社会责任指数和深交所责任指数的重污染行业企业作为样本，基于实证分析，重点考察环境信息披露质量与披露及时性对公司价值的影响。以期为我国环境信息披露的改进和完善提供经验证据，并为后续研究和提供有益的借鉴，推进我国环境保护和可持续发展。

本文贡献体现在三个方面：（1）本文将重污染行业企业作为研究对象，缩小的前人研究的范围，使范围更加清晰，且我国相关法律法规对重污染行业企业披露环境信息的要求更为严格，对这些企业展开重点研究，能够提出一些更客观科学的研究结论；（2）以往研究在量化企业环境信息披露时多都集中于是否披露或披露指数，本文增加了披露及时性的维度，探究是否会对企业价值产生影响，以期能够对模型进行改进，得到更全面的研究结果；（3）我国这方面的研究还处在待研究阶段，并未形成共识，还需要大量研究和数据加以探究，本文研究提供了我国市场上的经验数据佐证。

本文结构安排如下：第二部分是文献回顾；第三部分是制度背景、理论分析与研究假设；第四部分是研究设计；第五部分是实证检验与结果分析；最后是研究结论与建议。

一、文献回顾


在我国市场，现阶段的对于企业环境信息披露研究成果主要体现在以下方面：（1）早期的研究主要采用规范研究方法，如李祥义（1998）、孟凡利（1999）、耿建新和焦若静（2002）指出了环境会计信息披露的重要性，初步探讨了环境信息披露的内容、形式、核算方式；（2）袁亚丽（2010）和马存利（2009）对对环境污染信息的披露动因研究或经济学分析，发现主要影响因素包括环境法规及行业的政策政府压力，企业环境污染信息的披露的正义性较强，即倾向于选择反映正面的环境业绩，而隐瞒环境污染等负面信息；（3）王建明等（2007）和沈洪涛等（2010）采用描述性统计或案例分析方式分析和描述我国企业环境信息披露的现状。对于我国环境污染披露与企业价值的关系，刘崇贤（2010）对环境信息披露的经济后果进行研究，但对我国环境信息披露的战略价值分析仍处在待研究阶段，并没有形成学术上统一的共识和定论，还需要大量研究来探索和验证。所以本文基于我国A股上市公司的数据，对这一问题进行进一步的研究和分析。

二、制度背景、理论分析与研究假设

1. 制度背景
制度背景在引言部分有所涉猎，这里围绕本文研究的直接相关领域展开进一步的简要梳理。

关于公司环境披露的规制要求，最早可追溯到1986年美国《突发事件预案和社区知情权法案(EPCRA)》的颁布，这标志着环境污染信息披露这一崭新的环境管治手段兴起。1989年3月，国际会计和报告准则政府间专家工作组第七次会议讨论并通过了《关于环境会计和报告的立场公告》。1998年初，美国国家环境保护局开始要求石油钢铁金属等行业公司在网上披露环保信息，此外，加拿大、英国、法国、丹麦等国也都对公司环境信息披露和环境保护颁布过类似的规定和要求。


2.理论分析与研究假设

(1)企业价值与环境信息披露实质性

尽管国家有关部门制定了关于企业的环境信息披露的相关指引，如《深证指引》和《上证指引》，但其仅提供了披露框架，并未就所需披露细节进行具体说明，且没有分行业对环境信息披露进行指引，一些企业在公开环境信息的时候便有空可钻。因此投资者需要从企业的环境报告中甄别可利用的信息，从而判断企业价值和做出投资决策。


企业信息披露是投资人等各方面利益主体最主要的信息源之一，在一定程度上决定了他们对公司的看法和评价。而随着环境问题的日益严重，企业环境信息的披露也越发受到政府、社会公众以及投资者、债权人等的关注，那么其披露信息的质量的提升同样可能有助于企业价值的提升。据此，提出假设H1。

H1：企业价值和企业环境信息披露实质性正相关。

(2)企业价值与环境信息披露及时性

正如前文所分析到的，企业信息披露水平影响公司的价值。而信息披露除了与信息的实质质量有关，还受到信息披露时间的影响。Chambers and Penman(1984)的研究表明，通常较晚披露的信息比较早的披露的信息会产生较小的超额收益。也就是说，信息披露越及时，其企业的市场优势越明显。鉴于企业环境信息披露的及时性是环境信息整体水平的重要影响因素，所以预想企业环境信息披露的及时性会对企业价值造成影响。据此，提出假设H2。
H2：企业价值和企业环境信息披露及时性正相关。

三、研究设计

1. 样本选择与数据来源

环境信息披露的方式很多，而且日趋多元化，除了年报和独立环境报告等传统的披露方式

以外，还有公司网站、电视、杂志等方式。媒介繁多，资料繁杂，而且披露的环境信息没有统一的标准，所以本文仅以上市公司年报及报告中附带或单独披露的独立环境报告（包括社会责任报告和可持续发展报告）中的环境信息作为研究对象。本研究以2013年至2015年为研究期间，选取上海证券交易所社会责任指数（000048）和深圳证券交易所社会指数（399341）样本中重污染行业企业作为基准，由于构成这两个指数的重污染行业企业较少，在剔除研究数据缺失的企业后，所剩样本容量较小，最终得到129个样本。

上交所社会责任指数选取的是社会贡献前100强企业，深交所责任指数选取是社会责任履行较好且已经发行社会责任报告的前100名企业。因此这些主题指数能更好的反映企业履行社会责任的表现，选择构成责任指数的这些企业作为研究对象，使研究更有代表性。而选择重污染行业企业作为研究对象来研究环境信息披露，使研究更具现实意义。重污染行业的划分是以国家环保部门和证监会的定义和分类指引为依据的，具体行业范围包含：采掘业；建筑业；电力业；造纸印刷业；生物制药业；石油化工业；食品饮料业；金属非金属行业；纺织、制革业。这些行业由于生产工艺和产品自身特性等原因，对环境影响较大，应承担的环境责任也相对较大，成为环境信息披露的代表性样本，因此本文对样本所在行业做此限制。

本文用于EDI环境信息披露指数打分的社会责任报告（包括环境报告部分）均从巨潮资讯网下载，所使用的财务数据均来自CSMAR数据库并利用SPSS16.0对数据进行分析。

2. 变量定义与模型设计

（1）企业价值

本文的被解释变量为企业价值，由于企业价值度量的角度不同，往往涵盖账面价值、市场价值、重置价值及清算价值等不同含义（汤谷良，2001），因此，本文在对该变量进行具体界定时，主要是从市场价值的维度来考虑，采用Tobin’s Q值（TQ）作为公司价值的代理变量。由于Tobin’s Q值能较好地反映公司的未来价值与风险等关键要素，因此该值是衡量公司价值的一个较为合适的客观指标。具体指标上，本文直接采用国泰安（CSMAR）数据库中Tobin’s Q值的计算方法与计算结果，即用公司市场价值除以公司总资产额，其中公司的限售性流通股采用每股净资产值来进行替代计算。

（2）环境信息披露

围绕文本的研究重点，以企业环境信息披露的及时性及实质性（即质量）作为解释变量。

对于环境信息披露及时性，本文沿用Chambers and Penman（1984）提出的RLAG（时滞）作为量化指标，即环境信息披露时间和会计结束时间的差值。该变量与及时性之间为负相关。

对于环境信息披露实质性，本文采用环境信息披露指数EDI作为评价指标。笔者根据相关政策条文，选用内容分析法，使用从巨潮资讯网搜集到的上市公司年报及报告中附带或单独披露的独立环境报告，分析其披露的环境内容并根据不同内容赋值。计算各企业环境信息披露得分（ED）再除以各项满分分值之和，最终得到EDI:

$$EDI = \frac{\sum_{i=1}^{9} ED_i}{24}$$

具体赋值及计算方法见表1及表2。

表1 赋值方法
（3）控制变量

为了确保分析结果的科学客观性，结合中外前人学者的研究，本文选择公司规模、盈利能力、公司成长能力以及公司所有权性质作为主要控制变量，此外，对于不同年份和行业，本文设置了虚拟变量进行相应的控制。

（4）模型设计

为检验假设 1，构建多元回归模型一：

\[ QV = \beta_0 + \beta_1 EDI + \beta_2 SIZE + \beta_3 ROE + \beta_4 GR + \beta_5 STATE + \beta_6 YEAR + \beta_7 INDUS + \varepsilon \]

为检验假设 2，构建多元回归模型二：

\[ QV = \beta_0 + \beta_1 RLAG + \beta_2 SIZE + \beta_3 ROE + \beta_4 GR + \beta_5 STATE + \beta_6 YEAR + \beta_7 INDUS + \varepsilon \]

其中，\( \beta_0 \) 为常数项，\( \beta_1 \ldots \beta_7 \) 为解释变量及控制变量的系数，\( \varepsilon \) 为残差项。其余变量释义请见表 3。
（1）重污染行业环境信息披露实质性情况

表 4 2013 至 2015 年环境信息披露指数 EDI 对比

<table>
<thead>
<tr>
<th></th>
<th>样本量</th>
<th>均值</th>
<th>标准差</th>
<th>极小值</th>
<th>极大值</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013 年</td>
<td>43</td>
<td>0.44</td>
<td>0.16</td>
<td>0.13</td>
<td>0.88</td>
</tr>
<tr>
<td>2014 年</td>
<td>43</td>
<td>0.51</td>
<td>0.15</td>
<td>0.17</td>
<td>0.92</td>
</tr>
<tr>
<td>2015 年</td>
<td>43</td>
<td>0.53</td>
<td>0.14</td>
<td>0.21</td>
<td>0.92</td>
</tr>
</tbody>
</table>

本文所选样本为社会责任指数的构成公司，理应在环境信息披露方面有较好表现，但从上表可以看出，2013-2015 年，样本企业的环境信息披露指数极大极小值差异较大，环境信息披露的水平参差不齐。有些企业主动积极公开的环境信息很多，且包含定量或具体定性信息；相反有些企业披露态度消极，或只进行一般性描述。可能的原因有，一是部分企业虽为重污染企业，但其生产经营活动确实对环境的影响相对而言较小，能够披露的环境信息较少，因此所披露的信息较简略。二是环保部及其他相关部门的披露要求并没有细化，这给一些企业提供了钻空子的机会。

但从均值来看，2013 年至 2015 年每年该指标的均值不断增大，说明企业环保意识得到提升且环境信息披露质量有一定程度的提高。

另外，在打分过程中，笔者发现了还如下一些问题：

1）在所有样本中，“与环保部门签订的改善环境行为的自愿协议”这一项得分均为 0，即使环境信息披露表现良好的企业，均未描述该项内容。

2）对于“企业排放污染物种类、数量、浓度和去向”和“企业在生产过程中产生的废物的处理、处置情况，废弃产品的回收、综合利用情况”这两项，多部分企业未进行定量分析，或提供的信息很少，而这两项极大的体现了企业经营活动对环境的实质性影响，因此这两项内容披露不充分将不能体现企业在环保方面的表现和做出的努力。

（2）环境信息披露及时性情况

表 5 2013 至 2015 年环境信息披露时滞对比

<table>
<thead>
<tr>
<th></th>
<th>样本量</th>
<th>均值</th>
<th>标准差</th>
<th>极小值</th>
<th>极大值</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013 年</td>
<td>43</td>
<td>85.07</td>
<td>16.73</td>
<td>24.00</td>
<td>119.00</td>
</tr>
<tr>
<td>2014 年</td>
<td>43</td>
<td>89.44</td>
<td>17.30</td>
<td>59.00</td>
<td>119.00</td>
</tr>
<tr>
<td>2015 年</td>
<td>43</td>
<td>90.47</td>
<td>17.92</td>
<td>60.00</td>
<td>120.00</td>
</tr>
</tbody>
</table>

从时滞的均值、极小值和极大值三者来看，2013 年至 2015 年样本公司公开环境信息的时滞在不断延长。

（3）变量描述性统计分析

表 6 变量的描述性统计

<table>
<thead>
<tr>
<th></th>
<th>样本量</th>
<th>均值</th>
<th>标准差</th>
<th>极小值</th>
<th>极大值</th>
</tr>
</thead>
<tbody>
<tr>
<td>QV</td>
<td>129</td>
<td>1.55</td>
<td>1.22</td>
<td>0.17</td>
<td>6.69</td>
</tr>
<tr>
<td>EDI</td>
<td>129</td>
<td>0.49</td>
<td>0.15</td>
<td>0.13</td>
<td>0.92</td>
</tr>
<tr>
<td>RLAG</td>
<td>129</td>
<td>88.33</td>
<td>17.35</td>
<td>24.00</td>
<td>120.00</td>
</tr>
<tr>
<td>SIZE</td>
<td>129</td>
<td>23.46</td>
<td>1.32</td>
<td>20.85</td>
<td>27.04</td>
</tr>
<tr>
<td>ROE</td>
<td>129</td>
<td>0.11</td>
<td>0.08</td>
<td>-0.05</td>
<td>0.35</td>
</tr>
<tr>
<td>GR</td>
<td>129</td>
<td>0.35</td>
<td>6.57</td>
<td>-24.12</td>
<td>63.06</td>
</tr>
</tbody>
</table>
观察上表数据，我们可以看到，样本企业的环境信息披露指数平均数值为 0.49，表明国内重污染行业上市企业总体的信息披露质量不容乐观。从 0.13 和 0.92 的极小极大值中可以得出样本企业信息在信息披露质量方面的差异性还很明显。环境信息披露时滞均值是 88.33，极值分别为 24 和 120，说明时滞区别很大，即披露的及时性区别大。公司规模均值为 23.46，极小值为 20.85，极大值为 27.04，重污染行业企业规模无太大区别，符合我国的重污染行业的特征。作为控制变量有利于本文的研究。在盈利能力方面，均值为 0.11，说明整体而言重污染行业企业创造价值的能力并不强。公司成长性均值为 0.35，极大值和极小值分别为 63.06 和-24.12，企业间成长性差别很大。通过极大托宾 Q 值 6.69 和极小托宾 Q 值 0.17 对比发现，公司价值差别较大，托宾 Q 值均值为 1.55 说明整体重污染行业企业公司价值偏低。

2. 相关性分析

相关性分析用来揭示变量之间统计上的关系，是进一步检验和研究的前提和依据。本文采用 Pearson 相关系数分析，具体见表 7。

<table>
<thead>
<tr>
<th></th>
<th>QV</th>
<th>EDI</th>
<th>RLAG</th>
<th>SIZE</th>
<th>ROE</th>
<th>GR</th>
</tr>
</thead>
<tbody>
<tr>
<td>QV</td>
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<td></td>
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<td>-0.067</td>
<td>-0.064</td>
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注：**、*分别表示在 1%和 5%水平上显著。

对 Pearson 相关系数表进行观察可以得到，这些变量中，相关系数最高只有 0.474，远远低于标准值 0.8，这表明不同变量相互之间的联系较弱。下文还将通过 VIF 值来对解释变量共线性进行进一步探讨，检验结果表明 VIF 值均小于 10，据此可以得到本文所选择的各因素集的相关性较弱，并且也没有明显的多重共线性现象，因此能够利用上文所建立的数学模型对这些因素进行研究。

3. 多元回归分析

根据上一节对不同变量之间的相关性和共线性分析，本文所选取变量数据之间没有明显的共线性现象是可以基本确定的。据此，我们可以对模型进行多元回归分析，呈现这些因素对于年报披露及时性的影响程度，并进行进一步研究。
<table>
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<th>模型变量</th>
<th>模型一</th>
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注：采用 OLS 回归，括号内为 t 值。

从模型一的回归结果看，环境信息披露指数的回归系数为 2.263，t 值为 4.291，对应的 P 值为 0.000。环境信息披露指数与托宾 Q 值在 1% 的水平下显著正相关，说明环境信息披露质量高的企业，其公司价值也高，与本文假设一致。公司规模与股东权益报酬率的回归系数分别为 -0.540 和 6.221，且检验结果显著。经营活动现金流量与公司成长性回归系数都是负值，且都不具有统计上的显著性，这可能与重污染行业企业所处环境相关。

从模型二的回归结果看，环境信息披露时滞的回归系数为 0.004，t 值为 0.780，对应的 P 值为 0.437，说明环境信息披露时滞与托宾 Q 值正相关，但并不显著。控制变量的检验结果与模型一一致。

另外，从经调整后的 R² 来看，模型一与模型二分别为 0.503 和 0.431，可以认为模型的拟合度较好。两个方程的 VIF 值均小于 10，变量之间基本不存在多重共线性的情况。

4. 稳健性检验

本文进行了稳定性测试。通过适当增删控制变量，或选择替代指标（如选用 EDI 代替 Tobin’s Q 等），并运用以上模型对假设进行再次回归检验，所得结论与前面的基本保持一致。（限于篇幅，稳健性测试表予以省略）。

五、研究结论与建议

1. 研究结论

本文以上海证券交易所社会责任指数（000048）成分股和深圳证券交易所责任指数（399341）样本股中
重污染行业企业作为样本，将托宾Q值作为衡量企业价值的指标，分别将环境信息披露指数EDI，时滞RLAG作为企业环境信息披露评价指标，将公司规模、盈利能力、经营活动现金流量、公司成长性作为控制变量，研究企业价值和企业环境信息披露水平的相关性。根据研究，本文得出以下结论：

1）我国重污染行业上市企业环境信息披露质量与公司价值显著正相关。

通过实证部分的分析，能得到两者显著正相关的结论，同文章的假设相一致。这说明了，披露环境信息披露质量高的企业，拥有更高的市场价值。这对于鼓励企业自主披露环境信息，提高环境信息披露的质量具有推动作用。

2）我国重污染行业上市企业环境信息披露及时性与公司价值正相关但并不显著。

得出该结果，可能与样本数据和研究方法有关，也可能由于投资者已从同行业的其他公司所披露的信息中预测到企业的相关环境信息，所以环境信息披露及时与否对市场反应影响较小，进而对公司价值也仅稍有影响。

3）国内重污染行业上市公司整体的环境信息披露水平不高，披露质量低下。

许多企业对披露工作缺乏重视，缺少实用性的披露内容。在对比2013至2015年的环境信息披露指数数据后，我们又能发现企业披露环境信息的意识和总体质量都有一定提高，但与发达国家及地区企业相比仍存在不小差距。多数企业披露时并没有认真披露详细内容，而只进行泛泛之谈、披露随意内容零散，这些都是我国政府监管部门和企业在未来需要格外关注的。

2. 相关建议

（1）对于企业管理者的建议

企业的价值会随着其环境信息披露质量的提升而增长，因此为了确保企业的长远发展，应该加强环境信息披露，提升环境信息披露的主动性和有效性，解决企业与公众的信息不对称，进而增加公司自身的价值。

此外，企业还应完善其内部对于环境信息披露的规章制度，这有利于企业资源的利用，还能帮助企业提高经济效益，对于提升环境信息披露水平也有重要意义，最终提升自身价值。

基于战略视角，公司需要重点关注环保信息披露与公司发展战略的全面融合，让其服务于公司发展战略的整体规划和实现路径，同时也应注重通过持续性的、前瞻性的环保理念引领公司发展战略，实现动态优化调整和转型升级，并充分利用好政府的规制引导政策，从而充分发挥环保信息披露的价值创造功能。

（2）对于政府部门的建议

本文环保信息披露质量正向影响公司价值这一结论，可以作为环保信息披露内在的推力。据此，可以建议政府部门调整和进一步完善环境规制政策，即应从“刚性规制型”为主的制度设计向“利益引导型”为主的制度设计转变，如在股票市场上专门设立上市公司环保责任履行板块，或制定有效的激励措施，精神层面和物质层面对于环境信息披露执行较好的企业进行奖励，设立环保基金项目、在资金数目和利率上对企业环保投资的支持等，进一步提升企业参与披露工作的积极性和主动性。进而促使不同产权性质、不同行业的公司都能通过科学合理的环保投资更好地提升公司收益、提升公司价值。

在具体政策制定方面，国家主管单位应在企业环境信息披露框架下，细化披露规则，并制定详细的披露规范，为企业的环境信息披露工作提供有效指引，提升环境信息公开的质量。除此之外，在完善环境信息披露相关法规时应该注重企业所处行业的差异性，根据行业的不同，对信息公开的标准进行细化，制定统一的可量化、可对比的评价指标。
主要参考文献

[1] 沈红波，谢越，陈峥嵘：企业环境保护、社会责任及其市场效应[J]，中国工业经济，2012(01)。
[3] 彭妍岳，金桂：基于投资结构视角的企业环保投资与财务绩效[J]，环境保护科学，2016 (1)。
[8] 马存利：环境信息披露的法经济学分析[J]，生产力研究，2010 (22)：19-20。
[10] 沈洪涛，李余晓璐：我国重污染行业上市公司环境信息披露现状分析[J]，证券市场导报，2010 (6)：51-57。
[14] 张宗新，朱伟骅：信息披露增加能够提升公司价值吗？——基于声誉投资模型的公司价值分析及中国股市证据[J]，国家自然科学基金研究项目（70303006）和国家社会科学基金（08BJY052）研究成果，第 27-第 28 页。
出口经理的国际社会资本如何提升企业竞争绩效？—基于进口商参与中介作用的实证剖析

杨志勇
河北经贸大学 工商管理学院 050600

摘要:
出口竞争绩效是出口绩效的重要构成维度，出口企业如何提升竞争绩效备受理论和实践关注，但从进口商参与视角探讨社会资本对出口竞争绩效影响机制的文献却少之又少。基于中国出口营销经理的调查数据，本文实证研究国际社会资本对出口竞争绩效的影响机制。研究结论认为国际互动对关系网络和外销员知识均有积极影响，关系网络和外销员知识有利于进口商参与，进口商参与能够提升出口竞争绩效。并且国际互动在影响关系网络进而影响进口商参与方面优于通过知识影响进口商参与。进口商参与完全中介了关系网络对出口竞争绩效的影响，部分中介了外销经理知识对出口竞争绩效的影响关系。最后讨论了本文的理论价值和研究结论对出口营销实践者的应用价值。

关键词:国际互动;关系网络;外销经理知识;出口竞争绩效;进口商参与

0 前言


为了进一步探索国际社会资本对出口绩效的影响机制，本文首先将国际社会资本分为国际互动，关系网络和员工知识三个维度，考察三个维度之间的关系，检验国际互动对关系和知识两种资源的差异化影响作用。然后检验进口商参与在关系网络和出口竞争绩效关系中的中介作用，以及进口商参与在员工知识和出口竞争绩效关系中的中介作用。此模型，整合进口商参与进入到国际社会资本和出口竞争绩效影响关系之中，进一步丰富社会资本和出口营销领域的文献。本研究使用来自中国情景下出口企业样本来检验假设，来自中国的数据更能体现中国“关系”为本的文化情境和特色。另外，随着世界和中国经济的迅速发展，检验那些产生于西方的营销理论在中国的适用性问题变得更加重要。

1 相关理论和研究框架
1.1 资源基础观（RBV）

资源基础观解释了企业竞争优势的来源，认为公司绩效的差异来源于企业创造异质的不可模仿的内部能力不同（Amit and Schoemaker, 1993; Atuahene-Gima, 2005, P.63; Barney, 1991），资源基础观理论认为，企业不可模仿的内部能力恰恰就是公司的一种重要资源，这种内部能力具有不可模仿性，独特性和稀缺性等特征，因此成为重要的竞争优势。公司正在国际市场上构建的关系网络和外销员获得的知识，是一种能够观察到的资源，这些嵌入在社会资本中的关系和知识，就可以为企业塑造竞争优势，从而提高企业的出口竞争绩效。但是相关研究并没有从顾客融合的角度来解释，资源（国际关系和知识）对出口绩效的影响机制。由于企业拥有的关系和知识是一种独特的资源，这种独特的资源能够为顾客的融合提供必要的基础条件，促进顾客融合。国际互动和员工知识被认为是客户关系构建的基础和核心问题，是企业拥有的关键的社会资本。相关研究认为国际互动在培养信任等方面有积极作用，从而对绩效产生正向的影响效果，但是在国际互动对进口商参与（Customer Participation）的影响方面，目前文献鲜有提及。有关员工知识对创新的影响文献较多，但是在出口情境中出口经理知识对顾客参与的影响研究还很少见。其次，顾客参与的研究已经成为顾客关系和价值共创研究领域比较新的方向，有关顾客参与如何解释社会资本对出口竞争绩效影响方面的研究还很少。首先是在网络关系和出口竞争绩效关系中是否扮演者中介角色，另外在员工知识和出口绩效的提升方面，顾客参与的中介作用显著吗？

1.2 国际社会资本与出口绩效

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<tr>
<th>文献</th>
<th>研究内容</th>
<th>述评</th>
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</thead>
<tbody>
<tr>
<td>Griffith &amp; Harvey (2001)</td>
<td>基于沟通视角讨论出口中关系质量的提高</td>
<td>没有考察关系质量的绩效表现</td>
</tr>
<tr>
<td>Leonidou, Talias, &amp; Leonidou (2008)</td>
<td>从权力视角解释出口关系中关系治理（信任和承诺）的形成逻辑，并且把权力行使和满意、冲突连接起来作为信任和承诺的前因。文章考察了关系治理（满意和冲突）的中介作用</td>
<td>只是在发达国家做的样本调查问卷，不能很好体现转型经济环境下的可行性，也没有考察绩效结果</td>
</tr>
<tr>
<td>Lee, Jeong, Lee, &amp; Sung (2008)</td>
<td>建立了一个出口商和进口商关系中的互惠模型，从经济和社会两方面因素出发，基于社会交换理论研究互惠的影响因素，结论认为经济因素相对于社会因素对互惠有更强的影响</td>
<td>从进口商的角度研究，互惠的驱动机制，缺乏从出口商角度的研究</td>
</tr>
<tr>
<td>Styles, Patterson, &amp; Ahmed (2008)</td>
<td>在国际情境下率先从双边的视角，检验了影响进出口双边关系绩效的关键变量（比如个人因素、公司因素、信任、承诺等）。明确连接了关系变量和出口绩效，首开关系范式在出口绩效实证研究的先河。</td>
<td>仅仅从个人和公司因素方面进行了研究，而没有深入研究个人关系对绩效的影响机制</td>
</tr>
<tr>
<td>Katsikeas, Skarmeas, &amp; Bello (2008b)</td>
<td>基于进口商、出口商关系绩效的提升机制和信任的前因进行研究，主要围绕障碍因素（心理距离、内部不确定性、出口商交易特定资产等）方面研究信任的前因。</td>
<td>从进口商的视角进行的研究，未来可以从出口商的视角研究出口绩效；有关信任以及机会主义等的关系和影响方向目前仍然不是特别的清晰。文章仅仅检验了相互依赖对于信任——绩效的调节作用，未来可以同时检验关系行为作为中介（比如承诺或长期导向等）的模型。关系质量的其他变量比如信任、承诺，合作，技术整合和忠诚也没有研究。没有研究绩效中的关系和竞争方面的结果。</td>
</tr>
</tbody>
</table>
| (Tulin, 2009)                          | 在国际情境下研究关系质量-出口绩效的关系。以组织行为理论为基础，从公司的角度定义关系质量，包括的变量：信息共享、沟通质量、长期导向、满意。在模型中把出口绩效分为了：财务绩效、战略绩效、满意三个因子。 | 未来研究可以研究供应商其他的重要互动能力，比如，人或者管理系统互动能力（Johnsen and Ford 2006）。可以进一步深入研究关系的不同类型。可以分析服务提供者跨界关系网络的更加具体的关系，比如，顾客网络和关系等的对出口绩效的潜在影响。
| Jean, Sinkovics, & Kim (2010)          | 研究了关系学习作为一种互动能力与绩效的关系。                           | 可以此针对德国的模型应用到其他转型经济国家的情形中去。互惠、关系行为和财务绩效的关系还有待进一步的澄清；当前的研究仅仅是从财务绩效的角度来研究，未来的研究可以进一步拓展到，关系满意、关系延续期望、出口绩效等综合的绩效研究中；进一步研究企业互惠标准的影响因素和产生过程；进一步研究互惠在分销商支持、规范契约、延续期望这些关系治理战略对于绩效的影响中的作用。 |
| Sichtmann & von Selasinsky (2010)      | 针对服务行业的特点，研究出口绩效的特定前因（出口承诺、顾客导向、顾客信任和经理人员的文化技能）。把跨越的客户关系（CCRs）和出口绩效联系在一起，这在服务研究中是创新，并且将CCRs划分为两种类型（CCRs质量和CCRs数量）。研究两种类型的关系对出口绩效的影响。 | 可以此针对德国的模型应用到其他转型经济国家的情形中去。互惠、关系行为和财务绩效的关系还有待进一步的澄清；当前的研究仅仅是从财务绩效的角度来研究，未来的研究可以进一步拓展到，关系满意、关系延续期望、出口绩效等综合的绩效研究中；进一步研究企业互惠标准的影响因素和产生过程；进一步研究互惠在分销商支持、规范契约、延续期望这些关系治理战略对于绩效的影响中的作用。 |
| Griffith (2011)                        | 研究了互惠在关系行为和财务绩效中的调节作用；使用两轮的数据收集，进行结构方程模型的分析；互惠和关系行为结合起来研究他们对于财务绩效的影响。 | 可以此针对德国的模型应用到其他转型经济国家的情形中去。互惠、关系行为和财务绩效的关系还有待进一步的澄清；当前的研究仅仅是从财务绩效的角度来研究，未来的研究可以进一步拓展到，关系满意、关系延续期望、出口绩效等综合的绩效研究中；进一步研究企业互惠标准的影响因素和产生过程；进一步研究互惠在分销商支持、规范契约、延续期望这些关系治理战略对于绩效的影响中的作用。 |
近 10 年营销专业内，顾客融合已经吸引了大量的关注，特别是随着社会化媒体的发展，顾客能够共创也能够破坏价值（Libai 等，2010；Verhoef 等，2010）。Van Doom 等（2010）认为顾客融合行为是“超越购买之外的，针对品牌或公司的顾客行为体现，是动机驱动的结果”。比如，为猫途鹰（TripAdvisor）写评论，评价公司的网页，参与品牌社区，向同行顾客忠诚、顾客参与、顾客互动等。并且在互联网高速发展的当下，出口企业与进口商之间的关系正在发生着本质的变化，从交易型关系到关系型关系，到现在的融合型关系（更加强调顾客在关系中的贡献）。顾客融合是指顾客顾客超越财务支持，自愿为公司的营销功能做出资源贡献。顾客融合能够为企业塑造竞争优势，对企业竞争绩效的提升至关重要。但是如何促进顾客参与融合到企业的出口的各个环节迄今为止从社会资本的角度进行解释的文献少之又少。

基于以上顾客融合与参与理论，初步探索基于顾客融合与参与视角下社会资本对出口竞争绩效的影响机制问题，并构建如下的研究框架：

<table>
<thead>
<tr>
<th>文献来源</th>
<th>概念</th>
<th>维度</th>
<th>测量</th>
<th>模型</th>
<th>结论</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obadia &amp; Vida (2011)</td>
<td>把进口商的角色绩效作为出口绩效的前因，研究了出口商角色绩效在关系行为和经济绩效中的中介作用。</td>
<td>区别于公司间关系和出口绩效的正向和负向关系。利用国家数据验证了假设，在构建关系质量时，使用了基于动机和行为的综合的指标，采用二阶结构。</td>
<td></td>
<td>文章把进口商的角色绩效作为中介变量，完善了出口绩效理论，认为仅仅是信任等，还不能导致出口绩效的提升，可能导致经销商等利用信任进行欺骗等行为，所以增加了进口商的角色绩效。</td>
<td></td>
</tr>
<tr>
<td>Harmeling, Moffett, Arnold, &amp; Carlson (2017)</td>
<td>顾客融合是指顾客超越财务支持，自愿为公司的营销功能做出资源贡献。</td>
<td>基于任务：写评论，推荐顾客，对其他顾客提供支持；基于体验的是指与顾客一起愉快体验，激发顾客自愿贡献（顾客生成的内容，比如照片和视频等）。</td>
<td>自我转化（self-transformation）中介了体验融合活动对顾客融合的关系</td>
<td>有中介作用</td>
<td></td>
</tr>
<tr>
<td>Beckers, van Doorn, &amp; Verhoef (2017)</td>
<td>公司发起的顾客融合主要是一种行为，主要考虑顾客的非交易行为之外的价值创造</td>
<td></td>
<td></td>
<td>主效应是消极的，其他具有调节作用</td>
<td></td>
</tr>
</tbody>
</table>
2 研究假设

2.1 国际互动对出口经理关系和出口经理知识的影响


假设1a: 国际互动强度越大，越有利于出口经理知识的提高。

Tsai & Ghoshal (1998) 研究认为值得信任的关系都是从社会互动培养起来的。随着两个主体的互动，他们之间的信任关系将更加牢固，主体之间更可能感到相互值得信任。经常和近距离的国际互动允许出口商和顾客之间相互认识，共享信息和创造共同观点，因此，当出口商占据了国际互动网络的中心位置时被认为是网络中值得信任的。基于此我们提出如下假设：

假设1b: 国际互动程度越高，出口经理关系联结越强。

2.2 出口经理关系和出口经理知识对顾客参与的影响

资源依赖理论（RDT）指一个组织最终要的存活目标，就是想办法减低对外部关键资源供应组织的依赖。
程度，并且寻求一个可以影响这些供应组织之关键资源能够稳定掌握的方法。在出口企业和顾客进行互动和关系构建过程中，出口企业尽量的减少对出口国顾客的依赖，同时不断提升自己的关系网络以及通过不同的方式提高员工的知识，这些网络关系和员工知识都成为企业不可或缺的独特的资源和能力，从而企业拥有对于顾客的权利。在这种权利的驱使下，顾客愿意为企业进行贡献，比如反馈信息，顾客间的互动，口碑相传等从而在不同的环节融合到企业的出口过程中，同企业一同创造价值。

假设2a 出口经理关系会积极促进顾客参与
假设2b 出口经理知识会积极促进顾客参与

2.3 顾客参与与出口竞争绩效

如果一个顾客参与到公司，这个顾客将从企业购买产品，从而直接产生收入（Kumar 2008），而且同样会进行推荐，影响公司盈利性。通过社会化媒体进行品牌顾客沟通将在广泛的顾客群众推波助澜（Hogan, Lemon和Libai 2003），从而引导更多的受众与公司进行交易。顾客的反馈意见能够间接的贡献公司的盈利，由顾客反馈引致的产品和服务提升有望吸引比以前更多的顾客，从而为公司带来利润。因此所有的顾客参与行为都对公司的盈利能力做出了贡献。

顾客参与同样也对品牌长期的声誉和认知做出贡献（Verhoef, Reinartz, and Krafft 2010）。创造一个顾客参与好的环境需要初始投资，但是从长期来看通过顾客参与的创造会产生更多的盈利（Verhoef, Reinartz, and Krafft 2010）。

在出口中，一直以来由于空间、文化和心理产生的距离，顾客参与较为困难，但是随着互联网的发展，尤其是社会化媒体的运用已经在出口业务中广泛应用，因此顾客参与的作用越来越大。出口中的顾客参与主要表现在信息的反馈、顾客间互动和沟通等方面，这些方面的参与极大的提升了企业与顾客的关系，提高了产品质量和创新，促进了出口企业品牌的传播，由此的假设3：

假设3：进口商参与对出口竞争绩效有积极的促进作用

2.4 出口经理关系和出口经理知识与出口竞争绩效

资源基础理论（RBV）（Vernérfelt, 1984）认为企业是各种资源的集合体。由于不同原因，企业拥有的资源各不相同，具有异质性，这种异质性决定了企业竞争力的差异。资源基础理论认为企业为了长期的发展，需要培育和获取能给企业带来竞争优势的特殊资源。企业可以通过组织学习、知识管理和构建外部网络来实现企业独特资源的获取，从而形成优势资源。原因是对资源是通过学习和知识管理来获得的，而关系联结构建的目的就是要形成企业的关系网络从而构建自己的网络和社会资本，形成一种关系优势。因此，资源基础理论认为出口经理关系和出口经理知识都是企业的独特资源，能够为企业带来持续竞争优势，从而带来企业绩效的提升。

企业在出口的过程中，由于距离、文化和心理的距离产生了诸多的出口障碍，并且出口企业大多为中小型企业，资源乏力，竞争力不足是普遍现象。但是中小企业却有着灵活，“船小易调头”的固有特点。在国际交往中应该发挥自身优势，多通过互动与客户进行交流，从而构建关系网络，通过不断的学习提高员工对出口国文化，顾客行为习惯和出口市场的特征等多方面的知识提高，从而提升企业在出口市场的竞争力。

假设4：出口经理关系对出口竞争绩效的提升有积极的推进作用
假设5：出口经理知识对出口竞争绩效的提升有积极的推进作用

3 研究方法及数据收集

3.1 数据收集

本文理论框架为出口商社会资本对出口竞争绩效提升机制研究。因为通常的绩效提升的影响变量多
涉及到企业的资源和能力、高管认知等方面。但从社会资本视角研究出口竞争绩效的提升问题的文献还比较少，所以这一框架本身具有很强的探索性质。本文以中国出口企业为研究背景基于两个方面的考虑：首先，随着中国改革开放的深入发展，中国制造向中国创造的产品转型，中国外向型企业数量越来越多，所以出口企业是中国经济增长的重要增长极，是中国企业国际化的典型代表。其次，目前出现的逆全球化趋势，使得出口市场面临新的挑战和诸多不确定性。如何提升出口企业的竞争绩效成为中国政府和企业管理者以及国外的进口商普遍关注的重要问题。因此本文的样本具有很强的代表性。

与以往研究不同，本文的研究层面是针对单一市场和单一产品的出口企业和出口部门（export venture）。之所以如此是因为：首先，单一市场（或单一海外经销商）和单一产品在与顾客的关系策略方面比较一致，从而在企业之间有可比性。另外，可以避免使用多个地区（或多个海外经销商）时出现的一些不可控制的因素。此外，这一层面是营销的最低独立机构，具有独立的绩效考核体系，从而能够考察行为和绩效的关系。与以往的从顾客视角进行的研究不同，本文对中国出口企业的中高层管理者进行问卷调查，从而获得了真实企业的一手宝贵数据，确保了理论对实践的指导价值。

本文在选取样本方面，重点选择了杭州、北京和秦皇岛三个地区的出口企业作为研究对象，这样选择一方面是基于样本的代表性。另一方面，这三个地区代表了中国三个出口企业比较集中的地方，外向型企业最发达的地区、内陆出口地区以及沿海出口地区，从而能够很好的代表样本总体。为了获得随机样本，我们联系了三个地区的大型银行机构，通过银行机构的客户管理人员向其有出口业务的客户随机发放问卷。在发放问卷时，首先联系其出口客户的企业高层管理人员，由高管特别指定相关的出口部门经理或由本人来对问卷进行填写，选择标准是对出口业务比较了解，能够满足信息量的需求，并且愿意参与调研，从而确保了问卷填写的质量。除了运用上述方法来识别恰当的被调研者外，我们运用了一个事后的分析方法来判断被调研者是否合格。我们收集了一些能反映被调查者对出口业务以及主要竞争者等的出口行为、战略和绩效等了解程度的一些数据，排除得分低于3（里克特5级量表）的10个被调研者，通过对最终数据分析（n=98），主要被调查者的得分均高于4.0，显示出被调研者在研究的相关信息提供方面具有较高的能力。

另外，为了使我们的数据收集更加有效，我们尝试使用了如下几种方法：首先，在一个出口企业（或部门）通常只有一个出口经理，他们对出口整体的行为等有全面的了解，为了避免同源方差问题，我们尝试在30个出口企业中通过另外一个市场经理来收集数据，两者对于交易型互动和关系型互动的评价相关系数分别为正，交易型互动为0.34（P<0.05），关系型互动为0.74（P<0.01）。另外，由于主观的出口绩效评价的局限性，我们收集到了31家企业的有关销售、利润等数据，将其与主观的经济绩效得分进行了相关性分析，结果都显著相关。如上举措强有力的支持了我们调研数据的有效性。此次调研针对出口经理共发放问卷700份，收回问卷150份，有效问卷138份，问卷回收率21.4%，有效回收率19.7%。

根据Armstrong 和Overton（1977）的建议，又分别针对样本中先回收与后回收的问卷进行了比较分析，主要较了一些公司特征，包括员工数量、出口年限、出口市场数量等，并未发现未反应偏差。另外，使用一些二手数据我们比较了参与调研的公司和87家没有参与的公司在员工数量和年销售额方面的差异，我们发现没有显著差异，所以在我们的数据中无反应偏差问题不显著。样本的基本统计资料如下表2：

<table>
<thead>
<tr>
<th>表2 被调查者的基本情况</th>
</tr>
</thead>
<tbody>
<tr>
<td>性别</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>男</td>
</tr>
<tr>
<td>（58，42%）</td>
</tr>
<tr>
<td>女</td>
</tr>
<tr>
<td>（74，54%）</td>
</tr>
<tr>
<td>35.45</td>
</tr>
<tr>
<td>（49）</td>
</tr>
<tr>
<td>45岁以上</td>
</tr>
<tr>
<td>（8，6%）</td>
</tr>
</tbody>
</table>
由表可知，描述性指标主要包括两类指标：一是人口统计变量，在所有应答者中，男性占 42%，女性占 54%。说明在当前的出口行业中女性经理较男性经理数量占优。25~45 岁的经理占比相对较高，并且具有较高的学历，拥有大学专科以上学历的经理占到了 91%，比较符合出口业务中高学历密集的特征。二是所在行业的性质。其中，国有企业占到了 18%，三资和私营企业的比例为 73%，由于目前的出口企业仍然以中小型为主，从数据上也能体现出来。

3.2 测量和分析方法

3.3 问卷使用

7点利克特量表测量 5 个主要的变量：国际互动，网络关系，员工知识，参与型顾客融合，出口竞争绩效。这些多项目的测量来自于以前的高水平研究，基于预调研的反馈基础上进行了修改。问卷同时也收集人口统计变量数据用于分析。国际互动根据 (Lee D Y, 2005) 完成测量，出口经理关系 (Bonner, 2010) 进行测量；出口经理知识根据 Covello and Brodie et al., 2002 基础上进行修改和开发；出口竞争绩效根据 (Katsikeas, C S, Skarmeas, D, Bello, D C, 2008) 进行测量。相关题项参见下表 3。

3.4 测量模型结果

<table>
<thead>
<tr>
<th>因子名称</th>
<th>因子载荷</th>
<th>Cronbach α</th>
<th>AVE</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>国际互动 (SO)</td>
<td>0.733</td>
<td>0.513</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>我们经常在上下班外时间与进口商沟通和联系（比如，透过网络）(SO1)</td>
<td>0.655</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>我们经常与进口商一起进行感情交流和人际沟通等（比如，访问参观，非正式会议，讨论等）(SO2)</td>
<td>0.811</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>我们经常与进口商聊一些工作之外的共同话题（比如，个人爱好，时事新闻等）(SO3)</td>
<td>0.645</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>出口经理知识</td>
<td>0.755</td>
<td>0.602</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>我们的外销员对公司的产品和服务设计和专门知识有广泛的了解</td>
<td>0.710</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>外销员人员对进口商的市场和产品有广泛的了解</td>
<td>0.843</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>外销员人员对目标市场拥有广泛的了解</td>
<td>0.836</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>进口商参与</td>
<td>0.757</td>
<td>0.523</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>我们和进口商有广泛地面对面交流</td>
<td>0.757</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>我们和进口商经常进行小组讨论</td>
<td>0.922</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>进口商经常参与我们的工作会议</td>
<td>0.687</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>出口经理关系</td>
<td>0.885</td>
<td>0.734</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td>我们和进口商的不同部门之间都存在着联系</td>
<td>0.723</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>进口商是我们联系其他进口商的桥梁和通道</td>
<td>0.723</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>我们和进口商不同层次人员之间存在联系（高层、中层、基层）</td>
<td>0.686</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>出口竞争绩效 (CMP)</td>
<td>0.901</td>
<td>0.762</td>
<td>0.90</td>
<td></td>
</tr>
</tbody>
</table>
相对竞争对手，我公司产品获得了好的市场定位（CMP1）
相对竞争对手，我公司产品市场份额得到了提高（CMP2）
相对竞争对手，我公司市场得到了战略性扩张（CMP3）

\[ \chi^2 = 141.76 \quad df = 90 \quad NFI = 0.912 \quad NNFI = 0.954 \quad CFI = 0.965 \quad IFI = 0.966 \quad RMSEA = 0.069 \]

为了评价每个结构的心理测量构成，文章是用 EQS 进行了验证性因子分析（CFA）（Bentler, 1995）。在此之前，使用探索性因子分析（EFA）对题项的内部一致性进行了检验，删除了那些具有高交叉载荷和低题项-整体相关性的题项。剩余的题项进行了验证性因子分析，结果如上表。总体而言，使用收集的数据来拟合测量模型，NFI=0.912，NNFI=0.954，CFI=0.965，IFI=0.966，RMSEA=0.069，均通过了相应的接受水平，显示了较好的拟合水平（Garver&Menter, 1999; Hair et al., 1998）。为了评价结构可靠性指标（Reliability indicators），对 Cronbach a 值进行了估计，均大于 0.7，通过了普遍都接受的门槛值（Garver&Mentzer，1999; Hair, Anderson, Tatham, &Black, 1998）。所有变量结构的聚合效度（Averageent Validity）很充分，AVE 值均在 0.5 以上（Fornell&Larcker, 1981），因子载荷水平也处在较高水平上。

4 结构方程模型假设检验结果

为了检验假设结构之间的联系，本文使用椭圆再赋权最小平方技术（Elliptical re-weighted least squares）进行模型的估计。分析显示满意的结构方程拟合指标。卡方和自由度的比率为 \[ \chi^2/df = 98.781/65 = 1.520 \]，模型的各项拟合指标良好：\[ \chi^2 = 98.781 \quad df = 65 \quad NFI = 0.907 \quad NNFI = 0.952 \quad CFI = 0.965 \quad IFI = 0.966 \quad RMSEA = 0.065 \]。下图展示了各变量之间的标准化路径系数以及显著性。有趣的是总体的各路径系数中，仅有两个路径未得到支持而排出，其余的均得到了显著性支持。下面针对每一个假设的结果我们进行一一讨论：

![图 2 整体模型结果](image)

图 2 整体模型结果

接下来本研究使用 EQS6.1 软件进行了结构方程模型（SEM）分析，考虑了模型的拟合度较好。我们进行了假设验证，

假设 1a 认为国际互动有利于出口经理关系。两者关系尽管证明了假设，并且通过显著性检验（\( \beta = -0.567; P < 0.01 \)）。因此假设 1a 得到支持。

假设 1b 认为国际互动有利于出口经理知识提升，实证结果支持了这一假设（\( \beta = 0.343; P < 0.05 \)）。因此
假设 1b 得到支持。

假设 2a 认为出口经理关系有利于进口商参与的提高，实证结果支持了这一假设（β=0.696；P<0.01）。因此假设 2a 得到支持。

假设 2b 认为出口经理知识有利于进口商参与提升，实证结果支持了这一假设（β=-0.439；P<0.05）。因此假设 2b 得到支持。

假设 3 认为进口商参与有利于出口竞争绩效的提升，实证结果也支持了这一假设（β=0.675；P<0.01）。因此假设 3 得到支持。

我们按照中介效应检验步骤（Baron and Kenney，1986）。首先我们通过结构方程模型检验了出口经理关系、出口经理知识和进口商参与对出口竞争绩效均存在显著的直接效应，整体模型拟合较好（X²=139 df=80 NFI=0.905 NNFI=0.943 CFI=0.956 IFI=0.957 RMSEA=0.078）。然后我们在模型中加入了出口经理知识对进口商参与的直接影响，整体模型的拟合度进一步优化（X²=118 df=79 NFI=0.918 NNFI=0.961 CFI=0.971 IFI=0.971 RMSEA=0.064）。并且出口经理关系对于出口竞争绩效的影响由于加入进口商参与后变成不显著，说明进口商参与完全中介了两者的关系。如下图。

当我们在模型中加入了出口经理知识对进口商参与的直接影响时，整体模型进一步优化（X²=108 df=79 NFI=0.926 NNFI=0.971 CFI=0.978 IFI=0.979 RMSEA=0.055）。并且出口经理知识对竞争绩效的影响由于加入进口商参与后两者的关系降低，说明进口商参与部分中介了出口经理知识对出口竞争绩效的影响。
5 结论与讨论

在当今出口市场上，随着互联网等技术的发展，出口商与进口商之间国际互动表现的越来越频繁，越来越高效率。地理距离障碍正在被清除。但是由于“逆全球化”的出现，使得心理距离以及文化距离的障碍正在逐渐的被强化，如何破除障碍，促进进口商参与，提升企业的出口竞争绩效正是本文的研究重点。通过研究本文得到如下结论:

首先，本文从社会资本视角研究社会资本的相关维度对出口竞争绩效的影响机制，结论认为国际互动能够提升出口经理关系和知识。出口企业的资源优势关乎到企业的竞争力，本研究认为中国出口企业通过国际互动的方式能够嵌入到国际关系中，能够提高出口经理的知识。研究结论发现，国际互动对关系的影响要高于对知识的影响程度。

其次，出口经理关系和知识对进口商参与具有积极的影响作用，关系相比知识而言，关系的影响更大些。
再次，进口商参与对出口竞争绩效的提升有积极影响。
最后，参与型顾客融合对网络嵌入和出口竞争绩效的关系有完全的中介作用。参与型顾客融合对外销人员知识和出口竞争绩效的关系具有部分中介关系。

References:


exploitation in young technology-based firms. *Strategic Management Journal, 22*(6-7), 587-613


customer satisfaction in tourism service--The service encounter prospective. *Tourism Management, 28*(6), 1518-1528


Track 15: Management Issues in Digital Age
Mobile Advertising optimization Strategy Based on SICAS Model In China

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Abstract:

Mobile Internet changes consumer behavior, which also changes marketing. Mobile advertising is an important part of mobile marketing. SICAS model describes consumer behavior and provides guidance for mobile marketing. This paper applies SICAS model to analyze mobile advertising’s role in the consumption process, and then put forward the optimization strategy on the advertising delivery, advertising content and advertising communication. The precise delivery is achieved through tagged consumer and programmatic purchase. Content advertising, as the core of mobile advertising, is influenced by location, creative experience and scene. Native advertising that content is advertising provides good consumer experience. Cross-screen communication and social communication increases the communication performance of mobile advertising. This paper contributes to the understanding and improvement of mobile advertising, and its findings provide the new thinking perspective for mobile advertising.

Keywords: SICAS; Mobile marketing; Mobile Advertising

1. Introduction

The development of mobile Internet has brought about changes in consumer behavior. The consumer scenes open up online and offline from the traditional PC Internet to mobile Internet. A variety of rich content experience and consumption upgrades happen to consumers, and marketing methods have changed under the mobile Internet environment. Mobile Internet is influencing the traditional forms of advertising communication, constantly challenging the cost-effectiveness of traditional advertising, and increasing the demand for advertising content and advertising expression forms. With the continuous penetration of mobile media, mobile advertising has become the new normal for brand marketing. The mobile-side information dissemination is characterized by specificity, accuracy and interactivity. Compared with the full delivery of traditional advertising, mobile advertising can achieve precise delivery, convenient and timely, free from geographical restrictions and show better marketing performance and greater commercial value. This paper analyzes the consumer behavior and consumption path in the mobile internet, applies SICAS model for the mobile advertising, and puts forward the advertising optimization strategy to provide reference for the mobile advertising.

2. Literature review

The transformation of consumer behavior has led to the changes of marketing methods. In the aspect of consumer behavior model, it has undergone three stages: AIDMA, AISAS and SICAS. AIDMA model under the traditional marketing corresponds to Mass Media and Mass Market's broadcast marketing and describes the consumer shopping decision process in the traditional marketing environment. AIDMA believes that consumers experience five stages from the contact with information to the final purchase: Attention, Interest, Desire, Memory, and Action. AIDMA promotes the entire marketing process through traditional advertising marketing methods, and realizes the wide communication of information.

In the age of PC Internet, the guiding effect of AIDMA model has been continuously weakened. Japan Dentsu Group (2005) proposed AISAS model: Attention, Interest, Search, Action, and Share, which emphasizes that consumers independently search for information and share experience after completing purchase behavior. Consumers search Internet for the interesting product information, decide whether to purchase, and actively share their shopping experience to more consumers. AISAS model corresponds to
consumers actively searching for information and actively responding to shopping results, but consumers are still passively accepting advertisement information. The Internet provides consumers with the convenience of information search during the consumption process. It is still a one-way marketing communication process, focusing on obtaining consumer attention more than consumers sharing.

In the age of mobile Internet, consumer behaviors and marketing methods are more open and complex, changing the entire consumption process from a one-way communication to a two-way interactive sense connection. DCCI (Data Center Of CHINA INTERNET) (2011) proposed SICAS model to deconstruct the multi-point two-way consumer behavior and provided guidance for marketing decisions. SICAS model includes five stages: Sense between the brands and consumer, Interest & Interactive, Connect & Communication, Action and Share. SICAS model corresponds to changes in consumer behaviors and consumption patterns in the consumption process, and analyzes the links among consumer information contacts, consumer behaviors, consumption paths and the communication between consumers, consumers and the brands from a variety of perspectives of media, channels, and scenes. During the entire consumer process, consumers take the initiative in information attention. Consumers gradually change from passive one-way receiving information to actively acquiring, collecting and sharing information, actively involved in the creating, sharing and disseminating information. SICAS model demonstrates “relationship matching-interest coupling-experience sharing” marketing focusing on consumers rather than products. In such a communication environment, advertisers sense and respond to consumers demand in real-time, establish multidimensional interactions between advertising and services, relying on reliable and convenient entrances for consumption and actively undertaking the dissemination of advertisements.

SICAS model constructs the theoretical model to understand consumer behavior in the digital age, and has been continuously verified in digital marketing activities in China. Many researcher apply SICAS model for social networks communication and social marketing (Li(2013);Jiang&Yang(2013);Yang(2011);Zhang&Liu(2014); Zhang&Bi(2016); Zhang(2013); Yan,Hu,Xu&Liu(2017)), and the dissemination and development of online advertising (Ren&Zhao (2012); Wang (2013)), but there are still few research applications for mobile advertising.

3. Mobile Advertising Analysis Based on SICAS Model

Consumer behavior patterns have changed in the age of mobile Internet. Mobile advertising starts with acquiring consumers for products and services, obtains consumer demand through online senses; and realizes interactive connection with consumers to provide the valuable solutions; recommends the brands to meet consumer demands and form the flow from online to offline; feedback online through social sharing after using mobile payment to complete the transaction, to form a complete closed-loop mobile business.

3.1 Sense

Establishing sense networks between the brands and consumers is the foundation of mobile marketing. Social media and LBS (location-based services) can all be used to establish an interactive sense network. For the brands, the real-time sense of the entire network can fully sense consumers and be sensed by consumers, timely sense consumer needs and experience reviews, understand the consumption value orientation, discover and predict consumer trends, and realize dynamic response and effective contact, which is sensed by consumers in the most appropriate way. For consumers, they can choose the brands they are interested in anywhere and anytime. Click, push, subscription, follow, share, automatic matching and location services are implemented to achieve effective sense.

3.2 Interest & Interactive

The effective interaction on the sense network enables consumers to resonate with consumers based on interest coupling, and expresses their preferences through the topics, popularity and follow. Interaction lies not only in the effective sense, but also in the way of interaction, the topic content and the interrelationship. Consumers express their attitudes on social platforms, then word of mouth effect is
generated, understood, followed, and responded to consumers interests and needs through the social network, by which consumers are interested in mobile advertising content and interaction.

3.3 Connect & Communication

Brands and consumers should connect and interact with each other in varying degrees. Different advertising systems and content service are integrated based on advertisement, content, and relationship networks. Combining mobile Internet and PC internet, accurate brand information is delivered to the target consumers through cross-screen marketing to observe consumer behavior from the consumer’s point of view and establish an adequate communication and interaction mechanism to deepen familiarity of the brands.

3.4 Action

Consumer purchasing behavior not only occurs in the e-commerce platform, mobile app and social network may become the origin of the purchasing. Mobile advertising is a medium for increasing brand exposure and stimulating consumption while mobile payment and LBS are indispensable to realize sales conversion. Mobile applications, mobile e-commerce, and mobile payment can be integrated to increase promotions and discounts for mobile consumer. At this stage, mobile applications will pay attention to the connection rate with the e-commerce platform and the conversion of e-commerce data.

3.5 Share

Consumers often use social platforms to express their personalities and attitudes. Experience sharing is automatically distributed and dynamically aggregated on social networks, more complex than word-of-mouth marketing. Consumer experience sharing is becoming the source of consumption rather than the end of the consumer process to a large extent. Social relationships among consumers have become the key of enterprise marketing. Consumers express their feelings for products or services on social platforms, share experience with each other, and influence relevant consumers in the social network. The capability of discovering key information in experience sharing is essential to satisfy consumer needs and improve consumer productivity.

4. Optimization Strategies for Mobile Advertising

Mobile consumer behaviors are more private and more fragmented. Consumer usage time and diversification of mobile media has promoted the development of mobile advertising. Websites, social platforms and advertisers can make full use of the characteristics of mobile devices to interact with advertising content, to achieve precise delivery based on big data involved consumer attributes, geographic location and other indicators, and to improve the efficiency of mobile advertising. In order to match the characteristics of mobile consumers and explore the value of mobile advertising, mobile advertising strategies can be optimized in advertising delivery, content, and communication channels.

4.1 Optimization of Advertising delivery

To achieve precision marketing in big data environment, the advertising delivery needs the change from the media-orientation to the crowd-orientation. The previous media-oriented delivery was relatively simple, focused on the network flow, concerning the match of media content and network flow, so it was extensive and inaccurate. The crowd-orientation delivery precisely matches and targets the consumer through in-depth analysis of multidimensional data such as online behavior, offline location and consumer attributes, so as to optimize the delivery through tagged consumer and programmatic purchases.

4.1.1 Tagged consumer

To tag consumers is the first step of achieving precise delivery. The specific content of the tagged
consumer includes: mobile demographic attributes and consumer acceptance variables. Demographic attributes include age, gender, educational background and geographic location, as well as common time and location and mobile access methods. The mobile consumer acceptance variables influence consumers' usage of mobile advertising, such as entertainment sharing, information search, life status, and emotional level. Through the basic consumer tag refinement combined with online behavior and offline location, the target consumer characteristics can be determined. The consumers are tagged by using big data to crawl every consumer's Internet access path and analyze mobile consumers profile: male or female, how old, marriage or not, permanent city, career, the income, the habit of surfing the Internet, mobile device preferences, time period for using mobile devices, content preference and so on. Consumer interest and behavior preference are described to achieve precision marketing based on the personalized demand of consumers.

4.1.2 Programmatic Purchase

After tagging consumer, the target consumers of brand are segmented. According to mobile usage habits of target customers and recent search keywords, potential preferences brands and products are automatically pushed to consumers. The precise delivery of mobile advertising relies on emerging programmatic purchasing methods, by which the content of advertisements is intelligently delivered to the platforms and media strategies are continuously adjusted through real-time data feedback.

Programmatic purchase is suitable for the fragmented mobile advertising. Through automatic matching of supply and demand, labor and business costs are saved, and behavior tracking and intelligent dynamic allocation to cross-screen consumers are achieved. Programmatic purchases can be made on DSP (Demand Side Platform), Ad Exchange (advertising trading platform) by the way of RTB (Real Time Bidding) mode or NON-RTB (NON Real Time Bidding) mode. With the development of programmatic purchases, the current non-public auction methods such as PMP (Private Market Place) and PDB (Programmatic Direct Buy) are more popular. PDB can ensure the visibility of advertisements and brand safety, and is more in line with brand advertisers.

4.2 Optimization of Advertising Content

Content marketing has gradually become the mainstream of advertising. The effectiveness of mobile marketing depends not only on the media exposure of advertising, but also the communication experience. Advertising content is essential to influence consumer experience. Content advertising, which is the core of mobile advertising, transforms advertising marketing information into the content that consumers want. Advertising content focuses on media resources and big events, and is deeply embedded into product and service. Stream advertising and creative advertising are integrated to achieve strong content relevance. Native advertising provides valuable and meaningful content tailored to the consumer to satisfy the need of their lifestyles, to present brand information, and to appeal emotions and form consumer resonance.

4.2.1 Influencing Factors of Advertising Content

Advertising content not only requires the ad platforms to be highly integrated and provide creative advertising, but also has a high degree of relevance to the promoted consumer. Relying on big data analysis of the consumer segment, consumer characteristics are performed data mining and analysis to get personalized consumers profile, which helps the brands target consumers, precisely match marketing content, and make the content of the native advertising more targeted.

1) Location

Location service advertising is the most popular form of mobile advertising, with less than 10% of consumers taking a negative attitude toward it. In the content of location advertising, consumers are more willing to accept shopping, catering, entertainment and travel advertising. Location service is one of the
indicators that reflect the behavior patterns of consumers. Based on consumer characteristics and brand preferences, the location of consumers can be a powerful tool that describes the urgency of consumer demand. Consumer demand is highly correlated with the scenes which may easily affect short-term temporary consumption. By digging into the consumer's motivation and consumer's location, it is possible to combine effective consumer behavior and geographic location for effective marketing and to implement content-based, action-friendly personalized mobile advertising campaign.

2) Creative Experience

The creative execution of mobile advertising needs location, time, weather, or other elements to provide consumers with meaningful and relevant experience, so as to attract consumers and influence their consumption behavior. Product service performance and advertising creativity are integrated through in-depth analysis of the local target consumer behavioral characteristics and consumption paths, to provide a variety of advertising forms focusing on ad copy, relevance, preferential information and visual and sound effects, and to create the content that cause consumer emotional resonance and goodwill.

3) Scene

The boundary between the online and offline scenes has become increasingly blurred, and both show a convergence trend. Scene marketing starts from offline, connects online scenes, and then acts on offline scenes to achieve closed-loop scene marketing. At present, most of mobile scenes focus on catering, shopping, leisure, travel and family scenes. In the mobile scenes, the scenes of clicking ads mostly happen in shopping, chatting with friends, reading news, watching videos, searching information and social networks. Different advertising information and call for action are considered according to the consumption stage and location of the consumer to construct demand scenes and push advertising content that can reinforce the brands and provide useful information.

4.2.2 Native Advertising

In mobile advertising, native advertising that content is advertising, providing the better consumer experience with the broader applications and stronger interaction, is valued by mobile platforms and advertisers. Native advertising is not just a sudden presentation of the consumer attention, but the depth content implantation. It fully meets consumer demand, makes consumers willing to participate and share. It is not a simple one-way "end-of-service" advertising, but a consumer-centric interactive sharing and new consumer experience.

With the support of the personalized recommendation engines and information flow, consumer profile is more accurate and clear, so that native ads are able to perform better and attract consumers to contact more advertising content by continuous supplement of new information. Traditional advertising is focused on the USP ((Unique Selling Proposition) of brand reputation, emphasizing the comprehensive advantages of the brands with the same or similar content. Mobile advertising focuses on UBP (Unique Buying Proposition) of consumer experience, emphasizing the long-term win-win relationship between the brands and the consumer in which advertising is content and then content provides experience. It realizes the emotion in the scenes and set up consumer-participating marketing to achieve the brands differentiated competitive advantage with precise delivery.

4.3 Optimization of Advertising communication

4.3.1 Cross-screen Communication of advertising

Single-screen mobile or online marketing can no longer satisfy advertisers’ demand of contacting and impacting on the consumer in multiple scenes. Cross-screen communication has two-way complementary advantages, and consumers may use multiple screens for content consumption at the same time. It is also possible to transfer between multiple screens in consumer behaviors. The combination of large screen and small screen is a kind of integration of resources in all media sources. The same
advertisement can be effectively complemented by communicating on multiple platforms. More consumers touch points make it easier for the brand values deeply rooted into the mind of the consumer. The data from the cross-screen feedback can provide more comprehensive insight into content consumers to improve content and technology.

Cross-screen identification technology is not yet mature at present. Cross-screen programmatic purchasing is mainly supported by the DSP intelligent dynamic allocation of cross-screen advertising budget to help advertisers in precision advertising delivery. According to marketing scenes of different screens and integrated cross-screen data, appropriate advertisement ideas can be delivered to different consumers so that the right consumer can see the right advertisement at the right time on the right screen. Cross-screen delivery of “PC + mobile + DSP” will be an important growth point for the subsequent advertising.

4.3.2 Social Communication of Advertising

When consumers fully participate in advertising, their roles change from the receiver to the experiencer and the information distributor, which make the effectiveness of advertising multiplied under the conversion of social attributes. The strong social attributes of mobile Internet will increase the stickiness of social platforms. The results of social advertising have been greatly enhanced by the form of native stream advertisements based on social networks. Social interaction sharing increases the ads click rate and achieves the brands exposure through virus communication. Advertising has more commercial value in the social platforms such as WeChat, Weibo, Toutiao and other online communities in China. At the same time, as a distribution center for opinions and suggestions, social platforms can effectively analyze the effectiveness of advertising, form interactive feedback with consumers, and make reasonable adjustments for the advertising effect.

The social communication of mobile advertising can be optimized in the following three ways. The first way focuses on the topic effect, which makes some interesting topics continuity, and then promotes them through websites, Weibo, Wechat, Toutiao, online community and other social platforms to continuously interact with consumers and enable consumers to actively accept brand information. For example, Starbucks opens #My Starbucks Idea# page on its website and social platforms to encourage consumers to customize products according to their preferences and vote on others' proposals. Starbucks will put the highest-valued into mass production and sales. The activity got a lot of feedback and forwarding from consumers in the short term. The second way focuses on the entertainment effects of UGC (User-Generated Content) and PGC (Professional-Generated Content). UGC and PGC content is very suitable for virus marketing on social media. For example, the ice bucket challenge was generated and swept the world in the form of short video via social media. The third way focuses on opinion leaders, Internet celebrities and talents in the community, makes use of the fan effect in the target consumers to make consumer keep a deep memory and favorable impression on the brands.

Conclusion

Online advertising focuses on network flow, obtains consumer attention through the entry-level products and is aimed at obtaining profits through the flow performance. Mobile advertising focuses on content, acquires consumers with the ultimate products and services, and provides better consumer experience through the integration of resources. Based on SICAS model, we can deeply understand the changes in consumer behaviors, and then optimize the mobile advertising strategy to meet the demand of consumers for precise delivery, integrate advertising content into social life and achieve better advertising performance.

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References

[16] Zhang Q.(2014). Research on mobile Internet advertising marketing. Heilongjiang university,
The Construction of Enterprise Talent Management Supply Chain Model

Under the Sharing Economy

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Abstract

Cooperative consumption, open information exchanges, combined with unlimited geographical area and time, associated with the newly sharing economy, completely overwhelm the traditional market operation mode and lead to a new sharing mechanism. Along with occurrence and prevalence of sharing economy, the operation and management of enterprises greatly influenced by the unique ways of sharing which resulted in a new mode of talent management based on collaborative consumption. At present, a lot of researches have been done by scholars, but being fragmented and without complete and scientific theoretical system. By exploring the operational mechanism, advantages and potential shortages of the model, this paper provides practical enlightenment for the fine management of enterprise talents and promotes the continuous innovation of talent management theory.

Keywords: talent management; sharing economy; talent sharing platform; talent supply chain; talent pool

Introduction

Talent management (TM), originated in the Western management community, has only been developed for more than twenty years (McDonnell, Collings, Mellahi and Schuler, 2017). With the growing TM challenges enterprises confront, mainly reflect in the changing demographics, such as an aging workforce and generational differences, TM witness a flurry of attention to both academics and business practitioners (Collings, Scullion, and Vaiman, 2015; Gallardo-Gallardo, Gallardo, Thunnissen, and Scullion, 2017). However, as a phenomenon-driven emerging discipline (Gallardo-Gallardo, Nijs, Dries and Gallo, 2015), TM research is lagging behind the organizational TM practice. Comparing with other relative mature theories, such as Human Resource Management, the field of TM still has some limitations. First, there is lack of a consensus on TM definition and a systematical TM architecture. In order to minimize the research gap and explore it further (Thunnissen, Boselie, and Fruytier, 2013; Thunnissen; 2016), some existing studies have tried to incorporate different theories, such as supply chain theory (Cappelli, 2008a), related stakeholders theory, multiple objectives theory (Thunnissen, Boselie and Fruytier, 2013), resource based theory, social exchange and dependency theory, institutional theory (Krishnan and Scullion, 2017), learning theory, brand value and signal theory (McDonnell, Collings, Mellahi, Schuler, 2017), but more interdisciplinary researches are warranted. Second, despite an increase in TM studies since 2010, there is still too little empirical evidence (Collings and Mellahi, 2009; Krishnan and Scullion, 2017; Lewis and Heckman, 2006; McDonnell, Collings, Mellahi, and Schuler; 2017; Thunnissen, Boselie and Fruytier; 2013; Thunnissen, 2016). Third, more researchers are calling for contextualized TM. While much attention is paid to organizations in the private sector, multinational corporations, and the U.S. based organizations, little critical evaluation on organizations in other contexts, such as emerging markets such as China and India, the public sector, and small and medium-sized private enterprises (Collings et al., 2011; Krishnan and Scullion, 2017; McDonnell, Collings, Mellahi, Schuler, 2017; Thunnissen et al., 2013; Thunnissen, 2016). More specifically, a large number of studies focus on organizations’ internal strategic matching and ignore the changing external environment such as the circumstance of sharing economy (Gallardo-Gallardo et al., 2017; Thunnissen, Boselie and Fruytier, 2013). Fourth, existing studies on TM are overly unitarist and managerialist at an organizational level, with a lack of emphasis on individual talents, especially the talents in the “grey area”
In seeking to minimize the research gap, this paper aims to adopt an inclusive view of talents to conduct a contextualized interdisciplinary TM research under the sharing economy in China. Combine the theories of talent supply chain and talent pool, this study further advances the understanding of the TM theories. In the first part of the paper, we analyze the sharing economy and collaborative consumption regarding its drivers and present development. At the same time, we comprehensively review the TM theories including the definitions, TM practices and TM related outputs. In the third part of the paper, a talent sharing platform and a supply chain model, that was founded on Cappilli's (2008) research, was developed. Subsequently, we analyze the potential problems and provide countermeasures of talent supply model under the sharing economy. Finally, possible future research directions were identified.

1 Theoretical background

2.1 Collaborative consumption and the sharing economy

In recent years, a large number of scholars in the field of economy has attached great value of the sharing economy and the collaborative consumption. Belk (2007) put forward that the collaborative consumption, a new type of information consumption (Lv, 2014), is an acquisition and distribution of idle resource for a fee or other compensation. In addition, collaborative consumption can be defined as consumers that pay for the temporary use of the preferable good instead of buying it to possess its ownership (Bardhi and Eckhardt, 2012). With the development of the Internet, the new non-ownership-based sharing consumption, a personal-to-personal transaction(Lv, 2014), has a great effect on people's life (Belk, 2014; Lv, 2014), which influences travelling, housing, lending and socialization and other aspects (Möhlmann, 2015; Quattrone, et al. 2016; Hamari, Sjöklint, Ukkonen, 2016) such as idea and knowledge sharing for fees (Belk, 2014).

Under the circumstance of sharing economy, the collaborative consumption emerged at the historic moment is not only people's passionate pursuit for the simple lifestyle, but also a respect and favor for the Chinese ancient Mohist "thrifty thought" in management theories and management practices. The sharing model represented by the car2go and Airbnb in Western countries, Pig Networking Platform and Didi Taxi in China brings tremendous convenience and value, while simultaneously has had a huge impact on the traditional way of companies' operation (Zervas, Proserpio, and Byers, 2013; Schor, 2014). Therefore, as an important decisive factor of a company's operation, the traditional TM model has changed a lot (Gao, 2015). On the one hand, both the category and scope of talents have been extended, and the traditional employment restrictions of enterprises have been broken, which transformed the unequal employment relationship into an equal partnership (Ye, 2015). On the other hand, companies still face traditional problems, such as shortage of talents, skill mismatch, high brain drain, and huge cost of TM. Faced with new external environment, the current needs of enterprises cannot be met through the traditional TM model, which urgently needs a set of unconventional management methods and management theories (Cheng, Li and Liang, 2016). Thus, it is imperative to build an innovative TM theory to help organizations to gain new competitive advantage. This paper builds on a systematic review of exiting literature and develop a talent supply chain model to provide assistance for enterprises to increase their sources of hiring, promote the talent-organization fit, improve the stability of talents, and reduce management costs.

What drives the TM? There are mainly three key drivers including economy, technology and demographics. The development and operation of an enterprise cannot be separated from a specific economic environment. At present, China's economic development is in a new status with a high speed of development; economic structure has been continuously optimized and upgraded, and the requirements for innovation have been increasing (Zeng and Zhang, 2015). The rapid and dynamic changes in the economic environment have promoted companies to take steps to carry out transformation and upgrading
(Vaiman, Scullion and Collings, 2012; Peng, 2014b). As a result, companies have to restructure their business process, and adjust their staffing procedure to meet the needs of the changing economic environment (Li, Chen and Jin, 2016). Chen and Wu (2015) use the case analysis method and suggest that talents as the knowledge carriers should be viewed as a capital rather than a cost to a company. Peng (2014a; 2015) pointed out that talents gradually took a dominant position in organizations, that pushes society into the era of human capital management.

While changes in the economic environment have fundamentally promoted the transformation of TM models, the information technology (IT) is a catalyst of TM innovation. The rapid development of IT (Schor, 2014) has greatly facilitated the exchange of information (Hamari, Sjöklint, Ukkonen, 2016), breaking the normal status of inequality between companies and talents caused by the asymmetry of information and resources. Instead of attaching to companies, talents begin to cooperate with enterprises equally (Peng, 2014a). At the same time, IT has spawned a large number of sharing platforms (Belk, 2014) and lead to the fact that traditional management model does not work well as before. Extensive use of mobile clients simplified TM processes (Chen, 2016), real-time payment of salaries made talents be self-motivated at any time and in any place (Peng, 2014a; Cheng, LI and Liang, 2016), human capital increased self-value continuously in an autonomous and flexible manner with the support of IT (Chang, 2014), which will accelerate the development of TM models.

The combined effect of the economic environment and IT has made the reform of the enterprise TM model inevitable, and the rapid change of the talented plays a critical role in the successful transformation. On the one hand, the severe population aging problem (Tarique and Schuler, 2010), combined with the lower birth rate, leads to a shortage of the total labor force (Mcdonnell, 2011), which brings rigorous global talent supply problems (McDonnell, Collings, Mellahi, and Schuler, 2017). On the other hand, the population presents a significant structural difference among generations. The current talent pool is becoming younger in age, and there is diversity in the choice of personality and value orientation, which impacts the TM model. As the millennial generation, the generation after 80s and 90s, with different knowledge, ability, personality and behavior, become an important source of corporate value creation and the main force of the social talent pool (Shi, 2012). With their unique knowledge and emotions, they became a special “value-added” human capital (Zhao, 2015). Instead of pursuing for job stability, they pay more attention to the initiative and flexibility of work, prefer tolerated management style, and peruse the home-work balance (Tlaiss, Martin and Hofaidhlouai, 2017). The binding role of traditional work is weakening, resulting in higher mobility rate and turnover rate (Li, Chen and Jin, 2016), increasing the direct and indirect costs of talent investment and replacement for companies (Tlaiss, et al., 2017). Therefore, when companies are required to manage such talents, they should pay attention to their own personalities, conducting differentiated management, stimulating value creativity, promoting talent retention to reduce brain drain. On the whole, companies began to focus on the management of capital-based human resource, namely TM (Dries, 2013).

2.2 Talent management

Scholars have inconsistently debates on the TM specially regarding the research contents (Gelens, Hofmans, Dries and Pepermans, 2014; Gallardo-Gallardo, Dries and González-Cruz, 2013; Gallardo - Gallardo and Thunnissen, 2016; McDonnell, Gunnigle, Lavelle & Lamare, 2016; McDonnell, Collings, Mellahi and Schuler, 2017). Thunnissen, Boselie, and Fruytier (2013) reviewed 62 TM related documents from 2001 to 2013, and then summarized the research content of TM into three themes: the definition of talent and TM, TM expected results and effects, and TM practices. To understand TM, the definition of talents and TM are gaining great importance, which can be divided into four categories: 1) TM is the replacement of human resources management, that is, the acceleration of human resource management practices through information technology and other application of TM systems (Lewis and Heckman, 2006). 2) TM is the study of talent pools, which partly refers to the development and intensification of HRM practices, such as successor planning and human resource planning (Michaels, Handfield-Jones and Axelrod, 2001; Lewis and Heckman, 2006). 3) TMis the management of talents, which involves two kinds of TM approaches (Lewis
One is an exclusive TM approach that focuses on high potentials and high performers, and the other is an inclusive TM approach that emphasizes on all employees in organizations. 4) TM is an object-based management and mainly includes the management of key positions (Boudreau and Ramstad, 2005; Collings and Mellahi, 2009; Groysberg, 2010; McDonnell, 2011; Minbaeva and Collings, 2013), management of talent characteristics (knowledge, skills, capabilities) (Gallardo-Gallardo et al., 2012), and the management of personnel management framework (Collings and Mellahi, 2009; McDonnell, Collings, Mellahi, and Schuler, 2017). Regarding the expected results or impacts of TM, the current research is still dominated by corporate performance, that is, economic profit driven (Cappelli, 2008c; Collings and Mellahi, 2009), and some scholars have begun to pay attention to sustainability (Boudreau and Ramstad, 2005), but less consideration is given to non-economic factors in organizations, employees, and society (Thunnissen, 2016; McDonnell, Collings, Mellahi, Schuler, 2017). In terms of people management practices, it mainly includes talent recruitment, deployment and succession planning; training and development; talent retention (Thunnissen, Boselie and Fruytier, 2013; McDonnell, Collings, Mellahi, Schuler, 2017). The talent pool, as a main strategic method to develop and retain talents, is popular with most companies (Collings and Mellahi, 2009; Stahl, Björkman, Farndale, Morris, Paauwe, et al., 2011). Collectively, the current research topic mainly focuses on the analysis and discussion of talent supply chain (Cappelli, 2008a) and talent pool (Collings and Mellahi, 2009).

2.3 Talent supply chain

Supply chain management was first applied to business management to promote the matching of enterprise products, services and customer needs (Cachon and Terwiesch, 2006). Cappelli (2008a) firstly introduced supply chain theory into talent supply and demand management. After that, the talent supply chain research continues to deepen, mainly reflected in the definition of talent supply chain and the construction of models. In terms of definition, Cappelli (2008b) built a supply chain to continuously source talents from both inside and outside the company in order to rapidly adapt to the changing global environment. Liu (2010) proposed that companies can develop and cultivate the talents needed in small batches, at multiple frequencies to minimize the development cost of talents. In the aspect of model construction, Huang (2013) established a talent supply chain model to improve the match between schools and enterprises about supply and demand through talent training. Wang et al., (2013) developed an IT based talent supply and demand networks. To realize the integration of talent supply chain, Li and Teng et al., (2016) constructed a talent supply network centered on the human resources department in the organizations to form a talent flow between many HR departments and many employment departments, which provides guidance for the positioning of the human resources department in the talent supply chain. Dubey and Gunasekaran (2015) used a knowledge-skills model to build a supply chain talent framework to direct the cultivation of corporate supply chain talent. Makarius and Srinivasan (2017) used the CPFR (cooperation, planning, forecasting, replenishment) ideas of the supply chain to build a TM collaborative planning model and promote the development and flow of talent through the strengthening of cooperation between companies and suppliers (Zeng, 2011). The ultimate goal of the talent supply chain is to continuously source talent for the company and promote the sustainable development of the company. In order to guide companies in saving and cultivating talents, relevant scholars have focused on the study of talent pools.

2.4 Talent pool

Talent pool is a reservoir for corporate reserve talents (Iles, Chuai, and Preece, 2010). A relatively large number of studies focused on the construction of the talent pool system but lacking a unified and clear definition. Talent pools use specific succession or career channels to cultivate talents in a broad
organizational context (Stahl et al. 2007), and Cappelli (2009) introduces the concept of portfolios into TM pools to foster the development of extensive and universal capabilities. Combining with immediate training and guidance to reduce the uncertainty of talent demand, Chen and Yu (2015) believe that talent pool is the classification of training and career planning for talents to promote their use. In terms of system construction, current scholars shift their attention from internal talent pools (Collings and Mellahi, 2009) to the combination of internal and external talent pools, to inter-organizational talent pools (Boselie and Paauwe, 2018), and to the diversified global talent pools (Stahl, et al., 2011). Wen (2014) pointed out that talent assessment, selection and evaluation systems can be constructed to realize the importance of personal development planning and talent pools. Hou and Lin (2016) use cloud model to achieve employee information sharing and self-improvement. To promote the construction of talent pools for enterprises, Wu and Mao (2015) build talent pool public service platforms through database tools to encourage talent exchange and knowledge sharing. Lou et al. (2017) divide talents into two dimensions based on their qualifications and capabilities, and then build an international talent pool system to train and reserve talents to meet the internationalization needs of the Chinese multinationals. Zhang et al. (2017) indicate that talent pools should be extended to the outside of the company and even to the global scope to create high-quality talents for enterprises. Broek, Boselie and Paauwe (2018) study participants from joint talent pools at four public-sector hospitals in the same region of the Netherlands to explore the mechanism of co-opetition and cooperation innovation between health care sectors. In seeking to further advance the understanding of TM, this article takes the enterprise as the center, and divides the talent pool into internal and external to conduct a cross organization study. While the external talent pool is an automatic pool of talent sharing platforms and the internal talent pool is the active management of the human resources management department.

In the subsequent section, we construct a talent platform model and a TM supply chain model. In the process of talent supply, we focus on the talent sharing platform and sharing ideas among the sharing platform, the human resources department of the company, and the employer department of the company, which are embodied in the free flow of talents, funds, and information (Wu, 2007).

2 Talent Management Model under the Sharing Economy

3.1 Talent sharing platform model

Regarding the talents sharing platform, scholars discussed its existence on the reasons, evolution, objects, and benefits. Chen (2016) points out that the talent sharing platform exists because the current society has a lot of idle labor resources and other resources to be excavated and developed. In order to maximize the value of idle labor resources, the self-management organization has continuously evolved to promote the birth and development of talent sharing platforms (Gao, 2015). Talented people from a wide range of sources participated in the sharing platform to broaden their horizons and look for opportunities to change their knowledge into money (Lv, 2014). The participants of the platform are diversified, which mainly caused by the uniqueness and innovation of young talents who seek a convenient and flexible way of working instead of reconciling to the traditional working life of “nine-to-five”. Thus, with the help of Internet technology, a large number of witkey came into the picture.

Witkey, a combination of wisdom and key, was first proposed by Liu, a postgraduate student of the Chinese Academy of Sciences in June 2005. It means a kind of people who can create real wealth with their knowledge and wisdom (Liu, 2011). On this basis, Chen (2008) and Shi (2009) proposed that witkey is a person who uses internet technology to flexibly transform his knowledge, wisdom, experience, and skills into income. Therefore, this article defines witkey as a person with valuable creative ability. As a new source of corporate talents, witkey enters into the enterprise TM system, making up for deficiencies of company's talent reserves in a flexible and diverse way of employment. Regarding the source of witkey, Li (2015) made a case study based on the Pig Networking Platform and suggest that the talents of the sharing platform mainly come from incumbents (part-time witkey), college students, and full-time witkey. So this paper divides the source of witkey into three categories according to the dimension of “free time”: the first
category is the time-abundant underemployed talents (full-time witkey), the second is the college students with relatively enough spare time, the last talent group is time-limited job incumbents. This article builds and analyzes the talent sharing platform model (see FIG 1) and the talent supply chain model under the circumstance of sharing economy (see FIG 2) from three aspects: talent flow, fund flow and information flow.

3.1.1 Analysis of the model

As shown in FIG 1, underemployed talents (that is, full-time witkey) mainly refer to talented individuals who have personal expertise, advocate freedom, and prefer flexible working methods. Instead of being bounded by a fixed time and place, they choose to be a full-time freelancer. It also includes experienced retired talents who want to create value through the reuse of free time.

College students, with rich knowledge and competencies, and most free after-school hours, have become a source of witkey. Colleges and universities, as a main form of higher education, play a key role in cultivating talents (Wu, 2007). As a center connecting enterprises and students (Ren, Wu, and Zou, 2015), colleges and universities rely on their heavy cultural heritage, strong academic atmosphere, and advanced teaching techniques to train a large number of excellent talents for enterprises and institutions.

On-job talents, having a labor relationship with the organization, usually have a relatively fixed working time, workplace, and a stable salary every month. However, in order to pursue a higher level of life or realize personal value, they make full use of their leisure time to earn income other than wages and to realize their personal ideals.

3.1.2 Analysis of talent flow

From the model in FIG 1, it can be seen that the general direction of the talent flow is the influx of talented people consisted of underemployed talent group, schools, and enterprises to the talent sharing platform. Each talented person can freely flow from one source to the other. Specifically, the underemployed talents and on-job talents can enter school for further study. After graduation, college students go into company and then become on-job talents or underemployed talents. Underemployed talents become the job incumbents by entering the company to obtain income, in reverse, job incumbents can resign from the company to become underemployed talents.

3.1.3 Analysis of fund flow

Witkey can independently register to the sharing platform for free. The platform deducts a fixed percentage of commissions from the transaction amount after the witkey and demand parties have reached a deal. Although some platforms, such as the Pig Network Platform, have established a paid membership system, the membership fees are only for freelancers with certain membership privileges. So when witkey enters the platform, there is no capital flow with the platform. Even if after the completion of the late transaction, they do not need to pay directly to the platform.

While those underemployed talent can enter colleges and universities to study, graduates also can choose to go to university for further study. Both of them need to pay tuition to colleges as students (Wu, 2007). College students and underemployment talents can be recruited through the campus recruitment, talent exchange market, Zhi Lian network recruitment and other media to reach an identity conversion. According to the provisions of the Labor Law, when workers enter a company, the company must not charge workers any fees. Therefore, there is no capital flow when college students and underemployed talents employed by enterprises, in turn, the company needs to pay wages for talent.
3.2 Talent Supply Chain Under the circumstance of Sharing Economy

3.2.1 Analyze elements of the model

As shown in FIG 2, talent semi-product supplier: talent sharing platform, that uses T abbreviation, T1, T2, T3... Tn, to represent different talent sharing platforms. Multiple talent sharing platforms constitute an external talent pool, namely talent semi-product supplier. As can be seen from FIG 1, underemployed talents, college students, and on-job talents can freely join the talent sharing platform. This article regards the witkey group in the sharing platform as a new source of organization talents without considering the members of the platform operation team, and the platform's management of witkey.

Talent processing party: Human resources department, with H abbreviation, H1, H2, H3... Hn to represent the human resources department of different companies. Multiple corporate human resources departments form an internal talent pool. Referring to Li's (2015) research on the talent supply chain of the human resources department of the company, this paper defines the human resources department of the company as a talent processing party in the talent supply chain. When the human resources department introduced talents to meet the needs of the department, it was also the employer department. Therefore, this model, without consider the use of human resources by the human resources department themselves, is just defined as a processing plant in which companies introduce and cultivate talents.

Demand side of the qualified talents: employer department, which uses E abbreviation, E1, E2, E3... En to represent the employer department of different companies. The employer departments of multiple companies constitute the demand side of qualified talents.

3.2.2 Analysis of talent flow

The flow of talents: witkey seeks opportunities through the platform to meet the needs of qualified talents. After successful cooperation between witkey and the platform, witkey, with professional skills and superior self-learning ability, can enter the talent pool within the company through assessments and then become talents who are recruited by the company's employer department. The external talent pool can broaden the sources of talent for enterprises. Formal recruitment after many times of cooperation will improve the accuracy of talent matching, reducing the number of unqualified employees and potential issues, such as the loss of talent, talent dismissal and labor disputes.

Counter-current: The two-way choice of witkey and talent sharing platform. When the cooperation between the two sides is not smooth, they can stop at one transaction. After the transaction is over, witkey can seek new opportunities on the sharing platform. When on-job talents find their jobs unsuitable, they can go back to the internal talent pool for training, and then find the most suitable job through rotation or take part-time freelance service through the platform to make full use of their spare time and improve their skills. By using the sharing platform, talented people have more work choices to realize their ideals and improve their well-being.

3.2.3 Analysis of fund flow

After successful cooperation, the demand side of qualified talents will pay witkey immediately (Cheng, Li and Liang, 2016), and pay the platform part of the commission to ensure long-term cooperation. The human resources department pay to witkey, who has been processed to a talented person. The way of order-based talents simplifies performance management processes, realizes real-time pay, facilitates compensation, benefits management, and reduces both corporate payroll and social insurance purchases.
3.2.4 Analysis of information flow

The information is shared equally in sources of three witkey. Among different sources, the demand side of qualified talents informs the talent processing party of the demand information, and then the talent processing party conducts the talent recruitment and development according to requirements. At the same time, the talent processing party conducts the demand analysis and provides the demand side of qualified talents with suggestions (Li, Teng and Chen, 2016). The talent processing party will distribute the demand information to talent semi-product supplier. The witkey will develop self-training as a qualified product according to the information requirements. The sharing platform will also give feedback to talent semi-product supplier to help adjust the cultivation strategy. This promotes the transformation of training methods of traditional enterprises, changes passive training to active learning and realizes self-management to foster qualified personnel.

3.2.5 Coopetition of the model

In order to promote the normal operation of the model and achieve the purpose of continuously providing qualified personnel for the enterprises, it is necessary to coordinate relations among witkey, external talent pool, internal talent pool, and employer department and create a good competition mechanism.

Witkey individual

Talented individuals should exert their subjective initiative and actively promote their own qualification. Keeping abreast of the standards and requirements of quality products, finding the gap between self and quality products (Hou and Lin, 2016), and improving themselves through large open online courses, such as MOOC (Massive Open Online Courses) (Qi, 2015).

External talent pool

Each talent sharing platform attracts witkey to join the platform through platform construction and external publicity, paying attention to the status of other talent sharing platforms, adjusting its own construction in a timely manner, carrying out differentiated construction based on its own characteristics and highlighting to implement differentiated competition.

Internal talent pool

The human resources department must use IT to conduct talent measurement and diversity training. The human resources department should conduct talents review, analysis of demand supply, and predictive training of talents (Sun, 2017). Big data measurement tools will help determine the personality characteristics of employees and promote post matching (Russell and Bennett, 2015). Using information technology to estimate product demand reasonably (Yuan, Hu and Sun et al., 2017) and forecast talent demand (Du, 2017). By setting up a super cloud backstage that includes all job information and job requirements in the organization (Hou and Lin, 2016), the differentiated training and management will be established (Meyers, 2014; Lou, Meng and Liang, 2017). At the same time, it is necessary to differentiate and classify the importance of human resources work to outsource unimportant work (Li, Chen and Jin, 2016), perceiving industry dynamics, and strengthening cooperation with demanders.

Employer department

The employer department needs to predict the quantity and type of talent demand according to the status of product selling, identify the job demand situation in time, and send the information to the human resources department. The employer department should record and evaluate the quality and quantity of information provided by witkey each time. When encountering a particularly excellent witkey,
the employer department would take actions to stimulate witkey to become company’s on-job talents. At the same time, they could promptly discover and pay attention to on-job talents who participate in part-time job through the sharing platform in case of the brain drain. As far as specific measures are concerned, the competent leaders can use interviews to learn the status of employees’ work, or to meet the needs of talents through regular rotations and job re-adjustments to prevent sudden loss of talent.

Through the above analysis, we knew the operating mechanism of the talent sharing model. The birth and rapid development of the sharing platform promoted the innovation of the talent supply chain. Both of them played an important part in promoting the TM of enterprises. Their effective combination can broaden the sources of talents of enterprises, facilitate the training and management of talents, and realize the efficient use of talents. Although this model brings great convenience to the enterprise with quick and flexible employment methods, it may also increase talent uncontrollability and legal risks. In order to prevent and avoid potential risks better, some countermeasures and suggestions are proposed as below.

3 Analysis of Potential Problems and Countermeasures of Talent Supply Chain Model in Sharing Economy

4.1 Increasing platform selection costs, mismatches of talent supply and demand

The uneven quality of the talent sharing platform has increased the cost of selection for the human resources management department and the employer department, delaying the supply of talent. At the same time, there may be information distortions which would lead to information misunderstanding about supply and demand in online communications (Wang, 2017), making the actual capacity of talents unable to meet the requirements of the demand side. Thus, the occurrence of emergency talent shortages hindered their normal producing and operations (Zhou, 2014). In addition, if we just treat platform trading as a single indicator to judge whether witkey should be included in the internal talent pool, there is a lack of scientific objectivity. To this end, companies can regulate the selection process to ensure the quantity and quality of talent sharing platforms and witkey. There are a large number of sharing platforms, and the identity of witkey is diversified. The Ministry of Human Resources should rationally select suppliers of semi-manufactured talents to avoid the risk of matching between supply and demand (Zeng and Zou, 2010), and continuously optimize the supply network and improve the quality of talent supply by constructing the evaluation systems (Li, Teng and Chen, 2016). Rigorous information base of witkey services should be established, with excellent service count as a hard indicator, and talent values and personality characteristics obtained through interviews and online assessments as soft indicators. Developing witkey into on-job talent could be considered only when both of the two indicators meet the requirements of the company.

4.2 Complicated labor relations and increased legal risks

In the talent sharing model, companies face greater legal risks. The talent sharing platform gave birth to semi-contractual labor relations (Gao, 2016) on the basis of traditional employment relationship, complicating labor relations (Guo, 2016); there may exists legal risks if the platform does not purchase social security for witkey (Gao, 2016). For example, during the period when the witkey provide service for enterprises, legal disputes caused by accidents may affect companies and lead to labor compliance issues (Peng, 2015). Therefore, enterprises can define the relationship between power and responsibility by regulating the employment of workers and clarify the legal responsibility of the company and the talent sharing platform as well as witkey before recruiting, that is, before the human resources department incorporates witkey into the internal talent pool, or before the cooperation between the employer department and witkey, legal checks are made. It is stipulated that enterprise shall not be responsible for any personal accidents of witkey during the period of providing services. The employment of witkey is in the form of temporary employment, one-time payment of labor compensation without social security.

4.3 Increasing brain drain rate and talent instability

The diversity of job opportunities brought about by the various sharing platform increased the
mobility of talents and is not conducive to talent retention (Wang, 2017). Regarded as freelancers, on-job talents are always looking for opportunities in accordance with their own interests or which can help to realize the value of themselves. However, to a certain extent, this status will lead to distractions and errors of talents in their work, and even to resignation which will increase the loss rate and the cost of talent retention.

Enterprises can restrict the brain drain by increasing the flow of talent and creating unfavorable conditions. For example, they can increase the cost of talent flow to maintain the relative stability of talent through such methods as below: strategic personnel training, the service term and the non-competition agreement, as well as the long-term and short-term compensation system. On the training of talents, Xiao et al., (2008) proposed that the system of talent cultivation in Japan and other countries can be introduced to formulate a training system that is only applicable to internal companies, thus increasing the turnover cost of talents. It is possible to increase the cost of talent turnover by allowing employees to bear some or all of the training costs (Cappelli, 2009; Liu, 2010) and signing service agreements and non-competition agreement with companies. On the remuneration system, it is feasible to implement a remuneration system, that combines long-term and short-term as well as fixed salary and variable wages, and signs a certain period of remuneration agreements with talents. For example, it is agreed that 60 per cent of the total remuneration will be paid in peacetime. After three years of continuous work, a further 40 per cent will be issued; or only a fixed salary will be issued each month, and a variable salary will be issued once a year at the end of the year.

In addition, companies can also reduce talent turnover intentions by increasing their satisfaction and loyalty. On the promotion of talents, the proportion of internal talent promotion could be increased. The rigid index system for promotion assessment clearly stipulates that the proportion of internal employees can be no less than 60 per cent in each year or in each promotion. In terms of personnel training, the company can focus on internal talents training, strengthen the reserve training of generalists (Zhou, 2014), and improve the post-adaptability and corporate loyalty of talents. Company can solicit the work needs of young employees and achieve a balance between work and life to improve their loyalty by flexible working methods, flexible vacation time, and remote office work.

4.4 Diversification of performance and compensation management, disruption of corporate team building

Compared with internal talents within the company, witkey may have significant differences in performance appraisal and compensation plan. This may easily create inequities within the company and undermine team building. On the assessment of the main body and content, the internal performance evaluation of human resources is the human resources department’s assessment of talent behavior, attitude and results, while witkey’s performance assessment is the evaluation of employer departments’ satisfaction degree to accomplishment of order-based tasks. On the compensation plan, compared to the relatively delay in the traditional payroll distribution, the instant payment for witkey (Cheng, Li and Liang, 2016) may easily cause unfairness for internal talent (Chi, 2017), reduce incentives for remuneration. For some high-paying external order transactions, internal talents easily gain misconception and believe that companies do not trust their work ability thus affect their working enthusiasm.

To this end, companies can regulate the employment systems of witkey and strengthen their corporate culture. In the employment of witkey, companies seek the best person first in the company in the form of internal publicity, giving priority to internal talent. Open and transparent witkey employment principles can enhance the internal talents’ sense of trust within the company. It is possible to strengthen the sharing culture within the company and let employees know that the difference between witkey performance appraisal and the compensation system is determined by the nature of their order-based tasks (Chi, 2017). It is also possible to form a corporate culture that personal compensation is not exchanged to each other. This will help to make employees aware that their personal privacy cannot be freely known, which can effectively avoid mutual comparison and reduce unfairness.
4 Research Prospects

The sharing economy, with its convenient operation mode, quick promotion speed, concise transaction method, and wide audience market, has been widely accepted by the business community and society, and has become a research hotspot in academic circles. However, there are still many potential issues in the existing research. On the one hand, there is a lack of theoretical support. Existing studies mostly use case studies to analyze the enterprises that adopt the sharing model in order to learn the operating model of the enterprises under the circumstance of sharing economy, and there are few researches for theoretical architecture. On the other hand, the current academic studies on the sharing economy mostly view companies as research objects, focusing on the advantages and potential problems of the sharing model, and paying less attention to individuals. Talents, as the carrier of information and technology, the main undertaker of creative work and the major participants of the economy, play a crucial role in the development of the sharing economy. Therefore, this paper combines the theory of TM and theoretically constructs TM under the circumstance of sharing economy from the enterprise level and the individual level.

Based on this theory, future research can be explored in the following four directions. For example, there is a need to build the talent retention mechanism for enterprises under the circumstance of sharing economy. In this status, each talent individual can freely participate in the sharing mode and share time, experience, knowledge and skills. This will increase the flow of talent among organizations and threaten the stability of the organization’s talents. Thus, the issue of corporate talent retention will attract much attention. Second, exploring the enthusiasm of talent creativity so that talented people have more opportunities in job selection and they can choose flexible working hours, working places and position. However, under the sharing model, several questions remain open: will talents’ creativity increase, or will it dynamically change with the passage of time? Correspondingly, how can companies take measures to increase the enthusiasm of their workforce and motivate employees? This also needs to be explored in future research. Third, developing the TM mechanism for multinational companies. Multinational companies attract talents from three aspects: expatriates from motherland, host country talents, and third country talents. The promotion of talent sharing models will affect the TM model of multinational enterprises. In addition, due to institutional and cultural influence, the headquarters’ TM model may not apply to subsidiaries. With the rapid development of multinational corporations, the TM model of multinational corporations will receive further attention. Finally, the current sharing model is at a stage of development. The new economic development model has spawned labor relations, that differentiated from traditional employment relationships, and will inevitably lead to new labor disputes. How to determine the specific form of the employment problem under the circumstance of sharing economy model, and how to formulate policies and regulations to resolve existing or potential new labor disputes will also become a research hotspot.

5 Conclusion

Under the influence of external factors such as the economic environment, science and technology, and population structure, companies face an increasingly serious problem of talents shortages. The talent supply chain model, that was developed in the paper, under the provides a reference for the enterprise to solve TM issues. While the global economic environment fluctuates frequently, it also brings ample opportunities for development. The rapid change of science and technology accelerates the global flow of talents, which create an imbalance in the distribution of talents. Meanwhile, as a driving force of economic development and technological innovation, human resources are characterized by ageing, youthfulness, and stratification within global scope and exacerbate TM issues. Due to such differences as economic, cultural, and geographical factors, the state of talent and talent issues in each country have their own characteristics. Guided by the Chinese government policies, the regional and international economy have achieved long-term development. For example, the number of scientific and technological patents has been increasing, and the scientific and technological content of products has been continuously improved,
transferring from "Made in China" to "Created in China". Yet, the development and training cannot keep up with the pace of economic and technological development. In the current era of increasingly shared economy, the talent supply chain model constructed in this paper provides a solution to this problem. For instance, older retired people can play a role as a freelancer, creating value while slowing society's need for a young workforce.

In addition, the talent supply chain model in this sharing economy that built on the TM implementation status of enterprise can promote the pioneering and innovation of management models. Regarding cultural tradition that the companies around the world emphasize on internal successor training, this model can help companies introduce external talents and bring new ideas and new methods to the organization. When talents are included in the internal talent pool, enterprises must increase the construction of internal talent pool, build multi-level pools to deepen the cultivation of talents, and establish fine-grained training systems to accelerate the maturation of talents and optimize the talent pool in order to promote talent retention. In the era of sharing economy, the talent supply chain model can not only provide guidance for global TM and promote the globalization of talents, but also stimulate the globalization of talents' creativity, patents and products, enabling talents from all over the world to share creative ideas. For example, companies or individuals in any geographic area can seek out the best creative solutions on a global scale, while fully sharing the global intelligence and maximize the individual value.

References


[90] 高超民.分享经济模式下中契约型人力资源管理模式研究——基于6家企业的多案例研究.中国人力
FIG. 1 the talent sharing platform model

External talent  \( \leftrightarrow \) External talent  \( \leftrightarrow \) Employer

T1, T2, T3… Tn to present different Talent sharing platform
H1, H2, H3…Hn to present different Human resources
E1, E2, E3… En to present different Employer department

Talent semi-product supplier  
Talent processing  
The demand side of qualified personnel

- \( \rightarrow \) presents Talent Flow
- \( \rightarrow \) presents Fund Flow
- \( \leftrightarrow \) presents Information Flow

FIG. 2 the talent supply chain model under the sharing economy

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Abstract

This article has the objective of demonstrating how the digitalization process, and concomitant use of data, allows stakeholders to be more efficient and effective in the work they already develop. Besides leading to discoveries which will make it necessary to have alterations in the actions and strategies within every case. The research has the goal of presenting and analyzing the study of a holistic, non-generalizable case, conducted in an exploratory manner, with the presence of in-depth research and qualitative data. This case study refers to a new process of prevention and combat to the Aedes aegypti mosquito in Brazilian public organs. The intent is to emphasize the revolutionary potential that digital transformation can cause in the world, with primary focus on questions related to health and disease prevention, which will be objects of study. Despite the proposal's short time, it's possible to perceive how digitalization has led a previous process to new heights, improving the results obtained through this new proposal exponentially. This has also made evident new findings, substantially different from those widely disseminated by the major Brazilian media vehicles. This transformation has the potential to reformulate and take public health policies to a new level.

Keywords: Digital Transformation, Healthcare, Diseases, Emerging Countries, Strategy.

Introduction

The digital race is transforming traditional business models (McKinsey, 2017). Based on this change, it has been possible to identify new tendencies, new consumer habits, among other points. With this, new analyses are being made that generate insights that can contribute to the innovation of the service provided and the adequation of actions, this can contribute much in a healthcare context.

The digitalization of business has become a high entry barrier in some sectors, already being potentially considered a benefit to businesses seeking this method. However, it could be seen as a threat to competitive advantages if they are not taken into consideration, as smaller companies that make use of digital transformation might end up growing too rapidly, removing part of the market share of larger companies.

Still according to (McKinsey, 2017), it's necessary to not only follow tendencies, but to lead them, as companies that accomplish this deed will obtain disproportionate gains ahead of those that stay behind, about this deed mentioned previously, it is possible to affirm that it may be based on the pioneer's advantages.

According to (Chambers, 2016), most businesses will not exist in a significant manner in 10 or 15 years, due to the process of business digitization. As for (McKinsey, 2017), "leader companies are making use of data and analysis not only to improve their main operations, but to launch entirely new business
models.” Products and services will be induced towards this tendency sooner or later, they highlight, adding that strong sectors such as media, retail, travel, music and bookstores have already felt this power.

According to (Bughin, Laberge and Mellbye, 2017), research with 1573 companies from some selected sectors was conducted, amongst them: 112 from the automobile and assembly sector, 85 from the consumer goods sector, 89 from the retail sector, 348 from the high-tech sector, 86 from the media and entertainment sector, 310 from the financial services sector, 307 from the professional services sector, 55 from the telecommunications sector, 103 from the travel, transport and logistics sector and 78 from the healthcare services and systems sector. Among the pillars of digitalization evaluated, five dimensions were considered such as digitalization of products and services, digitalization of marketing and distribution, digitalization of processes, digitalization of supply chains and digitalization of ecosystems. The result presented was that no sector received the title of fully digitized. The order of percent digitalization can be seen as media and entertainment (62% digitalized), retail (55% digitalized), high-tech (54% digitalized), healthcare services and systems (51% digitalized), travel, transport and logistics (44% digitalized), telecommunications (44% digitalized), professional services (42% digitalized), financial services (39% digitalized), automobiles and assembly (32% digitalized) and consumer goods (31% digitalized), totaling an average digitalization of 37% among all sectors researched. Based on the results, it’s noticeable that it is a non-uniform process, which varies within countries and also within the sectors studied. Also, the sectors can be related, in the vast majority, with high technological component sectors and this brings about variance due to issues such as investment, education, among other aspects which can be seen to diverge among emerging and developed countries. Technological intensity matters, as well as the country. On account of this, it might be that this does not reflect in Brazil that quickly. However, some sectors, despite not totally digitalized, already show strong digitalization. It is strategic to follow international tendencies in order to seek leadership as well as to be attentive to digitalization cases in other sectors which might end up affecting companies in the primary sector of study.

Based on these premises, the necessity of being ahead of strategies that might make these companies assume leadership, and even permanence, is inevitable in this new reality. Since, once the client is captivated and reached, it is more complicated to make them easily change from one company to the other. The company that crafts strategies late needs to offer more value creation to the client so that they will change from the company they are already accustomed to, making it harder. Besides this, those who begin earlier have to opportunity to make mistakes earlier and fix them, building more experience in the process and possibly guaranteeing market-share in a context not yet vastly explored.

(Forrester, 2016) highlights that: “Nearly everyone understands that digital transformation is the key to driving customer experience, and that customer experience is the key to competing in the age of the consumer”. For the healthcare services and systems sector, in dealing with human lives, you could say this is an extremely strategic point as customer experience is tied to the life and health results of these patients.

(Bughin, Laberge and Mellbye, 2017) concludes that the companies standing out tend to make many connections between corporate and digital strategies. And (Forrester, 2016) adds that this is “leading to better business results including increased revenue, better differentiation, and increased customer satisfaction and loyalty”. In the healthcare sector, the review of digital data has the capacity to make actions customized for the patients available, and this accomplishment can improve the results obtained. It is necessary to understand the mechanisms that might help in this digital transformation occurring in an easier manner inside each country’s reality. In this article, Brazil will be given priority, being the object of study. Cultural questions possess clear relation with innovation questions, and also health care, to which a few points will be brought in other sections.

Data from the (World Health Organization, 2005), show that a substantial amount of risk factors can be avoided, in a way to not consolidate into chronic diseases. Based on this, it could be said that the healthcare sector possesses a very intense potential for change, seen as disease prevention can be
intensified through digital transformation. In the current world, many times a management of disease is preferred over one of health itself. Also, according to (Bain and Company, 2016), the treatment of chronic diseases possesses a much higher cost, up to seven times the cost of treatment for an infectious disease.

Disease prevention is much cheaper than treatment, seen as prevention involves correctly educating the population in a way that reduces the incidence of disease contraction. When a person acquires a disease, the cost can involve exams, medication and more specialized care, which turn the entire process more expensive. A difficult point could be the engagement and stimulation of this patient to care for their health as, many times, it ends up being related to the culture that individual might be involved in. Leading to a natural inclination to preventing, more or less, the risk factors.

A global context change is underway, with the increase of life expectancy, for example. Acting proactively is a matter of security for these people, and preventive models need to be driven so that the population does not come to require so much of disease treatment. Digital models already begin to be seen as a singular out, reducing costs and improving results. The potential for disruption in the sector is very high, finding tools and new business models are points that must be recommended. As such, this article has the objective to demonstrate, through a case study, how a digitalization process, made in favor of healthcare, has the capacity to be more efficient and effective in the results obtained and in the leading of actions. Besides highlighting how digital transformation allied to disease prevention has revolutionary potential for Brazil and for the world, being this the motivation and justification for this article. Besides raising hypotheses for a better engagement of society as to proposals of a technological nature allied to disease prevention, such as through a greater understanding of a specific context pertaining to each country and making an empirical contribution to the academic community, based on results presented by this article and the CombateAedes proposal.

Digital Companies, the New Reality: Concepts and Dimensions

According to (Yoo, Boland, Lyytinen and Majchrzak, 2012), increasingly penetrating technology creates innovations characterized by the global capacity of producing changes that end up being boosted by scalability. This trace is very notorious when you analyze global digital companies, which in many cases create rapid ascension.

Implementing paths of digital transformation can make companies faster, more efficient and adaptable. However, according to (Bughin, Laberge and Mellbye, 2017) a study performed globally, on a wide assortment of industries, showed that, in general, digital technology reduces revenue growth by an annual average rate of 3,5% and shrinks earnings before interest and taxes (EBIT) by an annual average rate of 1%. For some industries, this amount can reach up to 12% for revenue and 10% in reducing EBIT. This appears as something counterintuitive because, despite making companies more competitive, it ends up destroying monetary value that can be measured by revenue and EBIT. Among the digitalization pillars evaluated there are five dimensions considered, those being: marketing and distribution digitalization, processes digitalization, products and services digitalization, supply chains digitalization and ecosystem digitalization. As said before, in most cases, there is a lowering of EBIT and also revenue. The only different cases are in the process digitalization pillars, where there is a discreet increase in revenue, of 0,5% a year, but also showing a reduction in EBIT.

As said by (Bughin, Laberge and Mellbye, 2017), despite the presence of technology in our society’s day-to-day life, economy sectors are less than 40% digitalized, on a general average. Despite intense penetration in retail, media and high technology sector. Also highlighted is that business digitalization will generate a few market leaders, but emphasizes that the winners, most often, are the consumers and not companies in general, being this a case which will be much more easily seen in the healthcare sector.

In the insurance sector, (McKinsey, 2017) suggest that historical operators can double profits in 5 years and performed an interview with about 30 executives from market leading companies in the same
sector, wanting to know how the industry is changing and how to answer it. They were almost unanimous in their response, however, some were held up on one point. They said to act as soon as possible, in order to not lose the competitive advantages they enjoy today. What holds them back, however, is deciding how to face the challenge, given the expression of its enormity, inherent characteristics of decisions related to the volatile, uncertain, complex and ambiguous environment of digital transformation.

It’s interesting to quote the insurance sector because it can be seen as a sector that might create an intense interest in healthcare revolution through disease prevention, seen as with lower necessity for treatment, there is more profit for this sector, through the non-use of claims, thus, benefitting the sector. A union of forces between healthcare and insurance companies, seeking reduced patient risk, might be one of the more interesting points in this scenario. Companies that already operate with both business modalities end up having an advantage here, on the contrary it would be interesting to seek a middle ground in a way that one of the stakeholders is not harmed. Since, in fact, by working the hypothesis of less sick people, the healthcare sector’s revenue will be lower.

Digitalization brings the opportunity of bigger growth, more satisfied customers, process time and cost reduction, these last ones being created by automation. In addition, with the use of data it is possible to better know the client and to create, from this starting point, products/services more adequate to them, which is not different when we talk about healthcare system. Or even, the identification of new business opportunities. And when the client is more satisfied with the products/services offered with value creation, retention rates increase and not only this, a very satisfied customer brings the possibility of attracting more customers.

According to (Bughin, Laberge and Mellbye, 2017), among the pillars of digitalization already mentioned previously, the pillar that companies are focusing on the most at present is that of services and products digitalization, and the one they are least focused on is supply chains digitalization. The pillars can be almost entirely self-explanatory. However, when it calls back to ecosystems digitalization, it refers to hyper scalable models, such as Amazon, Alibaba and Google. Heading towards a focus on future investments, most of the research respondents say they will give the marketing and distribution digitalization pillars more emphasis and less consideration to the supply chains digitalization pillar. Despite emphasizing it is possible for large gains to come through ostensible digitalization of the supply chains pillar, and in the case of the healthcare sector, this is a matter that is already being looked at with more attention. (Deloitte, 2018).

The study was yet able to map what leading companies were doing, in order to recover digital investment and ensure revenue and EBIT growth. According to (Bughin, Laberge and Mellbye, 2017), the winners tend to make many connections between corporate strategies and digital strategies. Furthermore, altering business models based on this interweaving. It is made clear that a matter that might make victory unreachable within a digital proposition is related to organizational culture, “A strong organizational culture is important for many reasons: it increases the capacity to perceive digital threats and opportunities, reinforces the reach of actions that companies might take as a response to digitalization and supports the coordinated execution of these actions in functions, departments and business units.” Within the context of little resourcefulness in the companies researched, questions like not having a common view of the client and not having a common culture between business units can be cited. It was possible to reach the conclusion that disruptive strategies are the result of vast digitalization, and stress that a crucial point of success is tied to more investments, boldness in proposals, amplitude of action and the already mentioned point of organizational culture.

(Bughin, Laberge and Mellbye, 2017) emphasize that companies that execute well, and quickly follow the changes made by other companies are strong candidates for disruption. Despite not being properly disruptive, they can replicate what they want very well, and this ends up placing them in highlighted positions, which ends up being good news for companies consecrated in the market, which can visualize the startup success cases in the market in order to then replicate them. However, highly specific
operational and organizational aspects that allow this agility of action are necessary and this is not that simple.

According to (McKinsey, 2017), “Leading companies are utilizing data and analysis not only to improve their main operations, but to release entirely new business models”. The potential for growth is incredible, it’s an already present reality and that will intensify within the next few years, and it’s safe to say that is has to potential to take global health to never before reached levels.

Companies should act as soon as possible, in regards to what is necessary to adequate their businesses in a way their competitive advantages are not being mined by the companies already being born in the digital age, there is not much time to think. It’s recommended that companies perform the transformation on a trial-and-error basis (McKinsey, 2017).

The understanding is that even with the recommendation cited previously, there is still a small time period. Because, depending on the sector, companies can face barriers such as regulation, product complexity, capital necessity, managerial know-how, among others. These being the facts cited previously, also applicable to the healthcare industry. And the strength of the brand, whether you want to or not, still relies heavily on many cases, which makes clients take even longer to switch from a traditional company to one that they might, many times, not know. However, waiting is something very risky and by taking long on the change process and, by consequence, losing that client, it’s hard for them to come back. For example, it’s interesting to mention Nubank¹, to raise awareness for companies of the healthcare segment since cases in the healthcare sector are still in initial stages and not as concrete, like Nubank.

Banking, which is the previously stated companies’ sector, has taken long to understand what their clients want, especially when talking about consumer behavior, who were, in this case, looking for simplicity and pertinent information. According to (Oliveira, Sonêgo and Bigarelli, 2017), “a study by Capgemini consulting shows that in emerging markets and among the younger demographic, the fintechs have won popularity thanks to the perception that they are easier to use (82% of those interviewed), offer faster services (81%), and guarantee a good user experience (80%).”

The banks caring little about customer tendencies and desires, made the company grow exponentially over the past years with acquisition of credit card user market-share. Understanding what are the tendencies and needs for this new moment have become vital points, which will dictate what will be the future of companies seen as traditional. Especially when diverse aspects must be looked at closely and possess even more weight in healthcare businesses, seen as customer behavior can influence costs more directly. Information in this segment can be utilized for larger engagement through customization, according to (Euromonitor, 2017) data, companies are seeking ways to strengthen the brand and also the relationship with the client through emotions they might increase by crafting products/services in a personalized manner, even if this includes only customizable parts. According to globally performed research, (Nielsen, 2016) states: “personalization can bring great benefits to profit, including an increase in visitor involvement and an improved experience for the clients, as well as a raise in conversion rates, resulting in leadership and revenue.” Alllying information to better directives, within each situation is a key point. Especially since, according to (Kotler and Keller, 2012), researchers discovered that companies who had adopted this market orientation, which is when there is a more intense exchange of information with the public, had the best performances.

According to (Blank, 2013), there is a way to make this creation process less risky, “it’s a methodology called lean startup – methodology that advocates experimentation instead of minute planning, client opinion instead of intuition, an interactive project instead of traditional finished product conception from the get-go.” The main idea is to mold the business as possible and necessary, through a bigger focus on the client it’s possible for the company to do right more often and with this, not come to commit marketing myopia, which according to (Levitt, 1960) is the non-correct identification of your business, not answering consumer wishes, neither perceiving your true competitors. Being in a digital scenario makes everything quantifiable, and tracking customer information becomes exponentially easier.
In this moment it is important to raise the possibility of creating an experimentation scenario, which can be facilitated when you think of something digital. (Kohavi and Thomke, 2017) highlight that “controlled experiments can transform decision-making in a scientific process, based on evidence, instead of an intuitive reaction. Without them, many discoveries might never happen, and many bad ideas can be implemented, only to fail, wasting resources.” Besides this, the creation of this test environment creates the possibility of incremental experiments for a measly incremental cost, from the moment the environment is structured. And so, creating within the company the possibility of many more discoveries, which can make all the difference against the competition. This aside, it allows managers to test more and not be afraid of failing. On the other hand, if there is no structure or even if this structure is not integrated with company processes, it will make marginal test costs higher and might make the managers reluctant to create more day-to-day experimentation.

What’s most interesting is that the efficacy of an experimentation environment is proven since, according to (Kohavi and Thomke, 2017), many times the corporate environment gives more value to big disruptive ideas. However, in the digital environment, great deeds are accomplished through a large amount of small improvements, these creating the biggest impacts. This reinforces the idea that making the conversion to digital through trial and error might be the best path, as brought by (McKinsey, 2017), much more adequate than crafting a large strategic plan. Since, this way, you can win time, avoiding the risk of slowness and head towards user adhesion. And since this is a pillar of enormous weight, it’s better to be done little by little. In a way to optimize cost x customer satisfaction x return and even more, it has been proven that precepts had as theoretical are not proving themselves in practice. According to (Kohavi and Thomke, 2017), Microsoft, among other companies, for example, discovered that their experienced design professionals were using corporate style colors. And in sample experimentation, it was evidenced that practical results were completely divergent from the theoretical ones. And after analysis it was proven that, when released to all users, the new methods could create revenue superior to US$ 10 million per year.

(Kotler and Keller, 2012) add still that, when there is use of this user analysis: “It’s possible to discover many opportunities by identifying tendencies (directions or sequences of events with a determined impulse and duration) and megatrends (important social, economic, political and technological changes that exert influence over a long period of time).” With the information it is possible to verify the apparition of complementary products, new ways of product utilization which can be offered through new products/services for unanswered demands and tendencies, among others. And depending on the type of information, it’s crucial for there to be quick action, and a company model that has, in its culture, this habit of collection might be able to identify and act faster, such as in cases that have a negative repercussion on brand image. Or even, in companies that might utilize of a regional search analysis on disease symptoms, that might, if mapped, identify the precocious appearance of epidemics. With the potential of being faster than active health agencies. Utilizing this artifice is an intelligent action that will make the company create competitive advantage or might lead society to a new level of prevention and health care. Undoubtedly, the creation of an experimentation structure and digital transformation must be recommended as soon as possible. And (Forrester, 2016) highlights that digitalization is “leading to better business results including increased revenue, better differentiation, and increased customer satisfaction and loyalty” and experimentation is a fundamental part of this process.

According to (Batthi, Castillo, Olson and Darzi, 2018), in the healthcare sector, a growing alternative across the world is utilizing co-creation centered on the human being, already being understood as a set of approaches that might accelerate innovation in healthcare. Furthermore, with the more ostensible inclusion of people in the development process, it's possible for these people to be more responsible for health results in a collective scope. This raises the thought that as you intensify the use of strategies that allow collaboration, superior heights of innovation are reachable, with more accuracy and velocity, an experimental environment in a digital format ends up being another tool when you think of marketing myopia. Besides this, many more possibilities of quick trial and error are created, essential attitudes in this moment. With the advent of digital transformation, what used to take a long time to be evaluated can be
rapidly viewed and aid in analyses. Also, it can be even further facilitated with the use of decision supporting systems, “coordinated set of data, systems, tools, and techniques with software and hardware support, through which a company collects and interprets relevant information obtained from business and the environment and transforms them into basis for marketing action” (Kotler and Keller, 2012).

(Yoo, Boland, Lyytinen and Majchrzak, 2012) stresses that “companies should now learn how to build and organize digital platforms, which gain increasingly more strategic importance”. Furthermore, it’s added that the digital medium affects organizations not only by generating new products and services, and new business models. But also, creating new organizational forms, brought about by increasingly penetrating digital technology.

And in a healthcare context, there’s potential to incomparably improve general results, which might lead global societies to new heights in healthcare. The digital medium is perfect for this capture and analysis, since it permits more assertiveness in targeting, and when you consider that this targeting might be also joined with a better targeting of care in the sector, it’s a great thing, since according to people’s lifestyles it is possible for their health indexes to worsen or improve. “People see the world through a digital lens now. Digital experience and client experience are one and the same now, there is no delimitation” (Forrester, 2016). Here, business digitalization and subsequent data intelligence are ways of being more efficient, effective and making more assertive investments. Because they present plain synergy, seen as this data can be translated into actions.

**Healthcare Industry: A huge potential Industry**

The challenges global health faces are countless, and the way these challenges must be maneuvered can vary substantially from place to place. Matters such as education, demography, culture, economy, among others, are aspects which can easily have an impact in the set of measurements that will have to be thought out and prioritized. In Brazil, it’s estimated that there are approximately 208,747,000 inhabitants (IBGE, 2018). And the Human Development Index (HDI), which takes into account matters such as income, health and education, performed in the year 2014, highlights the country with a score of 0.755, leaving Brazil in a global scale behind countries such as Iran, Venezuela and Sri Lanka (UNPD, 2018). With a structural challenge such as this one, maneuvering around healthcare issues becomes even harder. Furthermore, according to data from research conducted in the year 2017, from a partnership between the Institute of Supplementary Health (IESS) and IBOPÉ², revealed that a considerable majority of the Brazilian population does not possess health insurance. This makes it so many people need to finance their spending, when necessary, or utilize the public healthcare system in order to resolve their health problems. The percent indicated in the study was of almost 70% of people with no health insurance, among the 18 years and older demographic, reaching up to 77% in the C, D and E layers (IESS, 2017). Interesting to mention that, in Brazil, a large share of companies provides health insurance as a benefit for their employees.

The moment a correlation is made between this information and the United Nations data in Figure 1, which shows the Brazilian population pyramid, we can have a dimension of the challenge that needs to be worked around.

**FIG. 1: BRAZILIAN POPULATION PYRAMID.**
The pyramid shows a radical scenario change, and this makes a radical strategy change necessary. It would be like saying that society is constantly evolving with the advent of sanitary improvements, vaccines, among other improvements that allow people to live longer in Brazil and the world. However, health strategies need to rethink a few points in order to know how to deal with this new reality, in a way that the healthcare system does not collapse even further in the country. Generally speaking, it’s possible to say that it is necessary that preventive actions be intensified in order to provide more security to society, with the benefit of not needing treatment so much, despite being able to relate sanitary improvements and vaccinations to prevention. However, there is still much space not effectively attended, such as other risk factors for heart disease and among many others.

The older portions of the population suffer more from risk factors that lead to disease and also with the intensification of chronic illnesses. According to (Bain and Company, 2016), the treatment of chronic diseases carries a higher cost, of up to seven times the cost of treatment of an infectious disease, and the development of chronic diseases is directly tied to aging, lifestyle and risk inducing habits practiced.
by a large portion of society such as a sedentary lifestyle, ingestion of alcoholic drinks, smoking, unbalanced eating habits, among others. They add that, despite growing awareness towards these risk factors, the tendency is that society will still live through an increase in incidence of chronic diseases before it comes to a reduction. These points make evident the need of a bigger correlation with culture, in a way to highlight the points that can be worked around and used as triggers for a larger effectiveness in actions. Through the constant paradigm shift, the focus on low cost must be intensified and prevention is still less expensive when compared to treatment of acute or chronic illnesses. Disease prevention, if done in an organized and strategic manner, has the potential to be even more efficient and effective when health and cost indexes are discussed, this is a point in which digital transformation can be a real ally, due to the possibility of scalability that can be created through these methods. Besides this, system organization and service distribution are considered key points in ensuring long-term sustainability in the healthcare system (Deloitte, 2018).

According to (Hsu and Griese, 2018), predictive analyses are being utilized in a pilot stage in the maneuvering of chronic diseases such as Diabetes. It’s reported that this algorithm, with the use of artificial intelligence that analyzes disease risk factors and compartmental economy, manages to estimate with approximately 80% certainty how much a diabetic patient will need non-planned interventions. However, when you think of something non-planned, generally it comes with a higher cost and with a much superior potential of non-effectiveness. It might, even, cost the patient’s life.

According to (Deloitte, 2018), risk factors are increasing the incidence of chronic diseases. Taking only Diabetes into account, “China and India possess the biggest numbers of people with diabetes in the world, around 114 and 69 million, respectively. Globally, it’s estimated to grow from the current 415 million to 642 in 2040.” Furthermore, according to the (World Health Organization, 2005), “the main causes of chronic diseases are known, and if these risk factors were eliminated, at least 80% of all heart diseases, all vascular brain accidents and type 2 diabetes could be avoided; above 40% of cancers could be prevented.”

Also from a study by (Deloitte, 2018), challenges have been occurring for years for many private and public healthcare systems such as increased costs, pressures on revenue, decline of margins and stagnation. It’s expected for this to persist, although, improvements to infrastructure, technological and therapeutic advances, among other points, are already limiting resources in a scenario of increased worldwide demand. Nevertheless, increased spending is not always translating into better results. That’s what happens in the United States of America, where, while spending the most on healthcare, is still performing poorly compared to other countries, these spending are related to hospital costs, medication prescription and doctors. To improve matters such as reduction of profit margins, it’s mentioned that some stances are being taken, such as alternative work team models, seeking to assign each professional to what they do best, for example, nurses in the handling of health care and not in administrative functions, a reality much too present in hospitals. Besides this, a reduction in administrative and supply costs has been occurring, as well as attempts of treatment outside the hospital environment, however, this is still in early stages and it is necessary to seek more ways to improve the system as a whole. Some companies are creating true healthcare conglomerates, to search for administrative and supply improvements, though synergies between acquired companies are still not being well utilized.

It’s evidenced that leaving a reactive model to a proactive one is the crucial point, when we analyze the scenario more deeply. However, not understanding the pillars that guide society from a cultural standpoint might stop results from being the best. As such, this deeper understanding is sought here, in a way to create more tools for the handling of this process.

Through a study by (Hofstede, 2015), performed worldwide, it’s possible to perceive aspects that differentiate each country in the matter of cultural patterns. Through this study it’s possible to extend this pattern to society in general, taking advantage of the samples to understand how it works as a whole, and this is of utmost importance when you think of public politics and engagement. They are highlighted among
six pillars, as Table 1 shows, it’s indicated that comparisons be made between countries, as can be seen ahead, but here a greater focus on Brazil will be given, seen as it is the object of study.

TAB. 1 – CULTURAL PATTERNS

<p>| Country     | Power Distance |  |  |  |
|-------------|----------------|---|---|---|---|
| Uncertainty Avoidance | Long Term Orientation | Individualism | Masculinity |
| Africa East | 64             | 27 | 41 | 52 | 32 | 40 |
| Africa West | 77             | 20 | 46 | 54 | 9  | 78 |
| Arab countries | 80         | 38 | 53 | 68 | 23 | 34 |
| Argentina   | 49             | 46 | 56 | 86 | 20 | 62 |
| Australia   | 38             | 90 | 61 | 51 | 21 | 71 |
| Austria     | 11             | 55 | 79 | 70 | 60 | 63 |
| Bangladesh  | 80             | 20 | 55 | 60 | 47 | 20 |
| Belgium     | 65             | 75 | 54 | 94 | 82 | 57 |
| Brazil      | 69             | 38 | 49 | 76 | 44 | 59 |
| Bulgaria    | 70             | 30 | 40 | 85 | 69 | 16 |
| Canada      | 39             | 80 | 52 | 48 | 36 | 68 |
| Chile       | 63             | 23 | 28 | 86 | 31 | 68 |
| China       | 80             | 20 | 66 | 30 | 87 | 24 |
| Colombia    | 67             | 13 | 64 | 80 | 13 | 83 |
| Croatia     | 73             | 33 | 40 | 80 | 58 | 33 |
| Czech Rep   | 57             | 58 | 57 | 74 | 70 | 29 |
| Denmark     | 18             | 74 | 16 | 23 | 35 | 70 |
| El Salvador | 66             | 19 | 40 | 94 | 20 | 89 |
| Estonia     | 40             | 60 | 30 | 60 | 82 | 16 |
| Finland     | 33             | 63 | 26 | 59 | 38 | 57 |
| France      | 68             | 71 | 43 | 86 | 63 | 48 |
| Germany     | 35             | 67 | 66 | 65 | 83 | 40 |
| Great Britain | 35          | 89 | 66 | 35 | 51 | 69 |
| Greece      | 60             | 35 | 57 | 112 | 45 | 50 |
| Hong Kong   | 68             | 25 | 57 | 29 | 61 | 17 |
| Hungary     | 46             | 80 | 88 | 82 | 58 | 31 |
| India       | 77             | 48 | 56 | 40 | 51 | 26 |
| Indonesia   | 78             | 14 | 46 | 48 | 62 | 38 |
| Iran        | 58             | 41 | 43 | 59 | 14 | 40 |
| Ireland     | 28             | 70 | 68 | 35 | 24 | 65 |
| Italy       | 50             | 76 | 70 | 75 | 61 | 30 |
| Japan       | 54             | 46 | 95 | 92 | 88 | 42 |
| Korea South | 60             | 18 | 39 | 85 | 100 | 29 |
| Latvia      | 44             | 70 | 9  | 63 | 69 | 13 |
| Lithuania   | 42             | 60 | 19 | 65 | 82 | 16 |
| Luxembourg  | 40             | 60 | 50 | 70 | 64 | 56 |</p>
<table>
<thead>
<tr>
<th>Country</th>
<th>Power Distance</th>
<th>Individualism</th>
<th>Uncertainty Avoidance</th>
<th>Masculinity</th>
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Source: Adapted by the authors based on a file present at https://geerhofstede.com/research-and-vsm/dimension-data-matrix/

To follow, a brief contextualization, based on (Hofstede, 2014), of what the pillars means and posterior identification of which might be more related to the proposal of this article. The scores vary, more or less, from zero to one hundred.

- Power distance: can be understood as the way in which the less powerful in organizations on institutions (family institutions, for example) accept that power is unequally distributed. This is always related to people that are in inferior positions and not to the ones that are at the top. The closer to zero, the smaller the distance of power and the closer to one hundred, the bigger the distance of power.

In populations considered to have high power distances, the inequalities are had as something normal. Innovations in general, be they technological or social, happen only if they are supported by those at the top. But in lower power distance societies, inequalities are fought and, innovations end up happening with more ease.

- Individualism: can be understood as a society more focused on "I", and in closer relationships with immediate family such as children, mother and father. The opposite of an individualist society is a collectivist society, in which people feel as part of something larger, possess a bigger identification with
"we". The closer the score is to zero, the more collectivist and the closer to one hundred, the more individualist. In societies considered more collectivist, relationships are recommended over tasks. Competition happens, in general, between groups and even though people may disagree amongst themselves, they pretend to maintain everything in a harmonic manner in order not to weaken the whole. They end up having a slower life pace and utilize social networks for communication with people in the group and searches are made based on group indications.

In more individualist societies, tasks come first and relationships after. Competition happens between individuals and life pace is seen in an accelerated manner. They tend to use digital media for searches more actively.

- Masculinity: it’s a society in which there is a greater distinction between boy and girl attitudes. As something more polarized, speaking of a purely emotional aspect. In masculine societies, men must not cry, must be more assertive, focused on material success and rigid. Women, however, can cry and be more oriented towards quality of life, as well as activities related to caring. In sex, the man is the subject and the woman the object. Work prevails over family. People tend to use social media to look up facts. The less masculine the society, the more it tends to be a feminine society. In masculine societies there is a greater number of people below the poverty line, despite not being possible to draw a connection between wealth and the two extremes mentioned.

In feminine societies, however, there is a better balancing of work and family. Sex is seen as a way for a couple to connect. Men and women can cry. Social medias tend to be used more for developing relationships between users. The higher the score, more masculine the society and the closer to zero, the more feminine.

- Uncertainty avoidance: Firstly, it’s important to state this is not related to risk aversion. It might be considered the way in which people from that society might feel threatened when faced with situations in which they have no knowledge of what will happen or something ambiguous, in a way that when there is a risk of something, this is already known. The higher the score, the higher the aversion to uncertainty and when closer to zero, less aversion to uncertainty. In time of war or economic crises, the score might suffer changes, but when reversing back to normal, it tends to lower.

In societies with more aversion to uncertainties, uncertainties related to life are combatted, there are higher indexes of anxiety and stress. Technologies and innovations are more carefully implanted, in a manner that demands more time. People tend to spend more years in work positions. They find more difficulty in dealing with different situations, people and habits. In this type of society there is more alcoholism. In propaganda and marketing, products more popularly accepted are pure and of clean style. Furthermore, specialists are more utilized in advertising for explaining the purpose of using that product or service.

In societies that have low aversion to uncertainties, however, life is accepted as is, and with this comes less anxiety and stress. Technology and innovations are implemented with more haste. People can more easily change jobs, the different is better accepted when it comes to habits, customs, people etc. There’s less use of alcohol. In propaganda and marketing, products that are given more priority are those of greater convenience and ease, besides customer captivation being done through humour.

- Long-term orientation: seen as how a society tends to prepare for the future, in a way that allows adaptations, preparing for the future is always necessary. The closer the score is to zero, the more long-term orientation and the higher, the more short-term orientation.

In societies that possess long-term orientation, norms to be followed depend on the situation. People must be humbler about themselves and traditions can be altered. If there is a problem to be
resolved, a consensus is sought. People are more open to learning from other countries. People save up more, thinking of the future, and companies seek long-term profits.

In a more short-term orientated society rules are unchangeable. People look for positive information about themselves. Traditions must be preserved. When there are problems with distinct opinions, there will be difficulty in conciliation. People are proud of their countries. People save less and companies are more guided towards quarterly results.

- Indulgence: can be related to life’s pleasures. It was discovered that as years go by, societies turn into ones with a more indulgent culture and less contained, but when relatively compared between a country and the other they remain the same. The higher the score, the more indulgent the society and the lower, the more contained.

In societies with a high degree of indulgence there is a search for the feeling of freedom, having fun, there is less moral and sexual discipline. Having friendships is extremely important and they tend to be more extroverted and optimistic. People participate more in sporting activities and tend to feel happier and healthier.

In societies with a lower degree of indulgence, people are more contained, there’s more moral and sexual discipline. People tend to be more introverted and pessimistic. Having friendships is not that important and they practice less sporting activities. They feel less happy and less healthy, despite being equally healthy.

Among some of the points stressed previously, a better connection can be made between healthcare and four pillars more directly, these being: individualism, uncertainty avoidance, long-term orientation and indulgence. However, in a slightly indirect way you can relate to the power distance pillar. The objective of mentioning all the pillars in this session is the demonstration of the matter’s amplitude, however it will be more related to the proposal in the conclusion topic.

The study of human behavior is already being diffused, in early utilization, in some sectors of economy. However, when we think of health, it’s possible to perceive that the utilization of some concepts may help to create insights that could lead to greater user engagement, which can be a great differential in the final result. Beyond this, human behaviour, engagement and collaborative business possess a lot of synergy.

(Chen, Zhang and Zhou, 2007) characterize collaborative business as a set of practices and technologies that bring the possibility of building stronger relationships with the stakeholders, with workflow integration, and complex processes through rules and logic. They add that they can: "(1) connect and automate processes with their partners, clients and suppliers; (2) reducing process latencies; (3) developing new capacities that improve the levels of services while reducing costs; (4) making planning, projection, and operational decisions dynamically, based on real-time information.” And these possibilities can visibly help companies achieve a featured position, or cause Governments to reformulate entire healthcare proposals around the world. It’s possible that digital transformation in the healthcare sector might come to obtain the biggest results, seen as the product ends up being related to the person themselves and not something immaterial to be sold.

Methodology

The present research has the goal of analyzing a case study which refers to a new process of prevention and combat of the Aedes aegypti mosquito which is being utilized in Brazil by the Public Federal, State and Municipal Administration which was developed by the company Lemobs.
The process will count on a holistic case study, which will be made in an exploratory manner since it is a theme still little applied in Brazil. And with the presence of qualitative data, because it aims to approach questions from a primarily subjective viewpoint and, in principle, non-quantifiable. The methodology is based as a case study, non-generalizable, with the limitation in the sense of pointing out the benefits that might be brought to public healthcare based on digital transformation. According to (Yin, 2001), this model is a research strategy that comprises a method which covers everything through specific approaches of data collection and analysis. (Yin, 2014) adds that it is an empiric investigation of a phenomenon that occurs in contemporaneity. Bringing an in-depth investigation about the real context which is seen. This method is very pertinent when the delimitations between context and the phenomenon are not easily described, and quite interesting when the phenomenon is complex and not sufficiently theorized. This research model is very appropriate in new areas of knowledge (Eisenhardt, 1989). Also added is that the purpose of sample selection is to choose something that will be possible to replicate in emergent theory (Eisenhardt, 1989). Besides this, the case was chosen based on proximity and, also, for being related to the healthcare sector.

Starting from previously addressed definitions, the proposed theme will have as purpose the approach of exemplifying, in practice, how digitalization can bring benefits. In this way, research will be indicated, without there being a violation of information security. Besides the description of the case study, an interview with a semi-structured questionnaire which was utilized with Sérgio Assis Rodrigues on November 21st, 2017, will be used, where it was possible to perform in-depth research, where an interview was made and this interview was deeply analyzed. Furthermore, bibliographical research was utilized (articles, periodicals, books, trustable sites, government agencies, television shows, video, interviews, collective entity authors and works presented in congress), so that the approach might be made in an assertive way.

Case Study

The case that will be described below, is about a digitalization that has been occurring for about a year in Brazil, aiding the combat of the Aedes aegypti mosquito in public organs. The study aims to make a connection with the theoretical referential, with the goal of exemplifying, in a practical manner, the benefits of digitalization for public healthcare.

CombateAedes

The CombateAedes app can be used on mobile or on PC and was developed in Brazil, in the COPPE/UFRJ3 technological park, by the Lemobs company. Through the app, public employees can carry out routine inspections and report possible mosquito foci through pictures, geolocation and complementary text. From these inspections, in the presence or absence of foci, statistical reports and dashboards are sent to the National Office of Coordination and Control, formed by the Ministry of Health, Civil House/Presidency and Ministry of Planning. The possible analyses range from agent deployment to specific orientation for the affected region, being, thus, more effective in resource management towards the prevention and treatment of the mosquito and in consequence, of diseases such as Dengue, Chikungunya and Zika virus. CombateAedes is an offspring of SIGELU (Urban Cleanup Management System), also developed by the Lemobs company, which relies on partnerships with the Federal Government, SEBRAE4 and the COPPE/UFRJ Company Incubator.

Today, this solution is present in the Public Federal, State and Municipal Administration. The system is a success case due to its usability, mobility and BI (Business Intelligence) reports. Within about a month of its implantation, 25,000 inspections were carried out in 300 units (Globonews, 2017). For perspective, in 2016, when the Government was adopting another solution, only 2,000 inspections had been performed in about 40 units, according to Sérgio Assis Rodrigues5, who answered a series of questions contained in Table 2. And with little over six months of implantation, the system reached around 100,000 inspections, 170,000 trained personnel and 1,300 foci eliminated in public federal buildings and installations (Ministry of Planning, 2017).
At the moment, the app’s focus is public units and not the general public due to the trustability of collected data, according to Sérgio Assis Rodrigues. As of today, it is undergoing a process of expansion between counties. The intention of the app is the substitution of paper, quick acting, and more efficient and effective use of resources, since the evaluation can be real time. An interesting piece of information, which was evidenced with data crossing, is that many foci were discovered in non-conventional locations such as external areas of public repartitions (1 in every 4) and more specific locations such as drinking fountain reservoirs, external areas, among others. Allowing decision making and specific actions in accordance with the database. Also, it was made clear that with the digital proposal, work is being done with around 5-6 people, and were it not a digital proposal, you would need at least 100 people to perform the same work. The numbers and findings previously mentioned could be considered the empirical contribution of the app’s proposal and this article to the academic community.

According to (Universidade Federal do Rio de Janeiro, 2017): “We foresee great gains in terms of navigability and usability. The use of georeferencing allows insights on new ways to combat the mosquito. It grants even more celerity and efficiency to the public power’s response. This has immeasurable value in this context.”

The previous average of data consolidation was around one to two months to decision making. However, the complete cycle of the mosquito lasts, approximately, 10 days. Now, analyses can be made almost automatically.

**TAB. 2 - COMBATEAEDES**

**In your case, did digitalization create an incremental improvement or was an entirely new business model created?**

“The scenario CombateAedes is inserted in is one where workers responsible for public building are obliged to, at least once a week, make a checklist. Indicating the area where there might, or not, be mosquito foci. This checklist has always been made on paper, and by being made on paper, generated a series of difficulties and inconsistencies in data generation. The moment this could be digitalized, and not just simply digitalized, since there was a whole new business model that would improve, even, the captation of these inspections, so it was a whole process. Although the checklist questions were maintained, its application format, both for the app and the web system, improved its utilization immensely. So you can have an idea, it left from a baseline of 2.000 inspections a year and our estimative is to reach 160.000 next year, so it’s a very significant increase. So, it was a new model.”

**How has the information and data intelligence system become apparent in regards to the company’s decision making?**

“It has improved the matter of investment, there has been a prioritization due to the potential of cross-referencing data. From the moment we started using the more modern information system, it was possible to better categorize the data and consequently put this into a BI system, where dashboards were able to give us analyses that were not possible before. I’ll give you an example, in our specific case of CombateAedes, a lot of propaganda is made related to water spots and removing water from plants, for example. And in public buildings, we identified that most focus incidences are in external areas. As a result of this, now the investments are being prioritized to these areas. It wasn’t possible to analyze this when there wasn’t this information system, for example. Because analyses from the system and from data intelligence have become much quicker and effective.”

**Is public feedback used to create improvements in the proposal? If so, what changes were possible and what were the impacts?**
“Feedback is constant, we have a support line that works both on the call center and by e-mail, and one that is very effective is the online chat. Many changes were made due to this feedback. I’ll give you some examples, for example, people of older age or that found difficulty in using cell phones had trouble with typing some specific locations, where they found the focus. Thought the app already had the GPS function, we implanted a technology, which is the same that Uber uses, of identifying the exact point of the location. This greatly improved finding out where each focus was. Another item which had a deep impact was creating an analysis on speech recognition intelligence. So, today, on the app, if you have any observations to make, you can type it, but you can simply say it and the app will understand and recognize the speech and transform it into text for future analysis. There were several other small changes, but there were the most significant. Feedback from managers was also possible and so we also created several new cross-reference data analyses, which are more sophisticated items.”

**What knowledge and which skills do you judge as being essential in digitalization? Which are being indicators of success?**

“That is a very broad question. I’ll speak about the point of view of the user and of the product itself. I believe that, in this scenario, the focus on usability was what was most preponderant, and observing which are the criteria for improving this matter of usability. Which were the criteria we used? First knowing the target market, the target market is a specific audience. A public worker, it’s a person that minimally has complete high school education, most have college-level education, but not all do. The degree of age, most are between 40 and 60 years old. The gender, whether male or female, this doesn’t make much difference in the scenario since the public is well blended. The geographical disposition, for example, what are the differences for people from the North? Because it’s hotter there and there you have a higher incidence of rain over a certain period than the South, where it’s less hot and the incidence is lower, but this has much more to do with the weather than the people, specifically. When you study this scenario, you create applications so that this public has engagement. And then, what comparative measures are you able to observe in this model? First, engagement itself, where do you have more or less engagement. And this is possible to be done, comparing, for example, the total number of employees in a location with the total number of employees that have adhered to the tool. Another interesting estimate is to compare the amount of employees that are in a certain location with the amount of foci that have been found with the amount of absentees with ICD 90, which is the ICD for Dengue, Zika and Chikungunya. With this assessment you can see that once you’ve hit your target market in that niche, the data is better, you understand? So, these are the measures that we, basically, use within the context of the tool’s usability. In this context we have, knowledge and skill is directly tied to the tool’s usability, because what does the person have to know? How to read, write, and have good will in using their phone. So, the only knowledge the person has to have is basic computer and cell phone use. But in the IT area, in that context, what did we work on? Even if the person did not have the knowledge, and the skills necessary, we improved the tool over time. This is why I cited usability. So that this required knowledge is the least possible.”

**Did you observe significant alterations in the organogram or the activity flow with digitalization?**

“What happened was, before this there wasn’t, as far as public buildings, there weren’t that many inspections, [then] what happened? They increased significantly. So, the fact that we are performing the service and utilizing the tool, today, there are about 5-6 technicians, in the technology and service section. If it wasn’t digitalized, we would need about 100. So, it’s not that there were changes to the organogram, just that many people were no longer occupied with something that was already digitalized at conception. So the number of inspections grew a lot. So, I’ll tell you this, the number of inspections, before, was limited to the organogram. With the same organogram, we went from 2.000 to 160.000 inspections. Because public resources are limited, people, especially. So, it’s not that there was a change to the organogram, but with the same organogram we were able to do much more.”
Felipe Ewald – “And in the flow of mosquito treatment and prevention, do you think the activity flow changed?”

Sérgio Assis Rodrigues – “In the case of public buildings, yes. Before, there was no knowledge of what was being done. Today, there is, and this data is now added to general data as well. Because there are other analyses, the most preponderant analysis is domestic analysis, which is not done by us. It’s done by health agents, it’s another scenario of the Ministry of Health, we’re not involved in this. Our app involves the specific part of public buildings. So, this is auxiliary information in order for there to be this combat. Which is the most significant matter? It’s the matter of prevention. So, today, we already know where you have this prevention. Before, there might have even been, but it wasn’t known. The fact that there is a bigger engagement, naturally, generates a bigger elimination of foci. And today, we are able to have this data charted. What happened before was that many things weren’t done. So, there’s a dynamic and the maturation time for this type of data, which is long. The treatments, for example, with domiciles, took over 10 years to reach a significant number which is what it has today, and this system isn’t even a year old. So this will grow over time, results in this first year are already impressive. But this statistical data we will only obtain in 4-5 years, to know, effectively, how much was prevented in the exclusive sphere of public buildings. Because it’s very simple, the cycle [of analysis] is annual, the cycle isn’t monthly. So comparative analysis has to go through a few cycles in order to have this context.”

Were the barriers against this digitalization on behalf of stakeholders? If so, what kind?

“There are always barriers. There are always barriers related to technology and I think that process and, context changes are a part of the human being. But there wasn’t a boycott or anything that would make the system not go live. Some barriers we can state, first, the natural barrier of the human being in regards to what is new, and this happens in any scenario. And it falls to us in the technology area, to deliver something of easy use and to insist on marketing, for which the solution is effective. And this, we had much success with, overall because there rapidly was a very large engagement and so it was put out across media outlets. In several positive reports, because, it’s difficult, isn’t it? For you to have, today, positive Government news is something that draws much attention. And we had several of these news, about this. And this generates credit, in functionalism and in Government itself, which lessens, let’s say, the resistances related to this type of change. The other barrier, due to the environment and scenario we are in, but is also an opportunity is the financial barrier. With the crisis, investments related to anything, including IT, they’re naturally limited. And so, I say this is also an opportunity because the implantation of a system like this is cheaper than if you had done something not digitalized. So, with the same type of resource, with the same potential resource, you can do much more. So, you overcome this barrier. Now, I haven’t barriers on a boycott levels or something of the type. Because we have been very happy in development and those who look at the applications, in general, are very pleased. So there’s the natural barrier, but they’re being overcome.”

What were the advantages and disadvantages brought about by digitalization?

“The cost, time, I think you could even get the planning director’s line from the interview, because he clearly states this in the interview. He says that before, movements would last 2-3 months to be consolidated, now it’s a matter of seconds. So, I think this is very preponderant, the mosquito cycle lasts a week. You can’t take two months to make a report, you’ll be in the fourth/fifth generation of mosquito if you take that long, you understand? So, time is the biggest advantage. Well, disadvantage, related to this scenario, maybe having to reeducate people with a new methodology, but I don’t see that as a disadvantage, I see it as an opportunity even. Because when you implant the information system, and it’s integrated at conception, the advantages and benefits far outweigh any difficulty there might be.”

Do you see threats/opportunities in the medium/long-term?
“The threat, the cut in spending and lack of investments due to everything going very well. That, sometimes, is a threat. Since the system works without problems, there’s nothing annoying the Government, the impression is that everything is alright. So, there might be cuts, you see? This is a threat. Opportunity, we are integrating the system with other public worker databases, citizen databases. So, this could greatly improve the system’s utilization. Because then, both the citizen and the public worker, won’t have to log in directly, they’ll have direct access to the tool. So, then, both this type of integration as well as the media itself, it could be an opportunity to increase its utilization significantly.”

Source: Phone interview with Sérgio Assis Rodrigues, CEO of Lemobs and COPPE/UFRJ researcher on November 21st, 2017.

Conclusion

The case study helps contextualize, in practice, how digitalization possesses efficacy and efficiency potential. Despite the proposal’s short time, the numbers make evident how digitalization is breaking barriers. From a total of 2,000 inspections in the previous model, it was possible to reach 100,000 inspections in less than “6” months and reaching up to 160,000 inspections by the year 2018. Digitalization proposals, as well as in health, present long-term results. Entering this scenario, fighting for the long-term, might be an arduous task. Mainly when in big companies, as well as in Government, in Brazil, in many cases short-term results are prioritized. In the first case relation can be made to the investors that are already used to this type of practice and they want to see results on the invested funds as soon as possible, and in the second case this habit of, in many cases, non-continuity of important assignments when there is a change in office, is made evident in the Government. On account of this, it is overtly important that those responsible for change receive support, so that work can happen and even continue.

It’s important to stress that even though there might be short-term results, as shown previously, the real results will come in the long-term and this is why it will not be possible to make the biggest accomplishments apparent in this article.

In CombateAedes’ case, there is a strict correlation between the use of data, which is being generated in a digital manner, with actions. And this is very much a right move, which will make the proposal’s success, as by correlation with the study made evident by (Bughin, Laberge and Mellbye, 2017), which highlights that winning institutions are the ones that make correlation of the digital with business strategies, which here can also be translated into actions. With the superior user experience brought by digitalization, it is possible to reach even better results as described by (Forrester, 2016). In CombateAedes’ case, greater engagement is apparent, and this greater engagement creates an atmosphere of greater results, as shown by the number of inspections and, consequently, the number of foci.

It’s mentioned in the interview that constant public feedback is used, which can be tied to market orientation, described by (Blank, 2013), of heading towards adhesion and learning how to improve the product through trial and error. It’s shown to be an interactive process on account of the feedback and improvements, which consequently is making a better product, and this is bringing more engagement and better results, as by correlation with (Kotler and Keller, 2012).

Among the digitalization pillars described by (Bughin, Laberge and Mellbye, 2017), it’s possible to better characterize CombateAedes’ digitalization as a process digitalization, since the checklist procedure was already done by employees, and with this digitalization, improvement of the process and data generation inconsistency was possible, making everything faster. Also, it is possible to identify the pillar of marketing and distribution digitalization, after all, the digitalization process proposed by CombateAedes helps to create scalability, making it able to be better distributed across other Brazilian states. According to the interview, there was resistance to change, but not a boycott, which is a natural point in any change. It falls on the company that will undergo digitalization to maneuver these problems, guarantee a culture that is open to change, identify the possible points that can be worked in acceptance and that guarantee
the smallest time possible in the changing process. Since digitalization is already a reality for many companies and the sooner they make this movement, the bigger the returns will be, based on pioneer advantage, which will give disproportionate gains ahead of companies that perform digitalization later. On Governments lies the choice to improve their policies or not. After all, the (World Health Organization, 2005) highlights that at least 80% of brain vascular accidents, heart disease and type II diabetes can be prevented. This without mentioning diseases such as obesity, HIV, among others, which also present a high possibility of prevention, drastically reducing the onus of treatment, if a more incentivizing and prepared concept is attributed to prevention. Digital transformation has the potential of a much larger reach than what's currently available.

As described in the interview, a lot of small modifications were performed based on the public's feedback and, amidst these modifications, it was possible to reach modifications that truly positively impacted functioning, such as exact identification of the focus point through GPS technology similar to what's used by Uber, speech-to-text transformation systems and creation of more sophisticated data cross-referencing. This information is in accordance with words on experimentation emphasized by (Kohavi and Thomke, 2017), who say that, online, great deeds are accomplished through a large amount of small improvements, and these are the ones to create the biggest impacts. So, it's apparent that the technique of making an insertion into the digital medium based on trial-and-error can truly be the best path. (McKinsey, 2017).

On account of digitalization, commodity and ease of use (usability), a bigger engagement is being allowed, reaching users that previously did not act. Furthermore, it's allowing an expressive increase in efficiency and efficacy, through the use of data. And, besides the improvements being made mostly based on the customer, which is a very intelligent attitude based on (Levitt, 1960), Lemobs shows that it is thinking ahead, and this movement enables the characterization of the proposal as a new business model. This aside, business intelligence reports are enabling data cross-referencing that are leading to identifying points and insights that weren't previously possible, as described by (Kotler and Keller, 2012). A very interesting point in information systems is knowing that much information has the potential to be extremely pertinent because, many times, what's unexpected will be able to give institutions possibilities to confront their operational mode with what's actually happening. For example, several foci that were discovered in non-conventional locations, such as external areas of public repartitions (1 in every 4) and water fountain reservoirs. Against traditional information carried through all Brazilian means of communication which massively indicated that the population should focus on locations such as water tanks, plant dishes, among others. This finding from the CombateAedes app, as well as the Microsoft case mentioned, presented by (Kohavi and Thomke, 2017), show that big companies and even the Federal Government are utilizing professionals that utilize theories that can't be proven in practice. And this point is of extreme importance, since it's impossible to not think about the fact that the Federal Government and companies of this size possess the best professionals in the market, if the theory can't be proven in practice in these locations, it will undoubtedly be much harder for the rest of the market. And so, it becomes increasingly proven that a digital structure can bring benefits. Furthermore, insights can be generated and opportunities visualized, through information systems, by institutions that enter this modality of greater analysis of the environment and public, which will help in guiding financial, marketing, tradeoffs, specific actions and customized healthcare decisions, among others, such as in CombateAedes’ case.

On account of digital revolution, many companies will realize that data volume and the information system end up creating the possibility of generating new products and services, as well and identifying new consumer habits and ways of consumption. It's still hard to know this method's real capacity. However, its effectiveness is already proven. Creating this environment, will stop intuition-based acting and transform it into a big scientific barn, as described by (Kohavi and Thomke, 2017), which will guide business and society into a paradigm, concept and business model shift, which might generate much value for companies, society and countries. On the contrary, not having this experiment structure might make managers more reluctant to testing or investing, due to fear of making mistakes. Joining this possibility to the healthcare sector should be incentivized and emphasized, since healthcare costs are extremely high and treating the population, in a preventive manner, from the get-go, is already the best path. The initial cost of implanting
technology systems that allow innovation and experimentation might be high, however, the incremental cost per experiment is very low. Despite it being reported in the interview that, in CombateAedes’ case, the implantation of the system is cheaper than if you had done something non-digitalized. Since, with the same type of resource it’s shown possible to do much more. Having this structure in extremely intelligent and strategic, since it also creates a high entry barrier to competitors, in the case of companies with their products and services. Having access, as soon as possible, to this information can also be seen as smart and strategic, even because, this data which will generate information, might generate a new revenue model for the company or massive reductions in spending for governments. Also, companies might start gaining revenue with the sale of data to other companies, on top of their core business, and the digital medium is perfect because everything can be quantified.

A point that is essential to stress in this moment is the matter of agility. Intelligence, with targeting through data cross-referencing in business intelligence systems, brings the possibility of everything being faster as specified by (Kotler and Keller, 2012). And depending on the type of information and the case, it’s crucial for there to be quick action. For example, in cases that have negative repercussion on brand image, a delay in action in this scenario might be disastrous. As in the case of CombateAedes, data consolidation before the proposal lasted around one to two months. However, the mosquito’s cycle last around 10 days, an answer which is not consistent with the scenario. Today, analysis can be made almost automatically. Real-time, opportunity maximization and constancy in research show to be very attractive points of digitalization and intelligence, completely changing the scenario, and being much more effective and efficient in the prevention of the mosquito. Applying this digital method to the control and prevention of chronic diseases, through bigger population engagement might mean extraordinary gains to public coffers, in a country with over 200 million inhabitants. Also, lives are being discussed, lives which can be improved or spared. Saving money utilized in treatment, through digitalization, healthcare's potential as a whole could be improved, seen as there would be much more money left over for the improvement of already existing healthcare units. This is a matter not only of costs, but of ethics and also risk mitigation.

(Yoo, Boland, Lyttinen and Majchrzak, 2012) report that the digital medium affects organizations not just by generating new products and services, and new business models. It goes beyond, also creating new organizational forms, brought about by increasingly intense digital technology. In the interview, it's highlighted that digitalization did not effectively alter the organogram. However, it is said that the technology and service crew relies on about five to six people, and if there weren't digitalization, approximately 100 would be necessary for inspections, reporting that with the same organogram much more was achievable. The altering of the flow chart was related with the better coordination of inspection activities with the targeting of preventive measures, and with the charting of data, which might be used for correlation with other databases, through integration. It's a fact that the organogram was not altered in CombateAedes’ case. However, based on this information, results and correlation, it would be possible to predict that if a similar proposal had been implemented in a traditional company in which 100 employees had been performing said function. Through digitalization the organogram could possibly have been altered the organogram. Today, in many places around the world, the capacity of health care professionals and service is saturated, with digital transformation it's possible that many people receive health guidance, or control, that was not previously possible, for countless reasons. In the end, if a greater focus is given to disease prevention via digital transformation, many companies will lose revenue as described by (Bughin, Laberge and Mellbye, 2017), who mentions that the winners in most cases are the consumers and not the companies, generally. After all, the powerful healthcare industries turn a profit, in fact, from disease. Despite insurance companies, the government and societies already being big stakeholders who should be utilized intensively for this technological and conceptual revolution.

Inside the CombateAedes proposal it's necessary to emphasize that some differential points that might be guiding the proposal on a path of success. The first point is related to customization, since adding a more accurate GPS mechanism and the system which transforms speech into text, it was possible for people of older age to engage more, as described by (Nielsen, 2016), who declares that personalization can generate great benefits for profit, including an increase in visitor involvement and an improved
experience for clients. The second point can be related to collaborative business, since according to (Chen, Zhang and Zhou, 2007), this helps in automating processes with the stakeholders, which reduces processing latencies, helps in operational decisions in a more dynamic manner with real-time information and improves service levels, while reducing costs, something that within a healthcare context translates into more efficacy, efficiency and might save lives. This being almost a perfect description of the results that are being achieved. The third point might be related to important information and simplicity, since according to (Oliveira, Sonêgo and Bigarelli, 2017), “fintechs have won popularity thanks to the perception that they are easier to use (82% of those interviewed), offer faster services (81%) and guarantee a good user experience (80%)”, as described in the interview, the biggest concern for developers was based on usability, so that use would become much easier. Furthermore, the app provides tutorial videos to help with doubts that might still occur, availability of support channels and online chat, which is identified as the most effective, besides being an aid in generating feedback that can be utilized in improving the proposal.

It’s considered that, in the case of CombateAedes, experimentation can be even further emphasized. Since, the feedback is already being captured, being this a tool of extreme worth for the process and this might help in reaching more improvements. Furthermore, the digital structure already makes everything easier to test, visualize and implement.

Also in CombateAedes’ case, due to being about prevention, the primary focus is diseases carried by the Aedes aegypti mosquito, such as Dengue, Zika and Chikungunya. However, in a second instance, it might help in avoiding diseases such as microcephaly, hemorrhagic diseases, among others. Acting in the initial stage of many diseases is a very intelligent and proactive strategy.

It’s interesting to notice that, generally, Brazilian healthcare system prefers to act in a reactive manner, with superior treatment costs, which are much more expensive. Despite there being preventive actions in many aspects, it’s still not being effective. You can find proof of this in hospital lines, it’s easy to see. The digital medium is a strategy which might bring countless benefits such as lowering costs, lines, among others. And as proven, it possesses a potential for incredible engagement, efficiency and efficacy. However, the largest gains will be future, as we are speaking of health and digitalization. At this time, it’s important to stress that scalability also makes all the difference and creates incredible synergy with public policies since, from the moment the proposal is complete, all that’s left to be done is to disseminate and expand to other regions. Much easier and cheaper than proposals of a physical nature, which require constructions and professionals.

Cultural patterns were mentioned in this article, the objective was to help future digital proposals in guiding their projects through safer paths. There still aren’t answers to every question, especially in such a novel subject. The ideal would be for the answer to come from the users themselves, since theory might not come true in practice, as shown by (Kohavi and Thomke, 2017). Furthermore, in each country a personalized course of action will be necessary, since there are triggers that must be activated and treated in a different manner. However, incremental experiments, in this scenario, possess a measly cost from the moment the structure is created, this emphasis might create the possibility of many discoveries and of being correct in the adequation that needs to be done so that engagement is better used, directly influencing the end result.

By drawing some parallels to the cultural patterns proposed by (Hofstede, 2014), as this is a matter of innovation, in the power distance pillar, which is high in Brazil, it will be necessary for there be support from the top, in this case, the Government. Correlating still innovation to the uncertainty avoidance pillar, which is also high, it might make it so the process takes even longer. Furthermore, in societies with high risk aversion indexes it should be incentivized that specialized professionals are involved in healthcare proposal advertisements and this might create better results.

The digital medium has a plain synergy with advertisement, generating even more engagement. This point can be well developed in collectivist societies, since socialization is easier, making use of social medias. Since indulgence is also considerably high, people are more open to sex, which if not safe might
bring diseases. However, it also makes it so the society wants to have greater participation in activities with friends, besides wanting to fulfill desires. Involvement might be difficult, since a considerable share of Brazilians do not possess long-term orientation, despite a slight majority worrying about the future. However, without long-term orientation, it might be that almost half the population does not easily adhere to the prevention proposal. However, it as a point that can be bypassed. With digitalization it’s possible to better discover the desires that most motivate this population so that they are better used as exchange currency for cooperation. Based on the value created, to many, collaboration, digital transformation and personal triggers might help create a proposal that ends up developing itself, by itself, within the healthcare sector.

There is a possibility of reeducating people in a singular manner. On account of this, the app also brings with itself a serious responsibility, since its success might make the Government notice this aspect. On the contrary, it might make it remain within its modus operandi.

References


**End Notes**

¹ Finance company with use of technology considered to have very high potential in Brazil.

² Brazilian Institute of Public Opinion and Statistics.

³ The Alberto Luiz Coimbra Institute of Post-Graduation and Engineering Research (COPPE) at Federal University of Rio de Janeiro (UFRJ).

⁴ Brazilian Support System to Micro and Small Companies.

⁵ Brazilian COPPE/UFRJ researcher and CEO (Chief Executive Officer) of Lemobs.

⁶ International Classification of Diseases (ICD).


Temporal Policy for Thailand

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Abstract

Audiovisual markets in Thailand have changed rapidly in the past few years due to ongoing digital disruption. As Over-the-Top (OTT) platforms continue to flourish, consumers can access a wide range of content from an increasing number of OTT platforms around the world. With this digital expansion trend, the traditional broadcasters in Thailand have claimed that they are affected by the rise of OTT services. Under the current system, these OTT operators are being lightly regulated in comparison to traditional broadcasting and telecommunication companies. Therefore, there is an increasing pressure for streaming video-on-demand services from Over-the-Top (OTT) to be regulated by National Broadcasting Telecommunications Commission’s (NBTC) in order to create a level playing field in the industry.

The aim of this study is to clearly understand the situation and provide recommendations for the best outcome for Thailand regarding the OTT industry. This case study research employed semi-structure interview and quantitative survey to gather necessary data for analysis. Key stakeholders were interviewed to gain insight into the issues while online survey was conducted with OTT users around Thailand. This study focuses on the market overview and benefits of online audiovisual industry to Thai content creators and consumers as well as its positive contribution to the growth of broadcast media industry and consequently the expansion of Thai economy. The study also outlines international OTT regulatory practices. The OTT regulations being adopted by many countries are still in the early stage of development. Many of these regulatory frameworks are being reviewed for modification and future improvement. The recommendations in this study are based on the analysis of data obtained from key stakeholders and industry experts.

While this study focuses predominantly on video and video-on-demand, it should also be noted that other OTT services such as those involved in e-commerce, payments, messaging, the sharing economy and transportation services delivered over-the-top would not necessarily fit into a similar regulatory model for video. OTT services cover a wide array of services and innovation and it is unlikely that they would effectively be regulated under one umbrella ‘OTT regulation’. Regulators should engage with industry to identify policies that will enable citizens to benefit from the services that OTT applications provide without distorting the marketplace with ineffective policies.

Keywords: OTT, Digital Policy, Thailand, Economic Value, Digital Regulation
Track 16: International Business
Research on Global Value Chain Reconstruction of Cross-border E-commerce Based on C2F Full Link Operation

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Abstract:
With the popularization of the Internet, small and medium enterprises and consumers are becoming the new main body and new impetus for global cross-border e-commerce, influencing the pattern of international trade, international division of labor and industrial structure. This article takes the cross-border exporter enterprise as an example founded by the students of Alibaba Business School in Hangzhou Normal University to describe and analyze the operation process and the value chain. It concludes the "C2F full link operation global value chain model". The model starts from collecting the hot market and results in forming the user's portrait, realizes the product originality, customization, globalization and branding during the whole operation process. It explores a path to rise in the global value chain for Chinese enterprises, and provides the reference for the Chinese small and medium micro cross-border exporters, and foreign trade company transformation and upgrading.

Keywords: Customer-to-Factory; Full Link Operation; Cross-border E-commerce; Global Value Chain

Foreword

Cross-border trade in China first appeared at the end of the 20th century. From the macro perspective, cross-border trade needs to create a healthier industrial chain and ecosystem to optimize the industrial structure of foreign trade. The reform of the supply-side reform policy even puts cross-border export trade Mention more important strategic position. From the microscopic point of view, price theory is the core theory of microeconomics. Based on this theory, cross-border e-commerce needs to precisely match the demand and products, reduce the operating costs of enterprises and enhance the added value of enterprises and the competitive advantage of products. Specifically, the cross-border e-commerce industry, which is dominated by commercial capital investment and individual entrepreneurship, has agile market flexibility and initiative, enables more accurate and prompt control and excavation of demand in an in-depth manner, efficiently corrects the allocation of factors, Expand effective supply, improve the adaptability and flexibility of the supply structure to changes in demand, raise the total factor productivity, better meet the needs of customers in global markets and promote the transformation, upgrading and innovation of Chinese foreign trade industry.

With the proposal and pilot of the eWTP concept, Chinese cross-border e-commerce industry, especially the cross-border export industry, holds more and more initiative in the world economy and trade. The change of traditional international trade brought by cross-border electronic commerce is not only the change of product production cost and transaction mode, but also the change of enterprise and product operation management process. The information technology and data resources under the Internet era will continue to give birth to new business formats and provide new engines for economic development. The market opportunities and management challenges brought by these new formats will coexist in the process of economic globalization. For the global consumer market set up by the Internet, how to manage our industrial competitiveness, build a complete global value chain, and guide the transformation from "Made in China" to "Created in China" is the historical mission of the new industry managers and regulators.
一、Theoretical Review and Literature Review

（一）Value chain theory

The theory of value chain is from the Harvard University professor Michael Porter (1985, pp.13-19) and was proposed in his book "competitive advantage". Michael Porter believes that the enterprise value creation process can be divided into basic activities and auxiliary activities. Basic activities include internal logistics, production, logistics, marketing and sales of external services. Auxiliary activities include purchasing, technology development human resources management, and enterprise infrastructure. In his view, the value chain was a collection of activities that each enterprise designed, produced, marketed, delivered and supported the product. Payport and Sviokla (1995, pp.41-42) creatively propose that value chains can be divided into physical value chains and virtual value chains. In their opinion, every enterprise today is competing in two worlds. One is that managers can see and feel, while the other is a virtual world composed of information. The existence of a virtual world has led to the creation of a new value creation place for e-commerce, which changes the traditional mode of production of enterprises. Enterprises carry out value creation activities through different value chains in these two worlds. In the real world, enterprises create value through real value chain in the traditional sense; but in the virtual world, the enterprise creates value in the virtual value chain through information collection, organization, selection, synthesis and distribution of the five links to increase the value of the original information. In the same year, Valter (1995, pp.29-54) showed that the value chain was more focused on a test method. Every activity in a business implies a value. It can test the entire value circulation activities of an enterprise and the activities of various members in the enterprise. He believes that the value chain as a subsidiary of the management activities, should flow through the value of the entire enterprise, to help businesses gain business advantage. This paper holds that the above concepts have enlightening and referential value for the comprehensive understanding of the current cross-border e-commerce value chain, that is, the production, marketing, sale and logistics of the products should be considered in the process of constructing the cross-border e-commerce value chain.

We should also consider the important role of information elements in product design, supply and demand matching, resource integration. This paper holds that the above concepts have enlightening and referential value for the comprehensive understanding of the current cross-border e-commerce value chain, that is, the production, marketing, sale and logistics of the products should be considered in the process of constructing the cross-border e-commerce value chain. We should also consider the important role of information elements in product design, supply and demand matching, resource integration.

（二）Global value chain

The theory of global value chain is based on the theory of value chain explored and developed by business researchers of various countries in the 1980s. After the 1990s, some economists began to focus on the fragmented space reorganization of the global value chain. Since the 21st century, with the integration of international markets, the process of global integration has been deepening and the division of labor in the country has been constantly clarified. Developing countries have begun to integrate into the global value chain. Powell (1990, pp.41-42) classifies value chain governance structures by market, network, and hierarchy. Henderson (1998, pp.356-384) thinks that the value added part of producer driven in the global value chain is mostly located in the field of production, and the added value of the buyer driven global value chain mostly flows to the circulation areas such as market sales and branding. In the same year, Adrian Slywotzky (1998, pp.3-16) put forward the concept of value network for the first time. He believes that changes in customer needs have changed the business model. In the highly competitive market, the traditional supply chain of enterprises will be expanded into a value network. Gereffi (1999) proposed a framework for a global commodity chain that links the value chain with a globalized organization and as a result, a comparative study of producer-driven and buyer-driven commodity chains was conducted. At the beginning of the 21st century, Gereffi and many scholars in management have always believed that the global commodity chain should be replaced by the global value chain (Hui Zhang, pp.38-46). Sturgeon (2001)
defines GVC from three dimensions of organization scale, geographical distribution and productive actors: in terms of the organization scale, the global value chain includes all actors involved in the productive activities of a product or service; In terms of geographical distribution, global value chains must be global; from the main participants, there are integrated enterprises, retailers, leaders, turnkey suppliers and component suppliers. He also distinguishes between the concepts of value chains and production networks: value chains describe a series of processes from production to delivery, consumption and service of a particular commodity or service. The production network emphasizes the nature and degree of the relationship between a group of related enterprises.

The most representative definition of the United Nations Industrial Development Organization (2004): Global Value Chain refers to the global cross-enterprise network organizations connecting production, sales, recycling and other processes in order to achieve the value of goods or services, from the procurement of raw materials and transportation, to semi-finished and finished product production and distribution, until the final consumption and recycling of the entire process. It includes all participants and the organization of activities such as production and sales, as well as the distribution of value and profits, At present, the global enterprises in the value chain are engaged in various value-added activities, such as design, product development, manufacturing, marketing, delivery, consumption, after-sales service, final recycling and other activities. For a long time, transnational trading companies were the carriers of global value chains. With the development of Internet-driven global cross-border e-commerce, the small and medium-sized enterprises as the main body of trade are rising and the cross-border e-commerce platforms become a new global value chain. The changes in the industrial structure and resource allocation of carriers and international trade have inevitably led to the restructuring of the global value chain.

(三) Global value chain reconstruction theory

The reconstruction of the global value chain is the process of natural economic development. In this dynamic process, all enterprises need to exert their own advantages to occupy a more advantageous position in the new round of industrial transfer. Especially after the economic crisis of 2008, the industries driven by the consumer-led value chain all had different degrees of decline. The industries driven by the consumer-driven value chain did not fall. According to Miller & Winkler (2013,pp.36-42), the integration of global value chains into vertical integration and horizontal integration is influenced by Adam Smith's "market-oriented division of labor". They think vertical integration mainly depends on the reduction of market size, the level of rational suppliers. Starting from Ricardo's rent-seeking theory, they summed up the concept of horizontal integration and studied the integration of the value chain mainly from the perspective of limited supply of resources and marginal product. In the same year, Songtao Ding and Houjun Liu (2013,pp.105-112) focused on the reconstruction of regional value chains from the perspective of vertical division of labor and put forward strategic proposals for breaking through the "low-end lock-up" in China. Wen Tian, Yaqing Zhang and She Min (2014,pp.3-13), professors of Nanjing Normal University Business School, jointly pointed out: "In the value chain, intermediate products can come from specialized suppliers and the value chain can be organized vertically or non-integratedly, or internally. Non-independent manufacturers, the value chain organization is vertical integration. At present, Chinese cross-border export electricity suppliers generally adopt these two methods of organization, providing a realistic basis for the innovation and development of the enterprise value chain. In recent years, the development of e-commerce in China has become a new breakthrough point in the economic development in our country and even in the world, which has laid a solid foundation for the development of cross-border e-commerce industry in our country. At the same time, the nation's leading Hangzhou cross-border e-commerce practice has also provided valuable and valuable materials for academic research.

(四) Global cross-border e-commerce

Cross-border e-commerce is an abbreviation for cross-border e-commerce companies. It includes both e-commerce platforms and trading entities where platforms are located. It can also refer to such industries. Cross-border e-commerce is an emerging economy that China vigorously developed after the
global economic crisis. Its initial development was in the form of overseas purchasing and personal purchasing. After the global economic crisis, the economy began to gradually become more and more large-scale (Xiaheng Zhang, 2017, pp. 76-83). According to the division of business entities, cross-border e-commerce is divided into platform-based, self-supporting, and hybrid. These three types of cross-border e-commerce each have their own development model, and they respectively build a producer-driven global value chain and consumer-driven global value chain.

At present, China is the world’s largest trading nation and manufacturing country, and the second largest economy. Although the growth rate of global trade is less than 10%, Chinese cross-border e-commerce has maintained a growth rate of more than 30%. The cross-border e-commerce retail sales account for a large proportion of Chinese cross-border e-commerce market. Chinese cross-border e-commerce has become a new engine of foreign trade growth. With the rapid development of Internet technology and global e-commerce platform, as well as the development of a new round of new markets such as cross-border trade, consumption and services, SMEs have become increasingly important in economic development. According to statistics from the Ali Institute, SMEs (small and medium enterprises) have provided 73% of jobs and 60% of GDP in our country. At the same time, the globalization trend of SMEs is also becoming increasingly strong. Cross-border e-commerce is developing into a new business and an important part of international trade. The above cross-border retail transaction volume comes from the contribution of approximately 5 million Chinese foreign trade SMEs. Together they created about 60% of the total foreign trade. SMEs continue to join the cross-border e-commerce market as “sellers” of “selling the world”. Therefore, cross-border e-commerce exports have maintained rapid growth.

With the rapid development of global Internet technology and e-commerce, cross-border e-commerce is replacing and influencing traditional international trade methods and status. It has severely impacted and subverted traditional trade systems and global value chains.

(五) Cross-border e-commerce value chain

The cross-border e-commerce value chain research is based on Porter's traditional value chain theory. The domestic scholars Wei Xi and Fang Rong (2000, pp. 72-76) analyzed the difference between the value chain under the traditional value chain and the e-commerce environment, and analyzed the impact of the value chain under the B2B and B2C models, namely, the value chain driven by the producer. Affected, they believe that traditional Chinese enterprises involved in e-commerce should be integrated into the corporate intranet, establish and deepen the B2B e-commerce model, and vigorously promote the B2C model in three steps. Xiuli Ma (2004, pp. 32-35) proposed that informatization is an important way to reconstruct the enterprise value chain. Researchers at Wuhan University such as Liwen Tan, Haiyan Ma, and Yisheng Liu (2007, pp. 8-12) have studied the restructuring of Chinese companies' value chains: “The reconstruction of Chinese corporate value chain requires three systems: industrial competition, learning and innovation, value chain reconstruction, and external support systems. The people are closely integrated and systematically consider this issue from a strategic perspective." Professor Zhibiao Wang (2015, pp. 67-72) of Henan University's School of Economics explained that: The value chain is essentially the sum of the value-added activities of the company, which constitutes a value chain. In the era of Internet economy, cross-border e-commerce operators are not the same, and their operating models are varied. Among them, B2B e-commerce, which accounts for the mainstream of cross-border trade transactions, still retains the traditional production-oriented marketing model, and attaches importance to the promotion of the downstream value chain. And sales work, ignoring the upstream customer demand research, product design work, it is difficult to improve product competitive advantage and added value. The global value chain is broadly summarized as the use of international inputs in the production process. It covers the activities of a product or service from concept idea to end use, and also includes how to lay out these activities in the geographical space and across national boundaries. This allows us to more clearly recognize the economic globalization. The essence of this is the globalization of division of labor and the global layout of the corporate value chain. Lauren A. Palmer (2014, pp. 386-394) analyzed the scientific and technological innovation capabilities of four Asian countries: China, India, Japan, and North Korea, and concluded that
the technological innovation capability in Asia as a whole is improving. It also verifies that science, technology, and innovation drive the assumption of global economic development. With the continuous deepening of domestic economic reforms and supply-side reforms, how will Chinese economy develop in the international context of global value chain reconstruction? In this regard, Professor Jinzhu Zhou (2017, pp. 23-25) of the China Council for the Promotion of International Trade pointed out that Chinese strategy for reconstructing the global value chain: "Promote the upgrading of Chinese companies in the global value chain; Improve the service system of the global value chain; Build Chinese leading global value Leading companies."

The above-mentioned domestic and foreign scholars have analyzed and explored the reconstruction of the global value chain from the global economic background, and pointed out the inevitable development trend of cross-border e-commerce at the theoretical level, providing a reference for the development of cross-border e-commerce companies in China. This article will use a typical case to summarize the "C2F full-link operating model", that is, "Customer-to-Factory (customer-to-factory)" to meet customer demand-oriented, using small batch, creative first for personalized custom intensive production business model. Such e-commerce subverts traditional standardization and assembly line production, from design, production, operation, and sales, all under the control of the corporate own brand, and is committed to improving user experience, increasing product added value, strengthening brand image and customer loyalty, and improving Cross-border e-commerce business competitiveness.

We hope to analyze the reconstruction process of global value chains through cross-border export e-commerce case studies, and promote the transformation and upgrading of traditional manufacturing industries, the development of new products and new competitive industries, and create a “China-created” global image.

二、Nansi Enterprise Case Study

（一）Enterprise review

Hangzhou Nansi Electronic Commerce Co., Ltd. was established in April 2016. Its legal person is Ye Zhen, a 2015 undergraduate in online marketing at the Alibaba Business School of Hangzhou Normal University. Sophomore has led students to conduct cross-border e-commerce ventures. The company is located in the export home industry zone in the Yangtze River Delta, has its own brand and the latest foreign home market dynamics, and has established a long-term cooperative relationship with suppliers, deepening the supply chain. The company registered the "MAGFLY" home private brand and put on record for brand in Japan, the UK and Germany. The product line was mainly concentrated in the household area. The average daily sales volume of the team members reached 1000 dollars in 70 days in July 2016. Starting in October, average daily sales were $1500, or about 10000 yuan, or 350000 yuan in October. Average daily sales in November were $3000, or about 20000 yuan. So far, the corporate turnover has exceeded 1.2 million.

In the initial stage of the venture, the low- and middle-end consumer groups were the corporate main customer base because of financial strength and brand restrictions. The company focuses on small home products, personalized customization, differentiated sales, and explosive products, especially in product R&D and design, based on the considerations of low-cost home products and low logistics costs, combined with the needs of consumers in major markets in Japan and Europe and the United States. Establish a product model, register its own brand, use data analysis software to capture hot spots in overseas markets, and look for suppliers to customize in small quantities after independently designing products.

（二）External environment

At present, the global economy has entered the era of global value chain. Under the framework of big data, cross-border enterprises are e-commerce online, data-based, and network-based. They are
directing consumption patterns from production in the industrial era to driving consumer demand driven (C2M) transformation. With the development of the era, international trade will mainly be carried out through e-commerce. Cross-border retailing will be a new force for the medium and small foreign trade enterprises in China to emerge from the predicament and stimulate international trade. In the process of deepening the "One Belt and One Road", Hangzhou was the first comprehensive experimental area for cross-border e-commerce in the country. Hangzhou comprehensive test areas were carrying out comprehensive management reforms to promote the development of the foreign trade industry and achieved phased results. Cross-border e-commerce became Zhejiang's foreign trade development a new bright spot. In 2016, Hangzhou achieved a cross-border e-commerce transaction volume of 8.112 billion U.S. dollars, of which cross-border e-commerce exports accounted for 6.06 billion U.S. dollars, stimulating foreign trade exports by 15.2 percentage points. At present, 7013 companies have registered and filed in the "single window" comprehensive service platform in the Hangzhou comprehensive test area, and cross-border e-commerce has become a new kinetic energy for transformation and upgrading. Through "Internet + Foreign Trade + Made in China" to help enterprises achieve well export and import, speed up the transformation and upgrade, organize the implementation of two rounds of cross-border e-commerce B2B special actions, and drive more than 6,000 enterprises in Hangzhou to go online, "relying on cross-border e-commerce The realization of transformation and development has become the consensus of traditional foreign trade and manufacturing enterprises in Hangzhou. The number of Hangzhou offline cross-border e-commerce industry parks reached 13 with a total area of over 3.23 million square meters, and the occupancy rate exceeded 98%. In 2016, 519 cross-border e-commerce enterprises were newly introduced. Alibaba and NetEase Koala further intensified cross-border e-commerce investment, google, Amazon, wish, eBay, newegg and other multinational enterprise platforms gathered in Hangzhou, China Manufacturing Network, Dunhuang Net and other well-known platforms have settled down, Hangzhou has become a cross-border the leading city for the global distribution of e-commerce leading companies. Cross-border e-commerce manufacturing, platform marketing, venture capital, financial insurance, warehousing, logistics, and integrated service industries converged in Hangzhou and Zhejiang to lead the practice of Chinese cross-border e-commerce, which became a new hot spot and new field of "mass entrepreneurship and innovation".

Hangzhou Normal University focuses on innovating talent development mechanisms and establishes and improves a cross-border e-commerce talent training system. The school not only allocates more than 30,000 square meters of space for the construction of a special innovation and entrepreneurship building. It also provides accommodation support for the self-employed students within two years of graduation. The pressure for the establishment of a business is reduced. And built an area of more than 7,500 square meters campus undergraduate business park, the current business park has initially formed a "one park, two districts and five centers" pattern, attracting more than 1600 students to participate in business, annual sales exceeded RMB 100 million. At the same time, the school used the Alibaba Business School as a pilot college for innovation and entrepreneurship, and joint Alibaba established related majors in cross-border e-commerce, international logistics, and online marketing. The college adheres to both theory and practice, adheres to a high starting point and high standards, and takes the road of internationalization and differentiation. It not only focuses on cultivating students' innovative spirit and entrepreneurial awareness, but also emphasizes the training of students' entrepreneurial abilities and practical experience, combining production, study and research. Creating a very strong entrepreneurial environment. In recent years, under the encouragement of "Ma Yun Spirit" with "dreams, passion, and sense of responsibility", college students have created entrepreneurial teams and entrepreneurial projects involving all walks of life and have won numerous titles in national college students' entrepreneurial projects. The Nansi company introduced in this article is a university student entrepreneurial project that has won many national awards.

三 Basic activities innovation of enterprise value chain

1. Design and production

Different from the traditional production-driven business model, Nansi enterprises aim at overseas
consumer demand, relying on big data analysis technology, aiming at creating single product explosives, integrating Chinese culture and resource advantages, and providing branding through micro-innovation and flexible production to provide personalized products. Take the blankets in the Nansi household’s just-needed products as an example. This type of product has a huge market capacity but a fierce homogenization competition. The company combines the current search hotspots and micro-innovation to customize a blanket of a mermaid appearance. Based on consumer demand for design and production, to accurately meet customer needs, and soon became the hot products of major sites, stand out from similar products. In addition, Nansi companies are deeply pursuing product lines and producing products with diversified value of use, ie, “multiple use of one product”. For example, a beach towel is used as a mat on the beach and a tool for wiping the body, and the scope of use is small. Nancy innovates on patterns and materials, adds fashionable elements and thickens the product, and can not only be used as an outdoor picnic mat. It can also be used as an interior decoration throughout the year and can even be used as a baby’s swaddling.

2. Operations management

Prominent feature of Nansi enterprise is different from other cross-border electricity supplier is C2F full link operation. It starts from demand of the overseas consumer and aims at the pain point of in Chinese manufacturing industry, such as the badly customer experience, the mismatch between supply and demand, and the inventories, especially the pain points of low added value. Through data analysis, it guides the production and operation of the domestic manufacturing industry. It takes C2F full-link operating model in design, production, sale and other aspect, and make corporate originality, customization, globalization, branding come true. The originality is the guide to the overseas consumer demand as the core, through a combination of Google Trends and Amazon tracker and other third-party software to collect hot topics in the home market, using data mining analysis of foreign consumers prefer the product style, color patterns, materials, etc. The concept of hot style is designed as the most important latitude of demand analysis. Customization is based on the originality and the manufacturers, then custom production. Through the promotion, sales and optimization of products in the global market, products occupy a large amount of user data while occupying market share, attracting some fans and realizing the globalization and branding value of the company. In the process of pursuing these four enterprise characteristics, the enterprise gradually accumulates the ability of deep mining customer demand, through continuously driving customer data, deeply mining customer demand, and then developing related products and multiple product lines to form an ecological cycle. The number of fans is also growing in this cycle, and ultimately based on the global value chain of the whole link operation. In terms of operational results, without increasing operating costs, this operating model can maximize customer satisfaction, increase the added value of self-owned brands, and stimulate the transformation and upgrading of Chinese traditional manufacturing industry and supply-side reform.

3. Marketing selling

At present, small and medium-sized cross-border e-commerce companies have relatively few available capital resources, and enterprises have to face high costs and inconspicuous results (Shijian Ma, 2016, pp. 33-43). Nansi designed a brand new marketing program for consumer groups, used big data analysis, integrated internet marketing methods, and inherited and developed the traditional marketing concepts and methods. On the one hand, it inherits the traditional way of network marketing: Nansi uses the official platform promotion method to promote, beautify product pictures and listing pages, and integrates the exquisite online shop decoration and refined product description with the corporate culture and product design concepts. Through price promotions, bringing high exposure, high conversion rate, and quickly accumulate a lot of praise. On the other hand, it is an innovation of online marketing methods: Nansi Corporation breaks through the traditional single search engine marketing method, adopts search engine optimization (SEO) that is widely used, highly competitive, and has a high rate of return on investment to reduce business risks. Through free experiential review promotion drives product sales, and through webpower, an e-mail marketing platform that precisely meets customer needs, reaches a tacit
agreement with customers. In addition, using the now-emerging means of online marketing, SNS adopts an implantable marketing model to allow customers to spread the virus, spread the product, expand the scope of product coverage, and increase the recognition of the brand. Knowledge, preference, and loyalty.

4. After-sale service

Perfect after-sales service system is a sign of a mature enterprise. Nansi Enterprise upholds the system responsible for the quality of products first. Responsibility for the product to the consumer is also the responsibility of the company itself. For products with quality problems, they insist on unconditional returns. However, after-sales service is not only for customer service with after-sales problems, Nansi also insists on the successful trading customers to continue to follow up and extend the contact cycle between products and customers. After-sales service is a cyclical process, both beginning and end, not only the end of the last marketing, but also the beginning of secondary marketing. The cost of fans through the secondary development of after-sales service is much lower than the cost of developing new users, and the marginal revenue generated is also very significant. In the process of converting users into fans and realizing corporate profits, Nansi enterprises built a set of complete customer data records and statistical analysis mechanisms through customer management software, which not only provided the basis for managers' post-sale customer management analysis, but also provided Enterprise decision-making provides strong data support. Through continuous improvement of the corporate after-sales service system to enhance customer satisfaction, continuous mining to create customer value, achieve sustained growth in business performance, and ultimately improve business efficiency, is the best state of after-sales service.

1. Platform support system

At present, the main business platform of Nansi is Amazon. With its relatively simple trading rules and vast sales of products in overseas markets, it has a certain amount of sales and popularity in European and American countries. The cross-border mainstream platforms such as Ebay, AliExpress, and Wish have their own advantages and disadvantages. The entry rules are slightly different. Therefore, they must be sorted by products and sub-platforms to show different advantages on different platforms. In a comprehensive view, AliExpress is based on price, only a low price can create a competitive advantage; Ebay requires higher product quality, and also need a price advantage; Amazon's entry barrier is higher, not only requires good product quality, but also needs The brand serves as an advantage base. In contrast, cutting into Amazon with good products with trademarks is the best way for traditional companies to enter cross-border e-commerce. Amazon, as the world's largest shopping platform, provides the largest protection and support for enterprises in brand registration, property protection, data analysis, and transparent information disclosure, which helps companies quickly open the market, control market information in a timely manner, reduce costs, accelerate inventory turnover, expand market opportunities. However, with the development of other mainstream platforms, multi-platform operations will also become an important way for Nansi to further occupy the world market.

2. Logistics service system

In view of Amazon platform's self-built logistics from picking, packaging, delivery and distribution, to achieve the advantages of one-stop service (abbreviated as FBA plan), Nansi Company has joined the Amazon FBA program. Nansi simply sends the product to the Amazon operations center. After the order is made, the customer can enjoy the ultimate experience of global delivery within 48 hours, which greatly enhances the customer experience and establishes a good reputation for brand. When the sales volume reaches a certain scale, in the face of a large number of orders, returns, inventory turnover, high freight costs and other issues, can be used to solve the problem by renting overseas warehouses. Under the circumstance of grasping the inventory and sales cycle, products can be shipped to overseas warehouses in bulk through shipping. On the one hand, logistics costs can be reduced, inventory turnover can be
accelerated, profit margins can be improved, and on the other hand, delivery speed can be accelerated and customer satisfaction can be improved degree. At present, third-party "overseas warehouse" services have emerged in an increasingly mature format and doesn’t take a lot of money to rent warehouses overseas, which is beneficial to the development of small and medium sellers. At the beginning of the lease, air freight, small shipments, and trial sales were carried out. After a period of time, sales were analyzed, replenishment and adjustments were made. If the sales were good and sales were large, shipping was used to further reduce costs.

3. Comprehensive foreign trade service

Strengthening the comprehensive service of foreign trade is the only way for the social division of labor, and it is also an inevitable choice for small and medium-sized cross-border enterprises represented by Nansi to reduce the operating costs of enterprises. The initial foreign trade comprehensive service basically followed the traditional freight forwarding model. Foreign trade service companies collected fees by helping customers pass through customs to achieve profitability. With the development of Internet technology, customs information has gradually become open and transparent, forcing foreign trade service companies to start earning profits through sub-categorization. The operating model has become increasingly specialized and diversified. The main business types include: Agency shop, distribution, talent training, and shops optimization and so on. With the rapid development of e-commerce companies, foreign trade service companies are aware that providing a full range of comprehensive services can be based on the foreign trade market. At present, it is obvious that single services are not enough to support the development needs of cross-border e-commerce businesses. It is necessary to promote the upgrading of the foreign trade integrated services industry through the integration of foreign trade integrated services, and to provide comprehensive guidance and acting operation services to customer enterprises. In order to realize the industrial value of comprehensive service of foreign trade.

三．Cross-border E-commerce Global Value Chain Model Based on C2F Full-link Operation

(一) Model diagram

The above diagram takes the experience of the Nantes case as an example to summarize the description of the cross-border exporter C2F full-link operation global value chain model. Such cross-border exporters based on platform information resources, proceed from the overseas consumer demand side, conduct product design and research and development through data analysis and mining, thereby stimulating domestic manufacturing production and operations, and forming a C2F full link operating all closed loop based on the global value chain. It includes eight links: market hotspot collection, data analysis mining, explosive models conceptual design, re-confirmation of sample, manufacturers produce custom, product network promotion, customer data accumulation, and user portrait formation. All links are
Interlocked, progressive and interacting with each other to jointly advance the spiral development of this model.

(二) Market hotspot collection

Collect hotspots in overseas consumer markets through third party software such as Amazon Tracker and Google Trends. For the keywords with large search volume and high search frequency, more attention is paid to focus on the user groups, and the use of hotspots to meet the market demand is the direction to carry out product design and production. In the cross-border export enterprises driven by consumer demand, the collection of market hot spots is the basis for all commercial activities. The product competitiveness thus formed is the core of the corporate value chain.

(三) Data analysis and mining

The use of professional data analysis software to replace the traditional market forecasting methods, using Google Trend and other software focused on the material, patterns, colors, styles and other aspects of the product to obtain effective data, hotspot analysis and mining. This link is the process that companies digest and absorb market data. Based on the development of modern information technology, e-commerce companies will have more time-effective capture of key market information, and business risks will be greatly reduced.

(四) Explosive models conceptual design

Using data analysis results, the target market will be clearly defined. The pre-set product will be fragmented for different target groups, and the concept of explosion model will be designed. This link is an important part of the C2F model in which users are converted to consumers. The concept of explosion models is centered on consumers rather than producers. Enterprises take consumer demand as the primary condition, increase consumer value, and increase consumer satisfaction. Therefore, C2F is not a substitute or competitive relationship between B2B and B2C. The difference is that C2F extends the value chain of B2B and B2C, and thus has more link and controllability than creating value for them. The core competitiveness of the C2F model is to aim at the whole process operation and full link management of consumer demand instead of relying on a single link or reducing cost.

(五) Re-confirmation of sample

After using the data for scientific analysis, the sample data was further improved, and a large number of overseas professional buyers were contacted for evaluation and voting by mail, telephone, and Skype. This kind of feedback research on the sample is an indispensable part of controlling customer demand in the C2F model. The design of a product is a process of repeated testing and repeated modification. Modern information technology can only provide support at the technical level, and the control of the market is a dynamic process of comprehensive, multi-level coordinated planning of technologies, resources, and management. The re-confirmation of the sample not only tests the user's needs and product match, but also further meets the user's needs. It also expands the corporate perspective from the technical level to all levels of the market and further enhances the market competitiveness of the company.

(六) Manufacturers customization

After the design sample has been repeatedly tested and confirmed, it is submitted to the company for a small amount of production. The development process of consumer-driven cross-border exports of e-commerce companies is divided into three phases: C2B2F, C2F, and C2M, based on the verticalization of corporate organizational structure. In the C2B2F phase, companies design products based on user needs, and then outsource order and production operations; C2F stage companies and factories conduct in-depth cooperation, and the two hold brands together; Finally, the company builds its own factory into C2M stage,
and then product design and product production will have more autonomy. The C2F model is suitable for cross-border e-commerce entrepreneurs and small and micro enterprises. In this model, product design and production are independent and belong to different enterprise entities. Generally speaking, cross-border e-commerce companies focus on searching for information design samples, then handing them to the factory for a small amount of production, using pre-sales, qualitative + quantitative sales forecasts and other refined operations to reduce the pressure on both sides of the inventory.

(七) **Product network promotion**

Cross-border e-commerce product promotion requires the integration of a variety of on-site, off-site, domestic and overseas network marketing methods, using graphic, video, live broadcast and other forms to build a comprehensive system for promotion on INS, TWITTER, FACEBOOK, and other social platforms system. For example, in the third-party cross-border platforms such as Amazon, AliExpress, etc., for pre-sale, limited-time spikes, special offers to buy gifts, collect social networking platform to build the corporate fan community regularly publish products and discount information, combined key in the YOUTUBE platform Word matching means for video promotion. Network promotion can not only expand product visibility, but also gain benefits in other areas. For example, product pre-sales can reduce raw material costs and inventory risks as much as possible, and control production costs from the source of the supply chain; spikes and special purchases can achieve the effect of reducing inventory and returning funds. Product network promotion is a compulsory course for cross-border e-commerce companies and a direct factor for the success or failure of cross-border e-commerce companies. The innovation of promotion methods and content is a corporate soft power that cannot be overlooked. Today, with the rapid development of information, companies must take the initiative to integrate and use multiple network marketing and promotion methods to expand the influence of enterprises and products in order to occupy a place in market competition.

(八) **Customer data accumulation**

Cross-border e-commerce companies no longer rely on traditional market research methods, but through the mining and analysis of platform data and their own data, to understand and gain insights into consumer demand and product trends, and to provide scientific basis for business decisions. The customer data resources accumulated by successful transactions are corporate assets. In the era of big data, modern enterprises must have awareness of data resources. The use of precipitated customer data to conduct consumer demand insights, forecast future product and demand scales, and develop and dig deeper into related products is the basis and guarantee for the corporate refined operations, and is also the source of the corporate long-term development. In the future market competition, whoever has customer data will have the right to speak and who will have the competitiveness.

(九) **User Portrait Formation**

The user portrait is a target user model based on a series of real data. According to the differences in their goals, behaviors, and viewpoints, they are divided into different types and typical features such as demographic factors and life scenes are extracted. The cross-border e-commerce business operated by the C2F full-link e-commerce enterprise through a solid self-owned data warehouse forms a connecting link between the entire operating model. It is both the end of the last enterprise product operating cycle and the beginning of the next cycle. The enterprise uses the big data technology to carry out user portraits to deeply mine customer needs, conduct continuous improvement and optimization of existing products, and develop related products and multiple product lines that are highly compatible with consumer needs, and form a closed loop full-link operation based on global value chains.

The C2F full-link global value chain model starts from the consumer demand side and drives the domestic manufacturing production and operation through data drives. It effectively solves the problems of poor user experience, mismatched supply and demand, and excess inventory, especially the pain point of low added value. Expanding the global competitiveness of Chinese original brands and promoted the
transformation of "Made in China" to "Created in China."

四、**Summarize**

Based on the global development status and trend of cross-border e-commerce under the Internet environment, the reconstruction of global value chains becomes inevitable. From a horizontal perspective, the essence of global value chain reconstruction is the international division of labor, and the international division of labor has now entered a stage of division of labor in the global value chain led by services and research and development (Tianding Zhang, 2017). Through the research on C2F in cross-border e-commerce, this article concludes that C2F in cross-border e-commerce still needs to improve its innovation ability and strain capacity in many aspects, such as organization innovation, network marketing, technology development, human management of business operations, international culture, international competitiveness, etc. Only in this way can we enhance global competitiveness in future.

**References**

Value Chains and Global Production Networks: Opportunities and Challenges for Upgrading with A focus on Asia.


**Task Performance of Expatriates from Emerging Economies**

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**Abstract**

This survey study examined predictors of task performance of Korean expatriates to India while considering their globalization status, and revealed that career development opportunities and satisfaction of international human resource management practices significantly influenced the performance, but cultural intelligence, family adjustment, and willingness to accept an international assignment did not. An emissary model of global HR strategy that fits with Koreans companies’ current globalization status explains these results and suggests valuable insights to fast growing companies from newly industrializing or emerging economies so that they can develop a relevant strategy for improving task performance of their expatriates.

**Keywords:** Expatriates, Careers in an international context, International assignments, Task performance, International experience

**Introduction**

Since globalization became an inevitable phenomenon, maintaining global competitiveness has been a key issue for the business world. Multinational corporations (MNCs) face a daunting task of updating themselves with various information and latest technologies in order to cope with constant changes in the global business environments. There is no uniformed approach for all MNCs but many researchers agree that effective expatriate management can create a competitive advantage for global operations, thus their international experiences have been highlighted as a critical asset (Tung, 1998; Black, Gregersen, Mendenhall and Stroh, 1999; Stahl, Chua, Caligiuri, Cerdin and Taniguchi, 2009).

While companies are becoming more cautious to select their employees for the expatriation, the candidates are also serious to accept the international assignments because the jobs would affect various facets of their individual lives. Under these challenges, the issues related successful international assignment has been an important topic for IHRM. While much has been written on North American or European expatriates, there are few researches on the expatriates from emerging or newly industrialized economies (NIEs) assigned to less developed or emerging nations, though the number of MNCs from the later combination has been significantly increased. The expatriates from these categories, in general, suffer from lack of relevant information and experience on the global operation, thus they may not have a clear career path or IHRM policies and programs for their expatriates (Baruch and Altman, 2002). As a result, their expatriates are often struggling with career opportunities and risks. For an instant, the notion of boundaryless or protein career which highlights on individualistic values is relevant to expatriates from North America, but it is likely to be discouraged by the management of Asian companies because they worry that the notion may influence their expatriates to pursue more individual career advancement than organizational goals.

Thus, this study focuses on Korean expatriates in India, which covers both NIE and emerging country, and sought to address the predictors of their task performance in order to fill the research gap by examining an underrepresented sample. Thus, the results might be added to the existing body of knowledge and also propose more relevant IHRM strategies for MNCs from emerging economies. Top three reasons for this choice are as follows.
First, Korean MNCs recently achieved their global status within the very short span of time despite their less international experience, which could give many insights to growing companies in emerging economies.

Second, India has dynamic business environments. India was ranked on the third most attractive destination of foreign direct investment (FDI) by United Nations Conference on Trade and Development (UNCTAD)'s World Investment Report (2017), but also stood at one of lowest (130th) on the World Bank (2017)'s Ease of doing business index. India is known for underdeveloped infrastructure, sophisticated marketing channels and logistics, different provincial languages, rules and regulations, and frequent industrial disputes. In addition, her cultural diversity and prominent economic development among emerging countries render IHRM in India as a very timely research topic.

Third, Korean companies have become important players in the Indian market. For example, Samsung Electronics has been taking lead in a smartphone, LG Electronics has maintained the lead in consumer durables (Cho, 2013; The Economic Times, 2017), and Hyundai Motors has become the largest exporter of passenger cars from India (Hyundai Motor Company, 2017). These achievements could not be explained without highlighting their expatriates' high task performance. Despite the remarkable success, most Korean expatriates do not consider India as an attractive destination (Kim and Tung, 2013), which draws more attention to explore the case.

Therefore, the Korean expatriates' attitude and the unique working conditions and situations merit research attention.

THEORY AND HYPOTHESES

Due to the dynamic nature of the foreign environment, the performance of expatriates is influenced by various factors. Tung (1981) grouped into four general areas that are commonly agreed as the determinants of success or failure on the job for expatriates: technical competence on the job, personal traits or relational abilities that enable expatriates to deal with work associates as well as customers, adjustment ability to deal with different environmental variables from accustomed domestic political, legal and socio-economic structures, and the ability of the expatriate's family to adjust living in a foreign environment.

Many researches deepened the knowledge of the above mention variables or extended further to explain a wide range of issues around the performance effect on IHRM. Job performance is a multidimensional construct which can be divided into task performance and contextual performance (Kraimer and Wayne, 2004). It is related to behavior with an evaluative component that can be positive or negative for organizational effectiveness (Motowildo, Borman and Schmit, 1997), thus the performance of expatriates should be understood in organizational the context. Companies send their expatriates according to their IHRM strategy and the expatriates usually work in accordance with the strategy. Heenan and Perlmutter (1979) explained four IHRM strategic options according to the level of a firm's internationalization status: ethnocentric, polycentric, region-centric, geocentric orientation. While this model focuses on international staffing in a way of control or coordination of an MNC, Baruch and Altman(2002) suggested a taxonomy according to the expatriation and repatriation policies and practices at the organizational operational level:

The global : This is the “archetype” large global MNC, with an established reputation in global operations. Because the company has a comprehensive set of procedures and practices in expatriation management as an integral part of HRM, expatriation is essential part of the normal career path. Thus, its employees would expect expatriation to be at the core of their professional and managerial career.

The emissary : The model fits companies operating globally, but rooted in a particular home culture which serves as its repository ideology, power base and expatriate source. The companies expect their
expatriates to represent and control operations in subsidiaries. Thus, its employees are expected to accept an expatriate role in a way of expressing their commitment and loyalty to the firm.

Peripheral: This model fits companies operating in peripheral geographies, which local markets are insufficient for their growth and globalization is an inexorable expansion strategy. Thus, its employees often perceive expatriation as a desired reward at work to gain experience of “the big world” as well as a sought-after career option.

Professional: This model fits companies whose goal is concentrating on home-country strengths and keeping their people within specific geographical borders. Thus, they prefer to use external people to operate their global operations based on buying in knowledge and expertise, and to rely on outsourcing the expatriation process.

Expedient: This option is often seen in new-comers to the global scene, which are lack of global experience and basic resources to manage expatriation of their employees. They are likely to copy from other companies’ expatriation policies and practices, and also follow an ad-hoc, pragmatic and situation specific approach, more of a “mixed bag” than a systematic strategy.

Since this taxonomy is more relevant to the companies in a different level of globalization as well as both developed and emerging countries (Altman and Baruch, 2012), this study adopted it. The majority of Korean companies in India could fit Peripheral or the Emissary model because of their lack of global experience and Korean style of managerial practices, however, they still show some characteristics of the expedient’s case-by-case approach to cope with diverse Indian environments. Thus, this study only focused on task performance in terms of the expatriate’s performance on meeting job objectives and technical aspects of the job while examining these different operational levels.

**Willingness to accept an international assignment**

International assignments, in general, have been considered as a career development opportunity by many expatriates (Tung 1998). And various financial benefits and high social status encourage talents to voluntarily apply for the expatriate position. But it may not be always promising.

If the host country has an unstable political situation, insecurity, and tough working condition, the organization would have difficulties in finding volunteers. On the other hand, If the host country does not have that kind of hardship but a company emphasizes more on the domestic operation and the home office always maintain superior status, its employees would be hesitating to apply or accept expatriation because of missed opportunities for promotion in the home office due to the ‘out of sight, out of mind’ syndrome (Tung 1988). If anyone accepts it despite these disadvantages, his or her acceptance or willingness for the position is often seen as expressing their commitment or loyalty to the organization.

Baruch and Altman (2002) explained Korean MNCs as an emissary model characterized by a sense of duty backed by high commitment and loyalty. Kim and Tung (2013) elaborated that the Confucian values of unswerving loyalty and commitment to the organization as well as tight societal culture enabled Korean expatriates to accept assignments to a lesser preferred country like India, including making major efforts to adjust to the challenges of living and working there. Highly committed expatriates who take the challenges will be motivated to complete their job responsibilities per the expectations of the parent company (Kraimer and Wayne, 2004; Yousef, 2000). Thus, this study hypothesizes:

Hypothesis 1: Willingness to accept an international assignment have a significant relationship with an expatriate’ task performance.
Cultural intelligence

International assignment exposes expatriates to foreign environments, where economic, legal, social systems, and cultures are different from their home country. Cultural intelligence reflects knowledge of the norms, practices, and conventions in different cultures as well as a competence to deal effectively with people from a different cultural background and understanding (Earley and Ang, 2003).

It enables expatriates to understand and enact role expectations in a manner that is culturally sensitive and appropriate, thus it affects task performance (Harrison and Shaffer, 2005; Ang, Van Dyne, Koh, Ng, Templer, Tay and Chandrasekar, 2007). In the same vein, well adjustment to a different culture was proved to be the main factor of job performance (Kraimer, Wayne and Jaworski, 2001; Shaffer, Harrison, Gregersen, Black and Ferzandi, 2006). Whereas, other studies have a different result that cultural intelligence did not significantly associate with task performance but only contextual performance (Kraimer and Wayne, 2004; Rose, Ramalu, Uli and Kumar, 2010).

However, as we mentioned earlier, expatriates of an Emissary company want to be representatives of their home culture rather than adjust to local culture; local employees of an Emissary company make an effort to resemble home country's work attitude and behavior (Baruch and Altman, 2002). Though it may look less necessary for an expatriate of an Emissary company to learn local culture, there is still significant importance to understand the local culture. For instance, the knowledge and ability to utilize cultural similarities and differences can help expatriates to lead local employees in a more familiar way to follow them and expect more favorable cooperation from them.

Accordingly, this study hypothesizes the following:

Hypothesis 2: Cultural intelligence has a significant relationship with an expatriate' task performance.

Satisfaction of IHRM practices

There has been a controversial issue on whether job satisfaction directly leads to high performance or vice-versa. However, the positive relationship between the two are generally agreed (Schleicher, Watt, and Greguras, 2004; Wang, Lee and Ho, 2012; Imran, Arif, Cheema and Azeem, 2014). Due to dynamics of IHRM, job satisfaction of expatriates has been measured by various aspects such as characteristics of the position occupied, internal communication, support from family, support from the company, participation in decision making, and skill variety (Li and Tse, 1998; Ali, Zee and Sanders, 2003; Bonache, 2005; Cox, 2004), and these aspects also shape IHRM programs and policies. Thus, companies can examine relevancy of their IHRM programs and policies in the light of job satisfaction. On the other hand, they also have to observe their expatriates whether they have inaccurate or unrealistic expectations, which may cause dissatisfaction with their jobs (Kim and Tung, 2013). If a company provides relevant IHRM policies that meet the expectations of her expatriates, it will bring high performance as a result (Black and Gregersen, 1991; Black et al., 1999). Thus, this study hypothesizes the following:

Hypothesis 3: Satisfaction on IHRM practices can increase an expatriate’ task performance.

Career development opportunities

Some major reasons for employees accepting the expatriation are their personal and professional development, and career advancement (Tung, 1998; Black et al., 1999; Baruch and Altman, 2002; Suutari and Brewster, 2003). Expatriates’ careers can be considered from the perspective of boundaryless careers because they obtained new competencies which were not available at home and had to view their career as being independent of organizational boundaries as global managers (Tung, 1998). On the other hand,
expatriates also worry about a negative career move because of the ignorance and lost promotion opportunity while they are away (Tung, 1988). In any case, once they accept the assignment, they feel an obligation to complete the tasks while expecting for positive career outcomes (Kim and Slocum Jr., 2008).

If expatriates perceive their company's support on their career development, they will more commit to the parent company and intend to complete the assignment in a better way (Kraimer and Wayne, 2004), and the career development opportunity positively relates to expatriate performance (van der Heijden, van Engen, and Paauwe, 2009). But, if their career prospects are not viable in the organization, they feel discouraged and may leave the organization and search for an alternative job opportunity outside the current organization (Selmer, 1999).

Accordingly, this study proposes the following:

Hypothesis 4: Career development opportunity can increase an expatriate’ task performance.

Family adjustment

Since expatriation often requires of uprooting their families and makes an adjustment to foreign environments together, the family situation contributes to the success or failure on the job for expatriates (Tung, 1981; Arthur and Bennett, 1995). For example, there are numerous areas of adjustment will take place. i.e., each family member's adjustment to their work, school, and social life, adaptation to new roles, children's education, etc. Due to a spillover or crossover process, partner or families' adjustment can affect expatriates' job performance (Lazarova, Westman and Shaffer, 2010). Each one's satisfaction, happiness, and cheerful spirit will influence others to result in a positive outcome, whereas the opposite case will produce a negative effect. Thus, this study proposes the following hypothesis:

Hypothesis 5: Family adjustment can increase an expatriate’ task performance.

METHODOLOGY

A questionnaire of this study was developed based on items contained in various other studies (Tung 1998; Ali et al., 2003; Kraimer and Wayne, 2004; Rose et al., 2010). The questionnaire was translated into Korean using the back-translation technique and was distributed during July 2011~February 2012 to 150 Korean expatriates working in India. A total of 129 questionnaires were returned – of these, 123 were usable. Though the sample size is small, it is large enough to allow for regression analysis on the predictors of the task performance. The respondents were employed in a variety of industries/sectors, including electronics, automotive, textile, trade, petrochemical, transportation, and services.

Measures

Independent Variables

Five items pertaining to willingness toward international assignment were adopted from Tung (1998) and measured by participants' willingness to accept an international assignment. A sample item from the scale is 'I will accept the work abroad even though the working condition is very tough’. The Cronbach’s Alpha of reliability statistics was 0.87.

Three items pertaining to cultural intelligence were based on Rose et al. (2010) and developed to adjust to the Korean expatriates' context in order to measure cross-cultural sensitivity and knowledge. A
sample item from the scale is 'I have gotten used to the legal and economic systems of India'. The Cronbach’s Alpha of reliability statistics was 0.65.

Three items pertaining to satisfaction of IHRM practices were based on Tung (1997) and developed to adjust to the Korean expatriates' context. A sample item from the scale is 'Parent company gives me the authority to decide on many critical issues in India'. The Cronbach’s Alpha of reliability statistics was 0.68.

Three items pertaining to career development opportunity were based on Tung (1998) and measured by participants' perception of their international assignment as a global competency development opportunity. A sample item from the scale is 'International experience is a competitive asset that makes me more valuable to the external labor market'. The Cronbach’s Alpha of reliability statistics was 0.71.

Three items pertaining to family issues were based on Ali et al. (2003) and measured the respondents' concerns about family issues. A sample item from the scale is 'My family's adjustment to Indian culture remains as one of my major concerns'. The Cronbach’s Alpha of reliability statistics was 0.64.

The aforementioned four independent variables were measured on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

**Dependent variables**

Four items pertaining to Task performance were adopted from Kraimer and Wayne (2004) and measured by how participants evaluated their task performance with regard to the accomplishment of job objectives, meeting performance standards and expectations, technical competence and overall job performance. A sample item from the scale is 'I meet job objectives'. The Cronbach’s Alpha of reliability statistics was 0.74.

The scale was measured on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

**Control variables**

Previous studies have shown that demographic variables such as age, position level, current assignment tenure influence expatriates’ attitudes and behaviors (Kim and Slocum Jr., 2008; Stahl et al., 2009; Bal, de Lange, Ybema, Jansen, and van der Velde, 2011). This study found that age and position level were strongly correlated (r=0.65) mainly because of the seniority system in Korean companies. Therefore, this study used only position level and current assignment tenure as control variables.

Position level refers to the hierarchical position of the respondent in India. The level was dummy-coded with 0 for lower than director level (hereafter referred to as lower-level managers) and 1 for director and above level (hereafter known as higher-level managers). The higher-level managers (69.1% of the respondents) are top-level managers such as managing directors or country heads who oversee overall operations rather than functional areas. The lower-level managers (30.9% of the respondents) are usually working under the higher-level managers and occupy titles as department heads or general managers.

Current assignment tenure was also dummy-coded with 0 for less than three years and 1 for three years or more so that the effect of longer than average three year tenure period could be clearly found.

**Analysis of the data**

Factor analysis and Cronbach’s Alpha Test were used to examine validity and reliability of this study (see Table 1). For the factor analysis, principal component analysis, Varimax rotation method and cut-off Eigenvalue of 1.0 were used and the results revealed that cumulatively 67% of the variance was explained.
Cronbach’s Alphas used to test the internal consistency of the instruments ranged from 0.64 to 0.87, which was acceptable for this exploratory study. In order to satisfy the statistical requirement of these two analyses, one item from family issues, three items from cultural intelligence, three items from the satisfaction of IHRM practices, and two items from career development opportunity were removed.

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Table 1 goes about here
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Preliminary analysis was conducted to present means, standard deviations, and intercorrelations among the variables. Multicollinearity effect is not a major concern since the highest VIF (variance inflation factor) was 1.86 and the lowest tolerance value was 0.54. Then, we conducted hierarchical multiple regression analysis to test our hypotheses.

Findings

Profile of Korean Expatriates

Table 2 presents the demographic profile of the respondents. Some of the findings merit attention.

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Insert Table 2 about here
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First, there were only two female expatriates in the sample. Both of them were single and mainly worked as interpreters. OECD (2013) reported that a female labor force participation rate of Korea stood one of lowest among OECD countries (55% compared to the OECD average of 65%) and the participation drastically decreases upon marriage. The gender pay gap stood at 39%, which was the highest among OECD countries and 90% of the women were not in managerial positions. These trends have been continued for the last 20 years and may not be changed if work cultures involve long working hours and socializing after work continue. The report also revealed that Korean men spend just 45 minutes on housework per week, which means there is little flexibility for Korean housewives who wish to work and raise a family.

Second, most Korean expatriates in this sample (85.4%) were married. Though other options were available on the questionnaire, the respondents marked only married or not married. And 66.6% of the respondents were the age of 40~59. While considering the average age for a Korean man to get married was 29.7 years in 2000 (Lee, 2012), the majority might have teen-aged children or above, and concern their children’ education due to very competitive Korean education system.

Third, the majority (90%) of Korean expatriates were university degree or higher. And 69.1% of the respondents held positions at or above the director level on the current assignments. Thus, most of the respondents were well educated and involved in high-level decision making.

Fourth, most Korean companies selected expatriates from those who worked for the parent companies more than 10 years (68.3% of respondents), and their average tenure for expatriation was around three years. However, the tenure in India often gets extended due to longer adjustment time.

Factors influencing task performance

Table 3 presents the means, standard deviations, and intercorrelations among the variables. First, though currently assigned tenure is a control variable, it showed significant correlations with task performance (r= 0.18), cultural intelligence (r= 0.28), the satisfaction of IHRM practices (r= 0.42), and
family adjustment ($r = 0.18$) at the $p<0.05$ level, which indicates that the respondents will do a better performance at work if they stay longer.

Second, cultural intelligence ($r = 0.19$), satisfaction of IHRM practices ($r = 0.47$), and career development opportunities ($r = 0.40$), and family adjustment ($r = 0.20$) had significant correlations with task performance. These relationships were further examined by the following regression analysis.

Third, with regard to correlations among independent variables, they showed weak or moderate positive correlations except for the relationship between willingness to accept an international assignment and family adjustment ($r=-0.02$).

Table 4 shows the factors influencing Korean expatriates’ task performance while they are still on the international assignment. First, willingness to accept an international assignment and cultural intelligence did not have significant relationships with task performance ($p<0.05$). Thus, both Hypothesis 1 and 2 were rejected.

Second, the satisfaction of IHRM practices had a significantly positive relationship with task performance, which indicated that the satisfaction could increase task performance. Thus, Hypothesis 3 was accepted.

Third, career development opportunities also had a significantly positive relationship with task performance. Thus Hypothesis 4 was also accepted.

Last, family adjustment did not have a significant relationship with task performance. Thus, Hypothesis 5 was rejected.

**Discussion**

This study presented various factors on task performance of Korean expatriates in India. To begin with, the Korean expatriates having Confucius background where loyalty to the organization is common are often under cultural pressure to accept even the least preferred international assignment (Kim and Tung, 2013). For Korean work culture, an employee’s refusal of international assignment may bring very negative impression to the other members in the organization, and the acceptance was influenced by more cultural obligation rather than their willingness. Thus, the result of the insignificant relationship between the willingness to accept an international assignment and task performance can be understood. However, Korean companies should develop appropriate HR policies and programs to appreciate their sacrifice or commitment, and try to utilize them to pull the expatriates’ high performance. Because, in the case of a global or professional option, high-performance effort at the subsidiaries is common as they want to develop global careers through the assignment (Baruch and Altman, 2002). Therefore, appropriate motivation measures are needed to help them to realize the significant aspects of the assignment. It is high time for them to introduce boundaryless career concept into their IHRM practices and give more opportunities for their expatriates to develop their global competencies or work experience by achieving high performance.

Next, the main reason for insignificant relationship between cultural intelligence and task performance can be explained by lack of motivation to adjust local culture. A growing number of Korean
restaurants, churches, and social or sports clubs caters Korean expatriates' social needs as well as after office-hour activities. Korean expatriates often mingle with other Koreans and barely interact with locals (Kim and Tung, 2013). The companies should develop IHRM programs that enable them to acquire local knowledge and social capital during their tenure period and transfer those assets to their successors (Stahl et al, 2009). The majority of respondents are in high-level decision making a position where they have to lead local employees. This result is identical to the emissary model where does not high stress on cross-cultural integration. This lack of cultural intelligence must be a disadvantage in the long run or near future.

Third, this study asserts that career development opportunities significantly increased task performance, which can be also explained by above mentioned Confucius Asian values. However, dynamic nature of global business environment such as economic, societal, technological changes causes more difficulties in meeting the career advancement expectation (Lazarova and Tarique 2005; Stahl et al, 2009). As we acknowledged that several studies suggested boundaryless career, but developing and providing more career development inside the organization can be more practical suggestion to Korean MNCs having Confucius cultural heritage which values more relational bondage and long-term commitment. Instead of a boundaryless career, boundary-expansion career development opportunities within the organization could be one of many practical options.

Fourth, the satisfaction of IHRM practices can increase an expatriate’ task performance. The expatriates appreciated for the autonomy to decide on many critical issues (Kim & Tung, 2013) as well as recognition from their parent company because mutual commitment is more common in the emissary model (Baruch and Altman, 2002). In addition to these job enrichment practices, the financial packages should be designed according to the designation in Indian assignment to satisfy Korean expatriates.

Fifth, even though this study did not prove a significant relationship between family adjustment and task performance, we should take note that family concerns are one of the major reasons for premature return intention (Kim and Slocum Jr., 2008). Korean expatriates have strong tendency to complete their assignments even at the expense of their family (Kim and Park, 2003; Kim and Tung, 2013). The negative relationship between willingness to accept the international assignment and family adjustment revealed that some respondents even accepted the assignment in spite of families’ the inability. Korean companies should aware of that taking care of family matter is related to effective performance (Arthur and Bennett, 1995) and expatriate satisfaction (Tung, 1987; Lazarova et al. 2010).

Conclusion

As a result of an increasingly globalized world, the expatriation of employees is one of most common practices among growing companies. As the companies’ success depends on the performance of expatriates, developing a relevant IHRM strategy for especially those who are from NIEs or emerging countries assigned to emerging nations became an urgent matter. Due to lack of global experience and basic resources, they try to imitate global companies from western developed countries. But these efforts often result in negative consequences due to ignoring their current globalization status. As most of the current Korean companies' globalization status is best explained by an emissary model (Baruch and Altman, 2002), reflecting the results of this study to the light of the model will be more useful. This study found that satisfaction of IHRM practices and career development opportunities predicted the high performance of their expatriates. These two factors should be taken as primary considerations to improve task performance of expatriates, which secure an MNC’s global competitiveness.

Therefore, this research contributes to knowledge of IHRM theoretically and practically, especially to those who seek a relevant model for expatriate management in MNCs from emerging economies. The MNCs usually lack human resources and global experience, which expose themselves as vulnerable in the global business arena. Without assessing their standpoint, merely imitating the characteristics of The Global archetype may mislead them to discourage their committed expatriates with their ill-prepared IHRM policies and programs. This study reveals Korean MNCs’ standpoint and suggests some practical implications.
**Practical implications**

Regular feedbacks on career development through international assignments by parent companies will improve both task performance and satisfaction of IHRM practices because it is an act of recognition that expatriates highly appreciate it if they pursue career advancement within the organization. However, expatriation is not only for the career development opportunity, the companies should utilize this enthusiasm toward global leadership development which closely related to its entire business strategy.

While considering Korea's Confucius background, senior management should take the initiative of expatriate management and recognize their employees' global experience. Their recognition surely motivates young expatriates to perform well even though they cannot guarantee promotion upon repatriation. The encouraging news is that Hyundai motors promoted a record number (19.6%) of their expatriates to executive posts in the end of 2013 (Kim, 2013), which will impact their expatriates' task performance.

Last, work culture change is required in order to embrace local employees in their subsidiaries. For example, many Korean companies have been sending key local employees to Korea to learn Korean working culture and continuing to emphasize behavioral resemblance to Korean expatriates. And Korean expatriates occupy key or decision-making positions. These facts hinder local employees from pursuing their career advancement within the organization.

**Limitations and suggestions for further research**

One obvious limitation is the relatively small sample size. However, a final sample of 123 expatriates is large enough to allow for regression analysis. Two, this study focuses on Korean expatriates only. Future studies should compare and contrast the performance of expatriates from western or other Asian multinationals toward living and working in India, or other emerging markets so that the findings can be more widely applicable. Three, this study used a self-reported performance measure which may cause single source bias. Future studies should compare the results with information from their supervisors or other sources. However, a great number of respondents stated that they did not have supervisors since they occupied the highest position.

Despite the aforementioned limitations, this study has advanced our understanding of task performance of expatriates from recently industrialized country working in emerging country. It will be great if future study includes contextual performance, too.
### Table 1: The combined results of Factor and Reliability analysis

<table>
<thead>
<tr>
<th>Scale item</th>
<th>WA</th>
<th>CI</th>
<th>SI</th>
<th>CD</th>
<th>FA</th>
<th>TP</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>I will accept the work abroad even if the country of assignment may not contribute to my career</td>
<td>0.8</td>
<td>5</td>
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<tr>
<td>I will accept the work abroad even if the country of assignment may not have much tourist attraction</td>
<td>0.8</td>
<td>4</td>
<td></td>
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<tr>
<td>I will accept the work abroad even though the working condition is very tough.</td>
<td>0.8</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.87</td>
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<tr>
<td>I will accept international assignments to countries/regions that are politically unstable and insecure.</td>
<td>0.7</td>
<td>3</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>I will accept anywhere that my company asks me to go.</td>
<td>0.7</td>
<td>0</td>
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<tr>
<td>I am aware that Indian cultural values are different from mine.</td>
<td>0.77</td>
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<td>0.65</td>
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<tr>
<td>I have gotten used to the legal and economic systems of India.</td>
<td>0.65</td>
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<td>I have some Indian friends with whom I can seek honest opinion/advice or help.</td>
<td>0.51</td>
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<tr>
<td>My work is well recognized by my parent company.</td>
<td>0.7</td>
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<td></td>
<td></td>
<td></td>
<td>7</td>
<td>0.68</td>
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<tr>
<td>I am satisfied with the financial packages accorded to my designation in India.</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
<td>0.6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Parent company gives me authority to decide on many critical issues in India.</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Overseas assignments bring personal development and career enhancement in and out of the current</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
<td>0.6</td>
<td>7</td>
<td>0.71</td>
</tr>
<tr>
<td>International experience is a competitive asset that makes me more valuable to the external labor market.</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>This international assignment enables me to develop a global mindset.</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>My spouse is happy to live in India.</td>
<td>0.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My children are doing well in school in India.</td>
<td>0.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.64</td>
</tr>
<tr>
<td>My family's adjustment to Indian culture remains as one of my major concerns (R).</td>
<td>0.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I meet job objectives set by company.</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
<td>0.6</td>
<td>8</td>
<td>0.74</td>
</tr>
<tr>
<td>Overall, I have fulfilled the requirements of my job successfully.</td>
<td>0.6</td>
<td></td>
<td></td>
<td></td>
<td>0.6</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>I encounter difficulties in meeting performance standards and expectations related to my job (R).</td>
<td>0.6</td>
<td></td>
<td></td>
<td></td>
<td>0.6</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>I am technically competent to undertake my job</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.5</td>
<td></td>
</tr>
</tbody>
</table>
Note: WA (Willingness to accept an International Assignment), CI (Cultural Intelligence), SI (Satisfaction of IHRM practices), CD (Career development opportunities), FA (Family adjustment), TP (task performance)
Loadings less than .48 are not reported.

Table 2: Demographic Profile of Respondents

<table>
<thead>
<tr>
<th>Gender:</th>
<th>Male (98.4%); Female (1.6%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td>20<del>29 years (8.9%); 30</del>39 years (17.1%); 40<del>49 years (27.6%); 50</del>59 years (39.0%); 60 years and above (7.3%)</td>
</tr>
<tr>
<td>Educational background</td>
<td>High school (8.1%); Vocational college graduate (1.6%); Undergraduate (74.1%); Post-graduate (15.4%); Doctorate (0.8%)</td>
</tr>
<tr>
<td>Position level Korea</td>
<td>&lt; Manager (13.8%); Manager ~ General Manager (43.9%); Director ~ Executive Director (42.3%)</td>
</tr>
<tr>
<td>India</td>
<td>Manager ~ General Manager (30.9%); Director ~ Managing Director (69.1%)</td>
</tr>
<tr>
<td>Functional areas</td>
<td>General management/administration (61.0%); Production/Operation (19.5%); R&amp;D/quality control (1.6%); Finance (9.8%); Sales/marketing (8.1%)</td>
</tr>
<tr>
<td>Organizational tenure</td>
<td>&lt; 3 years (11.4%); 3~10 years (20.3%); &gt; 10 years (68.3%)</td>
</tr>
<tr>
<td>Tenure in India</td>
<td>&lt; 1 year (20.3%); 1<del>2 years (13.8%); 2</del>3 years (22.8%); 3<del>4 years (6.5%); 4</del>5 years (10.6%); &gt; 5 years (26%)</td>
</tr>
<tr>
<td>Marital status</td>
<td>Not married (14.6%); Married (85.4%)</td>
</tr>
</tbody>
</table>

Table 3: Results of correlation analysis

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Position level</td>
<td>0.69</td>
<td>0.47</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Current assignment tenure</td>
<td>0.43</td>
<td>0.50</td>
<td>*0.40</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Willingness to accept an international assignment</td>
<td>3.28</td>
<td>0.77</td>
<td>0.10</td>
<td>0.03</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Cultural intelligence</td>
<td>3.12</td>
<td>0.76</td>
<td>*0.20</td>
<td>*0.28</td>
<td>*0.39</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Satisfaction of IHRM practices</td>
<td>3.43</td>
<td>0.70</td>
<td>*0.38</td>
<td>*0.42</td>
<td>*0.32</td>
<td>*0.35</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Career development opportunities</td>
<td>3.70</td>
<td>0.70</td>
<td>*</td>
<td>0.13</td>
<td>*0.24</td>
<td>*0.24</td>
<td>*0.40</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Family adjustment</td>
<td>3.04</td>
<td>0.46</td>
<td>0.08</td>
<td>*0.18</td>
<td>-0.02</td>
<td>*0.26</td>
<td>*0.30</td>
<td>*0.23</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>8. Task performance</td>
<td>3.57</td>
<td>0.67</td>
<td>0.09</td>
<td>*0.18</td>
<td>0.11</td>
<td>*0.19</td>
<td>*0.47</td>
<td>*0.40</td>
<td>*0.20</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: Correlations of .18 and higher are significant at the p<0.05 level.
Table 4: Results of regression analysis

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable:</strong></td>
<td>Task performance</td>
<td></td>
</tr>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position level</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Current assignment tenure</td>
<td>0.17</td>
<td>-0.03</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willingness to accept an international assignment</td>
<td>-0.09</td>
<td></td>
</tr>
<tr>
<td>Cultural intelligence</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Satisfaction of IHRM practices</td>
<td>*0.38</td>
<td></td>
</tr>
<tr>
<td>Career development opportunities</td>
<td>*0.26</td>
<td></td>
</tr>
<tr>
<td>Family adjustment</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td><strong>R²</strong></td>
<td>0.03</td>
<td>0.28</td>
</tr>
<tr>
<td><strong>Adjusted R²</strong></td>
<td>0.01</td>
<td>0.24</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>1.88</td>
<td>6.30</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>0.16</td>
<td>*0.00</td>
</tr>
</tbody>
</table>

Note: n=123. df=122. Values are standardized coefficient *Significance at p<0.05.

References


Sequential Investments in the study of International Business - importance, research results and future directions

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Abstract

This article aims to systematically review the existing literature on sequential investments considering International Business (IB) theory. Traditional internationalization models (transaction cost, internalization, eclectic paradigm) embody a static concept where decisions are made without regard to the learning process. Sequential investments factors establish a dynamic vision to internationalization studies. A total of 23 articles were selected from using ISI Web of Knowledge database data base (1980 to 2016) with terms related to the topic. We analysed the selected articles and classified then in 4 relevant clusters: institutional environment, location, path dependence, learning. We identified how sequential investments have been evaluated and points not explored by previous research, especially the way in which the unsuccess of subsidiary expansion affect the learning process. This study contributes in establishing new academic areas by revealing unexplored points to date on this literature. This is the first systematic review with sequential investment in IB literature.

Key-words: Sequential investments; Subsequent investments; Foreign Direct Investment; International Business.

Introduction

One of the fundamental questions related to International Business (IB) involves understanding the reasons that drive an organization to internationalize and become a multinational (MNE: Multinational Enterprise). Initially, economists conducted with a focus on the competitiveness of the country that received Foreign Direct Investment (FDI). The reasons for the attraction of foreign investment were national competitive factors. However, the theories of internationalization with economic base (Buckley & Casson, 2011; Dunning, 1980; Hennart, 2010; Hymer, 1976) present a static model of investment decisions. Investment decisions in these models do not consider investments made by MNE in the past and the experience gained in the region or expansion in the country where previous investments have already been made.

The behavioral-based models, especially the Uppsala gradual expansion model of internationalization (Johanson & Vahlne, 1977), establish that activities in international markets intensify as experience is accumulated by MNE. The behavioral aspects, the process of learning and acquisition of knowledge becomes relevant in terms of the decisions related to the internationalization process and the commitment to the international market. Thus, the uncertainties and risks arising from this decision are minimized. Uppsala model brings a more dynamic concept in the process of production and the expansion of the production process; however, the model does not contemplate the condition of global competition and strong technological changes that require and lead organizations to a faster internationalization. As observed by Kogut (1983), the theoretical models that explain FDI have focused on the motivations of internationalization based on national factors and market imperfections. According to the author, there is a fundamental flaw in the design of these arguments by considering FDI as a single investment.
The question raised by Kogut (1983) can be understood by the following argument: the initial FDI motivation are the same as the subsequent investments? FDI should be understood not as an isolated decision, but as a process stemming from the advantages of having an organization that is multinational. In other words, its capacity and flexibility in transferring resources between countries using its business network in different countries. Sequential investments (SI) should be studied as a process, not as an isolated decision (Kogut, 1983).

Based on our current knowledge, this article is unique considering that it performs a systematic evaluation of the articles related to sequential investments. We selected terms related to sequential investments and we used the ISI Web of Knowledge database to obtain articles and data for the period from 1980 to 2016. The research question relates to the way in which sequential investments have contributed to the understanding of IB. Using a disciplined approach in the identification of the 23 articles considered relevant to the focus of the study, the contributions of this article refers to the following factors. First, it reinforces the concept that investment decisions are not isolated events, based on traditional theories of investment location. In fact, these decisions are influenced by dynamic aspects. This article has the objective to explain what dynamic factors contribute to the SI decisions, considering the evaluated articles. The second contribution refers to aspects not explored by the authors. It was possible to observe the inexistence of studies that consider the learning due to the unsuccess of international expansion. Most studies consider sequential learning and investment within a successful FDI perspective.

Methodology and selection of articles

In this section, we present the fundamental concepts related to the systematic review process, its application in International Business, and the way in which we apply the concepts of systematic review for the selection of the relevant articles. The systematic review of the literature has been used as a mechanism for the advancement of knowledge. According to Webster and Watson (2002), the systematic literature review process facilitates the development of the theory and reveals areas where research is needed. The systematic review provides meaning to a significant amount of information and is a method of mapping areas of uncertainty, where few surveys exist (Petticrew & Roberts, 2008). Tranfield, Denyer, and Smart (2003) emphasize that in management research, literature review is a crucial aspect to respond a specific academic question.

Several studies in the social area demonstrate the importance of systematic review. Crossan and Apaydin (2010) used the systematic review to consolidate 20 years of innovation research. The analysis of the authors allowed the establishment of a multidimensional structure where aspects of leadership, innovation are interrelated allowing suggestions of determinants of organizational innovation. Michailova and Mustaffa (2012) studied the knowledge flow of MNE and, as a result, identified four categories of studies being carried out on the theme: results of knowledge flows, knowledge characteristics, actors involved in the knowledge flow, and finally, relationship among the actors. Based on this review, we conduct five major guidelines to guide future research in the area. Clark and Ramachandran (2016) studied the phenomenon of Born Global Firms, analyzing articles between the years 1995 to 2012, to suggest future research on the subject. The concept of distance in International Business is evaluated by Hutzschenreuter, Voll, and Verbeke (2011): the authors were able to answer questions related to “which distance?”, “why distance matter?”, “what outcomes are affected by distance?”.

On the other hand, systematic reviews receive criticisms. Hart (1998) points out that despite the importance of a systematic review on the acquisition of new knowledge, this importance is not compatible with a clear understanding of how it should be conducted and what should be done. Considering these comments, this article used the methodological approach defined by Petticrew and Roberts (2008). In general, we adopted the following steps in this study. Initially, we defined the aspects to be researched: we defined the research question (how sequential investments have contributed to the understanding of IB). We also defined the types of studies to be included in the systematic review, those related to IB. With these two aspects defined, we used the ISI Web of Knowledge database as the primary research source.
The reason for choosing this database was its recognition as a reliable source of information by several authors. The Web of Sciences Core Collection database has over 18,000 journals with 1.3 billion citations in its content.

At this stage there was a careful selection of the terms of the research, including consulting an International Business specialist in order to validate the terms and keywords – we made several combinations of the terms "sequential", "subsequent" and "investment" with the words "entry", "foreign direct investments", "FDI", "subsidiaries". Similarly, the terms "post entry" and "post-entry". We researched in the title, abstract, keywords. We determined the period of the survey from 1980 to 2016. The year 1980 was chosen considering as the 80’s was the decade where the analyzes of the aspects of internationalization go beyond the factors of the country and includes analysis at the level of the firm (Rugman, Verbeke, & Nguyen, 2011). Our initial sample comprised on 297 articles.

The first filter was the exclusion of articles presented in conferences and books. We excluded conferences due to their preliminary character. In addition, the exclusions were due to the absence of peer review (for both books and conferences). After the application of this filter, 149 articles remained in our sample. We analysed the abstracts of these articles with the purpose of evaluating their correspondence to the research question. Essentially, we eliminated economically based articles with concepts related to investment decisions through game theory. After this filter, 31 articles remained in our sample. We evaluated these articles for their content to ensure their correspondence with the research question. From this analysis, we excluded 13 articles, being only 1 due to the lack of access. The remaining 18 articles provided information on other papers that focused on the study of sequential investments. We also included these five articles in our sample (Arregle, Beamish, & Hebert, 2009; Chan, Makino, & Isobe, 2006; Gao & Pan, 2010; Ogasavara, 2010; Rittippant & Rasheed, 2016). In the end, our sample consisted of 23 articles.

**Analysis of the literature on sequential investments**

The first article on sequential investments was published in 1995. In addition to being the first to be published, the article from Chang (1995) is considered a seminal work in the area, being the most cited. The 23 papers present total of 1116 citations, with an average of 80.6 citations per year. When analyzing the number of citations per year, there is clearly a significant increase in recent years about sequential investments.

In 2013 there were 84 citations, and in 2016, 144 citations. In 2013 and 2015, only 1 article was published in each year. In 2011, 2014 and 2016, two articles were published per year. However, when observing a period of 5 years, the quantity increased. Figure 1 shows the result of this analysis. A total of 15 academic journals published the articles, as indicated in Table 1: Articles by Academic Journal.

**Table 1: Articles in Academic Journal**
<table>
<thead>
<tr>
<th>Academic Journal</th>
<th>Total articles</th>
<th>Citation</th>
<th>Impact factor</th>
<th>Impact factor 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Management Journal</td>
<td>2</td>
<td>458</td>
<td>3.380</td>
<td>5.972</td>
</tr>
<tr>
<td>Academy of Management Journal</td>
<td>1</td>
<td>301</td>
<td>6.233</td>
<td>10.588</td>
</tr>
<tr>
<td>Journal of International Business Studies</td>
<td>7</td>
<td>212</td>
<td>3.620</td>
<td>5.659</td>
</tr>
<tr>
<td>Administrative Science Quarterly</td>
<td>1</td>
<td>83</td>
<td>5.316</td>
<td>7.517</td>
</tr>
<tr>
<td>Journal of Economics &amp; Management Strategy</td>
<td>1</td>
<td>32</td>
<td>0.823</td>
<td>1.296</td>
</tr>
<tr>
<td>Journal of World Business</td>
<td>2</td>
<td>18</td>
<td>2.811</td>
<td>3.729</td>
</tr>
<tr>
<td>Eurasian Geography and Economics</td>
<td>1</td>
<td>4</td>
<td>0.603</td>
<td>0.956</td>
</tr>
<tr>
<td>Journal of Management Studies</td>
<td>1</td>
<td>4</td>
<td>4.260</td>
<td>6.563</td>
</tr>
<tr>
<td>Journal of The Japanese and International Economies</td>
<td>1</td>
<td>4</td>
<td>0.508</td>
<td>0.795</td>
</tr>
<tr>
<td>Applied Economics</td>
<td>1</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Asia Pacific Business Review</td>
<td>1</td>
<td>0</td>
<td>0.683</td>
<td>0.852</td>
</tr>
<tr>
<td>Economics Bulletin</td>
<td>1</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>European Business Review</td>
<td>1</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Management Research Review</td>
<td>1</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>BAR: Brazilian Administration Review</td>
<td>1</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23</strong></td>
<td><strong>1116</strong></td>
<td><strong>x</strong></td>
<td><strong>x</strong></td>
</tr>
</tbody>
</table>

Source: prepared by the author based on *InCites Journal Citation Reports 2015* (Thomson Reuters)

The articles published have a more empirical nature (total of 21 “quantitative” articles), being only 1 related to qualitative theory (Suh, Wang, Nam, & Zhang, 2014) and 1 involving qualitative and quantitative study (Guler, 2007). All 23 articles used a longitudinal analysis, as expected for a study related to sequential investments. The statistical tools used presented the following result: 5 articles used Cox Regression, 7 Logit regression, 3 EHA (Event History Analysis). The other articles used several tools, including Gravity Function, Investment Sequence Matrix, among others. The analysis of sequential investments involves a definition of the direction of the investments. In this way, 11 articles (practically half) are investments from Japan to somewhere in the world (6 for the world, 2 for China, 2 for USA, 1 for Brazil). A total of 8 articles use data from the *Kaigai Shinshutsu Kygyou Souran database: Kaisha Betsu*, a Toyo-Keizai publication relevant to years of research. The database is recognized for the quality of data and the possibility of grouping data into different classifications (market segments, expansion, internationalization speed, among others).

Only 3 articles have Europe as their origin (Germany, Spain, and Sweden). A total of 3 articles study investments having the USA as the country of origin. On the other hand, having as host country as focus, one article relates to China (world for China) and another world for USA. The Table 2: List of selected articles indicates articles analyzed by number of citations and the cluster to which the article belongs. In this table, the column "concepts" refers to the theoretical foundations of the article, its fundamental principles. Based on these concepts presented, we grouped the articles into "clusters" where similar aspects of the fundamental concepts served as the basis for their clustering.

**Table 2: List of selected articles**

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Journal</th>
<th>Citation</th>
<th>Fundamental concepts</th>
<th>Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td>The choice of entry mode in sequential foreign direct investment</td>
<td>Chang and Rosenzw</td>
<td>Strategic Management Journal</td>
<td>239</td>
<td>Learning changes the choice of input mode</td>
<td>Learning</td>
</tr>
</tbody>
</table>

662
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Journal</th>
<th>Citation</th>
<th>Fundamental concepts</th>
<th>Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political hazards, experience, and sequential entry strategies:</td>
<td>Delios and Henisz (2003)</td>
<td>Strategic Management Journal</td>
<td>219</td>
<td>Learning based on experience in high political risk countries, countries within the same cultural block and manufacturing plants in other countries</td>
<td>Learning</td>
</tr>
<tr>
<td>The international expansion of Japanese firms, 1980-1998</td>
<td></td>
<td></td>
<td></td>
<td>FDI is part of a series of decisions that determine the volume and direction of investments</td>
<td></td>
</tr>
<tr>
<td>Throwing good money after bad? Political and institutional influences on sequential decision making in the venture capital industry</td>
<td>Guler (2007)</td>
<td>Administrative Science Quarterly</td>
<td>83</td>
<td>Institutional environment (intra-organizational policies and pressures of co-investors and limited partners)</td>
<td>Institutional environment</td>
</tr>
<tr>
<td>Interdependent behavior in foreign direct investment: the multi-level effects of prior entry and prior exit on foreign market entry</td>
<td>Chan et al. (2006)</td>
<td>Journal of International Business Studies</td>
<td>57</td>
<td>Decisions of entry and exit are influenced by previous decisions of their own and of other MNEs</td>
<td>Path dependency</td>
</tr>
<tr>
<td>The regional dimension of MNEs' foreign subsidiary localization</td>
<td>Arregle et al. (2009)</td>
<td>Journal of International Business Studies</td>
<td>49</td>
<td>The number of subsidiaries in a country is determined by the activities of the MNE in the region.</td>
<td>Path dependency</td>
</tr>
<tr>
<td>Sequential investment, firm motives, and agglomeration of Japanese electronics firms in the United States</td>
<td>Chung and Song (2004)</td>
<td>Journal of Economics &amp; Management Strategy</td>
<td>32</td>
<td>Location decisions tend to be juxtaposed only where their previous investments were made, unless the MNE has little experience.</td>
<td>Path dependency</td>
</tr>
<tr>
<td>Multinational corporation internationalization in the service sector: a study of Japanese trading companies</td>
<td>Goerzen and Makino (2007)</td>
<td>Journal of International Business Studies</td>
<td>28</td>
<td>The initial investments of a service MNE are in its core business and not based on location aspects, but the sequential investments are more based on location aspects than the core business.</td>
<td>Learning</td>
</tr>
<tr>
<td>Internalization and experience: Japanese banks' international expansion, 1980-1998</td>
<td>Qian and Delios (2008)</td>
<td>Journal of International Business Studies</td>
<td>22</td>
<td>FDI by banks are performed to protect the benefits of internationalization by following the internationalization of their clients and for achieving economies of scale.</td>
<td>Learning</td>
</tr>
<tr>
<td>The pace of MNEs sequential entries: Cumulative and the dynamic process</td>
<td>Gao and Pan (2010)</td>
<td>Journal of International Business Studies</td>
<td>22</td>
<td>Assessment of the effect of the accumulation of experience on the pace of entry into a foreign market and, if this accumulation of experience reduces expansion constraints.</td>
<td>Learning</td>
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<td>Cultural differences, MNE learning abilities, and the effect of experience on subsidiary mortality in a dissimilar culture: Evidence from Korean MNEs</td>
<td>(Zeng, Shenkar, Lee, &amp; Song, 2013)</td>
<td>Journal of International Business Studies</td>
<td>17</td>
<td>The initial experience of expanding MNEs in countries with a dissimilar culture can lead to misleading learning.</td>
<td>Learning</td>
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<td>The MNE as a portfolio: Interdependencies in MNE growth trajectory</td>
<td>Nachum and Song (2011)</td>
<td>Journal of International Business Studies</td>
<td>17</td>
<td>The extent to which the growth trajectory can be explained by past activities.</td>
<td>Path dependency</td>
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<td>Title</td>
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<td>Journal</td>
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<td>Real call options to enlarge foreign subsidiaries - The moderating effect of irreversibility on the influence of economic volatility and political instability on subsequent FDI</td>
<td>Fisch (2011)</td>
<td>Journal of World Business</td>
<td>7</td>
<td>Real options model to explain the decision to invest in a subsidiary, considering the influence of the uncertainty of the institutional environment and the moderating effect of the irreversibility of investment decisions.</td>
<td>Institutional environment</td>
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<td>Spatial Organization of Fortune Global 500 Corporations in China: An Empirical Study of Multinationals from Japan, the United States, and European Union</td>
<td>He, Zou, and Zhu (2011)</td>
<td>Eurasian Geography and Economics</td>
<td>4</td>
<td>Functional and geographic expansion of MNEs due to sequential investment patterns and intra-firm competition.</td>
<td>Location</td>
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<tr>
<td>Industry and regional patterns in sequential foreign market entry</td>
<td>Chang and Rosenzweig (1998)</td>
<td>Journal of Management Studies</td>
<td>4</td>
<td>Analysis of patterns of sequential investments by MNE considering the region of origin and industrial sector.</td>
<td>Location</td>
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<td>Geographical and industrial spillovers in entry decisions across export markets</td>
<td>Muñoz-Sepulveda and Rodriguez (2014)</td>
<td>Applied Economics</td>
<td>0</td>
<td>Decisions to enter foreign markets due to geographic activities in neighboring countries and companies in the same industrial sector.</td>
<td>Location</td>
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<td>Sequential internationalization, heterogeneous process, and subsidiary roles: the case of Hyundai Motor Company</td>
<td>Suh et al. (2014)</td>
<td>Asia Pacific Business Review</td>
<td>0</td>
<td>Internationalization model of the countries with strong economic development (Korea).</td>
<td>Learning</td>
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<td>Are investment promotion agencies doing the right thing? evidence from China</td>
<td>Ni (2016)</td>
<td>Economics Bulletin</td>
<td>0</td>
<td>Role of Chinese Investment Promotion Agencies Affects Sequential Investments.</td>
<td>Institutional environment</td>
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<td>Sequential expansion in a foreign market Knowledge drivers and contingencies of establishments of additional subsidiaries</td>
<td>Pehrsson (2016)</td>
<td>European Business Review</td>
<td>0</td>
<td>Drivers that facilitate the evaluation of alternative ways of sequential investments.</td>
<td>Learning</td>
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<td>Antecedents of FDI options by Thai public firms</td>
<td>Rittipan and Rasheed (2016)</td>
<td>Management Review</td>
<td>0</td>
<td>Factors that predict the type of option exercised by the MNE (grow, postpone or quit) after the first sequential investment.</td>
<td>Institutional environment</td>
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<tr>
<td>The Role of Experiential Knowledge and Subsequent Investment Decisions on the Profitability of Japanese Companies in Brazil</td>
<td>Ogasavara (2010)</td>
<td>BAR: Brazilian Administration Review</td>
<td>0</td>
<td>Experience-based learning and sequential investments are associated with the performance of subsidiaries.</td>
<td>Learning</td>
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Source: prepared by authors
We identified common aspects among them to allow the definition of a framework for the systematic review. We grouped the articles in 4 different clusters: (i) institutional environment, (ii) location (iii) path dependence, (iv) learning, according to Figure 2.

Based on the analysis of articles related to sequential investments, we established a framework considering the main concepts related to each cluster. Basically, four factors are related to sequential investments - Figure 3. The institutional environment is considered in terms of market uncertainty, thus affecting the sequential investments. The institutional environment and a higher rate of subsidiary expansion, negatively affects the profitability of subsidiaries. In terms of path dependence, sequential investments are "pulled" by the region where the MNE initially established itself. In terms of location, MNE seeks to cluster subsidiaries in the same host country and carry out its sequential investments where it has the greatest competitive advantage. Learning, where the number of articles was higher, is considered as an effect of the sequential investments, allowing the acquisition of different types of knowledge and even altering the mode of entry of the subsidiaries.

**Institutional environment**

Macroeconomic factors of the host country, as well as the uncertainty of this environment, affect the sequential investments. High speed of affiliate establishment and uncertain institutional environment, lead to lower profitability of the subsidiary.

- **Path dependence**
  - SI to obtain legitimacy and competitiveness, sequential investments are pulled by the

- **Location**
  - Agglomeration of subsidiaries in the host country, initial investments in the line of business where there is greater competitive advantage,

- **Learning**
  - SI changes investment decisions, generate different types of knowledge, change the way of entry and can result from the sequential investments effects

**Sequential investments effects**

- **Initial investments**
  - Validity of classical theories of transaction cost, OLI

- **Sequential investments**
  - Dynamics from Sequential Investments invalidate classical theories of transaction cost, OLI

**Investments decisions**

- Initial investments
- Sequential investments

**Time**

Figure 2: Sequential investments articles – clusters
Source: prepared by authors

Figure 3: Sequential Investment Framework
Source: prepared by authors

**Institutional environment**

The institutional environment and sequential investments are analyzed in four articles. According to Rittippant and Rasheed (2016), host country factors (economic growth rate and economic freedom), industrial competitiveness, and ownership concentration, all have a significant impact on the decision to grow, postpone or exit its initial FDI. When analyzing venture capital investments between 1989 and 2004, Guler (2007) identified that venture capital organizations are less likely to terminate their investments even
when returns on investments are declining. Intra-organizational political aspects, as well as the coercive and normative pressures of co-investors and partners, can influence decisions to maintain or terminate investments irrespective of expected returns. In other words, political aspects and institutional environment affect the effectiveness of decision processes related to sequential investments.

Fisch (2011) presents a model of real options to explain the decision to invest in a subsidiary, considering the influence of the uncertainty of the institutional environment and the moderating effect of the irreversibility of investment decisions. According to the authors, MNEs maintain a flexible strategy and develop their subsidiaries depending on the volatility of the economy and the irreversibility of their investments rather than remaining in a pattern of sequential investments. Investors choose when to invest by analyzing the value of expected returns versus the value needed to exercise the option (increased investments in the subsidiary, postponing or not realizing the investment). Finally, Ni (2016) identifies that China's Investment Promotion Agencies act positively in sequential FDI, especially in the high-tech industry.

**Location**

In the evaluation of the relationship between location decisions and sequential investments, He et al. (2011) evaluate the functional and geographical expansion of MNEs by the patterns of sequential investments and intra-firm competition. The results indicate that the same MNE seeks to locate its subsidiaries in the same place as a result of the sequential investments. The authors have identified, specifically for Japan, the occurrence of agglomeration due to the country of origin for the Japanese MNEs. Competition between firms and between units of the same firm tends to mitigate the agglomeration effect in the country of origin. In an analysis of the sequential investment patterns by MNE, considering the region of origin and industrial sector, Chang and Rosenzweig (1998) have identified that Japanese and European companies are entering their most active business line, and after a while, they begin the lines of business less strong. Regarding industry effects, sequential input is stronger in the electronic than the chemical sector. It is confirmed that entry into a foreign market is a sequential process, with the effect of the industrial sector being more important than the country of origin.

The agglomeration effect of Japan MNEs and China as a host country is studied by Yamashita et al. (2014). Top-tier suppliers and customers pull investments in a particular location. This agglomeration effect does not repeat for the second and third level. The presence of relationships between firms (either for localized subsidiaries close to suppliers or customers) leads to sequential investments in that particular region due to the cheaper accesses to suppliers and customers. Sequential entry decisions in a given country can be explained by the positive effects of geographical proximity and the same type of industry (Muñoz-Sepulveda & Rodríguez, 2014). Location decisions of a given FDI are changed according to the SI, but the articles do not evaluate the impacts regarding the performance of the subsidiaries.

**Path dependence**

The concept of path dependence basically states that it is a characteristic of a sequence of events, where a particular event is unable to be accomplished without the influence of its past. Events are not independent, there is a logical association between them (Araujo & Rezende, 2003). In the case of sequential investments, Chan et al. (2006) studied the entry decisions in a foreign market as being based on two forces: legitimacy and competitiveness. Input and output decisions are influenced by previous decisions of their own and of other MNEs. When analyzing more than 4,000 input decisions made by MNEs from Japan, the authors identified that these decisions have an inverted U-shape relationship with previous input decisions and subsequent output decisions at the local industry level.

Studied carried out by Arregle et al. (2009) indicated that previous inputs and outputs in a given region have a significant impact on subsequent location decisions. Decisions for the location of a region-based subsidiary seek to obtain aggregate advantages and specific regional advantages of the firm (to the point of resource depletion). The exit decisions of a country and a region have a significant but opposite relationship. The resources released by these exits did not have a positive impact on the sequential
investments in the country but had a positive effect on the entry decisions in the countries of the region. Nachum and Song (2011) assessed the extent to which the growth trajectory of an MNE in legal services can be explained by past activities. The result indicates that the growth trajectory of an MNE (legal services) involves a trajectory that follows its past in terms of portfolio, exerting greater force in the entrance than in the exit. The motivators of initial expansion movements are distinct from subsequent ones. Portfolios have a greater impact on input than output, indicating that the process of path dependence exerts a more significant influence on expansion than on contraction of MNEs (portfolio as a description of an organization with multiple units with some kind of interdependence between them).

**Learning**

The largest cluster identified how and what types of learning affect sequential investment decisions. The articles indicate that sequential investments lead to learning that changes investment strategies. The fundamental concept is that the variables that explain the initial input mode do not explain the subsequent inputs. In other words, theories related to FDI decisions (Dunning, 1980, 1988) do not evaluate the effects that learning has on subsequent investment decisions. Uppsala's graduated expansion model affects the liability of foreignness, allowing for new sequential investments in business lines where competitiveness is less due to reduced risk. Entry is performed in the business where the organization has the most significant competitive advantage and moves to areas where the organizations is less competitive (Chang, 1995). The competitiveness of the organization is built from the realization of sequential investments.

The experience of sequential investments may be originated from intra-firm learning (experiential learning) and from the diffusion of extra firm experience. According to Chang (1995), the participation of organizations in corporate networks can enhance this learning. A sequential process of investments related to international expansion promotes less sensitivity to the effects of political risks. Experience in countries with greater political risks, experience in countries within the same cultural block, and experience in operating in manufacturing plants abroad reduces the organization's sensitivity to risks (Delios & Henisz, 2003). Although the above analyzes are focused on manufacturing organizations, as per Goerzen and Makino (2007), service MNEs become more internationalized in their core business.

Regarding types of knowledge, Kogut and Zander (1992) identified that organizations are characterized by their ability to share and transfer knowledge of individuals within the organization. FDI depends on the organization's ability to transfer tacit (less coded) knowledge across its national borders. In addition, sequential investments enable the development of capabilities from the perspective of the matrix and development of operational knowledge from the perspective of the subsidiary (Suh et al., 2014). Another aspect of learning relates to how it affects the choice of entry mode, as well as the its pace. Chang and Rosenzweig (2001) described that the variables that explain the initial entry mode do not explain the subsequent entries. Organizations choose the mode of entry according to the theory of transaction costs in order to internalize intangible resources. The choice for greenfield investment occurs when the organization has organizational and/or technical knowledge and seeks to exploit these competitive advantages by establishing a new enterprise. On the other hand, when organizations seek to acquire new knowledge about the local market or knowledge about a new process, product, technology, preference is given to joint ventures or acquisition. In addition, due to the problem of opportunistic behavior provided by joint ventures, organizations prefer full ownership when assets are intangible (high technology, brand loyalty).

National and cultural factors could explain another factor of choice of entry mode. The greater the cultural distance, the higher the risks of post-acquisition integration and the entry choice mode is directed to less risky entry modes such as joint venture or acquisition (Chang & Rosenzweig, 2001). However, sequential investments promote a dynamic to the decision process that alters these decision factors when compared to initial investment. The only unchanging factor is the real exchange rate, while factors related to R & D, international sales, and cultural distance are less critical in sequential investments. On the other hand, due to path dependence factors, the choice of input mode considering the line of business tends to
be the same. Experience with joint ventures is positively associated with subsequent acquisitions in other business lines. The authors conclude that the experience gained in other countries reduces the perception of risks and uncertainty.

Additionally, Gao and Pan (2010) demonstrated that the impact of the accumulation of entry mode experience on the pace of sequential entries varies according to the choice of entry mode. The cumulative experience of the three entry modes (contractual, joint venture, wholly owned subsidiary) increases the pace of expansion. However, the relative importance of this accumulation of experience varies according to the entry mode. Therefore, types of experience should be separated in different types of experience to identify effects on subsequent inputs. In addition, MNEs with the greatest accumulation of entry mode experience can handle the constraints of changing entry mode. Thus, the following propositions are performed. Study carried out by Pehrsson (2016) concerning Swedish organizations expanding to Europe and the US indicates that experience in a local market directly influences the propensity to expand in that location and this propensity increases if the firm has a broad geographic scope. In other words, sequential expansion investments are affected by the head office experience and local learning. According to the research findings, the establishment of wholly owned subsidiary is limited by the market environment and by the establishment of other subsidiaries in other foreign markets.

Only one article evaluated the relationship between experiential learning and the decisions to make sequential investments about the subsidiary’s performance and profitability. According to Ogasavara (2010), learning based on experience is positively associated with the subsidiary’s profitability. The learning results not only from the period of the management the unit in the host country but also from the increase in the number of investments in the local market. Out of the 23 articles analyzed, only two evaluated the experiences from unsuccess expansion. Zeng et al. (2013) identified that there is a positive relationship between subsidiaries mortality and a low level of experience in a different culture. This relationship is weaker if previous experience is distributed in FDI in different cultures. On the other hand, this mortality ratio is stronger if the expansion is done at a faster pace and becomes negative after the MNE has accumulated a high experience in the culture of the host country. The irregular pace of expansion does not appear to have effects on the mortality of the subsidiaries. The mode of entry through joint ventures or acquisitions has the potential to increase MNE learning, but its complexity draws attention to learning. MNEs should establish mechanisms to reduce the effects of misleading learning when expanding into dissimilar cultures.

**Propositions of this study**

The elaboration of the propositions focuses on the interface and inter-relationship between sequential investments and learning. The goal is to explore how the learning process influences sequential investment decisions by organizations. Only three previous works make a relation between learning and institutional environment. Jiang et al. (2014) seeks to connect the effects of TCD time compression diseconomies (increase in the speed of expansion of subsidiaries) and identifies that the effects of TCD are increased when there is an uncertain institutional environment and lack of learning by observing the movements of other subsidiaries. Delios and Henisz (2003) identified that IS promote less sensitivity to the political risks of the host country and, finally, Zeng et al. (2013) observe a higher subsidiary mortality when there is no experience in a distinct culture, but this mortality is lower if there has been previous experience of SI in countries with dissimilar culture. Arregle et al. (2009) studied the effects of accumulating investments in the same region rather than dispersing them in different areas. This aggregating effect may occur due to acquired knowledge (spillovers), the establishment of social relations, and at the regional level may be due to institutional proximity between countries in the same region. The authors concluded that the number of subsidiaries in a given region is determined by MNE activities in the region. Complementarily, Muñoz-Sepulveda and Rodríguez (2014) evaluate that the entry decisions in a given country consider the activities of the MNE in neighboring countries.
When considering location aspects, traditional International Business theories establishes that the definition of where to locate their assets is basically driven by the search for resources, market, efficiency or strategic advantages (Dunning & Lundan, 2008). According to the authors, the advantages derived from the institutional environment related to the extent, form and quality of the structural incentives of a given country, would have a strong impact on the quantity and quality of the activities of the MNEs and the FDI. The four articles related to location (Chang & Rosenzweig, 1998; He et al., 2011; Muñoz-Sepulveda & Rodriguez, 2014; Yamashita et al., 2014) do not address the issue of sequential investments, institutional environment, and location.

The articles do not consider the relationship between sequential investments, learning and localization, in other words, to what extent sequential investments lead to a specific learning that could impacts location decisions. For example, Delios and Henisz (2003), when studying 665 MNEs of Japanese origin with more than 3,800 sequential investments, identified that the most experienced MNEs are less sensitive to uncertainty factors, but do not consider the impact of agglomeration effects on the decisions made. In studying 1,310 sequential investments of the 5 largest Japanese exporting MNEs, the authors evaluated aspects of location (local and global) and "proximity" to the organization's core business. Goerzen and Makino (2007) identified that the initial investments are more related to their core business, but the sequential ones are based on location aspects. The relation of these sequential investments and learning is not explored by the authors. In an extensive study on the internationalization of Hyundai, Suh et al. (2014) identify that MNE, based on its sequential investments, develops capacities from the perspective of the matrix and local operational knowledge, arguing that the learning process is fundamental in understanding the sequential investments made by MNEs.

Based on the existing literature, it is expected that there will be a positive relationship between sequential investments and location decisions in the same region or country, considering learning as a moderating variable. Thus, the first proposition relating the groups of institutional environment and location is indicated below:

**Proposition 01:** Sequential investments promote learning that generates a greater expansion of the MNE in the same country and in the same region, considering aspects of the institutional environment and location.

As discussed above, earlier studies that correlate sequential investments and learning clearly indicate that learning is the main factor that alters investment decisions. For example, MNE uses learning from its SI to reduce the liability of foreignness, allows adaptation of choice of input modes, reduces sensitivity to institutional effects, learning is positively associated with profitability, among others fundamental aspects. However, except the Zeng et al. (2013) e Jiang et al. (2014) (already discussed above), other articles are based on success ratings (Chang, 1995; Chang & Rosenzweig, 1998; Goerzen & Makino, 2007; Pehrsson, 2016), not unsuccess.

It can be seen that unsuccess is assessed as a consequence of wrong learning in a dissimilar culture (Zeng et al., 2013), or it occurs due to time compression diseconomies, that is, a higher speed of expansion generates a lower survival of the subsidiaries of MNE (Jiang et al., 2014). The occurrence of unsuccess is not studied to evaluate if it is capable of promoting a level of learning equivalent to that of success investments. Another key factor is related to the lack of a learning considering the regionalization of the expansion of MNEs. Articles that consider regional aspects of expansion of MNEs and sequential investments (Arregle et al., 2009; Chang & Rosenzweig, 1998) identified that inflows and outflows in a given region are affected by previous location decisions and that the effects of the industrial sector on sequential investment decisions are more important than the region of origin of these investments. Thus, no article attempts to evaluate the regional aspects of learning.
We expected that there is no difference between learning when comparing the sequential investments made in the same region, if the MNE internalize the learning with the unsuccess, therefore, the following proposition is made:

**Proposition 02:** Learning from unsuccess leads to the same level of learning of success occurrences, considering the expansion in the same region.

Figure 4 presents the two propositions of the study, as well as the expected meaning of the relation between the variables.

**Conclusion and final consideration**

This article carried out a systematic review of the literature on sequential investments (SI), considering the theory of IB. It was possible to analyze and organize the studies on SI and identify the current status of the literature on one of the most relevant topics in International Business, the decisions about where and when to invest and possible factors that impact this decision. The preparation of a framework connecting SI, institutional environment, location, path dependence and learning, allowed the discussion and presentation of the propositions of this article, to be explored and confirmed by quantitative empirical investigations. The study itself presents its limitations, typical of systematic reviews. Essential articles about SI may not have been identified within the research process. In addition, the classification in groups of analyzes allows a general classification to facilitate the study, but it can limit the understanding of the interrelation and interdependence between the clusters. The academic contribution relates to the very essence of International Business studies. On one side, the traditional theory that considers the decision-making events about international expansion (specifically, where to expand) as isolated events, where the experience of learning in a particular country or region is not relevant. On the other hand, the studies presented in this systematic review demonstrate that the subsequent decisions on the expansion of subsidiaries consider the learning resulting from these evaluations. Another contribution is related to the concept of unsuccessful expansion. The study of unsuccess has received little attention in the academic literature, which is considered a key factor in International Business.

The learning aspect of SI presented the most significant number of studies, practically 50%. Few studies have identified how the failure of a SI decision alters subsequent decisions and, more importantly, whether unsuccess learning has a more pronounced effect than success. However, these SI are also
affected by the institutional environment where they are carried out, influencing the location decisions. Understanding how SI and unsuccess are related can help identify critical factors of International Business. The analysis also presents managerial contributions. First, by highlighting the importance of learning in subsequent investment decisions, and secondly, identifying and proposing that unsuccess can lead to learning as relevant as a success. Studying these fundamental aspects of International Business can help organizations decide, more assertively, how their SI should be applied.

References


Economic cooperation between Latvia and China on background of Belt and Road Initiative

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Abstract

The existing railway infrastructure can be used for establishing the “New Silk Road” Northern branch via Latvia, but the problem is a lack of cargo for this route. This route can be integrated into the existing Eurasian land bridge to connect China and the Scandinavian countries. The aim of the study is to assess the potential volume of Latvian cargo for the “New Silk Road” Northern branch through Latvia. The methods of the study are statistical analyses and the forecasts of experts. Forecasts of experts is an innovative method for investigating this topic. The study contributes to the discussion regarding trade routes between Europe and China and Eurasian land bridge. The research suggests to establish regular container block train between Latvia and China for distribution Chinese goods in the Scandinavian countries and vice versa because it is expected to be a shorter and faster route than other rail routes and cargo potential for this route is growing.

KEYWORDS: Eurasian land bridge; China; Latvia; railways; New Silk Road

JEL CLASSIFICATIONS: F13, F15,

Introduction

Freight transportation by rail is an alternative to sea and air freight for the transportation of goods between Europe and China. Sea and air freight represents two extremes for shippers because sea freight has long lead time and low transport cost, but air freight has short lead time and high transport cost (Rodemann & Templar, 2014). At the moment the main terminals for the rail route between Europe and China are located in Germany, Poland, Russia, Finland and the Netherlands (Rodemann & Templar, 2014; Tavasszy, Minderhoud, Perrin, & Notteboom, 2011). Currently, all operating routes to Europe go via Russia (Moscow) and Belarus (Brest).

The three Baltic States (Estonia, Latvia and Lithuania) try to attract cargo and partners for their routes to serve international freight transit cargo between the Scandinavian countries and China (Bulis & Skapars, 2014). There is lack of studies about cargo potential for rail route between Latvia and China but it is significant topic because this rail route is expected to be shorter and faster than other alternatives. The existing rail infrastructure can be used for it. This route was tested in 2008 and 2016 being successful.

Latvia in Eurasian landbridge
There are three seaports for international cargo transit in Latvia: Riga, Ventspils and Liepaja. In the framework of “New Silk Road” Riga can specialise in serving container cargo, but Ventspils and Liepaja – Ro-Ro cargo. The biggest seaport in Latvia is Riga as shown in Figure 1).
Source: authors’ construction (based on Bulis & Skapars, 2014; Kabashkin, 2012; Rodemann & Templar, 2014; Tavasszy et.al. 2011)

**Figure 1. Existing trade routes between Europe and China and potential route via the seaport of Riga in Latvia**

Cargo turnover at the seaport of Riga was 40 Million tons in 2016 (Central Statistical Bureau of the Republic of Latvia). In 2008 a demonstration container block train from Urumqi (China) to Riga (Latvia) was
organised and it was successful (Bulis & Skapars, 2014). Riga is a spoke seaport in the European hub-spoke seaports system. Latvian seaports mostly operate in the East-West cargo transportation corridor. Main target markets are Russia and other Commonwealth of Independent States (CIS) countries, and cargo flows to and from these countries. The main commodity groups are coal, oil and its products and general cargo.

Riga has three advantages in East-West logistics. Firstly, geographical position because Latvia is located between two extensive markets – the European Union and Russia (Bulis & Skapars, 2013). Secondly, the seaport of Riga is the nearest foreign seaport to Moscow. Thirdly, there is a flexible workforce with Russian and English language skills, as well as experience in working in a multicultural environment and with partners from the CIS countries and Western countries.

Potential Latvian cargo for Eurasian landbridge

Latvian exports to China has been growing since 2004, excluding 2009 when a decline was observed in the volume of 2.5 Million EUR in comparison with the previous year as presented in Figure 2).

![Graph showing trade dynamics between Latvia and China, 2004-2016 (Million EUR)](image)

Source: authors’ construction based on data from the Central Statistical Bureau of the Republic of Latvia

The largest export volume from Latvia to China was observed in 2016 as 120.32 Million EUR, which was 108.49 Million EUR more than in 2015. Imports from China into Latvia has a growing trend and the largest was in 2016 as 402.04 Million EUR. Latvia’s trade balance with China is negative and with a growing trend. In 2015 it was the largest – minus 306.98 Million EUR.

The main commodity section of Latvian exports to China is Wood and articles of wood that were exported in a volume of 50.86 Million EUR in 2016, shown in Figure 3.
The other main commodity sections of Latvian exports to China are Base metals and articles of base metals, Mineral products, as well as Machinery and mechanical appliances, electrical equipment. Each of these three commodity sections were exported in a volume of 13.05 Million EUR, 16.40 Million EUR, and 19.76 Million EUR in 2016. Latvian companies export goods to China in other commodity sections as well: Vegetable products, Products of the chemical and allied industries, Optical instruments apparatus, prepared foodstuffs, Plastics and articles thereof, rubber and articles thereof, Textiles and textile articles.

Machinery and mechanical appliances, electrical equipment provide more than a half of Latvian imports from China that were imported in a volume about 212 Million EUR in 2016, shown in Figure 4.

Source: authors’ construction based on data from the Central Statistical Bureau of the Republic of Latvia

Figure 3.Volume of export from Latvia to China by commodity sections, 2004-2016 (Million EUR)
Figure 4. Volume of import to Latvia from China by commodity sections, 2004-2016 (Million EUR)

In 2016 this commodity section was imported four times more than it was in 2009. Other significant commodity sections that Latvia has imported from China in 2016 are Miscellaneous manufactured articles, Plastics and articles thereof, rubber and articles thereof, Base metals and articles of base metals, Textiles and textile articles, Products of the chemical and allied industries.

In total 161 Latvian companies exported to China in 2016. 30 of them exported services, 37 companies were distributors and 94 companies were manufacturing companies (based on the
Analysing 94 manufacturing companies, 20 of them were producers of Wood and articles of wood, 18 companies – producers of Machinery and mechanical appliances, electrical equipment, but 12 companies – producers of Products of the chemical and allied industries. These 3 commodity sections provided more than half of the manufacturing companies that exported goods to China in 2016. Textiles and textile articles were exported by 9 manufacturing companies, Optical instruments and apparatus – by 8 companies, Miscellaneous manufactured articles – by 6 companies, Base metals and articles of base metals and Prepared foodstuffs – by 5 companies each. Mineral products were exported to China by 4 companies in a volume of 6.8 Million EUR. Exports were provided by some manufacturing companies in the framework of each other’s commodity sections that were exported from Latvia to China in 2016.

**Forecast of Latvian exports to China**

To find out the future trends in Latvian exports to China, the authors have conducted a survey of experts. 10 appropriate experts in Latvia from academia, government institutions and companies filled in the questionnaire regarding probable export volume from Latvia to China in 2020 in total, by commodity sections and in comparison with other main Latvian export markets. Taking into account the mean of experts’ assessments, in 2020 Latvian export to China will be 184.4 Million EUR, which will be 64.32 Million EUR more than in 2016, shown in Figure 5.
This forecast is with a standard error plus/minus 41.1 Million EUR. It means that the minimal volume of Latvian exports to China will be 143.3 Million EUR, but the maximum volume – 225.5 Million EUR in 2020. All experts forecast that Latvian exports to China in 2020 will be larger than in 2016. This positive assessment could be explained with some arguments. Firstly, since 2004 the volume of Latvian exports to China has been growing. Secondly, the Chinese market has been growing in the 21st century and continues to grow. Thirdly, experience and interest for operating in the Chinese market is growing among Latvian companies. Fourthly, the support of Latvian government institutions for the operation of Latvian companies in China is improving as well.

Experts forecast that the proportion of Latvian export volume to China in total Latvian export volume will increase in 2020 by 3.1%, shown Figure 6.
It is indicated that this indicator could increase twice in 2020 in comparison with 2016 when it was 1.6%. The faster growth of Latvian export volume to China than to other countries is related with the saturation of the European (the European Union) market and the Russian market, as well as growing and undigested high volume Chinese markets in different industries.

The experts surveyed forecast that in 2020 proportion of Latvian exports to the European Union countries will be increased by 0.1% as compared with 2016. The proportion of Latvian exports to the Commonwealth of Independent States is decreased in 2016 in comparison with 2013 by 1.4% because in 2014 mutual economic sanctions between Russia and the European Union began (Mau & Ulyukaev, 2015; Moagar-Poladian & Dragoi 2015), but by 2020 the volume of Latvian exports will increase in comparison with 2016 because economic sanctions between the European Union.

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**Figure 6. Experts forecast (mean) towards potential Latvian export proportion to China and other main Latvian export markets in 2020 (% in total Latvian export)**

Source: authors’ construction based on survey of experts conducted by authors
and Russia would be reduced or cancelled. The proportion of Latvian exports to other countries in total Latvian exports in 2020 will decrease in comparison with 2016. This could be explained with fact that by 2020 the volume of Latvian exports should increase because by 2020 Russia would have cancelled existing import sanctions for the food industry from the European Union countries that were imposed in 2014 (Moagar-Poladian & Dragoi, 2015).

The experts forecast that in 2020 in comparison with 2016 the proportion of Latvian exports by commodity sections to China will decrease in such commodity sections as Wood and articles of wood, Base metals and articles of base metals, Machinery and mechanical appliances that were the main Latvian export commodity sections to China in 2016, shown in Figure 7.

Source: authors’ construction based on survey of experts conducted by authors

**Figure 7. Experts forecast about potential Latvian export structure to China by commodity sections in 2020 (%)**

Latvian export volume to China will increase in the following commodity sections: Wood and articles of wood (28.4 Million EUR in 2013, 50.86 Million EUR in 2016, 56.4 Million EUR in 2020), Base metals and articles of base metals (16.5 Million EUR in 2013, 13.05 Million EUR in...
2016, 29.7 Million EUR in 2020), Machinery and mechanical appliances (15.5 Million EUR in 2013, 19.76 Million EUR in 2016, 30.2 Million EUR in 2020). The data indicates that the proportion of some commodity sections in total Latvian exports to China decrease, but it will increase in some other commodity sections and the total volume of Latvian exports to China will increase as well.

The experts forecast that the proportion of Latvian exports to China will increase in some commodity sections in total Latvian export volume to China in 2020 in comparison with 2016: Vegetable products, Other goods, Prepared foodstuffs, Plastics, rubber and articles thereof, Textiles and textile articles.

The results of the experts survey shows that in 2020 in comparison with 2016 the proportion of Latvian export commodity sections to China in total Latvian export to China will decrease in following commodity sections:

1. Wood and articles of wood (42% in 2016, 30.6% mean in experts’ survey for 2020);

2. Machinery and mechanical appliances, electrical equipment (16.72% in 2016, 16.4% mean in experts’ survey for 2020).

The proportion of Mineral products will decline in total Latvian exports to China as well (13.84% in 2016, 7.2% for mean in experts’ survey for 2020). Resources of wood, metals and minerals are limited in Latvia therefore their proportion in Latvian total exports to China is expected to decline. The proportion of these commodity sections will decline in total Latvian exports to China, but volumes in monetary terms of these commodity sections will increase, but not as fast as the total Latvian export volume to China.

Comparing the expected Latvian export proportion trends by commodity sections in 2020 and 2016, some commodity sections will experience significant growth:

1. Vegetable products (5.23% in 2016, 10% mean in experts’ survey for 2020).

2. Products of the chemical and allied industries (2.3% in 2016, 4.9% mean in experts’ survey 2020).


The experts forecast that the proportion of prepared foodstuffs will experience the fastest growth in total Latvian exports to China. In 2020, 3 times in comparison with 2016. The data from the Central Statistical Bureau of the Republic of Latvia shows that the main Latvian manufacturing export products are Prepared foodstuffs, Wood and articles of wood, Base metals and articles of base metals, as well as Machinery and mechanical appliances, electrical
equipment. All the commodity sections mentioned above, excluding Prepared foodstuffs, are among the leading commodity sections in Latvian exports to China. The experts forecast that the food industry will experience the most remarkable competitiveness growth among other Latvian industries in the Chinese market. The barrier for exporting Latvian Prepared foodstuffs to China is the long certification process in China. The experts are convinced that the advantages of Latvian food in China are that it is produced in the European Union and Latvia is the second “greenest” country in the world. The assessments of experts surveyed in this study regarding opportunities to export more foodstuffs to China is recognised in other scientific studies as well. It is recommended to export more foodstuffs to China because China is not capable of producing all the necessary foodstuffs for its own consumption (Anderson & Strutt, 2014; Xu, Xu, Deng, Huang, Uchida, & Rozelle, 2006).

Conclusions

The study is devoted to an analysis of the integration of Latvia into the existing Eurasian landbridge and cargo manufactured in Latvia for this trade route. In the past 13 years Latvia has a negative trade balance both with foreign countries in total and with China. In 2016 it was minus 282 Million EUR with China. Despite the fact that since 2004 the volume of Latvian exports to China has grown 10 times, the contribution of the trade deficit between Latvia and China to the total trade deficit of Latvia has grown from 59.93 Million EUR in 2004 to 281.72 Million EUR in 2016.

The experts surveyed in this study forecast that the commodity section which in proportion to the Latvian export structure to China that will increase the most will be Prepared foodstuffs. In 2016 the proportion of this commodity section in Latvian exports to China was 2.26 %, in 2020 it could be 6.1%, in monetary volume is 2.69 Million EUR, and 11.2 Million EUR respectively.

It is useful to develop studies identifying Latvian cargo and its volumes in tonnes that are appropriate for the Eurasian landbridge.

References


Track 17: Technological and Business Model Innovation
Analysis of Light Asset Operation Models-Taking Wanda Business Management as an Example

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Huijie Qi, Guizhou University of Finance and Economics

Abstract:

With the rapid development of Internet, big data and information technology in China, companies' target market has been expanded, their transaction time has been shortened, their transaction methods have been increased, and their business scope has been expanded. Undergoing earth-shaking changes in business practices and business environment of enterprises, some industries have shifted their asset operating model from a heavy production operation model to a light production operation model. Under the circumstance that real estate industry in China has moved from the golden age to the silver age, the real estate industry is also facing a transition. The paper takes Wanda Business Management as an example to analyze its light asset and light asset operating models, points out its successful transformation and operation experience, analyzes the enterprise risk prevention strategies under the light asset operating model and provide some practical suggestions to companies of light asset operating models.

Keys: Light assets; Light asset operating model; Risk prevention; Wanda Business Management

轻资产运营模式分析—以万达商管为例

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摘要：近年来，随着我国互联网、大数据和信息技术的快速发展，扩大了企业的目标市场、缩短了交易时间、增加了交易方式、丰富了经营范围，企业的经营方式和经营环境发生了翻天覆地的改变，部分行业已从重资产运营模式向轻质资产运营模式转变。我国房地产行业由黄金时代进入了白银时代，房地产行业也面临转型。本文以万达商管为例，对其轻资产和轻资产运营模式的分析，指出其成功转型和运营的经验，并对轻资产运营模式下企业风险防范策略进行分析，给采用轻资产运营模式的公司提供一些实践经验。

关键词：轻资产；轻资产运营模式；风险防范；万达商管

引言

新时期我们要加快建设创新型国家，以新产业、新业态、新模式等为代表的创新型经济正在成为我国经济发展的新动能。在大众创新，万众创业的背景下，我国企业将创新作为自身发展的第一要务，实现转型。创业成功的基础是摸索到合适的商业模式，轻资产运营模式比传统的重资产运营模式在存货和固定资产等资产上的投入比较少，更大的投入放在了企业品牌、核心技术、

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相关管理经验、企业和文化和销售渠道等附加值比较高的软实力上,可以充分发挥轻资产的效用,合理利用相关资源,做到以较少的投入获得较大收益。

我国经济发展的过程中,房地产行业是我国经济发展的支柱产业,也带动了相关行业的发展,发挥着举足轻重的作用。之前的房地产行业主要发展重资产,从项目最开始的选址、融资、建设到销售,各个环节都是开发商在运营。在融资的过程中,会存在融资机制不健全、融资成本高、投资账户机制不成熟和企业信誉等问题,都会影响资金的筹集,公司只要资金链断裂,很有可能会破产。再加上房地产行业会受到政府宏观调控手段的影响,传统的房地产行业压力越来越大,迫使其转向轻资产运营的发展战略。我国已经有部分房地产公司开始结合公司实际情况,来发展轻资产运营模式。

当前已经有一些企业实现了轻资产运营模式,如万科(小股操盘)、苹果公司、招商银行、农信机构、海澜之家等,但并不是所有公司的轻资产运营模式都能成功转型,会受周围各种经济、市场环境的影响,存在一定的筹资风险、经营风险和财务风险。因此,研究轻资产运营模式下的公司可能出现的财务风险以及相关风险控制措施会对公司的顺利发展意义重大。本文以万达商管轻资产运营模式为例,分析其转型路径和转型过程中的风险,汲取改革经验为其他房地产企业提供一定的参考价值。

一、轻资产运营模式分析

1. 轻资产概念与特征

"轻资产"最早是由国际著名管理咨询公司麦肯锡提出的,之后受到众多企业的关注。目前学术界对"轻资产"还没有比较权威的定义,它是相对于重资产提出的概念。相较于国外学者,我国对轻资产的研究相对较晚一些,但部分学者对轻资产的定义作出了表达。轻资产主要包括企业的相关管理经验、规范的管理流程、企业品牌、核心技术、客户服务、人力资本、客户资源、企业文化等,它具有占用资金较少,附加值高,使用灵活,资产回报率高等特点。除此之外,也有学者指出,公司在发展过程中形成的无形资产,如财务报表中周期长、流动性差的重资产以外的资产,比如货币资金、交易性金融资产等流动性较好的资产。轻资产运营是指企业在自身资源不足的情况下,合理化的运用外部资源,用较少的投入来为企业创造最大利益的战略。轻资产运营模式下的企业重点关注企业品牌,品牌是企业发展过程中形成的重要无形资产,构成企业的核心竞争力。学者利用企业价值驱动理论,研究了轻资产运营和企业价值之间的关系,分析在轻资产运营模式下,企业价值评估应该注意的主要问题。轻资产的主要内容和表现形式如下表。

<table>
<thead>
<tr>
<th>轻资产的主要内容</th>
<th>表现形式</th>
</tr>
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<tbody>
<tr>
<td>品牌</td>
<td>在资产负债表中以广告费用等的形式体现</td>
</tr>
<tr>
<td>专利、专有技术</td>
<td>在资产负债表中以无形资产的形式体现</td>
</tr>
<tr>
<td>著作权</td>
<td>在资产负债表中以人员工资等的形式体现</td>
</tr>
<tr>
<td>研发能力</td>
<td>在资产负债表中以科研投入等的形式体现</td>
</tr>
<tr>
<td>渠道和网络</td>
<td>在当年销售费用中体现</td>
</tr>
<tr>
<td>研发能力</td>
<td>在当年管理费用中体现</td>
</tr>
<tr>
<td>管理制度、流程和经验</td>
<td>在企业报表中无法体现</td>
</tr>
<tr>
<td>营销能力</td>
<td>在企业报表中无法体现</td>
</tr>
<tr>
<td>客户资源</td>
<td>在企业报表中无法体现</td>
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资料来源:文献整理

2. 轻资产运营模式相关研究

自轻资产概念提出以来,很多学者对轻资产运营进行了研究。轻资产运营是企业在资源有限的情况下,合理利用企业智力资本,利用各种资源实现企业价值最大化的管理策略。国内外学者也从不同角度对轻资产运营模式的研究分析。
认为：轻资产运营模式下的企业，它们的投资会向公司品牌、产品开发与创新、客户关系等无形资产倾斜，相应的会降低对存货和固定资产等重资产的投资，从而提高公司的核心竞争力。有学者从资产结构的角度分析认为：流动资产占公司总资产比重比较高的公司才能被称为轻资产公司，另外，还提出这个占比要超过百分之八十的公司才能被称为轻资产运营模式的公司。有学者从运营的角度分析认为，轻资产商业模式是指企业通过调动企业的固定资产，来降低对存货等的依赖，进而获得最大回报的一种商业模式。从具体行业角度看，运用具体的财务分析方法，将企业的某项行为看作的轻资产战略转型模式，研究其转型过程中的效果和不足之处，并据此对其他地产公司进行的轻资产转型提供可以借鉴的意见。在经济全球化和一体化的背景下，实施轻资产商业模式的公司在国内外探索低成本的运营方式，通过部分业务外包的方式，将公司那些回报率低且投入成本高的业务外包给其他公司。这种重资产外包的方式可以促进公司的价值增值，还进一步证实轻资产商业模式的转型可以提高公司的盈利能力，增加公司的市场价值，降低利益的波动。

总结相关研究可知，轻资产运营模式，是指企业运用自身的品牌、核心技术、先进的管理经验、管理规范等无形资产，通过与其他企业进行合作互补，来实现共赢。轻资产不仅包括自身的品牌、核心技术、先进的管理经验等，还包括企业的人力资本、客户资源、管理制度等。企业要想实现利润最大化，需要不断强化轻资产，丰富轻资产资源，来取得传统意义上的重资产，提高其经济效益构成竞争优势。企业通过轻资产的转型，以品牌为核心，以凸显核心价值为出发点，充分利用“微笑曲线”，将有限的资金投入到附加值比较高的环节，如产品开发和品牌维护等，而附加值比较低的环节，如生产环节、加工环节、物流环节等可以外包出去，降低资本的投入，集中将资源放在利润最高的环节，提高资本的回报率和盈利能力。

当然，学者在对轻资产运营的研究中也提到了转型过程中存在的一些问题。从品牌形象的角度看，轻资产运营存在的主要问题是企业把经营的重点放在了品牌上，将产品的生产环节外包给其他公司，不能完全保证产品质量，可能会出现质量不合格的情况，反而会对品牌形象有一定的破坏。从财务风险的角度，轻资产运营模式下有可能出现的融资风险、投资风险、运营风险和信用风险以及风险的成因进行分析。还有学者指出，轻资产运营对外包出去的业务失去控制，损失一定的技术和工艺，出现一定的风险。

3. 轻资产运营模式与企业风险控制

轻资产运营模式下，因重资产的减少会造成一定程度的融资困难，产生财务风险。用实证的方法分析运用轻资产商业模式企业的财务风险和资产结构之间的关系，并从资产结构、供应链等角度防范财务风险。在具体的公司转型分析中，如学者通过分析对不同企业的财务数据的分析，对其进行轻资产运营模式下财务风险进行了系统的评价，并提出一系列风险防范的措施。还有学者从网络安全、网络交易法、存货和应收账款等方面加强对财务风险的控制与规避。

二、万达商管轻资产运营模式转型分析

1. 万达商管近况

2015 年期间，万达商管与光大安石、嘉实基金等相关金融机构合作，筹集到 240 亿元的投资款，拉开了“机构出资、我建广场”轻资产转型的序幕。自 2015 年万达商管提出实施轻资产转型以来，轻资产在万达商管的收入中的占比就不断提高。2017 年，万达商管的租金收入为 255.2 亿元，同比增长 30.3%，占商业地产总收入的 22.7%。

2017 年 8 月，万达文旅和万达酒管被注入到万达酒店发展的上市平台上。目前，万达内部业务架构分为商业、文化、网络、金融四个集团。直到 2018 年 1 月 16 日，万达酒店发展发布公告称，拟出售伦敦项目 60%股权，将重资产职务万达酒店也将出售项目剩余 40%的股权。万达酒店发展的轻资产化趋势已十分明确，万达酒店发展平台上将仅剩福州恒力城一个项目，以及万达文旅和万达酒管两个轻资产公司，这将意味着该平台基本完成重资产的剥离。
2018年1月29日，万达商管对外公布，腾讯作为主发起方，联合苏宁、京东、融创与万达商业在北京签订战略投资协议，计划投资约340亿元，收购万达商业香港H股退市时引入的投资人持有的约14%股份。此外，万达也公布，引入投资者后将用1至2年的时间消化房地产开发业务，且彻底告别房地产，万达商业也已更名为万达商管，使其成为一个纯粹的商业物业持有和运营管理者，各方将推动万达商管集团尽快上市。在互联网的大趋势下，王健林认识到商业运营中的线上线下融合的大趋势，急需对万达的线上进行强化。因此，除资金层面的考量外，此次腾讯、京东、苏宁的入股，从业务层面来说，被认为用于补强万达线上业务的“短板”。万达也希望借助腾讯、京东和苏宁更为优化的客户数据，来提升商业地产的运营效率。同时，重新定义的万达商管集团将利用腾讯、苏宁、京东流量线上流量和本身巨大线下商业资源开展多方面合作，共同打造线上线下融合的中国“新消费”商业模式，为中国消费者提供智慧、便捷的消费体验，实现实体商业与互联网企业的双赢。

而与此同时，另一个重大调整是成立地产集团，主要负责消化原来商业地产的房地产开发业务，但利润仍归商管，同时负责开发万达广场重资产和输出品牌管理。

2.万达商业地产的重资产运营模式及转型原因

重资产指企业的大部分资产主要以房屋、设备等形式存在，企业会利用比较多的资金去建造和购买房屋、设备、生产线、存货等实物形态的资产，在资产负债表中的表现是固定资产所占的比重较高，这些固定资产成为企业可以利用的资源，经过不断积累固定资产来进行盈利的一种运营模式。

万达商管在重资产模式下全揽了商业地产的投资、建设，代表性的地产项目是“城市综合体”，具体表现为：用较低的成本购置商业地产，在短期内实施项目的开发和建设，并在四周建设写字楼、商铺和住宅等，并将配套物业进行销售，用销售回款的现金流投资持有的万达广场。万达广场建成后由自己管理经营，全部的租金收益归万达所有，这种运营模式叫做重资产。它的显著特征就是，万达商管全资进行建设，建成后全部租金收益归自己，但这部分租金收益的现金流是商业运营的关键，一旦现金流平衡模式被打破，会对企业造成很大的危险。

但是随着房地产限贷政策的实施，融资难，产品同质化严重存在较强的库存压力，会造成一定的库存积压，并随着房地产市场经济的发展，行业竞争加剧，各地商业用地的土地成本变高，招商压力剧增，并且在重资产经营模式下，万达广场的建设运营资金投入大，投资回报周期慢，占有大量资金，从而会造成其净资产收益率的下降，且融资压力大。由于以上各个因素的存在会导致重资产模式的缺点愈发显著，财务风险提高，万达商业运营模式转型迫在眉睫。

3.万达商管轻资产运营模式的转型

自2015年，万达商管的重资产运营模式逐步向轻资产运营模式转变，2015年期间，万达商管与光大安石、嘉实基金等相关机构合作拉开了轻资产转型的序幕。2016年，万达商管建立50个万达广场，其中20多个都是轻资产。截至2017年底，中国开业万达广场235个，新开业万达广场49个，其中轻资产项目24个，新发展轻资产万达广场47个，其中合作类万达广场签约37个，年客流共计31.9亿人次。并计划五年内万达商管将去房地产化，转型为一家商业投资服务企业，类似于酒店管理公司，完全轻资产化。万达商管董事长王健林在2017年的年会上强调，要加快万达广场全国布局，尽快多签多建项目，更早将万达广场发展到千店规模。

万达商管采用的是以运营为核心的，投资机构为财务投资者的类资管模式，万达广场轻资产运营模式具体表现为：万达商管与原来的开发商转变为运营商，投资建设万达广场的资金由投资方出，万达商管只负责万达广场的选址、设计、招商和日常管理，建成后作为万达广场品牌和万达全球独创的商业信息化管理“慧云”系统。万达广场产生的租金收益由万达和投资方按照三七分的比例分成。万达商管已开始运营这种模式。万达广场的轻资产战略分为两类：一是与“有钱没地”的机构合作开发投资类万达广场；另一类是与“有钱有地”的企业开发合作类万达广场，净租金收入3：7分成（万达占30%）。其中，后者为万达力推的模式。轻资产运行模式转型的具体表现为以下几个方面：
（1）拓宽融资渠道。主要通过两种途径：一是外部与各金融机构合作，找到投资方，如最开始万达商管与光大安石、嘉实基金、四川信托和快钱公司四家公司合作，筹集前期资金投入。万达具有品牌优势，很多机构、个人主动投资。二是内部融资，万达 2015 年收购快钱支付系统，通过这个支付平台进行众筹，保证项目融资的稳定性。项目完成后所产生的租金收益万达与投资方按一定比例分成。

（2）改革工程管理模式。在轻资产转型的过程中，万达商管的工程管理模式也需要进行一定的改革。之前的工程管理模式，万达商管要从前期的招标，中期的设计建造，最后的招标租金的决算，是一个非常复杂过程，耗费时间和精力。万达商管实施轻资产后计划在一年内开 50 个万达广场，之前的工程管理已不适用，因此，万达商管推出了一个交钥匙工程，这在中国工程管理史上是一个重大创新。万达和长期合作的中建系统公司，根据不同的地区制定不同的工程造价标准方案。万达商管按照不同的标准给施工单位结算费用，相应的施工单位按照制定的标准进行建造，按照合同约定的时间完成工程建造。在这个过程中万达商管只负责监督工程实施的质量。但这一过程中，万达掌握着实际的运营管理能力。

（3）建立轻资产标准模块。万达商管轻资产转型之后，对地方的考核由原来的利润和房价转为成本和租金。之前的决定重资产项目主要是对成本部和发展部在各地考察后，提交的成本和利润进行审核，交总裁和董事长审批。现在的轻资产项目由商业管理公司决定，主要由租金决定。租金是由商业管理公司进行保守的估算，然后结合商业地产研究部利用租金测算模型测算出的租金进行对比，来决定轻资产项目，建立一整套轻资产投资标准模块。

（4）积极发展中小城市。重资产主要看房价，非常看重销售利润，不能深入三四线城市。轻资产主要考虑租金，租金回报比合适就可以做，万达可以进入大量的三四线城市。万达拥有非常丰富的商业资源，有很多对万达信任的商业合作伙伴。现在中国的商业地产投资处于失衡状态，过分集中于大城市，对三四线城市和区域人口多的二线城市来说，投资非常稀缺，相比于二线城市，三四线城市的客单价较低，但这些城市人口总量大，消费忠诚度很高，容易形成万达广场商业单中心，而且投资回报率并不低于大城市。这对于万达轻资产转型来说是个发展的好机会。

三、万达商管轻资产运营模式的转型结果和风险分析

1. 万达轻资产运营模式转型结果分析（以下为万达酒店发展数据信息）

（1）着重发展轻资产，企业利润率提高

万达酒店发展随着伦敦项目的出售和万达文旅和万达酒管两个轻资产公司的进入，已逐步实现轻资产化。又表 2 可知，万达商管从 2015 年实施轻资产以来，万达酒店发展的总资产是上涨的，其中固定资产逐年减少，流动资产、流动负债、存款和现金逐年增加，显示出万达重资产的剥离，转向流动性强、利润率高的轻资产。

| 表 2 2015-2016 年万达酒店发展资产负债情况（单位：亿元） |
|------------------|------------------|------------------|------------------|
| 报表日期         | 2015年下半年度 | 2016年上半年度 | 2016年下半年度 |
| 固定资产         | 83.46769         | 88.32902         | 60.92031         |
| 流动资产         | 63.58769         | 69.31401         | 98.68786         |
| 流动负债         | 45.99085         | 47.39955         | 69.70266         |
| 存款             | 28.14078         | 35.35518         | 46.07885         |
| 现金及银行存款   | 29.69001         | 26.80396         | 31.83481         |
| 其他资产         | 1.92488          | 1.92951          | 1.72632          |
| 总资产           | 154.08014        | 164.80174        | 166.40201        |
| 总负债           | 125.08887        | 135.36050        | 137.23381        |

数据来源：香港证券交易所

2. 轻资产运营后可减轻资金压力

轻资产运营后，万达只负责招商、设计和运营管理等中心环节，会很大程度上减轻筹集资金
的压力，如表3所示，2015年实现轻资产后，需要筹资活动需要的资金由36.73501亿元降为5.38860亿元，同时经营活动中产生的现金流也有所降低。而投资活动产生的现金流在2015年有下降的趋势，但随后出现大幅增长，万达酒店发展可充分利用这些资金进行业务的扩张和发展。

表1 2015-2016年万达酒店发展现金流情况表（单位：亿元）

<table>
<thead>
<tr>
<th>报表日期</th>
<th>2015年下半年度</th>
<th>2016年上半年度</th>
<th>2016年下半年度</th>
</tr>
</thead>
<tbody>
<tr>
<td>经营活动产生的现金流</td>
<td>14.06275</td>
<td>-3.51968</td>
<td>6.13783</td>
</tr>
<tr>
<td>投资活动产生的现金流</td>
<td>-40.75925</td>
<td>-3.68940</td>
<td>-12.80852</td>
</tr>
<tr>
<td>融资活动产生的现金流</td>
<td>36.73501</td>
<td>5.38860</td>
<td>9.16002</td>
</tr>
</tbody>
</table>

数据来源：香港证券交易所

3、轻资产运营后快速扩张，市场占有率提高

通过轻资产运营模式的转型，可利用地产开发建设筹集的资金，进行快速扩张，提高市场占有率。如：万达广场，在扩大新开张数的同时，凭借自己丰富的商业资源优势，可向三四线城市扩张，万达拥有非常丰富的商业资源，有很多对万达信任的商业合作伙伴。现在中国的商业地产投资大多集中于大城市，同质化非常严重，竞争压力大，但对三线城市和城区人口多的四线城市来说，投资非常稀缺，而且三四线城市的投资回报率并不低于大城市。

2. 万达轻资产运营模式转型过程中的风险分析

（1）万达轻资产运营模式转型过程中的融资风险

公司在向银行获取贷款时，需要将自身的固定资产、投资项目等作为抵押资产，但万达转型后所持有轻资产，确实固定的抵押物，从银行获取贷款的融资方式会受到限制，需要转变获取资金的渠道。在轻资产的运营模式下，万达商管主要通过两种渠道，一是通过理财平台进行募集，二是利用投资机构的投资资金。第一种途径不含抵押物，但非常看重投资收益率，这种途径的融资额度不是很高。通过第二种方式可以获取大额资金，但万达在急速扩张下会需要更多资金，投资机构给予的投资资金在一定的额度之上同样需要抵押物。因此，万达商管在轻资产运营模式下会面对资金困难的风险，需要采取多元化，更加合理的融资防范措施。

（2）万达轻资产运营模式转型过程中的投资风险

万达在轻资产运营模式转向后，也积极的在文化和体育产业等进行多元化的并购和扩张，如：并购西班牙马竞足球俱乐部、盈方体育传媒集团、美国传奇影业公司等，并购花费了巨额资金，但有些并购公司的主营业务与万达商管的主营业务关联不大，其带来的盈利能力还有待考核。在辅助业务的方面，万达曾投资了电商产业创立飞凡网，但由于该项目前期投资期长，且消费者体验性差，没有达到预期收益。投资最为轻资产运营的主要环节，在进行投资的过程中要考虑多种因素的影响。

（3）万达轻资产运营模式转型过程中的运营风险

轻资产公司要多与外包商时刻保持沟通，对外包出去的业务实行标准化的管理，建立相关责任制度，避免产生供应链环节的质量风险。在重资产运营模式下，万达地产项目的开发、选址、建设等各个环节都是公司自主运营，可以对项目进行实时把控，但轻资产运营模式下，万达只负责招商运营，确实对项目建设各个环节的把控。万达广场在一二线城市扩张的过程中，受到同行业的竞争压力，也有向三四线城市渗透的趋势，但三四线城市的消费能力有待提高，对新项目的展开提出了考验。

四、万达商管轻资产运营模式下启示

1.运营模式的选择
企业需要在分析自身条件及所处环境对两种运营模式的适用条件做出综合判定后，选择最适合自身企业的发展模式。这两种运营模式没有优劣之分，是根据企业的发展阶段来选择的。公司选择轻资产化运营模式是在公司已经拥有先进的运营管理经验和品牌优势的基础上进行的选择，还有在重资产模式下，公司积累了资产规模的基础优势。万达商业地产公司就是通过重资产运营模式下的前期积累，拥有了雄厚的资产经济实力和轻资产运营模式所需要的品牌及工程管理优势。在轻资产运营模式下企业作为整个过程的管控者，需要实时把控项目过程中的每一个环节，这对企业的运营能力有很高的挑战，因此，企业要加强自身运营管理能力的培养。

2. 融资风险防范

轻资产运营之后，内部固定资产和存货减少，所以企业会因为没有抵押资产，无法向银行取得贷款，企业可以用内部自由资金和鼓励员工入股的方式进行内部融资。在融资的过程中建立比较合理的资本结构，积极利用财务杠杆融资，根据盈利能力和资产变现能力来决定企业的负债，进而提高资金的使用效率。除此之外，企业可以根据自身的实际情况来制定融资方案，如企业可以与银行协商，根据企业自身的实际来制定融资方案，如企业可以与银行协商，根据企业自身的实际来制定融资方式，如企业可以与银行协商，采取供应链金融融资（上下游企业提供的融资服务）。

3. 投资风险防范

企业在投资的过程中，企业尽量避免占用大量资金，充分发挥轻资产的优势，充分利用资金的灵活性来进行低成本扩张。另外，轻资产模式下公司可以利用特有的企业品牌优势进行收购，输出品牌优势扩大品牌知名度。在品牌输出的过程中，可以设立专门的轻资产投资管理部门，聘用专业管理人员对轻资产进行管理，进行明确的责任划分，确保公司的轻资产安全输出。轻资产投资管理部门为了降低投资的风险还可以定期对固定资产进行盘算。降低投资风险还要从公司内部入手，在企业内部建立审查制度，明确董事和股东的职能和责任，相互之间形成一定的约束，加强企业内部的把控，以降低盲目投资的风险。

4. 强化对外包业务的控制

由于轻资产模式下，公司的重要产品和业务是外包出去的，这时对业务的质量就提出了考验。此时，公司要实时与外包公司进行沟通，建立外包产品和业务的标准化管理，明确责任的划分，保证产品的质量，以免对公司品牌构成威胁。此外，除了对外包商进行把控之外，还可以同外包商深入合作，最大限度的降低企业的销售成本，实现最小库存量，以提高存货的周转率，缩短存货的周转天数，减少企业的营运资本，降低企业的经营风险，利用轻资产运营模式的优势提高企业的盈利能力。

4. 提高公司自身实力

明确并培育公司的核心业务，保留具有核心竞争力的相关业务，将其它业务进行外包，注意把控外部产品和业务的质量。外包非核心业务之后，积极对核心技术和业务的进行研发，强化企业核心竞争力。建立战略联盟，拓展融资渠道，与第三方金融机构签订协议，筹集公司项目所需资金，防止资金链断裂。另外，还可以考私募、发行股票和基金等方式，合理利用外部资源，来拓展融资渠道。建立品牌优势，轻资产转型以品牌为核心，要维护和强化自身的品牌，打造品牌优势，强化轻资产运营模式的实施与管理。当企业的品牌优势突出时，可以考虑将品牌与运营结合，在运营管理的过程中融入品牌优势，形成良好的运营管理水平。房地产企业应充分认识到轻资产运营所要面临的各种风险，轻资产模式下，在追求规模扩张的同时要兼顾利润和经营安全。

参考文献:
[7] 陈才溢．轻资产上市公司违法违规行为分析及监管建议[D]．浙江大学，2013．
[9] 黄雨卉．绿城轻资产战略转型的财务成效分析[D]．西南交通大学，2017．
[10] 吴丹．房地产企业转型轻资产运营模式的研究[D]．北京交通大学，2017．
[13] 刘艳军．国有线下电子支付企业的轻资产战略研究——以 PE 线下电子支付公司为例[D]．广州：中山大学，2010．
[14] 卢秀云．轻资产商业模式下的财务风险控制研究[D]．安徽财经大学，2017．
[16] 朱超瑞．轻资产商业模式财务风险研究[D]．首都经济贸易大学，2016．
[17] 刘芳婧．互联网企业轻资产运营模式下的财务风险分析[D]．北京交通大学，2017．
[18] 王秀芝．电子商务企业财务风险控制问题研究[J]．经济管理者，2016（11）：272．
[19] 胡良．制造类轻资产运营企业的财务视角分析[J]．中国总会计师，2016（07）：78-79．

注释：
① 文提到的万达商管为万达商业管理股份有限公司的简称，为原大连万达商业地产股份有限公司。
技术多元化促进了合作创新？——动态平衡的视角

摘要:
基于资源依赖理论，以电子信息行业为例，探索了技术多元化对合作创新的影响，并基于“阴阳平衡”的视角，检验了相关和非相关技术多元化的不同均衡状态下，总体技术多元化与合作创新的关系。结果显示，(1)相关技术多元化与合作创新之间存在倒U型关系；(2)非相关技术多元化对合作创新具有显著的促进作用；(3)多元化平衡促进非相关技术多元化对合作创新的促进作用；(4)总体技术多元化对合作创新的作用取决于相关和非相关多元化的动态平衡关系，在技术多元化初期，平衡状态对合作创新的促进效果更加明显。本文是对中国本土化研究范式的大胆尝试，研究成果对组织开展技术多元化战略提供重要的理论参考。

关键词：技术多元化，非相关多元化，动态平衡，合作创新

引言
随着“区块链”技术的发展，世界格局将进一步趋向“去中心化”，多元创新主体共同参与的合作创新正成为技术突破的主要形式[1]。国家统计局调查数据显示，20.1%的企业开展了创新合作，其中装备制造业和信息技术服务业的合作创新比例接近40%[2]。合作创新是指两个或两个以上的创新主体通过共享资源、共担风险而获得创新成果。合作创新是组织获取知识和资源的重要渠道[3]，对于丰富企业资源，提高企业竞争力具有重要作用。近年来，通过合作创新取得的科技成果比例和数量不断提高[4]，如何提高合作创新绩效也成为创新和战略研究的主要领域之一[5]。

资源依赖理论强调，组织与外部环境存在依赖性，通过与其它主体之间的合作互动获得互补性资源和能力。因此，组织掌握的资源和技术越多，创新合作的机会也越多。技术多元化是指创新主体知识基础的多元化程度[6, 7]，具有技术多元化的组织可以建立更多新的跨领域知识[8]，提高自身的吸收和整合能力[9]，为创新主体间合作提供了重要的基石。目前，许多学者从“组合观”的视角[10]，笼统的考察技术多元化与创新之间的关系，并得到诸多分歧的结论，包括正向影响、负向影响[11, 12]和非线性的和U型关系[13, 14]。鉴于以上分歧，学者们试图通过区分相关和非相关技术多元化，进一步探索技术多元化对创新的影响[9, 15, 16]。但是，现有相关研究是将相关和非相关多元化作为独立变量去研究而忽略两者的互动和协同关系，依然无法技术多元化分歧形成的原因进行解释。

随着中国管理学研究不断取得新进展，阴阳平衡的管理学范式收到诸多学者的推崇[17, 18]，也为技术多元化的研究提供了新的研究视角。相关和非相关技术多元化正如太极中的阴阳两面，两者相互作用、相辅相成，共同影响组织之间的合作创新。因此，有必要从动态平衡的视角，分析相关和非相关多元化的动态平衡关系，从而更好地解释技术多元化与合作创新之间的关系，并以此来指导组织的创新实践。

鉴于此，本文在世界格局趋于“去中心化”和合作创新的背景下，基于资源依赖理论，利用电子信息产业2001-2016年联合申请专利数据，从动态平衡的视角，探讨相关和非相关技术多元化对合作创新的影响，揭示技术多元化作用机制。本文可能的贡献如下，首先，探索相关和非相关技术多元化对合作创新的影响，以及两者动态平衡的调节作用，拓展了技术多元化的研究边界；其次，借鉴阴阳平衡的理念，从相关和非相关多元化动态平衡的视角，研究了技术多元化在相关
和非相关多元化不同状态下对合作创新之间的影响机制，深化了技术多元化与合作创新关系的研究，更是对中国本土化阴阳平衡范式的大胆尝试；最后，在实践方面，从动态平衡视角，为组织开展相关和非相关多元化战略提供了理论基础和决策参考。

一、理论基础与研究假设

1. 相关多元化与合作创新

核心能力理论指出，组织必须专注于某一特定技术领域来提高自身竞争优势。因此，组织必须根植于某一技术领域，并通过相关技术多元化巩固在该领域的竞争地位，提升合作创新绩效。相关技术多元化组织在某一领域特定范围内相关技术的能力，反映知识基础深度，在一定范围内，相关技术多元化可以促进组织间的合作创新。首先，具有相关技术多元化的组织在某一技术领域具有一定的知识积累，在合作创新中可以通过学习共享相似的知识来提升技术能力，同时可以利用规模优势来平衡 R&D 能力，达到降低研发成本[16]。其次，技术具有溢出效应。组织已有的知识基础对合作创新具有正的外部性，尤其是能从相关技术领域获得更多溢出效益，以提高合作研发的速度，降低研发风险。最后，相关技术多元化的组织还具有较高的知识整合和知识吸收能力[14, 19], 有效提高合作研发的成功率，并通过相关技术多元化的技术协同和技术融合优势，实现再创新。然而，随着组织相关技术多元化的提高，组织的会表现出较强的路径依赖[20], 这种路径依赖最终会限制组织合作创新的搜索范围和新技术开发。同时，根据交易成本理论，当组织具有较高相关技术多元化时，组织掌握了该技术领域多数核心技术，组织内部的技术研发成本低于外部合作研发成本，此时组织可能不再选择合作创新。

综上所述，本文认为，相关技术多元化与合作创新之间是非线性关系，相关多元化对合作创新的促进作用存在一个最优值，相关技术多元化超过最优值，将不利于组织合作创新。基于此，本文提出以下假设:

H1：相关技术多元化与合作创新之间存在倒 U 型关系。

2. 非相关技术多元化与合作创新


从合作创新的角度，我们认为非相关多元化通过以下三条路径促进组织的合作创新。第一，提高合作创新绩效的重要前提是组织拥有更多的合作对象，较高水平的非相关技术多元化能够有效扩大组织合作创新的搜索范围，进一步嵌入到外部知识网络[22]，实现与其他创新主体的协同与合作。第二，非相关技术多元化有助于组织实现范围经济，促进异质性技术和资源的“交殖”(cross-fertilization)[16, 23]，组织可以更好的不同领域的外部机会，实现组织之间的合作创新。第三，动态能力理论指出，组织可以通过调整和重组内部外部资源来获取竞争优势和和把握外部机
非相关多元化为组织提供更多的异质性知识和能力，具有更强的动态能力，在面对多变的外部环境中更容易寻求和把握合作机会，提高合作创新绩效。基于以上分析，本文提出以下假设：

H2：非相关技术多元化水平越高，组织的合作创新绩效越高。

3. 相关与非相关多元化平衡的调节作用

从知识管理的视角，创新是知识元素之间的组合和重组，合作创新则是组织间的知识元素通过相互作用和相互整合的结果。因此，组织的合作创新很大程度上受到其技术知识的广度和深度的影响。同时，技术多元化的广度和深度并非孤立，而是矛盾统一的整体，组织的创新是广度和深度的相互整合和协同的结果。因此，对相关和非相关技术多元化平衡（简称“多元化平衡”）的研究能够更好地揭示多元化与合作创新之间的关系。


基于阴阳平衡的思想，相关和非相关技术多元化分别反映知识基础深度和广度两方面，对合作创新的影响应该是整体的、动态的和辩证的[18]，两者的协同作用，共同对合作创新产生影响。因此，相关和非相关多元化的动态平衡将影响相关和非相关多元化对合作创新的影响效果。然而，根据本文作者所掌握的文献来看，目前并没有研究将阴阳平衡引入相关和非相关技术多元化的研究，并从多元化平衡的视角揭示技术多元化与合作创新的关系。

基于现有管理理论，多元化平衡通过两条路径来影响相关和非相关技术多元化与合作创新之间的关系。首先，多元化平衡的本质是组织通过深化知识基础和宽度的平衡[28]，提升组织的动态能力，增强相关和非相关的协同作用。非相关技术多元化有效扩展知识基础的宽度，为组织提供了充足的知识资源；而相关技术多元化侧重知识基础的深度，保证组织具有灵活运用知识的能力。多元化平衡既保证组织有更广的搜索范围和更多的合作机会，又能保证组织在合作领域的话语权和竞争力，提高合作创新的成功率。其次，组织通过多元化平衡建立知识和能力之间的联系[16]，更好地发挥技术溢出效应，避免路径依赖。一方面，根据技术溢出理论，相关技术之间具有更强的正外部性，组织通过多元化平衡，链接各种相关和非相关技术，对技术溢出效应的效果和范围具有一定的放大作用。另一方面，规模经济虽然能够降低研发风险和研发成本，但容易使组织陷入路径依赖的窘境，组织可以通过多元化平衡，扩展自身的知识和技术，通过对已有知识的整合和应用，建立更多知识路径和与外界连接的路径。

总之，相关和非相关技术多元化之间的动态平衡，是两者相互协调、螺旋上升的过程，可以同时发挥相关和非相关技术多元化的优势，达到“1+1>2”的效果。对于相关技术多元化而言，其对合作创新的倒 U 型影响的本质是正边际效用递减的过程，因此多元化平衡有利于减缓边际效用递减的过程，弱化倒 U 型关系；对于非相关技术多元化而言，多元化平衡则会增强原有的正向影响。基于以上分析，本文提出以下假设：
H3a: 多元化平衡弱化相关多元化与合作创新之间的倒 U 型关系；

H3b: 多元化平衡增强非相关多元化对合作创新的促进作用。

4. 多元化平衡计算和界定

本文将多元化平衡定义为，组织开展相关技术多元化和非相关技术多元化的程度所处的动态均衡和协调的状态。本文借鉴王风彬等（2012）有机平衡观的概念来界定多元化平衡，具体而言，首先得到出两种技术多元化相对不平衡的表达式 \( \frac{RTD - UTD}{RTD + UTD} \)，然后用 1 与该式的差1- \( \frac{RTD - UTD}{RTD + UTD} \) 来衡量多元化平衡。同时，我们将相距平衡线 0.2 [29] 的范围（\( \frac{RTD - UTD}{RTD + UTD} < 0.2 \)）划定为平衡发展（Balance Development, BD），同时根据不平衡时两种技术多元化的数量，将非平衡带进一步分为相关多元化占优（Related diversification dominant, RD）和非相关多元化占优（Unrelated diversification dominant, UD）。


基于以上分析，本文提出以下命题：

P1: 相关和非相关技术多元化的均衡状态影响技术多元化对合作创新的作用效果。

基于以上理论分析，本文研究框架图见图 1：

![图 6 理论框架图](image)
二、研究设计

1. 样本选择

在经济合作与发展组织（OECD）的技术密集型行业分类中，电子信息行业属于最典型的高新技术行业。同时，电子信息行业的技术创新速度更快，其 R&D 投入也高于传统行业且拥有雄厚的专利积累，因此，本研究选择电子信息产业开展研究。专利数据来自于重点产业专利信息服务平台，组织性质、间隶属关系等信息来自国家企业信用信息公示系统，地理坐标信息来自百度地图。

为了更加准确从数据库中识别和获取电子信息产业的专利数据，我们严格遵循关键词搜索策略进行搜索。最终我们得到了 1986—2016 期间获得授权的 48,584 个专利。进一步分析我们发现，中国电子信息产业专利授权数量在 2001 年以前非常少，为避免造成研究结果的偏差，本文选择 2002-2016 期间数据开展研究。本文考察组织技术多样性、组织间技术距离以及合作创新绩效之间的关系，本文对数据做进一步筛选，使其符合研究需要，首先，删除专利权人不包含境外技术的专利，得到 47,788 项专利；其次，为满足对合作创新的要求，删除只有一个专利申请人的专利，得到 6,220 项专利；第三，数据中包含三个或三个以上专利申请人的专利较少，于是便做研究，只保留两个专利申请人的专利授权数据，得到 46,34 项专利，隶属 1,108 个专利权人，根据专利共同申请，得到 1,660 对合作关系。最后，考虑到计算多元化平衡时分母不能为 0，因此删除相关和非相关技术多元化均为 0 的样本，最终得到 1,339 对合作关系作为本文研究样本。

2. 变量测量

为了检验技术多元化与合作创新绩效之间的关系，以及多元化平衡对以上关系的影响，根据本文研究假设，构建以下计量模型：

\[ Y_i = \alpha + \beta X_i + \mu Z_i + \varepsilon_i \]  \hspace{1cm} (1)

\[ Y_i = \alpha + \beta X_i + \eta M_i + \gamma (X_i \times M_i) + \mu Z_i + \varepsilon_i \]  \hspace{1cm} (2)

（1）式为直接作用模型，（2）式为调节作用模型。其中，\( Y_i \) 是合作创新，\( X_i \) 包括相关和非相关技术多元化，\( M_i \) 是多元化平衡，\( Z_i \) 是控制变量，包括合作形式、隶属关系、年均专利产出和地理距离等。

（1）因变量

因变量为合作创新绩效，用组织的合作申请专利的数量来衡量，Dang 等（2015）通过实证分析验证了，中国情境下，专利数量来衡量创新的有效性[30]。

（2）自变量

技术多元化（TD）的测量沿用国际文献中常用的熵指数法[16, 21]，即基于组织拥有的专利中涉及的四位国际专利号（IPC4）来衡量组织涉足的技术领域，计算公式如下：

\[ TD = \sum_{i=1}^{N} P_i \ln \left( \frac{1}{P_i} \right) \]

其中，\( P_i \) 表示包含 IPC4 号专利的专利数量，\( N \) 表示专利中 IPC4 号的数量。熵值越大，则表示组织技术多元化的程度越高。

相关技术多元化（RTD）和非相关技术多元化（UTD）的测量主要借鉴 Chen 等[16]（2012）和何郁冰等[21]（2017）的做法，以三位国际专利号（IPC3）的熵值来衡量非相关多元化，而相关多元化则是总体技术多元化与非相关技术多元化的差，即 RTD=TD-UTD。

（3）调节变量
多元化动态平衡，是指相关和非相关技术之间的动态平衡关系。借鉴王凤斌等（2012）[29]对双元创新平衡的测量来衡量相关和非相关多元化的平衡度（BLC），计算公式如下:

\[
BLC=1-\frac{|RTD-UTD|}{RTD+UTD}
\]  

BLC 的取值在（0,1）之间，取值越接近 1，表示相关和非相关技术多元化的平衡度越好，当取值为 1 时，则表示两者完全平衡。

4）控制变量。包括四个方面：合作形式、隶属关系、年均专利产出和地理距离。其中，合作形式依据三螺旋定理将组织分为政府（G）、高校（U）和企业（I）三类，然后根据合作双方的性质设定 6 个哑变量（GG、UU、UI、UG、II 和 IG）；隶属关系，如果合作双方为母公司或隶属同一母公司则取值为 1，否则取 0；年均专利产出即组织专利总数与专利产出年数之比；地理距离，基于百度地图得到组织经纬度，然后利用 stata 中 geodist 程序计算合作双方的地理距离，最后对地理距离进行对数。

三、实证分析

1. 描述统计分析

各变量的均值、标准差、相关系数矩阵和方差膨胀因子（VIF）见表 2。因变量合作创新数量为计数的非负整数，且方差远大于均值，因此本文选择负二项回归模型进行假设检验。各变量的 VIF 均小于 10，不存在严重的多重共线性问题。此外，为了避免模型中多重共线性的出现，本研究在构建交互项检验调节作用时，先对变量进行标准化处理。

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<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 合作创新</td>
<td>—–</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2 隶属关系</td>
<td>0.14*** (1.2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 年均专利</td>
<td>0.33*** 0.12*** (1.17)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 地理距离</td>
<td></td>
<td>0.09*** 0.09*** (1.04)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 RTD</td>
<td>0.19*** 0.10*** 0.27*** 0.07** (2.58)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 UTD</td>
<td>0.01 0.02 -0.03 0.02 0.35*** (1.92)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 多元化平衡</td>
<td>0.02 0.00 -0.00 0.07** 0.65*** 0.03 (2.08)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>4.22 0 12.94 4.4 0.61 1 0.54</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>S.D.</td>
<td>18.11 0.07 107.9 2.58 0.61 0.47 0.37</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

注：***和 ** 分别表示 P<0.1，P<0.01 和 P<0.01，下同。主对角线括号内为将全部自变量纳入回归时的 VIF 值。

3. 假设检验

各变量对创新绩效的回归结果见表 3，以合作创新为因变量，将控制变量加入模型，得到模型 1；模型 2 和模型 3 分别是在模型 1 的基础上将非相关多元化和相关多元化加入模型，检验其对合作创新的直接作用；模型 4 和模型 5 分别是在模型 2 和模型 3 的基础上将非相关多元化和相关多元化的交互项加入模型，检验多元化平衡对相关和非相关多元化的调节作用。
### 表 8 负二项回归分析结果

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<tr>
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<th>(1) co_pats</th>
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<th>(3) co_pats</th>
<th>(4) co_pats</th>
<th>(5) co_pats</th>
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<td>UU</td>
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<td>UI</td>
<td>-0.749***</td>
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<tr>
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</tr>
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<td>II</td>
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<td>(0.14)</td>
</tr>
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<td>(0.15)</td>
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<td>(0.07)</td>
</tr>
<tr>
<td>年均专利</td>
<td>0.004***</td>
<td>0.002***</td>
<td>0.004***</td>
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<tr>
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<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>地理距离</td>
<td>-0.075***</td>
<td>-0.070***</td>
<td>-0.080***</td>
<td>-0.061***</td>
<td>-0.078***</td>
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<tr>
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<td>(0.01)</td>
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<tr>
<td>RTD</td>
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<td>0.416***</td>
<td>0.304***</td>
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<td>0.342***</td>
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<td>(0.06)</td>
<td>(0.09)</td>
</tr>
<tr>
<td>RTD2</td>
<td>-0.356***</td>
<td>-1.086***</td>
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</tr>
<tr>
<td>UTD</td>
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<td>-1.485***</td>
<td>-1.485***</td>
<td>-1.485***</td>
<td>-1.485***</td>
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<tr>
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<td>(0.20)</td>
<td>(0.20)</td>
<td>(0.20)</td>
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</tr>
<tr>
<td>Rblc</td>
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<td>-0.204</td>
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<td>(0.28)</td>
<td>(0.28)</td>
</tr>
<tr>
<td>Rblc2</td>
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<tr>
<td>Ublc</td>
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<td>1.067***</td>
<td>1.067***</td>
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<tr>
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<td>(0.17)</td>
<td>(0.17)</td>
<td>(0.17)</td>
</tr>
<tr>
<td>_cons</td>
<td>1.783***</td>
<td>0.799***</td>
<td>1.283***</td>
<td>1.089***</td>
<td>1.019***</td>
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<td>(0.15)</td>
<td>(0.16)</td>
<td>(0.18)</td>
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<tr>
<td>lnalpha</td>
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<td>-0.314</td>
<td>-0.575</td>
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<tr>
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<td>(0.092)</td>
<td>(0.126)</td>
<td>(0.099)</td>
<td>(0.140)</td>
<td>(0.110)</td>
</tr>
<tr>
<td>Chi2</td>
<td>600.994</td>
<td>827.740</td>
<td>652.831</td>
<td>916.727</td>
<td>719.417</td>
</tr>
<tr>
<td>Pseudo.R2</td>
<td>0.092</td>
<td>0.126</td>
<td>0.099</td>
<td>0.140</td>
<td>0.110</td>
</tr>
<tr>
<td>Chi2</td>
<td>600.994</td>
<td>827.740</td>
<td>652.831</td>
<td>916.727</td>
<td>719.417</td>
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<tr>
<td>Pseudo.R2</td>
<td>0.092</td>
<td>0.126</td>
<td>0.099</td>
<td>0.140</td>
<td>0.110</td>
</tr>
</tbody>
</table>

模型 2 和模型 4 中，相关多元化的一次项系数为正、二次项系数为负，且均达到统计上的显著性（p<0.05），表明相关技术多元化与合作创新之间存在显著的倒 U 型影响，假设 H1 得到验证。模型 3 和模型 5 中，非相关多元化的系数为正，且达到统计上的显著性（p<0.05），表明非相关多元化对合作创新具有显著正向影响，假设 H2 得到验证。模型 4 中，相关多元化一次项与多元化平衡交互项系数为负，二次项系数为正，且未达到统计上的显著性（p<0.05），表明多元化平衡对相关多元化与合作创新绩效之间的倒 U 型关系没有调节作用，假设 H3a 未得到验证，进一步分析发现，相关多元化二次项与多元化平衡交互项的显著性为 0.103，非常接近 P<0.1 的显著性水平，因此我们也可以认为多元化平衡弱化了相关多元化与合作创新之间的倒 U 型关系，即减缓了相关多元化对合作创新作用的边际递减效用。模型 5 中，非相关多元化与多元化平衡交互项的系数为正，且达到统计上的显著性（p<0.05），表明多元化平衡增强了非相关多元化对合作创新的正向影响，假设 H3b 成立。

3. 相关与非相关技术多元化动态检验
本文假设检验部分已经验证了相关多元化和非相关多元化的平衡对合作创新具有显著地正向影响。接下来，从"组合观"的视角，认为总体技术多元化是相关和非相关多元化的和，并检验相关多元化和非相关多元化的动态平衡总体技术多元化对合作创新的影响。试图揭开技术多元化的作用机理。根据前文界定，分别使用 BD、RD 和 UD 三个子样本，检验技术多元化对合作创新的影响，结果见表：

<table>
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<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UU</td>
<td>-1.020</td>
<td>0.000</td>
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<tr>
<td></td>
<td>(0.77)</td>
<td>(.)</td>
<td>(0.46)</td>
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<tr>
<td>UI</td>
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<td>-2.107***</td>
<td>0.212</td>
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<td>(0.24)</td>
<td>(0.61)</td>
<td>(0.18)</td>
</tr>
<tr>
<td>UG</td>
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<td>-3.187***</td>
<td>-0.278</td>
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<td></td>
<td>(0.40)</td>
<td>(0.97)</td>
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<tr>
<td>II</td>
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<td>-2.772***</td>
<td>0.332*</td>
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<td>(0.22)</td>
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<td>(0.17)</td>
</tr>
<tr>
<td>IG</td>
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<tr>
<td></td>
<td>(0.21)</td>
<td>(0.61)</td>
<td>(0.18)</td>
</tr>
<tr>
<td>隶属关系</td>
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<td>1.348***</td>
<td>0.138**</td>
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<tr>
<td></td>
<td>(0.12)</td>
<td>(0.24)</td>
<td>(0.07)</td>
</tr>
<tr>
<td>年均专利</td>
<td>0.069***</td>
<td>0.002***</td>
<td>0.180***</td>
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<td>(0.01)</td>
<td>(0.00)</td>
<td>(0.01)</td>
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<tr>
<td>地理距离</td>
<td>-0.098***</td>
<td>-0.252***</td>
<td>-0.009</td>
</tr>
<tr>
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<td>(0.02)</td>
<td>(0.04)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>TD</td>
<td>1.718***</td>
<td>0.792</td>
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<td>(0.27)</td>
<td>(0.51)</td>
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<tr>
<td>TD²</td>
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</tr>
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<td>Pseudo.R-Square</td>
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<td>0.174</td>
<td>0.167</td>
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注：本文同时检验 RD 和 UD 子样本中 TD 对合作创新的线性作用，结果发现 RD 中 TD 对合作创新没有显著影响，而 UD 中 TD 对合作创新有显著影响，因此表中保留展示 UD 中 TD 与合作创新线性关系。

表结果显示，当相关和非相关多元化平衡发展时，技术多元化与合作创新之间存在 U 型关系；当相关多元占优时，技术多元化对合作创新没有显著影响；当非相关多元占优时，技术多元化对合作创新具有显著的正向影响。通过分析 BD 和 UD 状态下，技术多元化的对合作创新的边际效应难发现，在 BD 状态下，技术多元化对合作创新的影响在 2.263 处出现拐点，在技术多元化 1.88 前，BD 状态下技术多元化对合作创新的影响的边际效用大于 UD 状态，因此，在开展技术多元化的前期，两者平衡发展更有利于组织间的合作创新，而开展技术多元化的中后期则应该优先进行非相关技术多元化。

4. 稳健性检验

由于合作创新为非连续的整数，因此本文采用负二项回归进行假设检验，在稳健性检验中，我们将因变量合作创新绩效加一后取对数，然后使用 OLS 进行假设检验，结果见表中模型 R1、R2、R3 和 R4。此外，总样本中包含政府、高校和企业三种创新主体，本文在假设检验中控制了不同性质创新主体的差异。根据结果，本文选取子样本（N=868），重新进行检验，结果见表中模型 R5、R6、R7 和 R8。表中结果不难看出，稳健性检验的绝大多数结果与前文中的假设检验结果一致。值得注意的是，在两种稳健性检验中，多元化平衡对相关技术多元化与合作创新的负向调节作用显著，在一定程度上印证了本文假设 H3a。综合以上结果可知，本文研究结果比较稳健。
## 四、结论与启示

### 1. 研究结论

基于资源依赖理论，本文利用电子信息行业专利数据、国家企业信用信息公示系统和企业地理信息等数据，采用负二项回归探索了相关和非相关技术多元化及其多元化平衡对合作创新能力的影响，并基于“阴阳平衡”的视角，检验了相关和非相关技术多元化的动态平衡下，总体技术多元化与合作创新的关系，得到以下结论：

首先，相关技术多元化与合作创新之间存在倒 U 型关系，而非相关技术多元化对合作创新具有显著的促进作用。适度的相关技术多元化有助于组织更好的掌握某一领域内的技术知识和能力，并有助于与其他创新主体之间的合作创新，但是过度的相关多元化则可能导致组织的路径依赖，从而不利于合作创新。非相关多元化可以拓宽组织的知识基础，有利于组织在更大范围内搜索合作对象，进而提高合作创新能力。
其次，多元化平衡促进非相关技术多元化对合作创新的促进作用，但不能调节相关多元化与合作创新之间的关系。不同于林明等（2015）的研究[28]，本文将多元化平衡作为调节变量，多元化平衡是相关和非相关技术多元化的动态关系，其对调节作用的研究能够在一定程度上反映两者之间的协同和融合关系。

第三，技术多元化对合作创新的作用取决于相关和非相关多元化的动态平衡关系，两者平衡时，技术多元化与合作创新之间存在倒U型关系；非相关多元化占优时，技术多元化对合作创新具有显著的正向影响，且在技术多元化初期，平衡状态对合作创新的促进效果更加明显。本文结论在一定程度上解释了现有文献中，Hitt等（1997）[12]、Corradi等（2016）[13]关于技术多元化与创新关系的不同结论。

技术多元化的发展是从平衡到不平衡再到重新平衡的螺旋式上升的动态均衡过程，根据阴阳平衡理论，在整个过程中，非相关多元化为“阳”，起到主导作用，而相关多元化为“阴”，起到协同作用，通过组织非相关技术多元化拓展合作范围，并通过在相关技术领域的发展，提升合作创新的成功率。

2. 研究启示

本研究丰富了技术多元化的研究内容，借鉴阴阳平衡的理念，研究了技术多元化在相关和非相关多元化不同平衡状态下对合作创新之间的影响机制，深化了技术多元化与合作创新关系的研究，也是对中国本土化阴阳平衡范式的。本文研究结果为政府和高校等多元创新主体之间的合作创新提供一定的理论指导和实践参考。

首先，在世界趋于多元化和去中心化的背景下，组织应该通过积极开展技术多元化战略来促进与其他创新主体的合作。其中，非相关技术多元化可以有效扩大组织与多元化创新主体的合作范围，在组织可承受范围内，可以广泛开展非相关技术多元化，提高创新能力。而在开展相关技术多元化时应该遵循适度原则，避免因为过度的相关多元化而产生路径依赖，阻碍组织的合作创新。

其次，组织应该意识到相关和非相关技术多元化是相互促进、相辅相成已达到螺旋式上升的结果。在开展技术多元化时，应该把握相关和非相关技术多元化之间的平衡关系，充分发挥两者的协同优势，以非相关多元化拓展技术领域，并以相关多元化在新领域建立自己的核心能力。特别注意，在开展非相关技术多元化后，应该继续在该领域“深耕细作”而不是“蜻蜓点水”。

虽然本文在理论方面可能存在一定的贡献，在实践方面也为政府和企业提供若干启示，但是仍存在一定的局限。首先，本文只使用了两个专利权人的样本考察合作创新，虽然包含了合作申请专利的大部分样本，但可能对研究结果产生误差。其次，本文选取了电子信息行业作为样本进行实证研究，可能导致研究结论在普适性方面存在局限，尤其多元化平衡对相关技术多元化的调节作用并未达到预期效果，需要利用更多的样本数据进行检验。最后，本文是对阴阳平衡的本土化管理思想的一种实证研究的尝试，对于平行的隐患和异同可能存在一定的偏差，在今后的研究中，可以将阴阳平衡的研究范式应用到更多二元式关系的研究中，完善理论体系。

参考文献


[29] 王凤彬，陈建勋，杨阳．探索式与利用式技术创新及其平衡的效应分析 [J]. 管理世界,
Abstract:

S&T service industry has become an important pillar in the era of commodity knowledge economy with the characteristics of high density of knowledge and high added value. The dual needs of development strategy of S&T innovation and S&D strategy give birth to the integrated innovation paradigm. Integrated innovation is a new paradigm growing out of innovation and development ideas in China, which is a community of collaborative innovation, strategic innovation, comprehensive innovation and open innovation. Standing on the integration of innovation and basing on the concept, characteristics, innovation capability elements and internal logic of the S&T service industry, this study constructs the index evaluation system for innovation capability of S&T service industry, then, extracts the key indicators by factor analysis as a tactical level to integrate the innovation paradigm, thus providing a diversified and multilevel integrated management strategy for the new growth point of innovation level in the S&T service industry.

Keywords: S&T service industry; integrated innovation paradigm; innovation capability

摘要:

科技服务业以兼具高知识密度和高附加值为主要特征成为商品知识经济时代的重要支柱,科技创新与服务发展战略的双重需求催生了整合式创新范式的产生。整合式创新是在我国创新发展理念驱动下产生的全新范式，是协同创新、战略创新、全面创新和开放创新的共同体。本研究以整合创新为立足点，以科技服务业的概念、特征、创新能力构成要素和内在逻辑为基础，构建科技服务业创新能力指标评价体系，并通过因子分析提取整合性关键指标，以此作为整合创新范式的战术面，为科技服务业实现创新层面的新的增长点提供多元化多层次的整合经营策略。

关键字：科技服务业；整合创新范式；创新能力

0 引言

随着产业分工的不断细化以及产业融合的生长需求，以科技和知识为核心的科技服务产业
面向社会应运而生。科技服务业在现代服务业中占据了关键的位置，在促进产业优化和产业升级等方面发挥了重要的作用。当前，科技服务业发展迅猛，已经成为当今世界发展最快、最活跃的服务产业之一。创新是科技服务业的灵魂，在科技服务业的发展中起到了动力、源泉的巨大作用。从现有研究归纳来看，学者们很少有对科技服务业创新能力的评估和提升策略方面的研究。本文站在一个全新的视角上，以整合创新为立足点，在对科技服务业的概念界定、特征和创新能力构成维度的理论分析基础之上，以天津市36家科技服务型企业为研究样本，构建科技服务业创新能力指标评价体系，通过对因子分析提取整合性关键指标，选取了创新投入、创新能力、管理创新和销售创新四个维度，以此作为整合创新范式的战术面，为科技服务业实现创新层面的新的增长点提供多元化多层次的整合经营策略。

文献综述

1. 科技服务业的相关概述

（1）科技服务业的概念界定

在早期的相关研究中，学者们比较关注科技服务业在信息化水平和专业知识技能方面的探索。Macluph（1962）把科技服务业定义为：以现代化管理理念和经营理念为理论背景，借助电子信息技术等技术手段服务社会的组织。Data Monitor公司（2006）在其实证研究的基础上，指出科技服务业是包括了知识咨询服务、信息技术服务、信息交流服务等新型服务产业的一种总称。很多国外学者将科技服务业定义为知识密集型服务业，Danile Bell（1974）认为随着科学与技术的进步，行业的发展日益向知识领域转化，这也就是所谓的知识服务业。Miles（1995）在其相关研究中认为，知识服务业是依托私营企业开展以知识为内容的产业或服务业的行业。

国内学者对科技服务业的界定主要从产业形成过程、与相似概念对比、所提供服务的内容这三个角度展开。在产业形成过程的角度上，王毅成（1987）认为科技服务业从属于第三产业，主要参与创新活动的服务，为其提供新知识、新技术和新信息等咨询业务。王仰东等（2009）在其相关研究中指出创新是科技服务业的主要内容，它的发展得益于知识经济时代的崛起。在于相似概念对比的角度上，王晶等（2006）在与“科技中介”的概念对比后，指出科技服务业是第三产业的一个组成部分，它主要结合了新兴技术和知识资源的优势，来为社会提供服务。在所提供服务的内容这一角度上，张道宏等（1996）认为科技服务业主要指包括了技术服务、信息咨询、科技金融等内容，为促进社会经济的发展融合和科学技术的进步发挥了重要作用。赖志军（2008）指出科技服务业主要是提供技术研发、交流咨询、整合服务等技术方面的服务。

（2）科技服务业的特征

对科技服务业特征的探讨有利于对其开展深入的研究，把握其在以后的发展规律。学术界对这一方面的研究比较统一，主要集中在以下几个方面：

①知识的密集性。科技服务业主要聚集了高知识水平的劳动力，为社会生产提供现代知识、高端技术、服务咨询等形式的内容。无论是其从业人员还是其提供的产品和服务都体现了高知识水平的特点。

②效益的高外部性。根据相关学者的研究，科技服务业1个单位的生产效益能为对应的企
业制造5倍以上的经济效益，或者降低相同数量的经营成本。科技服务业对社会经济的发展和科学技术的进步有着重大的作用。

③服务的广泛性。科技服务业所能服务的行业包括农业、机械制造业、公益组织、能源业、医疗服务、电讯业等等几乎涵盖了社会的方方面面，科技服务业的发展能为社会的各行各业带来巨大的利益。

（3）科技服务业的创新能力及评价

Tether（2007）等通过相关研究表明，科技服务业能够拉动其他公司参与创新活动。Wong Poh Kam（2007）以新加坡的科技服务业企业为研究对象展开实证分析，其研究结果也证明了学者Tether的观点。Tether,Hipp, Mile, Vander Aa, Elfring认为，由于知识服务行业具有多层面的优势，所以在非技术方面创新服务的规范性需要新的制度来予以明确。Koschatzky和Zenker指出，知识密集型服务业需要为其服务对象提供复杂且庞大的数据信息，这就要求知识密集型服务业具有强大的创新能力。

关于科技服务业创新能力的评价，学者们主要通过以下三种方式加以衡量：

①评估企业生产的每一个环节。对科技服务业的概念界定非常宽广，把企业生产运营中的每一个步骤都包含在内，由于这种研究方法可操作性比较差，且实际操作起来的消耗非常大，所以很少付诸实践，一般用在理论研究上。

②评估技术创新。把技术创新的评估方法不加修改的应运用于科技服务业创新能力的评估上。技术创新和服务创新之间存在紧密相连的关系，技术创新为服务创新提供了工具支持，技术创新的进步有利于服务创新的发展，技术创新的实现促进了新的服务理念和信息系统等的产生，而服务创新反过来也带动了技术的创新，服务领域消费者的新的需求必将促使技术的变革。虽然，这一方法的操作简单，但它的针对性不强，没有把科技服务业的特征纳入考量。

③构建指标体系。基于上述两种方式的弊端，部分学者开始通过构建指标体系的方式来更加全面的对科技服务业的创新能力进行评价。高婷婷（2010）以广东省科技服务业企业为研究对象，通过因子分析的方式，提取出了3个作用于科技服务创新力的影响因子，分别是社会因子、行业因子、人力因子。周梅华，徐杰，王晓珍（2010）以江苏省13个城市为研究对象，运用主成分分析法和聚类分析法，研究出了影响科技服务业创新能力的三个关键因素：发展环境、投入、产出。卫博（2009）站在科技服务业的基本组成要素的立场上，筛选出了资金投入量、设施使用率、专利获得率三个影响因素，并在这一3个指标下设置了9个二级指标作为衡量科技服务业创新能力的体系。

1.2整合创新范式

整合创新是一种旨在让价值增值的创新方法，它整合了企业中每一个创新元素，包括企业文化、信息技术、营销战略、沟通技巧等，并结合有效的创新管理体系运行，从而为企业创造新的核心竞争力。很多学者运用这一方法在不同的企业进行研究，取得了一些比较好的效果。陈菊花（2017）从酒店管理的实际问题着手，结合整合创新的具体应用，分析了其在酒店管理中的重要作用，根据酒店管理中的具体问题提出了相应的解决措施，并指出整合创新为酒店发展提供了新
的核心竞争力。魏洁（2016）在研究人才培养模式时，指出人才的培养方式和培养体系可以从整合创新型人才这一角度进行深入思考。锡东光和王玮（2015）把整合创新的思维运用于黑龙江省旅游业发展的问题上，得出了打造冬夏两季特色的具体营销方案。丁文娟（2010）通过整合创新与企业核心竞争力的内在联系，在整合创新的基础上构建了企业核心竞争力模型，为企业打造核心竞争力提供了切实可行的建议。

### 指标的确立

根据文献综述部分的描述可知，对科技服务业创新能力的评价并没有统一的标准，且这一过程涉及了诸多因素，是一个相当复杂的任务。为了科学全面的对科技服务业创新能力进行评估，本文以整合创新为立足点，本着科学性、可比性、可操作性、全面性、代表性等评价指标的构建原则，本文在综合比较的基础上，选择了任爱莲（2008）的创新型企业的创新能力评估指标以及魏江和黄学（2015）的高技术服务业创新能力评价指标，结合两者的指标体系，提出了本文评价科技服务业创新能力的指标体系（见表1）。

### 表1：科技服务业创新能力评价指标体系

<table>
<thead>
<tr>
<th>变量</th>
<th>编码</th>
<th>题项</th>
</tr>
</thead>
<tbody>
<tr>
<td>创新能力评价指标</td>
<td>X1</td>
<td>研发资金投入</td>
</tr>
<tr>
<td></td>
<td>X2</td>
<td>研发人员投入</td>
</tr>
<tr>
<td></td>
<td>X3</td>
<td>生产设备投入</td>
</tr>
<tr>
<td></td>
<td>X4</td>
<td>其他创新资金投入</td>
</tr>
<tr>
<td></td>
<td>X5</td>
<td>研发成果转化水平</td>
</tr>
<tr>
<td></td>
<td>X6</td>
<td>新产品开发平均周期</td>
</tr>
<tr>
<td></td>
<td>X7</td>
<td>产学研合作比率</td>
</tr>
<tr>
<td></td>
<td>X8</td>
<td>生产设备先进度</td>
</tr>
<tr>
<td></td>
<td>X9</td>
<td>技术人员水平等级</td>
</tr>
<tr>
<td></td>
<td>X10</td>
<td>高层重视科技创新、熟悉开发过程</td>
</tr>
<tr>
<td></td>
<td>X11</td>
<td>明确的科技创新战略</td>
</tr>
<tr>
<td></td>
<td>X12</td>
<td>支持战略执行的完善制度和章程</td>
</tr>
<tr>
<td></td>
<td>X13</td>
<td>相应的服务开发机构或有稳定、可靠的技术依托单位</td>
</tr>
<tr>
<td></td>
<td>X14</td>
<td>创建数据库、信息系统和管理平台</td>
</tr>
<tr>
<td></td>
<td>X15</td>
<td>新服务的商业模式具有新颖性和市场潜力</td>
</tr>
<tr>
<td></td>
<td>X16</td>
<td>市场研究人员</td>
</tr>
<tr>
<td></td>
<td>X17</td>
<td>客户信息反馈</td>
</tr>
<tr>
<td></td>
<td>X18</td>
<td>销售网络化程度</td>
</tr>
<tr>
<td></td>
<td>X19</td>
<td>销售费用投入强度</td>
</tr>
<tr>
<td></td>
<td>X20</td>
<td>品牌强度</td>
</tr>
<tr>
<td></td>
<td>X21</td>
<td>客户满意度</td>
</tr>
</tbody>
</table>

### 数据的收集与分析

3.1 数据的收集
为了对科技服务业创新能力的各个指标进行进一步的分析，本文在天津市选取了36家科技服务业企业进行问卷发放，问卷题项对上述的科技服务业创新能力的21个指标分别加以注释，进行了简单化处理，确保各个题项通俗易懂，易于理解。要求被调查者根据实际情况使用李克特五分评分法对21个题项进行评分，1-5分别对应着非常不同意、不同意、不确定、同意、非常同意。本次调查共发放调查问卷1080份，回收调查问卷942份，调查问卷的回收率为87.22%。在回收的调查问卷中，经过筛选检查，剔除无效问卷133份，剩余有效问卷809份，有效问卷率为85.88%。

3.2 因子分析

（1）信度分析

为了分析该评价指标的整体内部一致性，即科技服务业创新能力问卷的信度，运用SPSS22.0对该指标进行了α系数信度检验，如表2所示，总体问卷的Cronbach α = 0.816，大于0.8，说明总体问卷具有很好的信度，即科技服务业创新能力的各项评价指标之间具有很好的内部一致性。

表2：问卷信度检验结果

<table>
<thead>
<tr>
<th>Cronbach Alpha</th>
<th>基于标准化项目的Cronbach Alpha</th>
<th>项目个数</th>
</tr>
</thead>
<tbody>
<tr>
<td>.816</td>
<td>.825</td>
<td>21</td>
</tr>
</tbody>
</table>

（2）效度分析

表3为总体问卷的效度分析，从表中的分析结果可以看出，KMO值为0.889，大于0.8，表明问卷的效度很好，并且巴特立特球度检验的卡方统计值显著性概率为0.000，小于0.05，说明数据相关系数矩阵不是单位矩阵，因此可以进一步做因子分析。

表3：量表效度分析

<table>
<thead>
<tr>
<th>KMO 值</th>
<th>Bartlett’s sphericity test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>近似卡方</td>
</tr>
<tr>
<td>0.889</td>
<td>1712.298</td>
</tr>
</tbody>
</table>

（3）提取公因子

在进行因子分析的过程中，采用了主成分分析法提取因子。表4即为采用主成分分析法提取因子的公因子方差，从中可以看出除了变量X9、X10小于0.6，其他的变量的提取方差百分比均在0.6之上，而且多数在0.7之上，说明采用了主成分分析法提取因子效果很好，能够提取原始数据较多的信息。

表4：公因子方差

| 变量 | 起始 | 提取 | 变量 | 起始 | 提取 |
提取方法：主成分分析。

此外，还将特征值大于 1 作为提取因子的标准。从表 4 可以看出特征值大于 1 的有 4 个主成分，解释总体变量的 72.50%，说明提取 4 个公因子可以很好的表达原始变量的所有信息。

表 4：解释的总方差

<table>
<thead>
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表 5 即为旋转后的因子负荷矩阵。从中可以明显看出，所有变量可以分为 4 个因子:
X1、X2、X3、X4 即研发资金投入、研发人员投入、生产设备投入、其他创新资金投入归为一个因子，表示科技服务业行业的所投入的人力、物力、财力，命名为创新投；

X5、X6、X7、X8、X9 即研发成果转化水平、新产品开发平均周期、产学研合作比率、生产设备先进度、技术人员水平等级归为一个因子，表示科技服务业的技术人员的研发能力以及生产设备的先进度，命名为创新能力；

X10、X11、X12、X13、X14、X15 即高层重视科技创新、明确的科技创新战略、支持战略执行的完善制度和章程、相应的服务开发机构、创建数据库、信息系统和管理平台、新服务的商业模式具有新颖性和市场潜力归为一个因子，表示科技服务业行业的高层对创新的重视程度，所制定的制度、商业模式是否是支持创新研发的，命名为管理创新；

X16、X17、X18、X19、X20、X21 即市场研究人员、客户信息反馈、销售网络化程度、销售费用投入强度、品牌强度、客户满意度归为一个因子，表示科技服务业的市场人员的创新能力，销售的网络化程度，客户的满意度及信息反馈等，命名为销售创新。

表 5：转后的因子负荷矩阵

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<tr>
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科技服务业创新能力提升策略

通过对科技服务业创新能力的评价指标进行因子分析，得到了创新投入、创新能力、管理创新、销售创新四个因子，下面将从这四个方面对科技服务业创新能力的提升提出了相应的建议，并从整合创新范式的战术面，为科技服务业实现创新层面的新的增长点提供多元化多层次的整合经营策略。
4.1 创新投入方面

很多的科技服务业在创新上的投入都明显不足，所以会在后期发展缓慢甚至裹足不前。创新对于科技服务业本身的作用非常重要，如果科技服务业没有了创新，就如同没有了精髓，是很难得以继续发展的。因此，不仅仅是各地政府要加强对科技服务业创新的投入，企业本身也要意识到创新对于自身的重要程度，高度重视对创新的投入，尽可能满足创新投入的需要。

4.2 创新能力方面

人才的吸纳是科技服务业的重要软实力，人才是创新得以实施的一个关键要素，决定着科技服务业的发展前景。科技服务业不同于普通服务业的一个主要原因在于它是高知识储备人才的聚集地，它的发展得益于人才头脑中知识的转化成果。企业也要重视对人才的培养和奖励，不断完善员工的培养体系，给员工更大的平台施展自己，挖掘员工的潜力，同时，也要为他们提供公开透明的晋升渠道。

4.3 管理创新方面

由于国内科技服务业的发展并没有经历多少年的沉淀，大部分的科技服务型企业存在服务功能不完善，服务层次较低等问题，其内在发展还有待进一步提高。此外，科技服务业的势头良好，市场竞争比较激烈。因此，科技服务型企业必须走上管理创新的道路，为今后的可持续发展奠定基础。这就要求企业一方面，增强自身的独立性，实实在在的提高自己的服务水平，虽然国家目前对科技服务业的支持力度非常大，但对政府部门的过度依赖势必影响自身创新的发展。另一方面，科技服务型企业要根据自己企业的实际情况，寻求出一条易于执行的创新之路，所以它的创新机制要保证企业在人力、业务等方面的活力，提高自身竞争力。

4.4 销售创新方面

销售对于企业是否可以走出去，可以走多远有着重要的作用，因此，企业对市场的准确预计是很有必要的。企业要想抓住国内和国际的市场走势，该抓住机遇的时候，就要抢占市场优势，该韬光养晦的时候，就不宜铤而走险。除此大环境的把控以外，企业还需要在销售的细节上多加注意，商品包装、促销策略、定价规则、铺货渠道等都是企业要牢牢掌握的。

4.5 整合创新方面

单独要素的运行都不足以让企业做强做大，因此，把创新投入、创新能力、管理创新、销售创新等方面要素进行系统整合创新显得尤为重要。科技服务型企业要立足整合创新的范式，推动企业的全面创新，除了与企业的利益相关者外，也要对普通大众开放，鼓励更多的人投入创新活动。

参考文献


Corporate Social Responsibility and firm growth, the mediating effect of technical innovation

Abstract:

Based on the RBV theory, this paper investigates the relationship between the Corporate Social Responsibility, technical innovation and firm growth using the Chinese A-share listed company data from Shanghai and Shenzhen Stock Exchanges. It explores the internal influence mechanism of corporate social responsibility on firm growth. Meanwhile, this paper also examines the mediating role of technical innovation in the relationship between CSR and firm growth and the moderating role of organizational slack in the relationship between CSR and technical innovation. The results suggest that the corporate social responsibility can promote technological innovation and firm growth in Chinese context. The technical innovation plays partial mediation role in the relationship between corporate social responsibility and firm growth. Furthermore, it is found that organizational slack moderates the relationship between the CSR and technical innovation positively. The result has a managerial implication on the behavior of Chinese firm's CSR.

Keywords: CSR; technical innovation; organizational slack; firm growth;

企业社会责任与企业成长：技术创新的中介效应

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国家社科基金一般项目: “社会资本、知识管理与科技型小微企业成长研究” (16BGL037)。

摘要:

基于资源基础理论, 采用中国沪深 A 股上市公司数据, 本文对企业社会责任、技术创新和企业成长之间的关系进行了理论研究和实证检验, 试图解释企业社会责任对企业成长的内在影响机制，并对技术创新在两者之间关系中的中介效应以及组织冗余在企业社会责任和技术创新之间的调节效应进行实证分析。研究结果发现, 在中国情境下, 企业承担社会责任能够促进技术创新和企业成长, 技术创新在企业社会责任和企业成长关系中起部分中介作用, 而组织冗余在企业社会责任和技术创新关系中具有显著的正向调节作用, 即在组织冗余水平较高的企业, 企业社会责任和技术创新的正向关系更强。研究结果对中国企业社会责任实践提供了新的启示。

关键词: 企业社会责任; 技术创新; 组织冗余; 企业成长
在中国，环境保护、食品安全、劳工权益和慈善捐赠等企业社会责任问题已经引起消费者和社会公众的广泛关注。自 2006 年《深圳证券交易所上市公司社会责任指引》发布以来，越来越多上市公司开始披露企业社会责任报告。中国商务部《WTO 经济导刊》杂志社主办企业社会责任中国网（csr-china）和润灵环球等第三方评级机构成为重要的社会责任信息交流平台，企业社会责任也成为学者研究的重要热点话题。股东至上理论认为企业应该追求经济利益最大化，承担社会责任是一种额外的经济负担，然而 Carroll（1979）创造性地提出社会责任的概念和内涵[1]，为学者研究奠定了基础，很多学者通过实证研究发现企业社会责任和企业长期财务绩效呈显著的正相关关系[2-5]。Freeman（1984）提出了利益相关者理论，认为企业还应该对社区环境、政府和消费者等利益相关者承担责任相应的责任[9]，随后迈克波特（2006）从企业战略角度分析发现企业社会责任有助于企业保持竞争优势，资源基础理论认为良好的企业社会责任形象也是一种无形资源，能够为企业发展带来受益[7]。目前企业社会责任主要集中在承担社会责任的经济后果，特别是企业社会责任与企业绩效之间的关系，比如财务绩效、企业成长、竞争优势和企业价值的关系，此外也有学者提出企业社会责任能力能够降低企业的隐性成本[3], 提升消费者对企业产品或服务的购买行为[9, 10]。企业社会责任能够促进企业成长，很少学者关注他们之间的内在机制。Orlizky(2003)检验了企业外部组织声誉在两者关系中起了中介作用，Surroca(2010）提出企业内部的学习能力、创新和文化等在企业社会责任和企业成长之间起着中介作用，因此 CSR 行为如何通过企业内部影响企业成长是研究的重要切入点。

目前学者研究还停留在企业社会与企业的财务指标的关系研究，以及企业承担社会责任从外部获得合法性、组织声誉、顾客忠诚度和其他资源帮助企业成长的层面，忽略了承担社会责任对企业内部技术创新产生的影响进而促进企业成长。企业承担社会责任不仅仅体现在对外捐赠救灾等慈善行为，还应该在企业自身的生产过程和提供的产品服务中融入社会责任行为[11]，比如创新型的节能环保工艺是对环境和社区公众负责，而提供优质的产品和服务是为消费者负责，这些都离不开技术创新和在企业成长中起着新角色。企业在承担社会责任的同时也会促进技术创新[14]，而企业社会责任还能帮助企业吸引优秀的人才和研发人员[15]，提高研发产出，进而获得竞争优势[16]，促进企业成长。这个过程体现了技术创新的中介效应，因此有必要研究企业社会责任是否通过技术创新来影响企业成长，以及企业内部的组织冗余等因素是否会影响他们之间的关系。

为了弥补上述不足，本文将从以下两个方面探讨企业社会责任对企业成长的内在影响机制：（1）以资源基础理论为基础，讨论企业社会责任和内部技术创新的关系并引入组织冗余到研究框架中，检验组织冗余在两者关系中的调节作用，为企业管理者如何通过企业社会责任行为提升技术创新和促进企业成长提供新的视角。（2）探索技术创新在企业社会责任和企业成长之间的中介机制，揭开企业承担社会责任如何从企业内部影响企业成长的“黑箱”，丰富资源基础理论的研究。

2 理论分析与研究假设

2.1 企业社会责任与技术创新


从企业角度来看，企业履行社会责任的动机，是主动承担社会责任还是掩盖企业存在的问题，或者处于外界压力不得不做出的选择？企业主动履行社会责任能够增加消费者和社区成员的认同感[9]，获得企业声誉提升[9]，黄敏（2008）发现在企业社会紧急事件中如果企业能够满足公众对社会责任期望，可以打造社会责任品牌个性，提升品牌信任和忠诚[9]。而高财务杠杆和研发
活动导致企业风险增大，企业社会责任能够减缓投资人和公司管理层之间的信息不对称，降低公司管理层的监管压力。然而高勇强（2012）也发现企业提供捐赠转移外界对企业其他问题的关注，或者企业通过慈善捐赠达到避税和掩盖企业内部问题。目前企业履行社会责任的动机有以下2个方面，（1）利益相关者压力，应对政府、证券管理部门和社会公众等利益相关者的要求，企业处于被动。（2）战略动机，企业社会责任作为非市场竞争战略，即战略工具，能够获得声誉资本和政治合法性，有助于企业形象建立，从而获得绩效和竞争力的提升，企业处于战略主动。

资源基础理论认为稀缺、有价值和不可模仿的资源能够提升企业的技术、产品质量和服务能力，从而保持竞争优势。为了获得战略资源，企业开始主动实施企业社会责任战略。首先，企业社会责任是一种投资而不是成本，企业社会责任能够为企业、社会和其他利益相关者带来回报。而拥有良好的企业社会责任形象也是一种无形资源。企业使用这种无形资源进行产品和工艺创新时，能带来销售增长和企业绩效提升，同时促进企业的发展。在企业社会责任和创新关系研究中，Mcwilliams（2000）发现企业超额履行法律规定的环境社会责任时，有利于工艺和产品创新。比如通过企业树立环保型形象时，就会加大可降解材料和无公害产品的研发投入，保持产品材料和工艺的创新。其次，企业主动履行社会责任能够带来利益相关者的认可，特别是高质量企业员工的价值认同；Turban和Green（1997）研究多米尼（KLD）社会指数发现良好的企业履行社会责任能够吸引高素质和具有创造力的员工加入。企业对员工承担相应的责任，比如改善工作环境，会激发员工的工作热情。而研发需要熟练掌握知识并进行产品和服务创新，此外研发是系统性的活动，高质量的和有创造力的员工加入有助于企业的研发产出，同时学者也会把本科以上学历的员工（高素质员工）工作作为研发的人力资本投入，或者以高素质员工人数比例作为研发表现的衡量指标，因此企业履行社会责任会促进企业的研发投入和创新。

最后，企业社会责任作为一种非市场竞争战略（Non-market strategy），能够帮助企业应对政府和制度压力，获得良好的企业声誉和政治合法性，从政府获取关键性资源，企业就会拥有更多的资金和资源进行研发投入，保持竞争优势。履行社会责任是企业差异化竞争战略的一种途径，即把社会责任应用到技术改进和开发新产品来或新服务中，企业履行社会责任会扩大研发投入进行创新。比如邵剑兵和刘力刚（2016）通过案例研究分析阿里巴巴社会责任行为时发现，阿里巴巴企业基因增加了社会责任属性，强化客户意识和诚信原则，披露环境保护，城市基础建设和报告，获得国家工商总局局长张茅肯定，化解了与政府矛盾，并推动了大数据及相关产品的应用；大数据及相关产品是阿里巴巴研发及推广的项目。

根据以上分析，我们认为企业社会责任实施程度越高的企业，研发投入也越多，技术创新能力越强，所以得到如下假设：

H1：企业社会责任与技术创新具有显著的正相关关系。

2.2 组织冗余的调节作用

组织冗余是存在企业或企业内部没有被充分利用的资源，主要被个体或小团体控制，主要分为可利用冗余和潜在冗余。冗余能够帮助企业抵御风险，是企业的资源缓冲器。Bourgeois（1981）系统分析和定义了组织冗余的内涵，并提出了利用财务指标来衡量组织冗余的方法，为组织冗余的研究奠定了基础。组织冗余是管理者控制的资源，影响企业决策的内部因素，因此也会影响企业社会责任和技术创新的关系。技术创新充满风险和不确定性，当组织冗余水平较高时，企业通过企业社会责任这种无形资源应用新技术和开发新产品，由于冗余资源的存在，这能为研发活动提供非正式的资源供给，保障了技术创新产出；其次，企业履行社会责任会吸引优秀的员工和吸引高素质的员工加入，当企业管理人员拥有较多的冗余资源时，这种吸引力会增强，而且研发人员将拥有更充足资源进行创造性活动，因此技术创新表现会更好。企业社会责任作为非市场竞争战略，能够帮助企业获得政府、消费者和其他利益相关者的认可，即合法性。蔡新蕾（2013）发现组织冗余会促进政治行为和政治合法性的正向关系，那么在组织冗余水平较高时，企业的合法性也会提高，进而获得更多的关键性资源进行研发投入，并提高技术创新水平。组织冗余水平提高时，企业社会责任对技术创新的促进作用也更强，因此我们提出如下假设：

H2：组织冗余正向调节企业社会责任与技术创新的关系。组织冗余的水平越高，企业社会责任对技术创新的促进作用越强。
2.3 企业社会责任、技术创新与企业成长

企业社会责任和企业成长之间的关系一直是学者研究的热点话题。从股东至上的理论观点来看，企业应该在合法合规要求下为股东实现经济利益最大化，企业履行社会责任是一种额外的支出，会降低企业绩效。然而，很多学者通过长期财务指标、技术创新和企业价值等方面衡量企业社会责任行为的影响，发现企业履行社会责任可以为股东带来长期利益并实现价值增长。从资源基础理论来看，企业履行社会责任是一种投资，能够为企业带来价值[33]，保持竞争优势并促进企业成长；学者 Rynes(2013)通过 meta 分析发现企业社会责任与企业绩效有正相关关系[4]，即企业通过社会责任行为可以获得合法性、企业声誉、利益相关者认可和购买意愿提升，进而保证了财务绩效的增长。社会责任促进企业成长主要表现在以下几个方面。首先，企业履行社会责任能够获得合法性，进而获取优质资源帮助企业发展；企业作为一种非竞争战略，能够赢得政府、供应商和客户等利益相关者认可，比如政府会为环保型企业提供特别的税收优惠[34]。学者研究发现企业树立承担社会责任的企格形象，能够帮助企业在劳动力市场上吸引优秀的人力资源并提高现有员工的生产率。其次，企业社会责任能够降低企业隐形成本来提高企业成长性，比如融资成本，组织运行成本和人力成本；企业社会责任能够向股东和投资者等传递一种企业可持续发展的信号，缓解资本市场的压力和投资人的担忧，进而降低组织运行成本，权小锋（2015）验证了企业社会责任能够提升公司信息透明度并降低企业股价崩盘风险[35]。同时良好的企业社会责任形象帮助企业在融资过程中遇到的阻碍，李珠（2014）研究中国资本市场发现社会责任履行可以提高企业债务融资能力[36]。再次，企业履行社会责任能够提高产品销售和营业收入；产品相关责任行为和慈善活动能够提升消费者对品牌的评价[37]，马龙龙（2011）通过实验方法发现积极的企业社会责任行为能够激发消费者对产品的购买欲望[38]，同时企业履行社会责任能够获得良好的企业声誉，顾客的忠诚度更高[19]，所以社会责任行为会促进产品销量提升和企业成长。根据以上分析，我们可以提出以下假设：

H3：企业社会责任与企业成长具有显著的正相关关系。

企业承担社会责任，主要通过慈善捐赠、环境保护和改善员工待遇等方式，利益相关者理论观点认为企业发展需要政府、股东和员工等各个利益相关者共同参与[8]，企业发展应该考虑整体利益，而不是股东的经济利益。企业通过社会责任行为改善与各个利益相关者的关系，获得双方认可而增加销售并减少交易成本[39]，实现企业成长。企业主要通过产品和服务与各个利益相关者发生联系，因此企业销售环保创新型的产品、使用节水节能技术和提供高质量的服务也是承担社会责任的重要方式[40]，这就需要企业增加研发投入和提高技术创新产出；此外，企业通过捐赠和改善社区关系建立的品牌形象，能够为企业带来高质量的人力资源，而且改善员工待遇能够提高现有员工的工作效率[41]。技术创新是系统性的研发活动，优秀员工加入能够提高创新能力，进而保持企业竞争优势，促进企业成长。学者 Surroca(2010)研究发现创新和企业声誉形成的无形资源在企业社会责任和财务绩效关系中起到中介作用[2]。因此，履行社会责任的企业，需要通过工艺改进和产品创新等研发活动提高技术创新，来生产环保友好型产品或解决社会问题，提高产品销售或服务质量并赢得政府、社区公众和消费者等利益相关者的认可。把社会责任行为融入到产品和服务中，能够体现企业社会责任战略的竞争优势，提高企业成长性。这个过程体现了企业社会责任向企业成长绩效转化过程中的技术创新的中介作用，所以企业社会责任通过技术创新能够促进企业的成长。根据以上分析，提出以下假设。

H4：技术创新在企业社会责任和企业成长的关系中起中介效应。

根据假设，本文所涉及的变量以及变量之间的逻辑关系如图 4.1 所示。

3 研究设计

3.1 样本选择

2006 年，《上市公司社会责任指引》在深交易所发布。接着上市公司开始发布社会责任报告，2009 年证监会要求上交所三类共 260 家企业必须在公司年报中披露企业社会责任报告，为了避开金融危机的影响，并确保信息披露完整，因此选取 2009-2014 年深交所和上交所 A 股上市公司年度数据，剔除特殊行业金融和房地产行业的公司以及 ST 类数据异常的公司，财务数据主要来自于 wind 和国泰安数据库，企业社会责任数据来自于第三方评级机构润灵环球（RKS），删除变
量缺失的样本，最终获得 1324 个观察值。最后对主要连续变量进行 1% 的 winsorizing 处理，避免极端值的影响。

### 3.2 变量定义

**企业成长性 (MB)。** 企业成长性主要反映公司的增长潜力和经营发展状况，衡量指标主要有销售收入增长率和资产增长率等代表企业的成长性，也有学者采用市场价值与资本重置成本之比，即托宾 Q（Tobin Q）值来衡量企业的成长性，而本文参考学者 Rajan 和孙健做法[42, 43]，企业成长性的衡量指标采用企业年后的市场价值和账面价值的比值，因为“市账比”不仅代表着成长机会，还反映了市场时机，高“市账比”意味着低融资成本。

**技术创新。** 技术创新是指生产技术的创新，技术的创新也会导致产品创新，他们都是企业创新的一部分。目前主要采用专利数、研发投入和新产品销售额等指标衡量企业的技术创新，本文采用研发经费支出来衡量企业的技术创新。

**企业社会责任。** 测量企业社会责任的方法很多，包括企业声誉、综合评价指数和内容分析法等[1]，上市公司社会责任报告中涉及政府、环境、消费者和社区等多方面和维度，为了确保数据的可信度，本文采用润灵环球第三方评级机构的企业社会责任评分衡量企业社会责任。企业社会责任评分包含整体性、内容型和技术性等 15 个一级指标，65 个二级指标，能够客观地评价企业履行社会责任情况，具有较高的可信度。

**组织冗余。** 根据学者 Bourgeois（1981）使用财务指标测量的做法[44]，将组织冗余分三种。首先是可利用冗余（Available Slack），指没有投入到组织生产设计或具体流程中的资源，采用速动比率来衡量；其次是潜在冗余（Potential Slack），指可以通过发债或者股权融资等方式能从外部获得的资源，采用所有者权益与负债比率衡量；最后是可恢复冗余（Recover Slack），指那些已经投入生成流程中但运营成本较高，可通过流程重新设计节约的资源，采用销售、管理和一般费用与销售总收入的比率衡量。参照 Bourgeois、蒋春燕和赵署明等学者的做法[45]，采用三个指标的平均值来衡量组织冗余。

**控制变量。** 本文还控制了其他影响因素：(1) 公司规模，企业规模越大，研发投入相对越高，采用企业的总资产来衡量。 (2) 资产负债率，资产负债率越高，企业风险越大。此外资产负债率会影响企业的融资成本和研发投入，以及企业的成长绩效。 (3) 资产收益率，企业收益率代表着企业对资产的利用情况，资产收益率高的企业会有更多的资源投入研发，企业成长性也越好。(4) 企业性质，把企业分为国有企业和民营企业，国有企业赋值为 0，民营企业赋值为 1。(5) 股权集中度，采用第一大股东的持股比例衡量，股权的集中程度也会影响企业内部决策，比如对研发投入的态度和公司的战略执行。(6) 行业类型，参照证监会行业划分标准，剔除了文娱传媒、房地产业和金融等特殊行业，样本主要覆盖信息技术、生物医药、工业制造、电力能源和交通运输等行业，行业进行编码后采用虚拟变量处理。(7) 固定资产比率，采用固定资产除以总资产，固定资产比率反映了企业的营运能力，这会影响企业的收益和增长。(8) 企业年龄，采用考察年度减去公司上市年份。表 4.1 中显示各个主要变量的定义和测量方法。

<table>
<thead>
<tr>
<th>变量类型</th>
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<th>变量定义</th>
</tr>
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<tr>
<td>被解释变量</td>
<td>企业成长性</td>
<td>企业年后的市场价值和账面价值的比值</td>
</tr>
<tr>
<td>解释变量</td>
<td>Rdlog</td>
<td>技术创新，当期研发投入的自然对数</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Score</td>
<td>企业社会责任，采用润灵环球评级数据库评分</td>
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<td>调节变量</td>
<td>Slack</td>
<td>组织冗余</td>
</tr>
<tr>
<td>Firmane</td>
<td>企业年龄，考察年度减去公司上市年份</td>
<td></td>
</tr>
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<td>企业所有权性质，分为两类，国有企业和民营企业</td>
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<td>固定资产比率，固定资产除以总资产</td>
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<td>Roa</td>
<td>资产回报率，净利润/总资产</td>
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<tr>
<td>Stock-ratio</td>
<td>股权集中度，第一大股东持股比例</td>
<td></td>
</tr>
</tbody>
</table>

3.3 回归模型设计

1. 企业社会责任与技术创新

构建回归方程（1）对假设 H1 进行检验

\[ \text{Rdlog} = \beta_0 + \beta_1 \text{Score} + \beta_2 \text{Controls} + \varepsilon \] (1)

模型（1）检验企业社会责任对技术创新的影响，Rdlog 为技术创新，Score 代表企业社会责任，避免异方差影响，采用稳健性标准误。其中，Controls 为控制变量，包含公司规模、资产负债率、资产收益率、企业性质、股权集中度、行业类型、固定资产比率和企业年龄等。根据假设 H1，模型（1）中企业社会责任系数 \( \beta_1 \) 大于 0 且显著，假设得到验证。

2. 组织冗余的调节作用

构建回归方程（2）对假设 H2 进行检验

\[ \text{Rdlog} = \beta_0 + \beta_1 C_{\text{Score}} + \beta_2 C_{\text{Slack}} + \beta_3 C_{\text{Slack}} \times C_{\text{Score}} + \beta_4 \text{Controls} + \varepsilon \] (2)

其中企业社会责任（C_Score）和组织冗余（C_Slack）采用中心化处理，C_Slack*C_Score 代表企业社会责任与组织冗余的交互项。其中，Controls 为控制变量，包含公司规模、资产负债率、资产收益率、企业性质、股权集中度、行业类型、固定资产比率和企业年龄等。根据假设 H2，模型（2）中企业社会责任系数 \( \beta_3 \) 大于 0 且显著，假设得到验证。

3. 企业社会责任、技术创新和企业成长

构建回归方程（3）对假设 H3 进行检验

\[ \text{Growth} = \beta_0 + \beta_1 \text{Score} + \beta_2 \text{Controls} + \varepsilon \] (3)

Growth 代表企业成长性，Score 代表企业社会责任。其中，Controls 为控制变量，包含公司规模、资产负债率、资产收益率、企业性质、股权集中度、行业类型、固定资产比率和企业年龄等。根据假设 H3，模型（3）中企业社会责任系数 \( \beta_1 \) 大于 0 且显著，假设得到验证。该模型检验企业社会责任对企业成长的影响，根据学者温忠麟的做法，也是验证中介效应第一步。

构建回归方程（4）对假设 H4 进行检验

\[ \text{Growth} = \beta_0 + \beta_1 \text{Score} + \beta_2 \text{Rdlog} + \beta_3 \text{Controls} + \varepsilon \] (4)

模型（4）是检验企业社会责任和技术创新同时对企业成长的影响，结合模型（3）和模型（1），就可以验证技术创新的中介效应。Controls 为控制变量，包含公司规模、资产负债率、资产收益率、企业性质、股权集中度、行业类型、固定资产比率和企业年龄等。根据假设 H4，模型（4）中企业社会责任系数 \( \beta_1 \) 和 \( \beta_2 \) 都大于 0 且显著，再把 \( \beta_4 \) 与模型（3）中企业社会责任系数 \( \beta_3 \) 比较，假设设得到验证。

4 实证检验与结果分析

4.1 描述性统计
本文共获得344家上市公司数据。其中国有企业157家，民营企业187家。2009-2014年共有样本观察值为1324个，从行业来划分，信息技术343个，占比25.91%，生物医药205个，占比15.48%，工业制造482个，占比36.4%，汽车制造103个，占比7.78%，电力能源157个，占比11.86%，交通运输34个，占比2.57%。样本的其他主要变量描述性统计量如表4.2所示。

表4.2主要变量描述统计量

<table>
<thead>
<tr>
<th>变量</th>
<th>观察值</th>
<th>平均值</th>
<th>标准差</th>
<th>最小值</th>
<th>最大值</th>
<th>中位数</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>1324</td>
<td>0.457</td>
<td>0.319</td>
<td>0.0282</td>
<td>3.257</td>
<td>0.378</td>
</tr>
<tr>
<td>Rdlog</td>
<td>1324</td>
<td>18.26</td>
<td>1.788</td>
<td>11.60</td>
<td>23.00</td>
<td>18.226</td>
</tr>
<tr>
<td>Score</td>
<td>1324</td>
<td>38.46</td>
<td>11.48</td>
<td>18.60</td>
<td>78.44</td>
<td>35.675</td>
</tr>
<tr>
<td>Slack</td>
<td>1324</td>
<td>2.634</td>
<td>4.859</td>
<td>0.0936</td>
<td>104.7</td>
<td>1.516</td>
</tr>
<tr>
<td>Stockratio</td>
<td>1324</td>
<td>39.38</td>
<td>16.18</td>
<td>4.960</td>
<td>88.55</td>
<td>39.195</td>
</tr>
<tr>
<td>Asset</td>
<td>1324</td>
<td>32.84</td>
<td>106.4</td>
<td>0.308</td>
<td>1451</td>
<td>6.301</td>
</tr>
<tr>
<td>Fixtotal</td>
<td>1324</td>
<td>0.208</td>
<td>106.4</td>
<td>0.00743</td>
<td>0.872</td>
<td>0.170</td>
</tr>
<tr>
<td>Lev</td>
<td>1324</td>
<td>6.338</td>
<td>5.778</td>
<td>-26.16</td>
<td>41.40</td>
<td>5.3</td>
</tr>
<tr>
<td>Roa</td>
<td>1324</td>
<td>6.338</td>
<td>5.778</td>
<td>-26.16</td>
<td>41.40</td>
<td>5.3</td>
</tr>
</tbody>
</table>

各个主要变量的皮尔森相关系数（Pearson correlation coefficient）如表4.3显示。各项控制变量之间相关系数没有超过0.5，而且从两两变量的相关系数来看，不存在严重的多重共线性问题。其中企业社会责任和技术创新相关系数为0.358，并在1%的水平下显著，初步验证了假设H1，即企业社会责任与技术创新有显著的正相关关系。

表4.3各个主要变量间的相关性分析

<table>
<thead>
<tr>
<th>变量</th>
<th>growth</th>
<th>rdlog</th>
<th>score</th>
<th>currentratio</th>
<th>stockratio</th>
<th>asset1</th>
<th>fixtotal</th>
<th>lev</th>
</tr>
</thead>
<tbody>
<tr>
<td>growth</td>
<td>1</td>
<td></td>
<td></td>
<td>-0.151***</td>
<td>-0.129***</td>
<td>0.072***</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>rdlog</td>
<td>0.192***</td>
<td>1</td>
<td></td>
<td>0.140***</td>
<td>0.199***</td>
<td>-0.147***</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>score</td>
<td>0.259***</td>
<td>0.358***</td>
<td>1</td>
<td>-0.095***</td>
<td>-0.295***</td>
<td>0.174***</td>
<td>0.138***</td>
<td>1</td>
</tr>
<tr>
<td>currentratio</td>
<td>-0.151***</td>
<td>-0.129***</td>
<td>0.072***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stockratio</td>
<td>0.192***</td>
<td>0.140***</td>
<td>0.199***</td>
<td>-0.095***</td>
<td>-0.295***</td>
<td>0.174***</td>
<td>0.138***</td>
<td>1</td>
</tr>
<tr>
<td>asset1</td>
<td>0.387***</td>
<td>0.383***</td>
<td>0.386***</td>
<td>-0.095***</td>
<td>-0.295***</td>
<td>0.174***</td>
<td>0.138***</td>
<td>1</td>
</tr>
<tr>
<td>fixtotal</td>
<td>0.242***</td>
<td>-0.165***</td>
<td>0.060**</td>
<td>-0.182***</td>
<td>-0.487***</td>
<td>0.185***</td>
<td>0.265***</td>
<td>0.091***</td>
</tr>
<tr>
<td>lev</td>
<td>0.321***</td>
<td>0.298***</td>
<td>0.188***</td>
<td>-0.487***</td>
<td>-0.487***</td>
<td>0.185***</td>
<td>0.265***</td>
<td>0.091***</td>
</tr>
<tr>
<td>roa</td>
<td>-0.359***</td>
<td>0.0200</td>
<td>-0.0450</td>
<td>0.182***</td>
<td>0.0110</td>
<td>0.095***</td>
<td>0.173***</td>
<td>0.447***</td>
</tr>
</tbody>
</table>

4.2回归结果分析

企业社会责任和技术创新关系的检验。方程模型的回归结果如表4.4显示。其中模型(1)中方差膨胀因子（VIF）平均值为1.41，说明多重共线性问题影响处在合理范围内。模型(1)中企业社会责任系数（β=0.042，P<0.01）为正且在1%的水平上显著，调整后R²为0.460，在控制变量的基础上增加了0.058，说明数据对模型的拟合度较好。检验结果支持假设H1，即企业社会责任和技术创新有显著的正相关关系。

**组织冗余的调节作用**。模型(2)回归时进行中心化处理，便于对方程系数进行更好得解释，方差膨胀因子（VIF=1.4）处在合理水平，数据对模型的拟合度也比较好（R²=0.464，ΔR²=0.062）。企业社会责任与组织冗余的交互项系数为0.002，并在5%的水平上显著，这说明组织冗余正向调节企业社会责任和技术创新之间的关系，即组织冗余水平较高时，企业社会责任和技术创新的正向关系更强，组织冗余的调节效应如图4.2，更直观地展示组织冗余的调节作用，假设H2得到支持。
图 4.2 组织冗余的调节效应

企业社会责任、技术创新和企业成长。模型（3）回归结果显示，企业社会责任对企业成长有显著的正向影响（β=0.003，P<0.01），数据拟合程度（R²=0.385，ΔR²=0.008）较好且没有多重共线性问题（VIF=1.41），即假设 H3 得到支持。根据温忠麟中介效应三步检验方法，模型（3）和模型（1）系数都显著，符合中介效应检验的前两步；模型（4）回归结果显示，R²=0.395，与模型（3）相比增加了 0.01，数据拟合程度较好；技术创新的系数（β=0.027，P<0.01）显著为正，而且企业社会责任系数（β=0.002，P<0.05）为正且在 5%的水平上显著，与模型（3）系数相比减小（Δβ=-0.01），因此技术创新在企业社会责任和企业成长关系中起部分中介效应，即假设 H4 得到支持。
表 4.4 回归分析结果

<table>
<thead>
<tr>
<th>变量</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>rdlog</td>
<td>0.042***</td>
<td>0.043***</td>
<td>0.003***</td>
<td>0.002**</td>
</tr>
<tr>
<td>growth</td>
<td>(11.28)</td>
<td>(11.66)</td>
<td>(3.73)</td>
<td>(1.96)</td>
</tr>
<tr>
<td>Rdlog</td>
<td>-0.240***</td>
<td>-0.258***</td>
<td>-0.059***</td>
<td>-0.053***</td>
</tr>
<tr>
<td>(4.35)</td>
<td>(-2.91)</td>
<td>(-4.67)</td>
<td>(-4.19)</td>
<td></td>
</tr>
<tr>
<td>enterprise social responsibility</td>
<td>0.042***</td>
<td>0.043***</td>
<td>0.005***</td>
<td>0.005***</td>
</tr>
<tr>
<td>(11.28)</td>
<td>(11.66)</td>
<td>(3.35)</td>
<td>(3.64)</td>
<td></td>
</tr>
<tr>
<td>ownership</td>
<td>-0.013*</td>
<td>-0.012</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>(1.69)</td>
<td>(-1.52)</td>
<td>(1.64)</td>
<td>(1.39)</td>
<td></td>
</tr>
<tr>
<td>equity concentration</td>
<td>0.005*</td>
<td>0.004</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>(1.69)</td>
<td>(1.50)</td>
<td>(1.64)</td>
<td>(1.39)</td>
<td></td>
</tr>
<tr>
<td>enterprise scale</td>
<td>0.004***</td>
<td>0.004***</td>
<td>0.001***</td>
<td>0.001***</td>
</tr>
<tr>
<td>(10.74)</td>
<td>(10.65)</td>
<td>(3.96)</td>
<td>(3.30)</td>
<td></td>
</tr>
<tr>
<td>fixed asset ratio</td>
<td>-0.727**</td>
<td>-0.803***</td>
<td>0.122</td>
<td>0.142***</td>
</tr>
<tr>
<td>(-2.40)</td>
<td>(-2.66)</td>
<td>(1.41)</td>
<td>(1.65)</td>
<td></td>
</tr>
<tr>
<td>financial leverage</td>
<td>0.020***</td>
<td>0.019***</td>
<td>0.000</td>
<td>-0.000</td>
</tr>
<tr>
<td>(8.44)</td>
<td>(7.29)</td>
<td>(0.76)</td>
<td>(-0.53)</td>
<td></td>
</tr>
<tr>
<td>return on assets</td>
<td>0.049***</td>
<td>0.047***</td>
<td>-0.013***</td>
<td>-0.015***</td>
</tr>
<tr>
<td>(7.10)</td>
<td>(6.54)</td>
<td>(-8.60)</td>
<td>(-8.78)</td>
<td></td>
</tr>
<tr>
<td>organizational redundancy</td>
<td>-0.003</td>
<td>-0.003</td>
<td>0.002**</td>
<td></td>
</tr>
<tr>
<td>(-0.49)</td>
<td>(0.22)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>enterprise social responsblity*organizational redundancy</td>
<td>0.042***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2.52)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.460</td>
<td>0.464</td>
<td>0.385</td>
<td>0.395</td>
</tr>
<tr>
<td>ΔR²</td>
<td>0.058</td>
<td>0.062</td>
<td>0.008</td>
<td>0.010</td>
</tr>
<tr>
<td>Mean VIF</td>
<td>1.41</td>
<td>1.40</td>
<td>1.41</td>
<td>1.50</td>
</tr>
<tr>
<td>N</td>
<td>1324</td>
<td>1324</td>
<td>1324</td>
<td>1324</td>
</tr>
</tbody>
</table>

注："***、**、*"分别表示在 1%、5% 和 10% 的统计水平上显著。

4.3 稳健性检验

为了确定结论的可靠性，本文还进行了稳健性检验。1) 企业社会责任是企业的非竞争战略，技术创新是企业的创新战略，在进行决策时，它们可能会同时进行，或者技术变革高的企业更愿意履行社会责任，出现反向因果；此外，尽管控制了其他变量，模型设计还会出现遗漏变量，即模型存在内生性问题，因此需要寻找工具变量来解决内生性问题。工具变量要和企业社会责任相关但不受企业技术创新的影响，具有外生性，因此本文选择公司所在地区教育水平和法律环境等作为工具变量；法律环境体现了当地司法效率和执法水平，企业履行社会责任也受法律压力的影响，法律环境与企业社会责任呈正相关系，而当地的法律环境主要受当地政府和中央司法机构的影响，在现行体制下短期内不受外界因素影响，特别而不受企业的技术创新影响，因此选择地区法律指数衡量。地区教育程度代表企业的利益相关者社区公众对公司履行社会责任的期望，教育程度越高，环保意识和社会责任意识越强，教育程度和企业社会责任呈正相关，而地区教育程度主要受地方高校高校数量和中国教育部招生名额决定，不受企业技术创新的影响，地区教育程度采用国家统计局每万人大专以上历人数比例衡量。因此保留年度上连续的观察值，生成面板数据，以法律环境和地区教育水平为工具变量，采用固定效应 GMM-IV 估计模型，对假设 H1 进行重新检验，参考模型(5)。

2) 本文对控制变量指标替换，进行稳健性检验：首先采用公司的人数替换公司的资产来测量企业规模；其次，采用净资产收益率 (ROE) 代替资产回报率 (ROA)。最后，采用公司前十名的股权比例代替第一名来测量股权集中度。参考模型(6)、模型(7)、模型(8)和模型(9)，对假设进行重新检验。
稳健性检验结果如表 4.5 中展示。模型（5）可以看出，企业社会责任系数（β=0.131，P<0.01）为正且显著。此外，工具变量检验如表 4.6 所示，其中 Hansen J （p=0.766）统计量在 5% 的水平上不显著，说明工具变量是合理的，两个工具变量冗余检验值都强烈地拒绝原假设，即不存在冗余工具变量；此外弱工具变量检验的 Cragg-Donald Wald F 统计量大于 19.93，表明对于名义显著水平为 5% 的检验，其真实水平不会超过 15%，即不存在弱工具变量问题；识别不足检验 Kleibergen-Paap rk LM 统计量为 25.433 （p<0.01），强烈拒绝原假设，即不存在识别不足的工具变量，说明工具变量合理。因此，假设 H1 得到支持，结果稳健。从模型模型（6）、模型（7）、模型（8）和模型（9）中可以看出，与原模型相比，企业社会责任系数、技术创新、企业社会责任与组织冗余交互项系数略有差异，但符号和显著性没有发生改变，因此本文实证结果稳健。

表 4.5 稳健性检验主要变量结果

<table>
<thead>
<tr>
<th>模型变量</th>
<th>（5）</th>
<th>（6）</th>
<th>（7）</th>
<th>（8）</th>
<th>（9）</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rdlog</td>
<td>0.131***</td>
<td>0.038***</td>
<td>0.0391**</td>
<td>0.003***</td>
<td>0.002***</td>
</tr>
<tr>
<td>(11.18)</td>
<td>(10.52)</td>
<td>(11.01)</td>
<td>(4.03)</td>
<td>(2.61)</td>
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<tr>
<td>Rdlog</td>
<td>0.006</td>
<td>0.005**</td>
<td>0.004</td>
<td>-0.001*</td>
<td>-0.001**</td>
</tr>
<tr>
<td>(1.02)</td>
<td>(2.11)</td>
<td>(1.47)</td>
<td>(-1.75)</td>
<td>(-2.01)</td>
<td></td>
</tr>
<tr>
<td>风险集中度</td>
<td>-0.079</td>
<td>0.717***</td>
<td>0.729***</td>
<td>0.117***</td>
<td>0.102***</td>
</tr>
<tr>
<td>(0.48)</td>
<td>(12.80)</td>
<td>(12.99)</td>
<td>(4.67)</td>
<td>(3.71)</td>
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</tr>
<tr>
<td>固定资产比率</td>
<td>-0.429</td>
<td>-0.790***</td>
<td>-0.887***</td>
<td>0.167*</td>
<td>0.183**</td>
</tr>
<tr>
<td>(0.75)</td>
<td>(-2.62)</td>
<td>(-2.95)</td>
<td>(1.95)</td>
<td>(2.17)</td>
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</tr>
<tr>
<td>财务杠杆</td>
<td>0.005</td>
<td>0.013***</td>
<td>0.012***</td>
<td>0.001***</td>
<td>0.001***</td>
</tr>
<tr>
<td>(1.04)</td>
<td>(5.97)</td>
<td>(4.92)</td>
<td>(3.18)</td>
<td>(2.74)</td>
<td></td>
</tr>
<tr>
<td>净资产收益率</td>
<td>0.006</td>
<td>0.016***</td>
<td>0.015***</td>
<td>-0.005***</td>
<td>-0.005***</td>
</tr>
<tr>
<td>（roe）&lt;br&gt;（1.27）</td>
<td>（3.59）</td>
<td>（3.3）</td>
<td>（-2.89）</td>
<td>（-2.92）</td>
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<tr>
<td>技术创新</td>
<td>0.021***</td>
<td></td>
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<tr>
<td>(2.92)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>组织冗余</td>
<td>0.003***</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(2.98)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Adj. R2</td>
<td>0.245</td>
<td>0.504</td>
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<tr>
<td>Mean VIF</td>
<td>1.37</td>
<td>1.36</td>
<td>1.37</td>
<td>1.47</td>
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<tr>
<td>N</td>
<td>1198</td>
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表 4.6 模型 5 的工具变量检验

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<tr>
<th>弱工具变量检验</th>
<th>工具变量冗余检验</th>
<th>过度识别检验</th>
<th>识别不足检验</th>
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<tbody>
<tr>
<td>统计量</td>
<td>检验值</td>
<td>统计量</td>
<td>检验值</td>
</tr>
<tr>
<td>Cragg-Donald Wald F</td>
<td>115.638</td>
<td></td>
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<td>Hansen J</td>
<td>19.93</td>
<td>P&lt;0.01</td>
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<tr>
<td>Kleibergen-Paap rk LM</td>
<td>25.433</td>
<td>P&lt;0.01</td>
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5 结论与启示

本文以资源基础理论为基础，采用中国沪深 A 股上市公司为样本，实证检验了企业社会责
任、技术创新和企业成长的关系，探讨了企业社会责任对企业成长的影响机制。研究结果发现：
（1）企业社会责任和技术创新呈显著的正相关关系；（2）组织冗余正向调节企业社会责任和
技术创新之间的关系；（3）企业履行社会责任能够促进企业成长，并且技术创新在企业社会责任和
企业成长之间关系起部分中介作用。本文从企业社会责任影响企业成长的内部机制出发，主要
理论贡献如下。

首先，先前学者检验了企业社会责任能够提升企业绩效和促进企业成长，但很少研究探索企
业社会责任与企业成长的内部机制。从资源基础理论出发，本文认为企业社会责任是一种投资，
是企业的无形资源：从企业内部来看，企业把社会责任这种无形资源应用到产品和服务中，满足
政府、供应商和客户等利益相关者的要求，通过提供优质的产品和服务承担社会责任；进而促进
企业成长；这需要工艺和产品创新等研发活动，包括节能技术、环保材料、环境友好型产品和解
决社会问题的服务项目等，从而构建竞争优势。本文完善了企业社会责任与企业成长之间关系研
究的理论模型，从企业内部因素找到了企业社会责任影响企业成长的路径。
其次，本文还找到了组织冗余素对企业社会责任与技术创新关系的影响，引入新的调节变量，丰
富了相关文献研究。已有的文献研究主要考虑企业外部环境对企业社会责任直接效应的影响，很
少考虑企业内部因素组织冗余对企业社会责任与技术创新关系的影响。
此外，本文对中国企业管理还有一定的实践启示。企业社会责任是企业的一种投资，企业把社
会责任这种无形资源应用到产品和服务中，通过提供优质的产品和服务来承担社会责任，从而促
进企业成长；这需要工艺和产品创新等研发活动，包括节能技术、环保材料、环境友好型产品和解
决社会问题的服务项目等，从而构建竞争优势。企业社会责任影响企业成长的路径。

参考文献
[3] MCWILLIAMS A, SIEGEL D. Corporate Social Responsibility and Financial Performance:
Responsibility CORPORATE SOCIAL RESPONSIBILITY: AN OVERVIEW AND NEW RESEARCH
1984.
[7] RUSSO M V, FOUTS P A. A Resource-Based Perspective on Corporate Environmental
Matter in a Dysfunctional Institutional Environment? Evidence from China[J]. Journal of
[10] 齐丽云，张碧波，郭亚楠. 消费者企业社会评价对消费者社会评价的影响[J]. 科研管理,
2016(05):112-121.
responsibility and its effect on innovation and firm performance: An empirical research in
learn to innovate for the greater good[J]. Journal of Business Research, 2016,69(11):5014-
5021.


权小锋, 贺世农, 南开管理评论, 2016(12):159-171.


x The Bologna process in documents and articles (Sorbonne-Bologna-Salamanca-Prague-Berlin) in “The Center of European Documentation”. Magazine #1, dated 2003, p.9