

**International Symposium on Humanistic
Management and Development of New Cities
and Towns (ISHMD)**

October 31 – November 2, 2014 Hangzhou, China

The American Scholars Press

Editors: Chen Huixiong, Jin Zhang, Lisa Hale

Cover Designer: Wang Jianming

Published by
The American Scholars Press, Inc.

International Symposium on Humanistic Management and Development of New Cities and Towns (ISHMD) is published by the American Scholars Press, Inc., Marietta, Georgia, USA.

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ISBN: 978-0-9855986-9-3

Printed in the United States of America

Preface

Humanistic management is a kind of “people-oriented” management pattern, which is quite different from traditional management mode of “Instruments first, people second”, or just regarding people as some kinds of tools. Based on a profound understanding of the roles of human beings in social-economic and business activities, humanistic management is a human-centered pattern that emphasizes people’s prominent central position in all kinds of activities. New urbanization is the new “human-centered” urbanization characterized by urban-rural interaction, intensive conservation, natural ecological environment and harmonious development. Therefore, it is necessary to coordinate and mutually promote the development of cities, towns and new rural communities. The essence of the new urbanization is to achieve human-centered development goals through ways that are not at the expense of agriculture and food, ecology and environment. That is, to focus on farmers and realize the rural-covering integration and equalization of infrastructure and public services, thus promoting economic and social development and achieving common prosperity. We human beings are the ultimate goal of the new urbanization in which people and happiness are the initial point and foothold of urbanization and city fusion. In the meanwhile, it aims to speed up institutional reform and management innovation, improve the quality of human life and realize China’s dream about new urbanization.

Therefore, the School of Business Administration and School of Urban and Rural Planning & Management held an International Symposium on Humanistic Management and Development of New Cities and Towns (ISHMD 2014) from October 31 to November 2nd, 2014 at the Zhejiang University of Finance & Economics, in Hangzhou, China. Over one hundred scholars attended the symposium. Several scholars were invited from the USA to speak at the Symposium, including Professor Ronnie Clayton from School of Business, Jacksonville State University; Dr. Ermal Shpuza, Department of Architecture, Texas Southern University; Eric Gagnon, head of department at American Enterprise Marketing Association; Dr. Linda Sun, head of International Department, Southern Polytechnic State University; Dr. Ahmad Khan, manager of International Service Department, AT&T; Dr. William D. Markle, School of Economics and Management, Zhejiang University of Science and Technology; Dr. Zhang Xiaoling, associate professor of City University of Hong Kong; professor Huang Jianxin, vice-president of Zhejiang University of Finance & Economics; professor Chen Huixiong, Dean of the School of Business Administration, Zhejiang University of Finance & Economics; Dr. You Liqun, Secretary of the Party Committee of School of Business Administration, Zhejiang University of Finance & Economics; professor Bao Haijun, Assistant Dean of School of Urban and Rural Planning & management, Zhejiang University of Finance & Economics; professor Chen Shibin, Assistant Dean of School of Business Administration, Zhejiang University of Finance & Economics; professor Wang Jianming, Assistant Dean of School of Business Administration, Zhejiang University of Finance & Economics; professor Fan Jun, assistant dean of School of Business Administration, Zhejiang Gongshang University; professor Shang Zhengyong, Assistant Dean of Urban and Environmental Science College, Huaiyin Normal University; assistant professor Dang Huaiqing, Assistant Dean of School of Business Administration, Zhejiang University of Science

and Technology; assistant professor Huang Meichu, vice-president of Xiaoshan College, Zhejiang Radio & Television University.

At this meeting, I gave a keynote speech, *Humanistic Conception and People's Position in The New Urbanization in China*, which demonstrated the humanistic characteristics of new urbanization and development. Many American experts also addressed keynote speeches such as Ronnie Clayton from the Business School of Jacksonville State University; Ermal Shpuza from the Department of Architecture at Southern Polytechnic State University; Eric Gagnon, the director of the American Marketing Association. In the group discussion stage of the General Assembly where delegates could launch group discussions, there were three issues that arose: "Humanistic Management, Strategic Management," "Green Management, Logistics and Supply Chain Management", and "International Paper Workshops and New Urbanization". In the Q & A session, experts and scholars made in-depth academic exchanges and discussions on a series of issues: humanistic management (happy work, happy management), human resource management, urban-rural integration and social governance, and urbanization in happiness, etc. The seminar atmosphere was awesome.

About forty papers have been selected for publication through a rigorous review process. All of these papers attempt to make a contribution to humanistic management and new urbanization in different research areas. All of the papers represent the authors' views, but not the views of editors. There must be some defections in the proceedings as the time was limited, and we are glad to have your advice.

Professor Chen Huixiong

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Keynote Address I

Sustainable Urbanism: Street Networks as Generators of Adaptive Urban Form

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Introduction

Cities are cradles of civilization and milieus of innovation and prosperity. By no surprise, cities continue to attract population, and a few years ago we surpassed the threshold of more than half of world population living in cities. The United Nations projects that the percentage of the world's population in cities will continue to increase in the years to come. While China has historically been part of this global trend, the scale of urbanization in recent years is unprecedented given the population size and the rate of population migration from the countryside to cities. China thus, faces the paramount challenge of planning, designing and managing new cities and expanding existing ones based on humanistic principles.

While the socio-economic background for the development of new cities is unique to China in this phase of its history, we can learn from the vast knowledge of planning and designing cities in the past and from other parts of the world. How to plan and design future cities that can best serve our aspirations for a better life, social cohesion, sustainability, and low impact to the environment? How can we learn from the mistakes of the west, such as the case of suburban developments in the United States? How can aspects of good urbanism from historical precedents inform the way we plan and design future cities?

Apart from the society itself, cities are the most complex human artifact. They are manifestations of a wide range of socio-economic and physical factors, and in turn affect most aspect of social life. This paper focuses the discussion on streets as fundamental elements of the urban form from the viewpoint of social life and sustainability. It considers streets in both the global scale of planning street patterns and networks, and the local scale of designing street profiles (Jacobs, 1996) and the way the block faces configure urban space.

Ingredients of Good Urbanism

Successful cities are commonly defined based on the amenities they provide, including the places to live, work, entertain and become involved in social activities. According to a common point of view, this vision for the city is translated literally into a list of buildings and places that support such activities. We thus, celebrate the opening and improvement of public buildings, parks, schools, hospitals, and offices. Such events are also considered measurable points of success for politicians and leaders of large organizations, in part, because they can be achieved in a relatively short period of time. This position results in the often-celebrated role of architects being responsible for the design of buildings in the city. The large-scale development in China in recent years has attracted world-renowned architects that have left their signatures on important buildings across the country.

Does great architecture equate into good urbanism? Undoubtedly, architectural design is responsible for a large and important part of the built environment, and successful cities always include great

architecture of public buildings, museums, train stations, shopping arcades, and sport palaces. But the opposite is not always true. Great architecture alone does not guarantee good urbanism. The paper aims to argue that planning and design of streets and street networks is the foundation of good urbanism and the way buildings and city parts are put together to contribute towards better social life.

Streets and ‘Towers in the Garden’

The progressivist vision of the city proposed by the modern architecture movement in the first half of the twentieth century is centered on the idea of ‘object in the field’ or ‘tower in the garden’. It is best elaborated in Corbusier’s proposals for *Ville Contemporaine* and *Ville Radieuse* (Figure 1). The designs were a revolutionary reaction to the traditional city, which was considered too overcrowded and unable to provide healthy environments. Realizations of those ideas in the West during the three decades after World War II have been heavily criticized primarily for the way the buildings and building entrances relate to the streets. In contrast, Jane Jacobs, in her influential book *The Death and Life of Great American Cities* (1961), pointed to the timeless and valuable aspects of traditional cities from the point of view of how streets contribute to important aspects of social life.



Figure 1. (Upper left) Plan Voisin, Paris, France, 1925, Designer: Le Corbusier. (Upper right) City center, Albany, New York, USA, 1965-1979, Designer: Harrison Abramowitz. (Lower left) Stuyvesant Town, New York, USA. (Lower right) housing blocks in Eastern Europe

Many architectural projects that have recently made headlines in China are based on the ‘tower in the garden’ idea. The Nanjing Office Tower by UDG China and Nanjing Exhibition Center by TVS Architects impresses with the volumetric composition, formal language and features of grandiose design (Figure 2). While successfully fulfilling the programmatic requirements of their clients and arguably succeeding at the architectural design level, the projects have little in common with good urbanism. The buildings are celebrated as ‘objects in the field’ and do little to activate the surrounding streets. They are retreated away from the pavement, separated from the streets with parks, and they create huge urban blocks that discourage walkability. The schemes are oriented inwardly towards the center of the urban block, and turn their backs to the street. The rows of trees framing the streets cannot suffice to give spatial definition, and thus streets are degraded to ‘roads’ suitable only to fast moving automobile traffic but not to a walking pedestrian.



Figure 2. (Left) Nanjing Office Tower, Designer: UDG China, image Lexigon. (Right) Nanjing Exhibition Center, South Extension, Designer: TVS Architects, image TVS Architects.

Cloud Citizen Shenzhen goes even further with its futuristic architecture that impresses with imaginary designs suitable for science fiction movies (Figure 3). It raises the bridges between towers above the street, thus clearly achieving two undesirable results: first, the bridge competes with the street by removing the people that would otherwise use the street to move between the buildings. This reduces the levels of pedestrian movement, which is key to maintaining a safe and lively atmosphere in the streets. Second, it shields the buildings from the street as if street is something dangerous to be protected from. Over and above the imaginary design of its volumetric composition that shares many characteristics with utopian vision of the 1920s cinematography (Figure 2), Cloud Citizen Shenzhen repeats the grave mistakes of architects in the West during the last gasps of modernism in the 1970s (Figure 1). The vast inventory of failures of modern urbanism in the West must suffice to avoid the repetition of similar mistakes in China.



Figure 3. (Left) Cloud Citizen Shenzhen, Designer: Urban Future Organization and CR Design, image UFD CRD. (Right) Utopian image from the film ‘Metropolis’ by Fritz Lange in 1926, image Alberto D’Arce.

Resilience and Adaptability of Streets

Streets are the most permanent elements of urban form. Most streets in historical cores of cities can be traced back to the origins of the city. The street resilience is attributed to the fact that they are public, and unlike private land lots, they are not exchanged in the real estate markets. The comparison between two historical maps of Manhattan, New York, in 1873 and 1999, reveals that the streets have remained intact, unlike the substantial changes in the buildings from mid-rise buildings to high-rises (Figure 4). In addition to changes in building typology, streets have been able to successfully support the transition from housing to office use. Comparisons between historical stages of development of other cities around the world testify to the resilience of streets and their ability to adapt to changing socio-economic conditions, and enabling various built forms and building uses to exist over time.

Are street networks in the cities we are currently planning and developing able to withstand future changes in the built fabric? What would become of the urban blocks of Nanjing Office Tower and Exhibition Center when the two building complexes no longer exist in a not so distant future? Examples from suburban developments in the United States suggest a bleak picture in the future. Most suburban developments, with their hierarchical street configurations encompassing huge urban blocks, cannot support any building typology other than single-family houses. Unlike street network in historical cities, which have been able to withstand changes over millennia, the suburban street patterns are congealed into a configuration that is unlikely to withstand future changes and is thus unsustainable.



Figure 4. Aerial views of Lower Manhattan, New York, USA in 1877 and 1999 indicating the substantial changes in building typology while the street network has remained intact.

The sustainability of street networks is closely linked to the effect of block size on patterns of development over time. Siksna (1999) argues that there is a favorite dimension for urban blocks, ranging around 100m. His survey of several central areas in cities in North America and Australia demonstrates that small blocks, like in Portland, USA (Figure 5), tend to merge together over time to allow the construction of certain configurations of buildings. In contrast, large blocks exceeding 300m, like in Adelaide, Australia, tend to be partitioned over the years with streets and alleys in order to maximize the length of block faces abutting streets (Figure 5). Meanwhile, small blocks are shown to correlate to higher levels of pedestrian movement and are preferred to large ones. ‘Towers in the garden’ developments are dependent on mega blocks that well exceed 300-400m in length. Are new urban developments in China considering the need for small urban blocks as a key requirement for achieving a humanistic character of future cities?

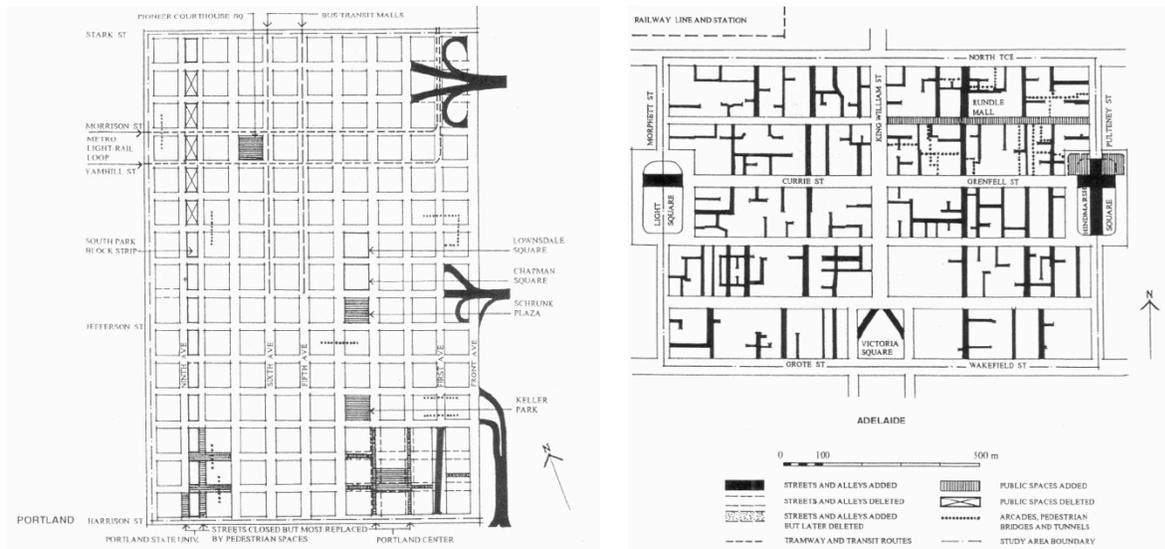


Figure 5. (Right) The merging of small urban blocks in Portland, USA over the years to allow for large building typologies. (Left) The subdivision of large urban blocks in Adelaide, Australia over time to maximize retail frontage.

Space Syntax Analysis of Street Networks

Space syntax is set of theoretical ideas and analytical tools for the analysis of urban space based on topological features. An axial map is one of the most powerful representations of the city, according to which street networks are represented with the fewest and longest lines (Hillier & Hanson, 1984). Lines are considered as graph elements (Harary, 1969), and intersections between lines are graph links (Figure 6). Integration is one of the most commonly used syntactic measures of in syntactic analysis of cities; it is based on the topological depth, i.e. shortest path graph distance, among lines.

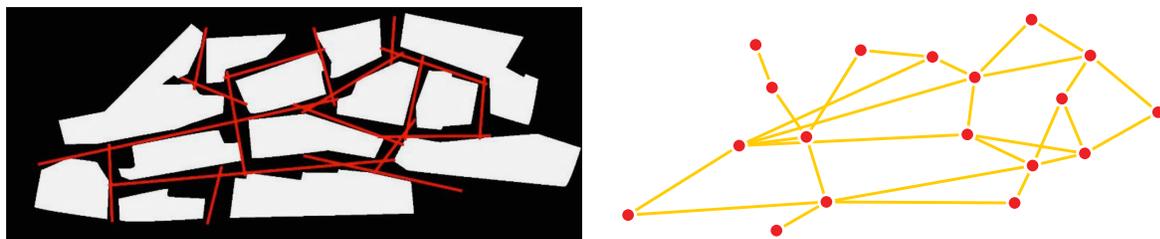


Figure 6. Representation of open space of streets and public spaces in the city with axial map. (Right) An axial map in red. (Left) Axial lines represented with graph nodes in red, and intersections between lines with graph links (yellow).

Since the publication of *The Social Logic of Space* in the 1980s, a growing number of studies have shown that the axial map analysis of streets captures the potential of street networks to influence the distribution of pedestrian movement in cities (Hillier, et al., 1987; Hillier, et al. 1993; Peponis, et al., 1989), cognition (Penn, 2003), to reveal the social logic of urban form (Hillier, 1989), enabling the formulation and evaluation of urban designs (Hillier, 1993), and affecting social sustainability of cities (Hillier, 2009). The distribution of integration values in the city has also indicated important cultural underlying traits of cities in various countries and world regions (Shpuza, 2014) (Figure 7). It is important

to consider the spatial structure of street networks when planning and developing new cities and when intervening in existing cities. A number of studies, many of which have been published in *International Space Syntax Symposia* over the years, have shown examples of applying space syntax tools to generate planning strategies and evaluate design proposals.

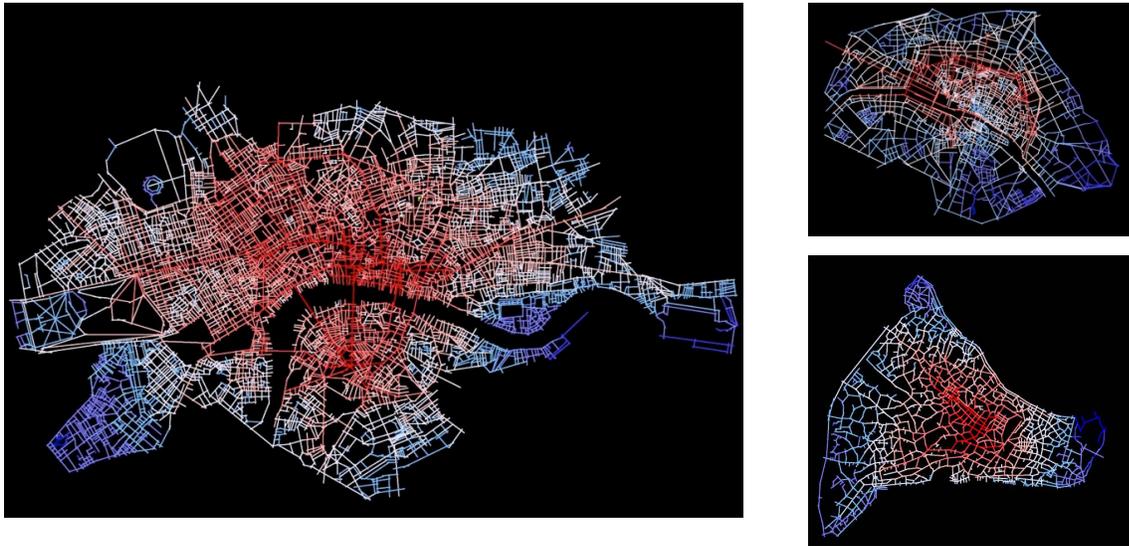


Figure 7. The axial analysis of London, UK 1835, Paris, France, 1834 and Istanbul, Turkey 1840 (Peponis, Shpuza & Rashid, 2000). The distribution of integration values in street segments from high (red) to low (blue) depict important spatial characteristics of street networks in the city.

Urban Design Pedagogy

It is important to educate the future generation of planners and designers to be able to face the challenges of future cities. Since 2009, Urban Design Studio has become a required studio and one of the main pedagogical components in the Department of Architecture at Kennesaw State University (formerly Southern Polytechnic State University). Urban Studio engages the city as an integrated design problem. The studio focuses on the (re)design of public spaces, streets and boundaries in an existing urban environment, which, on one hand, are considered manifestations of political order and cultural identity, and on the other hand, constitute elements of built form that greatly impact social and economic life of communities. The studio envisions the design of sustainable environments that encourage higher densities, walkability, and a mixture of activities aimed at counteracting sprawl, segregation and zoning guidelines based on designated use. The studio emphasizes the planning and designing of street networks and the right sizing of urban blocks as fundamental elements for the future success of cities (Figure 8).

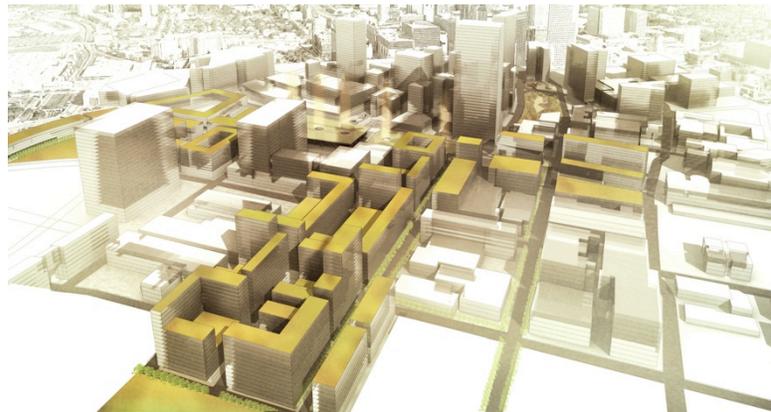
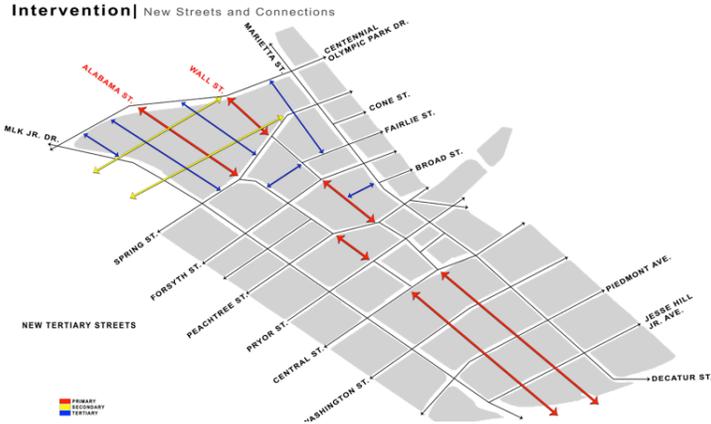
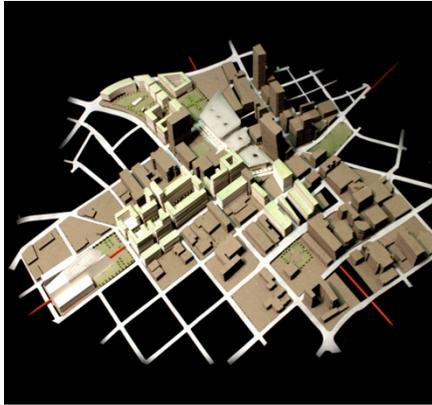


Figure 8. Examples of student work in Urban Design Studio, at the Department of Architecture, Kennesaw State University (formerly Southern Polytechnic State University). The projects are based on a rigorous analysis of urban conditions including street networks. They emphasize the improvement of connectivity of streets and offer proposals for streets shared by pedestrians and various modes of transportation, and aim at activating streets with a wide range of activities along their entire length.

Local authorities, planners and designers in China should reconsider the nature of development and strive for sustainable solutions. The least they can do is to not repeat the grave mistakes of suburban urbanization in the United States. It is paramount to understand the role of streets and street networks as the foundation for sustainable and humanistic urban growth, and to emphasize a full understanding of the past for guiding us into the future. Some important lessons can be learned by revisiting and pondering upon the charming streets of the historical center of Hangzhou.

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Biography

Dr. Ermal Shpuza is an Associate Professor of Architecture at Southern Polytechnic State University. His research interests span across complex systems in cities, architectural and urban morphology, urban history and design computing. His work is focused on the study of evolution of Adriatic and Ionian coastal cities, interaction between boundary shape and circulation network in buildings and cities, development of descriptive measures of shape, impact of physiography on street networks and effects of building floorplate on daylight and acoustics. He teaches design studios focusing on urban design and environmental systems and courses on research methods, morphology and design, urban design theory and environmental technology. He received his architectural professional degree from Polytechnic University of Tirana, MSc in Architecture from the Bartlett, University College London, and his Ph.D. in Architecture from Georgia Institute of Technology, Georgia, USA.

Keynote Address II

Mortgage-Backed Securities in the U. S. and China: Benefits and Risks

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[Abstract] The mortgage market is a large and growing part of the world's financial markets. In the United States alone, the mortgage debt totaled more than \$13.3 trillion at the end of the third quarter 2014. Approximately \$10 trillion of that debt is for single-family residences. In order to encourage home ownership through greater availability of mortgage funding and lower mortgage interest rates, the United States has established and maintained a market for mortgage backed securities (MBS) that allows investors to purchase interest in somewhat diversified pools of mortgages, thus providing liquidity to those financial institutions that originate mortgages. The total of outstanding MBS based upon mortgages originated in the United States exceeded \$7.5 trillion in 2014, representing more than 50% of all outstanding mortgages. China began to experiment with the securitization of assets in 2005, but suspended the experiment during the global Great Recession. Recently (2012), China allowed the asset securitization experiment to resume and in July 2014 the Postal Savings Bank of China served as the issuer of the first MBS issue in China in 7 years.

Introduction

In 1969 the United States Congress enacted amendments to the National Housing Act that mandated the establishment of an active secondary market for mortgage securities. The amendments set in motion the creation of the Government National Mortgage Association (GNMA), the Federal National Mortgage Association (FNMA) and the Federal Home Loan Mortgage Corporation (FHLMC) to structure and issue mortgage-backed securities (MBS). The intent was to bring additional liquidity to the overall mortgage market by allowing investors to purchase interest in a pool of mortgages rather than invest directly in mortgages. Thus, investors could invest relatively small amounts in a somewhat diversified pool of mortgages. Investors that would not normally purchase a mortgage because of the amounts involved and the risk of loss should the single mortgagor default then had more access to mortgage investing because of the small minimum investment (originally \$25,000) and the spreading of the risk of default over a number of mortgagors. To investors, an additional attraction of the MBS was an explicit or implied guarantee from the U. S. government. GNMA backed securities have the “full faith and credit” backing of the U.S. government for the timely payment of both principal and interest. Investors in the past have assumed that FNMA and FHLMC securities provided an agency guaranteed of the timely payment of interest and the ultimate payment of principal. While FNMA and FHLMC both assume the risk of default on mortgages in their pools, both now explicitly state that there is not a governmental or a governmental agency guarantee of the payment of principal and/or interest. (Federal Housing Finance Agency (fhfa.gov) Reports and Plans.)

Mortgages and MBS in the U. S.

Mortgages originated in the United States totaled more than \$13.3 trillion at the end of the third quarter 2014 and more than \$10 trillion of that amount represented single-family mortgages. The majority of mortgages originated in the U. S. are instruments that carry a fixed rate of interest for 15, 20, or 30 years.

They are amortizing instruments so that interest is paid on the outstanding balance and the principal amount of the loan is paid down over the life of the loan. Most U.S. mortgages can be prepaid at the option of the mortgagor (homeowner).

MBS are based upon a pool of mortgages usually with similar characteristics. The pool may contain several hundred individual mortgages with total outstanding principal of hundreds of millions of dollars or more. The original MBS were simply pass-through securities, meaning that all of the principal (including prepayment of principal) and interest paid on the pool (less servicing and guarantee fees) was passed through to the investor in proportion to the investor's share of the pool. This structure carries a substantial degree of uncertainty relative to when and how much cash flow will be provided by the investment due to the uncertainty surrounding the mortgagors' prepayment option.

In May 1983, the FHLMC became the first organization to issue the MBS that we now know as Collateralized Mortgage Obligations (CMO). The first CMO attempted to restructure the mortgage cash flow as bond-like with differing sequential "tranche" securities as follows:

1. "A" tranche is short-term and receives promised cash flow plus all prepayment cash flow until the tranche is completely paid.
2. "B" tranche is mid-term and receives promised cash flow plus all prepayment cash flow after "A" tranche is paid and until the "B" tranche is completely paid.
3. "C" tranche is longer-term and receives promised cash flow while either "A" or "B" tranche is outstanding and receives all prepayment cash flow after both "A" and "B" are completely paid.
4. "Z" tranche is a residual tranche and absorbs any excess cash not required for tranches "A" "B" or "C".

U. S. tax law changes in 1986 permitted restructuring of mortgage-backed securities as Real Estate Mortgage Investment Conduits (REMIC) that provided for multi-structure collateralized mortgage obligations or mortgage backed securities. Most U. S. CMO are issued by one of the three organizations discussed above: GNMA, FNMA, or FHLMC. An example of a typical REMIC CMO issue is provided below:

Prospectus Supplement
(To REMIC Prospectus dated June 1, 2014)

\$1,787,142,830



FannieMae.

**Guaranteed REMIC Pass-Through Certificates
Fannie Mae REMIC Trust 2014-60**

The Certificates

We, the Federal National Mortgage Association (Fannie Mae), will issue the classes of certificates listed in the chart on this cover.

Payments to Certificateholders

We will make monthly payments on the certificates. You, the investor, will receive

- interest accrued on the balance of your certificate (except in the case of the accrual classes), and
- principal to the extent available for payment on your class.

We will pay principal at rates that may vary from time to time. We may not pay principal to certain classes for long periods of time.

The Fannie Mae Guaranty

We will guarantee that required payments of principal and interest on the certificates are available for distribution to investors on time.

The Trust and its Assets

The trust will own

- Fannie Mae MBS and
- underlying REMIC and RCR certificates backed by Fannie Mae MBS.

The mortgage loans underlying the Fannie Mae MBS are first lien, single-family, fixed-rate loans.

Carefully consider the risk factors on page S-8 of this prospectus supplement and starting on page 14 of the REMIC prospectus. Unless you understand and are able to tolerate these risks, you should not invest in the certificates.

You should read the REMIC prospectus as well as this prospectus supplement.

The certificates, together with interest thereon, are not guaranteed by the United States and do not constitute a debt or obligation of the United States or any agency or instrumentality thereof other than Fannie Mae.

The certificates are exempt from registration under the Securities Act of 1933 and are "exempt securities" under the Securities Exchange Act of 1934.

Class	Group	Original Class Balance	Principal Type(1)	Interest Rate	Interest Type(1)	CUSIP Number	Final Distribution Date
IP(2)	1	\$ 51,024,285(3)	NTL	3.5%	FIX/IO	3136ALDH1	February 2043
EP(2)	1	178,585,000	PAC/AD	2.5	FIX	3136ALDJ7	February 2043
PV(2)	1	7,685,000	PAC/AD	3.5	FIX	3136ALDK4	January 2026
PZ(2)	1	16,048,000	PAC/AD	3.5	FIX/Z	3136ALDL2	October 2044
Z	1	40,000,000	SUP	3.5	FIX/Z	3136ALDM0	October 2044
NA(2)	2	362,206,000	PAC	4.0	FIX	3136ALDN8	June 2043
NB(2)	2	38,708,000	PAC	4.0	FIX	3136ALDP3	October 2044
NF	2	88,585,400	SUP	(4)	FLT	3136ALDQ1	October 2044
NS	2	27,682,938	SUP	(4)	INV	3136ALDR9	October 2044
EA	3	266,393,997	SEQ	3.0	FIX	3136ALDS7	September 2040
EV(2)	3	24,319,000	SEQ/AD	3.0	FIX	3136ALDT5	November 2027
VE(2)	3	13,762,000	SEQ/AD	3.0	FIX	3136ALDU2	July 2033
EZ(2)	3	50,716,999	SEQ	3.0	FIX/Z	3136ALDV0	October 2044
LA	4	177,701,000	SEQ	3.5	FIX	3136ALDW8	December 2040
LV(2)	4	17,591,000	SEQ/AD	3.5	FIX	3136ALDX6	October 2027
VL(2)	4	10,911,000	SEQ/AD	3.5	FIX	3136ALDY4	August 2033
LZ(2)	4	30,731,830	SEQ	3.5	FIX/Z	3136ALDZ1	October 2044
MP(2)	5	207,829,000	PAC/AD	2.0	FIX	3136ALEA5	September 2044
MI	5	103,914,500(3)	NTL	4.0	FIX/IO	3136ALEB3	September 2044
ZM	5	522,000	PAC	4.0	FIX/Z	3136ALEC1	October 2044
FA	5	73,319,200	SUP	(4)	FLT	3136ALEDE9	October 2044
SA	5	18,329,800	SUP	(4)	INV	3136ALEE7	October 2044
LP(2)	6	117,131,000	SC/PAC/AD	2.0	FIX	3136ALEF4	March 2044
LI	6	43,924,125(3)	NTL	4.0	FIX/IO	3136ALEG2	March 2044
ZL	6	295,000	SC/PAC	3.5	FIX/Z	3136ALEH0	March 2044
PL	6	18,089,666	SC/SUP	3.5	FIX	3136ALEJ6	March 2044
R	0	0	NPR	0	NPR	3136ALEK3	October 2044
RL	0	0	NPR	0	NPR	3136ALEL1	October 2044

- (1) See "Description of the Certificates—Class Definitions and Abbreviations" in the REMIC prospectus.
(2) Exchangeable classes.
(3) Notional principal balances. These classes are interest only classes. See page S-6 for a description of how their notional principal balances are calculated.
(4) Based on LIBOR.

If you own certificates of certain classes, you can exchange them for certificates of the corresponding RCR classes to be delivered at the time of exchange. The GP, HP, PA, PB, NP, EB, LB and AP Classes are the RCR classes. For a more detailed description of the RCR classes, see Schedule 1 attached to this prospectus supplement and "Description of the Certificates—Combination and Recombination—RCR Certificates" in the REMIC prospectus.

The dealer will offer the certificates from time to time in negotiated transactions at varying prices. We expect the settlement date to be September 30, 2014.

Credit Suisse

The date of this Prospectus Supplement is September 24, 2014

Source: Page taken from a typical FNMA Prospectus Supplement dated September 24, 2014.

The FNMA offering above is for approximately \$1.8 billion. Twenty-six different securities were created from the pool in 6 different groups. The securities consist of:

1. Fixed interest and principal securities.
2. Interest only securities.
3. Securities with interest tied directly to an interest rate index (when the index increases the interest payment increases).
4. Securities with interest tied inversely to an interest rate index (when the index increases, the interest payment decreases).

The securities based upon this pool are interconnected in that the payments that investors receive from their investment in some of the securities is dependent upon the payments to other securities. Additionally, payments to some securities are dependent upon the rate of prepayment on the underlying mortgages.

Asset Securitization in China

Asset securitization in China was allowed on an experimental basis beginning in 2005. Based upon the widely held understanding that derivative securities created under the concept of *asset securitization* played a significant role in causing the *Great Recession*, the experiment was suspended during the global financial crisis. Only recently did the Chinese Government allow the experiment of asset securitization to be resumed. In May 2012, the People's Bank of China, the China Banking Regulatory Commission and the Ministry Of Finance jointly provided the *Circular On Relevant Matters Concerning Further Expansion Of The Pilot Securitization Of Credit Assets*, thus marking the restarting of credit asset securitization in the country.

In July 2014, the first mortgage-backed security issue allowed in China in 7 years was offered. The Postal Savings Bank Of China served as issuer and offered MBS totaling 6.8 billion Yuan (approximately \$1.1 billion). A number of reasons were provided in the decisions to resume issuance of MBS.

1. Home sales in China declined 9.2% in the first six months of 2014
2. Housing prices have shown some tendency to decline.
3. Mortgage backed securities may provide additional liquidity to the Chinese mortgage market and permit more people to obtain mortgages to buy homes.
4. Permitting these securities may be an indication of the Chinese government's desire to support the housing market.

The characteristics of the July 2014 mortgage-backed security issue are based upon a mortgage pool of loans made to homebuyers in 12 cities, 10 provinces. The buyers all live in the homes. The MBS notes were priced at issuance to yield between 5.3% and 5.8%. (The MBS issue was described in the *Wall Street Journal* July 23, 2014.

Conclusion

As China's real estate market continues to struggle, the continued issuance of MBS may serve to provide some assistance. Mortgage backed securities add liquidity to the housing finance market and may allow the Chinese government lower mortgage interest rates. These outcomes will tend to make home ownership more available.

Mortgage-backed securities are not without risk and are subject to default risk, prepayment risk, and the risk that lenders will not uphold credit standards. These types of risk contributed greatly to the 2007-

2009 global financial crises. China will need to carefully consider how the utilization of MBS will influence their markets. Will the outcome be better access to homeownership or more easily accessible funds for real estate speculation? Greater levels of homeownership will be beneficial to the Chinese populace; however, greater ability to speculate will likely cause significant issues in the real estate market in the future. For those interested in additional understanding of the benefits of risks of asset securitization two outstanding sources of information are the *Securitization of Financial Assets* (Jason H. P. Kravitt, Editor, Aspen Law and Business) and *The Handbook of Mortgage-Backed Securities* (Frank Fabozzi, Editor, Probus Publishing). Both sources provide extensive information to allow the reader to better understand the process and requirements of asset and mortgage securitization.

Biography

Dr. Ronnie Clayton serves as the Glenn Huie Eminent Scholar and Professor of Finance in the College of Commerce and Business Administration at Jacksonville State University. Professor Clayton joined the faculty of the Department of Finance, Economics and Accounting in June 2000. His teaching and research interest are in the areas of U.S. and international investing, asset valuation and financial issues in bank management. Among the journals in which he has published articles are the *Journal of Financial Research*, *Decision Sciences*, *the Financial Review*, *the Financial Management Journal*, *the Journal of Portfolio Management*, *the Journal of Personal Finance*, *Journal of Applied Finance* and *Advances in Financial Planning and Forecasting*.

Dr. Clayton regularly provides expert analysis and testimony for cases involving mortgage derivatives, mortgage valuation and the valuation of financial institutions. His most recent consulting activities involved the valuation of approximately 6,000 mortgages in the bankruptcy proceedings for American Home Mortgage, Inc. and the valuation of collateralized debt obligations in the bankruptcy proceedings of Lehman Brothers Holding, Inc.

Dr. Clayton currently serves as Executive Director of the Southern Finance Association (the co-sponsor of the *Journal of Financial Research*) and as the editor of the journal *Financial Decisions*. During his career Dr. Clayton has served on the faculty of the University of Georgia, the University of Kentucky, the University of Tennessee, the University of Central Florida and the Crummer Graduate School of Business at Rollins College. Dr. Clayton earned his Ph.D. in Business Administration at the University of Georgia in 1982. His BSBA and MA degrees were earned at the University of Alabama in 1976 and 1978, respectively.

Keynote Address III

The New Marketing Model: The Content-Based Marketing Revolution

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As China continues its aggressive development and expansion of its cities and industrial areas, these efforts will also require building a strong economic base, consisting of companies who can execute world-class sales and marketing strategies to sell their products in both domestic and global markets. For these companies, strong, sustainable growth depends on employing world-class sales and marketing methods to sell their products in the new ways their potential buyers will want to buy from these companies, as a result of the revolutionary changes brought about by the Internet and global information access through the widespread use of smartphones and other mobile devices.

Business-to-Business Marketing's Role in Economic Development

Business-to-business (B2B) marketing and sales, the marketing and sales of products manufactured by one business and sold to another business, for industrial, commercial, or professional use by that business, is an important but little-known part of China's economy. According to U.S. research firm Frost & Sullivan, the global marketplace for B2B products is forecast to grow to 41.64 trillion RMB in gross merchandise value by 2020 and will be roughly twice as large as the business-to-consumer (B2C) market by that time. Compared to consumer marketing, where consumer products such as automobiles, televisions, and other everyday products are sold direct to mass markets of individuals, B2B marketing is unique in the following ways:

- **Highly segmented markets:** B2B marketing occurs within specific industrial, trade, and professional segments utilizing specialized marketing programs addressed to targeted individuals within these segments.
- **Longer, more complex buyer purchase decision-making processes:** Products sold in B2B markets are often expensive and highly complex; because of this, potential buyers of these products often undergo an equally long, complex decision-making process, which often involves several decision-makers at the buyer's company, to make the final purchasing decision during this "sales cycle".
- **Products are sold by highly qualified and knowledgeable sales professionals, supported by sophisticated marketing programs:** Because of the high cost and complexity of products sold in B2B markets, these products are usually sold by teams of experienced sales professionals, who build relationships with potential buyers during their purchase decision-making process, who answer questions about the product, and make use of sophisticated marketing programs to communicate critical information to these prospects to address the critical needs and issues raised by the prospect about the problem or issue that is solved by the seller's product.

In addition to these characteristics, highly complex products sold in B2B markets require an extensive process of educating prospects on the important features of the seller's product, and information providing insight on how this product can solve the prospect's problem, technical application, or business

issue. For the seller, success depends on how effectively the seller's sales and marketing team can implement this education process for its prospective buyers, who each have their own unique problems and needs in relation to the seller's product.

The Internet and the Rise of the Self-Educating Buyer

A large number of prospective buyers in B2B markets now do their own online research on products of interest, by performing keyword searches, accessing company and product Web sites, and researching information and news articles on third-party industry news sites and social media discussion forums. Here are the results of important research on buyer behavior in U.S. B2B markets that reveal important changes in the ways that global buyers research and evaluate products in B2B markets:

- 93% of all B2B buyers begin their product research process by conducting research on the Internet (iMedia);
- 51% of all B2B buyers delay their initial contact with companies until they create a "short list" of preferred vendors for the product they are interested in buying, based on this initial online research (DemandGen);
- 94% of buyers access and view multiple pieces of product-related information (content) available on company Web sites and other sources during their purchasing process (DemandGen)
- 56% of buyers say they are "less than satisfied" with their B2B buying experience, compared to 36% in a prior year's survey; this dissatisfaction is mainly caused by poor performance in the two areas they find most important: Timeliness of the seller's response, and relevance of the information provided (DemandGen)
- Additionally, online buyers now trust conventional advertising 20-25% less than they did in 2009, according to a Nielsen survey.

Based on these changes, it is clear that B2B buyers are now more empowered to conduct their own product research, and much of the success of a company's marketing program now depends on the quality and relevance of the information, or content, that is provided by companies to these potential buyers. These changes in buyer behavior require a radically different approach to sales and marketing compared to traditional marketing programs implemented by companies just a few years ago. For example, instead of relying exclusively upon the information provided by a company's sales team, buyers now have access to a wide array of online product information available not only from the company, but from the company's competitors, third-party industry news sources, and other online users. Increasingly, potential buyers performing their initial product research seek out factual and objective product information – content – as an important part of their decision-making process when making a purchase decision.

The Content-Based Marketing Revolution

To meet the needs of these new, self-educating buyers, companies in B2B markets are now implementing content-based marketing programs, which represent a radical change in how these companies present their products and interact with potential buyers. Here are the major differences between content-based marketing and traditional, old-style B2B marketing programs:

Provide an Objective, Problem-Solving Information

Whereas, in the past, companies would focus on promoting their company's products by extolling their product's features, benefits, and other positive attributes in heavily promotional language, content-based

marketing programs present factual, reasonably objective information on the company's products that is focused on solving the problems experienced by buyers in these markets.

Freely Accessible Information

Where companies once held a monopoly on information about their products, and where potential buyers once had to rely upon a company's sales team as the sole provider of this product information, content-based marketing programs now make useful product information – and problem-solving information involving the company's product – freely accessible to potential buyers, through the company's Web site, through online social media, and through automated and personal e-mail communications with these prospective buyers (prospects).

Provide Non-Promotional Information in a Wide Variety of Formats

Where companies once provided a limited range of advertisements, brochures, product flyers and other highly promotional material to their prospects, companies employing content-based marketing utilize a wide variety of information, much of it written or presented in an objective, non-promotional tone, and make it available in a wide variety of online, print, video, audio, and interactive formats and media, to present the problem-solving aspects of the seller's product.

Use of Software Tools to Increase the Efficiency of the Marketing and Sales Process

Companies now have access to a wide range of tools, such as customer relationship management (CRM) and marketing automation software systems, to help them more efficiently manage their interactions with their potential buyers, and to deliver content more efficiently and effectively when needed by these potential buyers.

Goals of Content-Based Marketing Programs Serving B2B Markets

The primary goal of content, distributed to potential buyers, is to position the seller as a "thought leader": A company whose unique perspective on how it can solve the buyer's problem places it foremost in the buyer's mind as the best provider of this solution for the prospect. Through use of effective content, companies who are thought leaders in their industries achieve a distinct advantage and leadership position ahead of their competition in the buyer's mind, becoming the preferred provider of the solution offered by the company selling its product.

Content-Based Marketing Programs Showcase Company Expertise

Content-based marketing programs are based on the principle of "show what you know": Discovering, developing, publishing, and communicating the specialized expertise that is possessed by the company and its management, technical, and product development teams. This unique knowledge, when applied to content that is used to market and sell its products, also helps to position the company as being uniquely suited to solve the prospect's business problem or issue. This content can take many forms, from reports, articles, and "white papers" covering specific problems and their solutions, to online video presentations, interactive programs, online Web discussion seminar presentations ("Webinars") and other media forms.

To implement successful content-based marketing programs, companies must also develop content to meet the needs of their prospects in a wide range of the industries and markets served by the company, since each of these markets or industries have unique and different problems, business issues, and other needs that are solved by the company's product. As well, content must be developed to meet the needs of specific types of prospects, by their job title or responsibility within the buyer's company. For example,

prospects who are financial managers in the buyer's company will require content that addresses the cost, financial return (ROI), and savings available from the seller's product; another type of prospect within that same company, for example an engineer or technical manager, will require different content that documents the specific applications for the seller's product, and how this product solves this technical buyer's problem.

Most importantly, however, content must be developed to address the typical key questions asked by each type of prospect within a buyer's company, during the extended time period required for these buyers to make their purchase decision. For example, at the start of their decision-making process, buyers will require basic, factual information on the kinds of problems that can be solved by the seller's product. As buyers who read, view, and study this content become better informed (or "self-educated"), they are then ready to receive more advanced content that is more relevant to their specific problem or business issue.

CRM and Marketing Automation Systems Make the B2B Marketing and Sales Process More Efficient

Increasingly, marketing automation systems are utilized in content-based marketing programs to distribute this content to potential buyers, and to track and measure the buyer's interaction with this content. For example, a marketing automation system can determine when a buyer who visits the company's Web site has downloaded a variety of information on a single type of product, and can then automatically send additional, related content of interest to this prospect. Additionally, if this same prospect visits the company's Web site again a week later to view product pricing information, which may indicate a high interest in buying the product, the marketing automation system can then send an e-mail alert to a member of the company's sales team to contact this prospect.

Marketing automation systems are usually integrated with customer relationship management (CRM) systems, which are used by the company's sales team to efficiently document and manage the ongoing interactions between each member of the sales team with each prospect. CRM systems allow members of the sales team to log or document each contact with a potential buyer (such as a phone call or e-mail exchange), and then make note of action items required to meet the prospect's need and set a date for a future follow-up with the prospect. By helping sales professionals keep better records of their interactions with their prospects, CRM systems help members of the sales team to more effectively help their prospects in their purchase decision-making process. The increased efficiency provided by CRM systems helps companies to close more sales, and often helps them shorten the sales cycles for their products, resulting in greater selling efficiency, increased revenue, and higher profits.

Companies are Now Publishers of Content

These radical changes in the way that buyers find, research, and buy products in B2B markets means that companies who market and sell products to these buyers will have to become publishers of content, and not only promoters of their company's products. This will require development of highly specialized skills of prospect profiling, to evaluate the information required by each different type of prospect served by the company, content creation, to develop and produce this content, and content strategy, to utilize marketing automation systems and other tools to effectively communicate the right content to the right prospect at the right time in the prospect's purchase decision-making process.

Making the Transformation: Economic Benefits to B2B Companies in China

Companies in China who can successfully implement content-based marketing programs can gain the following major benefits in their company operations:

They can make their marketing programs more effective and measurable. Use of marketing automation systems can deliver effective content to their buyers that demonstrates how their product solves their buyers' problems; the higher efficiency introduced by marketing automation also enables companies to measure the return on their investment in content-based marketing programs.

More effective differentiation of “commodity” products. Content-based marketing programs help companies who sell products in highly competitive or “commodity” markets to more effectively differentiate and uniquely position themselves against their competitors, creating a major selling advantage for these companies.

Higher domestic sales. As well, content-based marketing helps companies to more effectively differentiate themselves in domestic China markets, by offering unique content to their potential buyers that demonstrates the seller's unique insight into solving that buyer's problem.

Higher sales in global markets, based on value to the customer instead of the lowest price. When implemented in overseas markets, content-based marketing programs help Chinese companies compete much more effectively in these highly competitive international markets, positioning them so they can compete based on their demonstrated expertise applied to solving problems, instead of being the lowest-priced provider. Selling based on value to the customer, instead of merely offering the lowest price, gives Chinese companies the opportunity to derive higher profit margins from each sale and better strategic market positioning for long-term growth

Adopting New B2B Sales and Marketing Strategies Helps Chinese Companies Build a Strong Economic Base for Steady Future Growth

China's aggressive growth plans will require equally aggressive development of world-class business processes and marketing programs to help Chinese companies compete effectively in B2B markets. This will become increasingly important as China strives to develop and grow a vigorous domestic market for its products, and continues its efforts to create and grow new business opportunities in global markets.

Companies in China who are first to make the shift to this New Marketing Model utilizing content-based marketing will gain the biggest early benefit by selling to today's buyers in the ways they want to buy from companies today and well into the future.

Biography

Eric Gagnon, a Director of The Business Marketing Institute, has over 30 years' experience in the marketing, advertising, direct mail, product development, consulting, and publishing fields. He is the author of *The Marketing Manager's Handbook*, and *The CRM Field Marketing Handbook*, and is the developer of the Business Marketing Institute's (BMI) Marketing Skills Assessment, Certification and Skill-Building (MSA/B/C) and CRM Field Marketing (CRM-FM) systems, two Web-based training and certification systems for business-to-business marketing, sales, and product management professionals.

BMI's partners include the Institute for the Study of Business Markets (ISBM) at the Pennsylvania State University Smeal School of Business, the Sales Lead Management Association (SLMA), and the Business Marketing Association; the largest B2B trade association in the U.S. BMI courseware is also utilized in the Penn State University business marketing curriculum. In China, BMI content is utilized by the Training Center of Foreign Experts Affairs (TCSAFE), a government training and professional development agency of the PRC. Gagnon holds two U.S. patents for Internet-related systems and services, and a B.A. in Business Administration/Marketing from George Washington University.

The Effect of Customer Participation and Knowledge Communication on the Innovation of Enterprises and Customer Satisfaction after Service Failure – In the Case of Watsons Cosmetics

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[Abstract] This paper takes the Hong Kong Watsons Cosmetics Company as an example, including the survey of consumer willingness to participate, participation and so on, and finds out the influence factors of Watsons service recovery, such as willingness to participate, participation behavior, satisfaction, loyalty, innovation and so on, to enhance customer willingness to participate in the proposal. The author stressed the target customer group and product positioning, and put forward the development and utilization of public platform marketing strategies.

[Keywords] customer participation; knowledge communication; after service failure; cosmetics; customer and business communication; innovation of enterprises

Introduction

With the steady and sustainable development of China's economy, the cosmetics industry continues to rise rapidly, sales continue to rise, and the market is also expanding. However, a large number of foreign brands in China have the majority of market share; domestic enterprises have cosmetic quality, but they have an uneven level of service, and significant differences, which are likely to leave the customer unsatisfied (Grewal and Roggeveen, 2008). Therefore, enterprises should take remedial measures effectively to reduce these negative effects (Ha and Jang, 2009). This paper uses the Hong Kong Watsons Cosmetics Company as an example, including the survey of consumer willingness to participate, participation and so on, to find out the influence factors of Watsons service recovery, such as willingness to participate, participation behavior, satisfaction, loyalty, innovation and so on (Rod, Ashill and Carruthers, 2008). In order to enhance customer willingness to participate in the proposal, the author stressed the target customer group and product positioning, and put forward the development and utilization of public platform marketing strategies.

Influence Factors of Customer Participation during Service Recovery

In the survey of 201 consumers, 148 people were still willing to reflect their problems in the process of purchase or use of the Watsons product; this accounted for 73.63%. Of course, there were 63 people reluctant to reflect their dissatisfaction (Fig. 1). Among them, they were reluctant to reflect their reasons, because of a lack of time and there were 29 people unwilling to answer, accounting for about 46%. Twelve people responded they did not receive attention; four people experienced poor service attitude. The former has 12 people; choosing tourism options included 2 people, and for the latter two without reaction had 4 people.

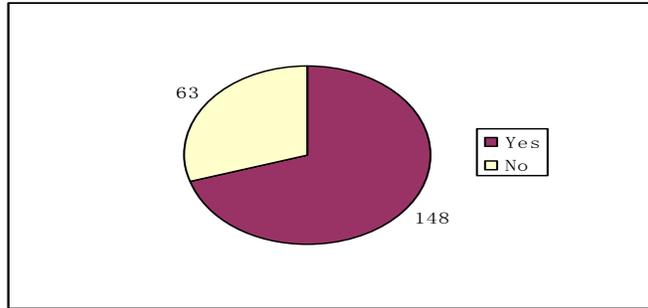


Figure 1. Customers Willing to Reflect

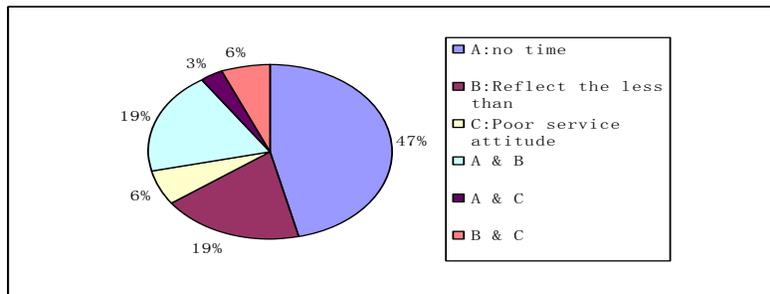


Figure 2. The Reasons for No Response

The Characteristics of Watsons' Customer Participation Behavior

Analysis of Customers Reflecting Discontent with Watsons

The author's purpose from the customer perspective was to reflect the dissatisfaction with Watsons' research (see Fig. 3). It was found that there were 58 people that expressed their dissatisfaction, 137 wanted to guarantee the product quality, 17 people wanted to reduce product prices, 55 people wished to improve service quality, 59 people wanted Watsons to meet their new requirements, and 137 wanted to protect their own rights and interests. Thus, most of the people felt discontent with Watsons in ensuring product quality and protecting their own interests, as well as in reducing the product price and ability to express their discontent.

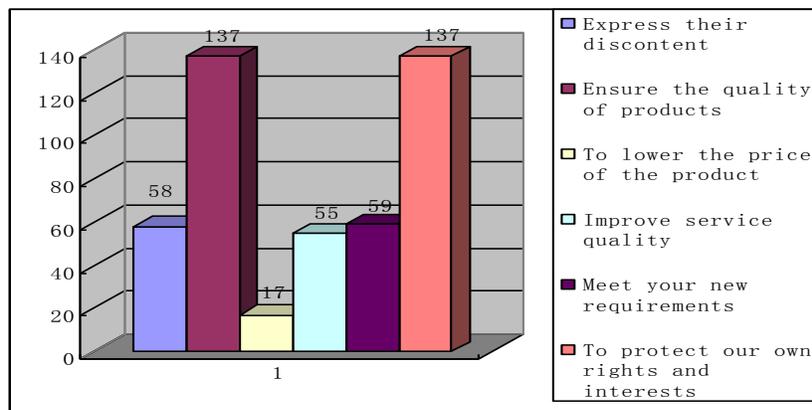


Figure 3. The Purpose of Response

Analysis of Customers and Watsons in the Form of Interactive Communication

Interaction is not a business or consumers can unilaterally, but there is a need for both businesses and consumers to participate in; also, according to the investigation and analysis, the writer participated in the reflection of form consisting of the disgruntled customers' reflections to Watsons channels and what form the Watsons information feedback was given to the customers.

First, we analyzed the customer feedback channels compared to Watson's reflection (see Figure 4). 136 people adopt the way of talking face to face, 166 people chose the complaints hotline, and 105 people chose mail. Relative to characteristics, that customers chose a complaint hotline more and more, shows that they are more willing to adopt the form of a complaint hotline to complain, and this can avoid customer direct conflict with the enterprise or service personnel, and can identify Watsons service attitude.

In addition, what are the ways Watsons receive customer feedback? See Figure 5. According to the survey, 127 people received Watsons feedback face to face, it shows that Watson is very interested, very respect customers; 152 people answering the Watsons called back, 85 people had received feedback email, or used other ways, such as the micro letter. Weibo is very few, and this suggests that the Watsons customers are not using new platform for the public good.

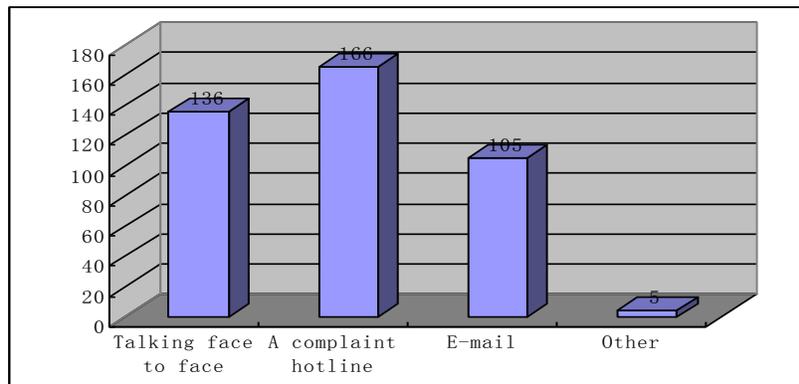


Figure 4. Customers' Preferences for Resolution

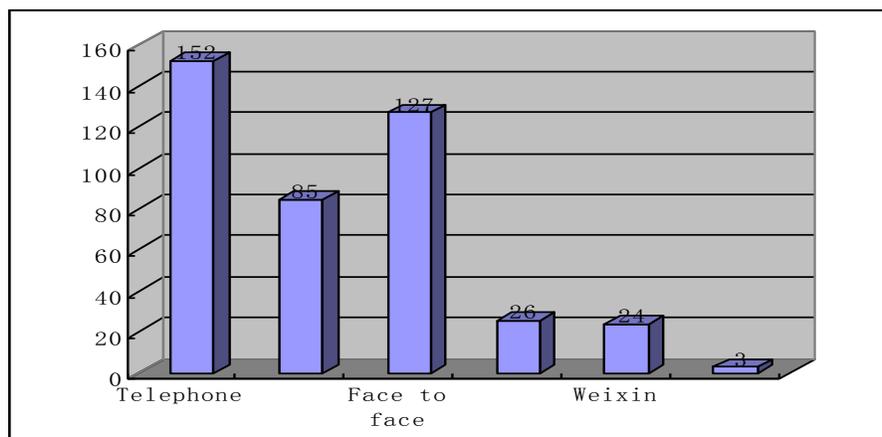


Figure 5. Watsons Collection of Customers' Response of the Channel

Require Analysis of the Customers’ Reflections of Watsons’ Content

According to survey data (Figure 6), from the point of view of investigation about the content of the feedback, 92 people reflected they felt the product price is high or unreasonable; 154 people felt there were product quality problems, such as packaging is damaged, use after allergy, the effect was not good, and so on; 85 people felt there were service attitude problems, such as poor attitude, too warm. Technological aspects were reflected less, only 25 people had that experience; 71 people reflect their new demand for services. Also some customers reflected the market, management processes, consumers’ rights and interests protection policy issues, but these aspects were reflect less, because not every customer has professional knowledge in these areas.

Overall, the feedback on product quality problem was almost 2 times greater than the feedback on product price or service attitude problems. Clearly customer’s care most about the quality of the products; product quality has always been the key to attract customers.

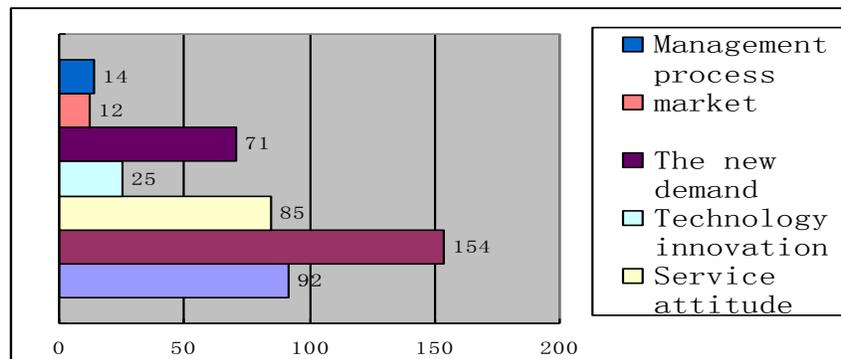


Figure 6. Customer’s Reflections of their Content

Analysis of Watsons’ Processing Means and Customers’ Expectations

According to the survey of customers’ expectations of the best way to strengthen Watsons’ intentions (Figure 7), the results showed: 140 people chose an apology, 130 people chose receiving small gifts, and 147 people chose receiving discounts or coupons. Although each respondent chose two options, the customer is willing to chose these three ways.

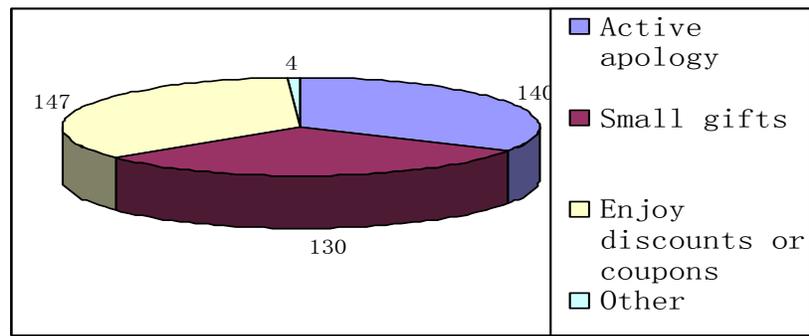


Figure 7. Respondents Expectations of Solutions

But according to Figure 8, of how Watson handles customer dissatisfaction and the way customers want to be treated, there is a certain difference. Of those surveyed, 78 people felt Watson did not handle

the situation, 147 people received an apology from Watsons staff, 121 people received discounts or coupons, and 58 people received gifts.

Overall, Watson has realized that the customer is God’s truth, and they are willing to spend the time and energy to make the customer feel good, but there are still a lot of customer complaints without treatment, and this is a major hidden trouble for the company. The author suggests using regular public relations to set up good public praise.

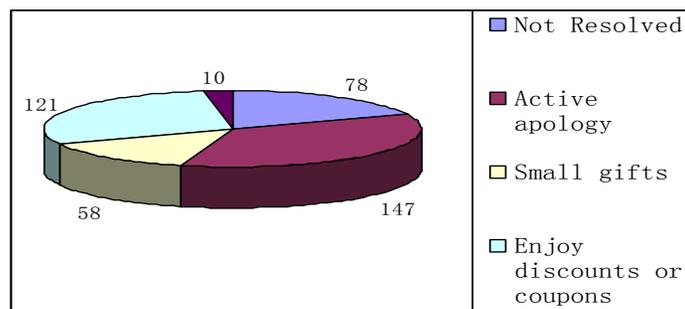


Figure 8. Watsons’ Way of Solving Customer Dissatisfaction

Analysis of Customers’ Tolerance of Time to Solve Service Failures

After the service failure, how to take remedial measures within the effective time is a lot of cosmetics companies’ key problem. See Table 1. In the survey, there are 43 respondents that feel cosmetics enterprises should give a corresponding reply within 1 day, accounting for 21.39%; 134 respondents believe that a solution within 1-3 days is acceptable; 10.45% of respondents feel that it is okay to receive a reply within 4 to 6 days; only four respondents thought more than a week was acceptable, accounting for only about 1.49% of the total sample. Therefore, to sum up the above data, the author thinks the sooner the enterprise solves customer dissatisfaction, the better, and had better not be more than three days.

Table 1. Customers’ Expectations of Time to Solve the Service Failure

Expectation	Frequency	Percentage
Within 1 day	43	21.39%
1-3 days	134	66.67%
4-6 days	21	10.45%
For more than a week	4	1.49%

Analysis of Customer Awareness of Watsons’ Product Information

As shown in Table 2, of those surveyed, those customers that said they will focus on information about Watsons accounted for 72%. There are 56 people that don’t want to focus on relevant information, don't feel this need or feel vexed, accounting for 28%. The author thinks that, according to the customer’ information, Watson can do better by selective publicity, and promotional products for customers, to create a better mood with customers reject.

Table 2. Customer Awareness of Watsons’ Product Information Statistics

	Frequency	Percentage
Yes	146	72%
No	56	28%

Customer Participation is Analyzed

Direction according to the research, the writer summarized the customer participation to reflect dissatisfaction with the frequency, the time, and time period. Survey results show the times of day when customers reflect their dissatisfaction (see Figure 9). 139 people chose their lunch break, 116 people chose the afternoon, 109 people chose after work, and very few people chose in the morning because most people want to work in the morning or go to class – they are busier; the customer’s common choice is their lunch break, in the afternoon, or after work. The author suggests that Watson should better be able to focus on the three periods, communications, and fully collecting customer feedback information.

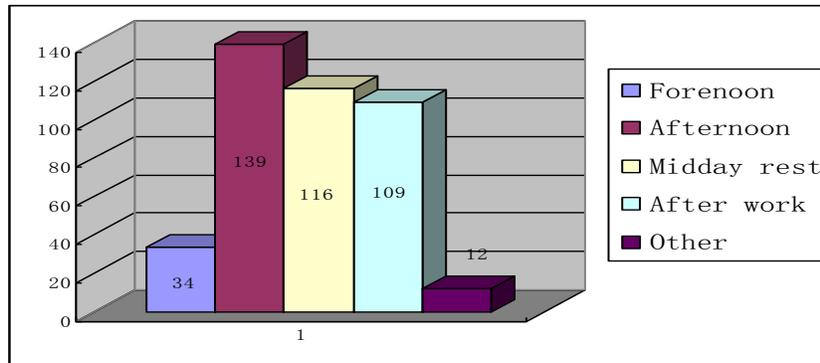


Figure 9. The Reaction Time with Respondents

Figure 10 shows the analysis reflects the frequency of the customers and 52 respectively, namely 26% chose to never reflect or reflect their dissatisfaction in two days; 33 people would reflect their discontent between 3 to 5 days, accounting for 16% of the total sample; one week or more before complaining was 64 people, accounting for 32%. To see that the frequency of the customers is not very high, the interval time is long, the author suggests that Watson take incentive measures to increase the number of customers, enhance the enthusiasm of customers.

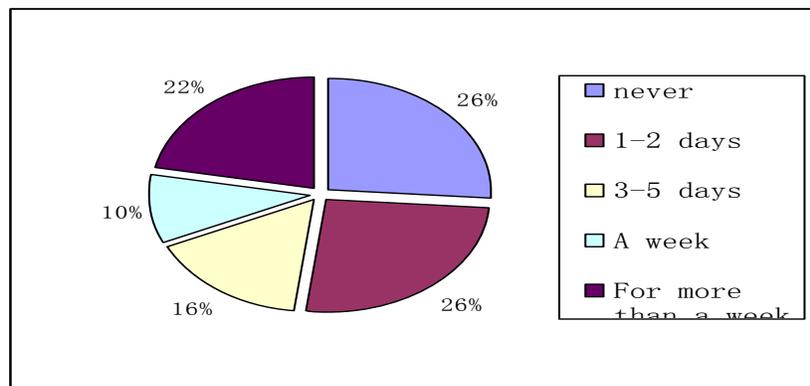


Figure 10. The Frequency of Respondents Complaints

According to the data (Figure 11), generally, customers are willing to spend 1 - 5 minutes with Watsons to complain – 94 people, accounting for 47% of the total; 46% of customers chose 6-10 minutes; 11 minutes and more was 25 people, only accounting for 7%. It is clear that customers spend a lot of time, the time is short, and to communicate with service personnel is not fully effective.

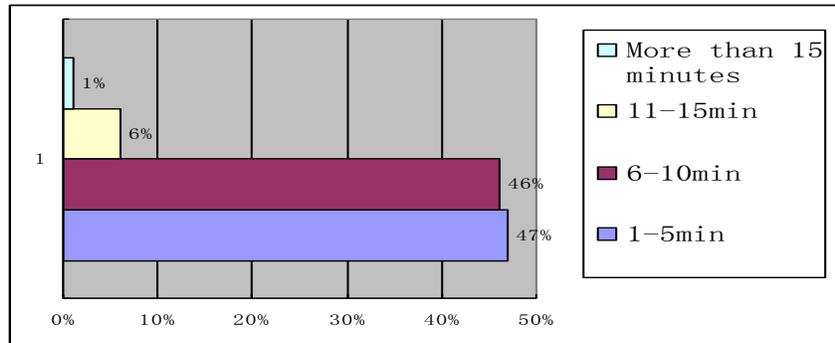


Figure 11. Respondents Complaint Length of Time

Summary

First, from the point of view of the target audience, the investigation of the gender gap is more obvious, among them, about 35.82% of men surveyed versus female respondents (64.18%). However, it also suggests that the future of the cosmetics market target customer base is not just restricted to women. Moreover, Watson's target customers are mainly concentrated in the age of 18 to 30, in college or above, with a monthly income of 5000 yuan, which is mainly students, accounting for 83.09%. This part of the customer group have received higher education, and their demand for cosmetics is larger. The way they use cosmetics to enhance their self-confidence and improve their quality of life, and have the rich experience in purchasing. They were willing to cooperate with our investigation, put forward many constructive proposals for our investigation, and concluded that Watson is suitable for taking mass line.

Second, up from participation in strength analysis, the customer generally chose their lunch break, in the afternoon, or after work for their reaction period; this suggests Watsons' should focus on these three periods, their communications, and fully collecting customer feedback (Wang, Wu, Lin & Wang, 2011). Generally, customers are willing to spend 6-10 minutes with Watsons to complain, the reflection frequency is not high, the interval time is long, visible, customers spend a lot of time, time is shorter, and to communicate with service personnel is not fully effective communication (Youjiae & Taeshik, 2008). We suggest Watsons should take measures to increase the number of customers, and enhance the enthusiasm of customers.

Acknowledgements

This work has been supported by Zhejiang Provincial Philosophy Social Science Planning Project of China (Project No. 14NDJC093YB and 13NDJC047YB), Zhejiang Provincial Natural Science Foundation Project of China (Project No. LQ13G020003), the Research Project in Humanities and Social Sciences by the Ministry of Education of China (Project No.12YJA630064) and the Natural Science Foundation of China (Project No. 71002092).

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Analysis of the Influence Factors of Urban Residents' Sense of Happiness in China – Based on the Occupational Difference Perspective

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[Abstract] *The difference in the sense of happiness between Chinese urban residents and floating population is an important subject that should be focused on for the construction of a new-type people-oriented urbanization. By using the Multinomial logit model, this paper makes an estimate analysis on the differences between urban and floating residents in occupation attainment and occupation distribution, and then conducts a regression analysis on the factors affecting happiness of people in different professions. Empirical analysis and model estimation results show that there are structural differences in professions between urban residents and floating population. They are treated differently, because the floating population always suffers from discrimination. Therefore, eliminating limitations and discrimination is the key to narrow the difference in the sense of happiness between urban residents and the floating population.*

[Keywords] *professional nature difference; employment discrimination; social security; China*

Introduction

Since the reform and opening-up of China, the rapid growth in China's economy has brought a dramatically enlarging scale of urban labor floating from rural areas. The floating population has reached 236 million in 2012. The 2011 statistics shows that the average wage of the floating labor has experienced a rapid growth of 12% per annum since 2004 when a long period of wage growth stagnation came to an end. In the future, due to the fact that the labor shortage is becoming more and more common, enterprises will be forced to put more emphasis on the welfare and the benefit of floating labor. As a result, the difference in the occupations between the floating labor and the urban residents will be gradually eliminated. However, the current occupational difference between these two groups is so great that it is of theoretical and practical importance to find a way to eliminate this significant difference in the level of the sense of happiness between the two groups, which is considered the result of several institutional factors, e.g. the difference in jobs between the two groups.

Most of the relative research provides evidences to the significant influence of the nature of different occupations on the level of happiness. Zhang (2007) found that the level of sense of happiness of staff from the party and government institutions, state owned companies, intermediary services and retirees was quite high, while that of laid-off workers and unemployed people was the lowest and with significant difference from that of those with other occupations. In addition, Jiang and Ji (2003) found that the different industries that the resident and the floating labor chose to enter inevitably affected the availability of social security, incomes, conditions of mental health and the development of personal career, and so forth, which are all determinants of the satisfaction of life. Nevertheless, the influence of the official residence registration system (*Hukou system*) on people's sense of happiness is more complicated. Gunatilaka (2011) claims that the low-income residents in big cities may not find significant improvement in happiness because of the insignificant increase in wages, while the low-income immigrants may find their sense of happiness improved as the income of the high-income residents

increases. Knight's (2010) article added more details that the floating population would not reach a higher level of the sense of happiness than folks who choose to stay in the rural areas, for the reason that they have over-expected the living standard of the cities and that the great psychological gap will lower their happiness level, despite other factors such as discriminations and working capabilities. Li (1997) emphasized the restrictions of the government over the floating labor in the employment market and asserted that they cause a great difference in the occupations between the urban residents and the floating labor.

Some studies on the determinants of happiness take the gender factor into consideration. Marsh and Byrne (2005) suggested the great difference of subjective feeling of happiness between different genders and found that women feel significantly happier than men on both emotional and cognitive issues. Moreover, the distributions of occupations are differentiated between men and women. The percentage of women whose occupations are of better payment and reputation, such as "officer of government or political institutes" and "manager of enterprises", is lower than that of men, while the percentage of women being "about to retire or already retired" and "others" is higher than that of men. More women tend to work as technicians alike but they are still paid at lower levels. According to Bergmann's (1974) "Crowding Hypothesis", the income gap between men and women stems not only from the discrimination on females of the same occupation but also from women's disadvantageous distribution of occupations. On the segregated and crowding labor market, women are paid lower wages, which may lower their sense of happiness. Another important factor is age. Zhang, Yao and Fang (2009) show an increasing trend of life satisfaction as people get older, and people between the ages of 36 to 59 having the highest level of satisfaction with life. However, Wu and Ma (2008), whose study is based on the statistics of Beijing, suggest that as age grows, the level of happiness may decrease at first and increase after reaching the bottom level.

Studies on the direct and inevitable causality between income and subjective feeling of happiness can have both pros and cons. Lever's (2004) research in Mexico claims that according to statistics, the influence of the level of income greatly varies at different dimensions of subjective feeling of happiness, while Michael (1998) concludes that the sense of happiness will not improve when the increase of income exceeds a certain level. Blanch and Oswald's (2000) study provides evidence that although the American's income level greatly increased from the end of World War II to 1995, their subjective feeling of happiness had just slightly or almost did not improve during that period.

The factor of being unemployed may be influential to the sense of happiness because a successful career could bring confidence and psychological satisfaction to people and help people stay at the state of happiness. Ning's (2002) study finds that unemployment may cause the loss of objective in life and result in inferiority complex and anxiety. Under the situation of inflation and great difficulties to be employed, the subjective feeling of happiness will be significantly influenced at a negative trend by the conditions of being unemployed and suffering inflation. Zhou and Jiang's (2010) analysis concludes the polarization of subjective feeling of happiness among different groups in China, where the unemployed people suffer most from an unhappy feeling, compared with the better situation of other groups in society. Korpi (1997) and Clark, et al. (2003) asserted that the negative influence of unemployment on the sense of happiness is highly significant but the decrease in the sense of happiness may not only be caused by the following reduction of income after being out of a job. This is because that the negative influence on happiness from being unemployed will still be considerably significant after the loss of income is controlled.

Overall, it is easy to find out that the current relevant studies focus more on the wide range of factors influencing the sense of happiness, but the analyses on the different levels of the sense of happiness that are brought by the occupational factor are much less emphasized. Specifically, the relevant studies in China that attempt to find out the influences of different factors on happiness have not had insight about the dual-economy system or the residence registration system in China. Therefore, this article is trying to reveal how the occupational factors cause the difference in the sense of happiness by an empirical analysis employing the multinomial logit model that estimates the occupation attainment and the occupational distributions of both the floating labor group and the urban resident group.

Description of the Data

This article, adopting the 2007 data of CHIPS, categorizes the residents into four types with regard to their professional natures: a) permanent employees, b) employees under long-term contracts, c) employees under short-term or temporal contracts and without official contracts, d) self-employed and others. Based on the occupational distribution of urban residents and floating labor (Table 1), it can be concluded that the occupational choices are highly inconsistent between the two groups because of the fact that an urban resident will have a higher probability than floating labor to become a permanent employee, while floating labor will have more possibilities to choose self-employment or other occupations. Is this inconsistency determined by different personal characteristics or by the different registered status of urban residence? This is a question that will be answered in the following part of empirical analysis. It can also be found from Table 1 that the urban residents' sense of happiness in each type of occupation is no less than the one of the floating labor and that the sense of happiness urban residents who work under permanent and long-term contracts is significantly higher than that of floating labor with similar types of jobs. The mean of urban residents' level of the sense of happiness is 3.49 while that of floating labor is 3.37 and the difference is 0.12. Thus, the level of the sense of happiness is correlated with the residence status and the type of occupation.

Table 1. The Occupational Types and the Happiness Level

	Urban residents			Floating labor		
	<i>Frequency</i>	<i>Mean level of the sense of happiness</i>	<i>Standard error</i>	<i>Frequency</i>	<i>Mean level of the sense of happiness</i>	<i>Standard error</i>
(a) Permanent employees	2728	3.52	0.83	10	3.20	0.63
(b) Under long-term contracts	964	3.49	0.89	93	3.23	0.87
(c) Under short-term or temporal contracts and without official contracts	667	3.40	0.90	503	3.40	0.85
(d) Self-employed or others	397	3.47	0.89	1294	3.37	0.79

According to the distribution of human capital (Table 2), the human capital index of urban residents is higher than that of the floating workers (the average education length is 2.59 years longer). This phenomenon may be the result of unequal distribution of education resources between urban and rural regions. In addition, urban residents have longer working experience and experience for their current jobs. On the one hand, compared with urban residents, floating residents work in a more flexible way in that they usually move back to their hometown after working a few years in cities, which makes them less

experienced to work and live in cities. On the other hand, urban residents tend to have stability in their work and have less possibility to switch their jobs, partly due to their career choices of being employed under permanent or long-term contracts.

Table 2. The Distribution of Human Capital

	Urban residents		Floating labor	
	Mean	Standard error	Mean	Standard error
Age	47.95	11.15	35.8	9.08
Length of education	10.72	3.32	8.13	2.74
Length of working	23.15	8.38	7.59	5.36
Length of current job	16.65	9.92	5.33	4.45

This article also applies the sample data to analyze the influence of different financial conditions on the varying happiness levels (Table 3). The financial condition index consists of several indices including: a) household financial assets b) household income in 2007, c) household debts, d) household expenditures on living, and e) household medical expenditures. The financial assets, debts and expenditures of urban residents are all higher than those of floating labor, but floating families' incomes are higher than urban residents' families. One reason for this phenomenon is that the proportion of those who are employed by firms is higher in the urban resident group. Overall, the financial differences between two groups are all significant at the level of 1% according to Z-test.

Table 3. The Influence of Different Financial Conditions

	Urban residents	Floating labor	Difference
Household financial assets	9.950 (0.0161)	8.773 (0.0370)	1.177 (0.0363)
Total household income in 2007	9.259 (0.0081)	9.521 (0.0159)	-0.262 (0.0176)
Household debts	5356 (703.8000)	2606 (463.5000)	2751 (240.3000)
Household living expenditures	6.898 (0.0066)	5.662 (0.0270)	1.236 (0.01890)
Household medical expenditures	571.100 (29.6800)	250.500 (37.8900)	320.700 (0.0189)

Estimations of Occupation Attainment and Occupational Distribution

First, the multinomial logit model is applied to estimate the occupation attainment of the urban resident group and the floating labor group by analyzing the determinants of these choices. The formula is

$$P(y_i = j|x) = \frac{\exp(x_i' \beta_j)}{1 + \sum_{k=2}^j \exp(x_i' \beta_k)} \quad (j = 2, \dots, j)$$

where, N is the sample size, J is the amount of categorized occupations, and x_i denotes the set of variables that are influential on the choice of occupation.

A certain type of occupation is necessary to be set as the base group in order to carry out the estimation. If the coefficient of an independent variable is positive, the marginal effect of this variable on the probability of the choice of an occupation will be positive, comparing with the control group and vice versa. We have categorized occupations into four types in the foregoing part and now choose the fourth type as the base category for the other groups. The set of independent variables consists of education, working experience, dummy variable for men (that for women is controlled), age, and dummy variable of married (those who are living without spouses are controlled).

Table 4. Regression Result of the Multinomial Logit Model

	Urban residents		Floating labor	
	<i>Coefficient</i>	<i>Standard error</i>	<i>Coefficient</i>	<i>Standard error</i>
Permanent employees				
Age	-0.0037	0.0053	0.0036	0.0194
Married	0.4230	0.2060	-1.1180	0.4560
Length of Education	0.3280***	0.0145	0.3500**	0.0582
Working experience	0.1500***	0.0049	-0.0123	0.0339
Male	-0.3120*	0.0949	0.9860	0.4900
Constant	-3.6790***	0.3570	-7.8660***	0.9520
Employees under long-term contracts				
Age	-0.0421***	0.0059	-0.0002	0.0089
Married	0.2380	0.2150	-1.1340**	0.2350
Length of Education	0.1580***	0.0153	0.1570***	0.0282
Working experience	0.1540***	0.0052	0.0235	0.0158
Male	-0.6580***	0.0993	0.8430*	0.2230
Constant	-0.7820	0.3760	-3.7650***	0.4610
Employees under short-term or temporal contracts and without official contracts				
Age	0.0123	0.0057	0.0143*	0.0057
Married	-0.0623	0.2110	-0.9310***	0.1630
Length of Education	0.0601**	0.0156	0.0654**	0.0185
Working experience	0.0038	0.00524	-0.1210***	0.0125
Male	-0.9230***	0.1000	0.0703	0.1210
Constant	0.0680	0.3770	-0.6400	0.3010
Log likelihood	-4255		-1262	
Prob>chi2	0.0000		0.0000	
Observations	4450		1679	

Notes: (1) The base category is the employees working as the fourth type of occupations.

(2) * denotes being significant at the 10% level, ** denotes being significant at the 5% level, *** denotes being significant at the 1% level.

The F-test of the model shows the existence of significant structural differences of the occupational choices between the urban residents and the floating labor. According to the regression result, the marginal effects of education on the urban residents and the floating labor are very close. The floating labor will have higher probabilities to choose the first three types of occupation if they spend more time on education, compared with those who are self-employed. It means that education may help to lower the market barriers and eliminate the systematic discrimination that the floating labor faces. Compared with the self-employed people, the urban female residents could find it easier to obtain the other three types of occupations, and so could the floating male laborers. Those floating laborers who are married have more possibility to become employees under contracts, which supports that a married migrant worker may have

it easier to enter the labor markets with higher barriers. But the marriage status does not seem influential on the occupation type of an urban resident. Furthermore, the marginal effect of working experience is very significant because an urban worker with longer working experience may have a better opportunity to become an employee under permanent or long-term contracts. However, the working experience variable has negative effect on the floating labor's choice of being employed under short-term or temporal contracts.

The structural differences of occupational types imply how differently the urban residents and the floating laborers are treated in the employment market. The distribution of the types of the floating laborers' occupations can be calculated based on the estimates of the urban resident group. This distribution index represents how the choice of occupation will be if the floating laborers are treated as equally as the urban residents. The difference between the real and the estimated distributions of occupational types implies how the floating laborers are discriminated or how the urban residents are favored in the market. Similarly, the distribution of the types of the urban residents' occupations will be estimated by the regression result of multinomial logit model of the floating labor group. According to Table 5, suppose the two groups are equally treated, the elimination of discrimination and the lowering barriers may increase the floating laborer proportion of working in the employment markets with more restrictions and greater discrimination by 43% and may reduce the proportion of being employed in the markets with fewer restrictions and lower discrimination. Meanwhile, 56% less urban residents will appear at the more restrictive and discriminating markets while more urban residents will enter into the less restrictive and discriminating ones. The difference of occupational distribution shows the evidence of different positions and treatments that the two groups receive in the employment market.

Table 5. The Real and the Estimated Distribution of Occupational Types

	Real (1)	Estimated (2)	Difference: (2) – (1)
<i>Urban residents</i>			
(a) Permanent employees	57.60	1.34	-56.26
(b) Under long-term contracts	20.50	9.63	-10.87
(c) Under short-term or temporal contracts and without official contracts	14.00	13.70	-0.30
(d) Self-employed or others	8.02	75.30	-67.28
<i>Floating labor</i>			
(a) Permanent employees	0.60	24.90	24.30
(b) Under long-term contracts	5.07	18.20	13.13
(c) Under short-term or temporal contracts and without official contracts	26.20	31.70	5.50
(d) Self-employed or others	68.20	25.20	-43.00

Regression on the Happiness Indicator Model

Based on the analysis of the attainment and the distribution of occupational types, this article will continue to conduct a regression analysis on the model of the sense of happiness for the urban residents and the floating labor. The happiness indicator model is formulated as

$$S = \alpha + \beta_1 \text{edu} + \beta_2 \text{mrt} + \beta_3 \text{age} + \beta_4 \text{age}^2 + \beta_5 \text{gend} + \beta_6 \text{house} + \beta_7 \text{medical} + \beta_8 \text{ocp} + \beta_9 \text{Infasset} + \beta_{10} \text{cost} + \varepsilon$$

where, edu denotes the length of education, mrt is the dummy variable of being married, age is the age, age^2 is the square of age, $gend$ is the dummy variable of male, $house$ denotes the dummy variable of living in the house of urban area, $medical$ denotes the dummy variable of having medical security, ocp is the dummy variable of being employed, $lnfassets$ denotes the logarithm of household financial assets, $lncost$ denotes the logarithm of household living expenditure, and ε is the random error term. The OLS regression result is showed in the following Table 6.

Table 6. Regression of the Happiness Indicator Model for Each Occupation Type

	Urban residents				Floating labor			
	(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Male	0.0794* (0.0380)	0.0907 (0.0622)	-0.0941 (0.0750)	0.0284 (0.1090)		0.3170 (0.4510)	0.0799 (0.0972)	0.0356 (0.0580)
House	0.0747 (0.0497)	-0.0246 (0.0817)	0.0731 (0.1120)	0.3760* (0.1580)		0.1790 (0.283)	-0.0470 (0.0977)	0.0226 (0.0577)
Medical	0.0208 (0.0326)	- 0.1470* (0.0573)	-0.1150 (0.0835)	-0.2300 (0.1600)	-0.0030 *** (0.0003)	0.0066 (0.0053)	0.0017 (0.0058)	0.0057 (0.0013)
Employed	-0.5780 (0.8120)	1.5510 (0.8510)		-0.3770 (0.3290)		-0.9290 (0.9160)	-0.6130 (0.3350)	0.3480 (0.2110)
Household financial assets	0.1240 *** (0.0137)	0.1380 *** (0.0253)	0.09310 ** (0.0310)	0.1490 *** (0.0384)	0.0992 * (0.0243)	-0.0158 (0.0738)	0.1400 *** (0.0256)	0.08450 *** (0.0151)
Household living expenditures	0.0220 (0.0328)	0.0548 (0.0621)	0.1340 (0.0777)	-0.0157 (0.0880)		-0.0875 (0.1120)	-0.0459 (0.0441)	-0.00467 (0.0190)
Age	-0.0151 (0.0194)	0.0017 (0.0382)	-0.0251 (0.0349)	-0.0241 (0.0390)	- 0.0341** (0.0045)	-0.0572 (0.0680)	0.0089 (0.0269)	0.0105 (0.0193)
Age ²	0.0015 (0.0022)	-0.0011 (0.0045)	0.0031 (0.0040)	0.0019 (0.0040)		0.0085 (0.0008)	-0.0019 (0.0003)	-0.0019 (0.0002)
Married	0.1070 (0.0926)	0.2690 (0.1410)	-0.1330 (0.1530)	0.1580 (0.2150)		-0.0955 (0.3800)	0.0912 (0.1390)	0.0461 (0.0993)
Education	0.0071 (0.0057)	0.0030 (0.0105)	0.0055 (0.0138)	0.00314 (0.0162)	-0.1260 *** (0.0121)	-0.0033 (0.0422)	-0.0138 (0.0160)	0.0058 (0.0089)
Constant	2.7150** (0.9380)	0.2080 (1.2350)	2.3020* (0.9100)	2.7680* (1.1250)		5.3320* (2.0710)	2.6820*** (0.6960)	2.1910*** (0.4590)
Urban	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Family	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Prob>F	0.0000	0.0000	0.0000	0.0000	0.7325	0.6325	0.0000	0.0000
R ²	0.4080	0.5950	0.4050	0.4920	0.4492	0.4459	0.5920	0.4386
Observations	2567	911	617	355	10	85	439	1189

Notes: (1) (a) Permanent employees, (b) employees under long-term contracts, (c) employees under short-term or temporal contracts and without official contracts, (d) self-employed and others.

(2) * denotes being significant at the 10% level, ** denotes being significant at the 5% level, *** denotes being significant at the 1% level.

(3) The estimate of the dummy variable of region is not listed on the above table.

The regression results show that most signs and coefficients are as expected and that the value of R² is reasonable. Being unemployed may negatively influence the individual level of happiness due to the decrease of income and the existence of anxiety and pessimistic expectation. The correlation of age and sense of happiness is in a U-shape curve, which implies that the happiness level goes downwards first and

upwards after reaching the bottom as the age grows. The effect of the variable of education is negative when a floating laborer is working in the first three types of occupations. It indicates that the higher education level may enlarge the gap between the expectation of the worker and the reality that they face in the employment market.

Gender may affect the distribution of the occupation types. Male employees tend to be happier than female employees in both groups. One possible explanation is that female workers have to face sexual discrimination and be expected to play more social roles, which places more career pressure on women. The amount of household financial assets can significantly affect the sense of happiness in a positive way. *Ceteris paribus*, the more financial assets a family holds, the better substantial security the members will have and the higher level their happiness will be. The coefficient of the variable of public medical insurance is positive but not significant for the group of floating labor. The insignificance could be explained by the lower coverage of public medical insurance in this group. Age negatively affects the happiness of the first type and the fourth type of employees from both groups because the marginal level of the sense of happiness will decrease when the age becomes older. For the second and third types of occupation, the level of happiness will be negatively affected by the longer length of education. Living expenditure variable negatively influences the sense of happiness of the floating laborers who work as the first and the second types of occupation because of the higher costs of living in cities that the floating workers have to pay. The other control variables in this model are not under the discussion.

Conclusion and Suggestions

According to the regression results, there is a significant structural difference of the occupation attainment between the urban residents and the floating laborers from the rural area due to the discriminated and segregated treatment they receive in the employment market. The multinomial logit model estimates the distribution of occupation types and predicts that if the two groups face identical standards, a larger proportion of floating laborers will enter into the markets with more restrictions and discrimination while larger parts of urban residents will be positioned at the market with fewer restrictions and lower discrimination. The analysis of the happiness level with regard to different types of occupations shows varying estimations of the effects of different variables. Education may negatively affect the happiness level of floating laborers but positively affect that of urban residents. The participation of public medical insurance creates a negative effect on the happiness of the urban residents, whereas it creates a positive effect on the happiness of floating labor. Age places significant restrictions upon the happiness level of the urban residents. Finally, when the living costs become higher, the happiness level of the floating labor reduces significantly.

Thus, in order to reduce the difference in the level of sense of happiness between the urban residents and the floating laborers, the institutional restrictions should be first prohibited. The prohibition of such restrictions, e.g. the discrimination on the floating labor in the employment market, will help to protect the working rights of floating laborers and optimize the use of the other production factors. The establishment of a well-functioning nationwide labor market is necessary. In this nationwide labor market, the discriminative restrictions and the unreasonable surcharges on floating laborers should be prohibited. The government should carry out supporting policies that help to increase the income of floating laborers in a stable and constant way and improve their capabilities to live in the urban area. The basis of the policies consists of the improvement of the payment protection as well as the solution to the problem of illegal wage payment arrears. The inequality of residence status between the urban residents and the

floating laborers from rural areas should be eliminated by setting up an identical employment service system, which will force the market to carry out an identical wage level for two groups of workers as well as a more restrictive supervision over the use of labor in firms. Further, the enforcement of the *Labor Contract Law of the People's Republic of China* and the relative regulations on paid vacation need to be carried out more seriously in order to make sure that the floating labor have entitlement to annual leave and have more time and energy in their life.

Another suggestion is to improve the social security system. Based on the situation of the new generation of migrant workers, a project that helps the floating workers should be covered by the urban social security programs, and should consist of clear objectives, focused issues, practical plans and relentless implementation. The entitlement of floating laborers should share the identical standards of urban residents and they need to be improved constantly. The improvement of the entitlement will encourage the floating labor to be integrated into the urban society in a more effective way and further eliminate the social estrangement in the urban communities. There are two more ways to integrate the floating laborers into the urban society. One is to improve the vocational education system for floating laborers, and the other is to encourage the entertainment consumption of the floating labor.

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Business Marketing Strategy of Small and Medium Electricity Meter Enterprises – Case Study of AUX

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[Abstract] This paper selects an electricity meter manufacturer, as well as a small and medium company—Ningbo AUX Group Ltd., for research on business marketing strategy. The research starts with an overview of the company, followed by critical descriptions of qualitative methodology of the in-depth, personal interview, and the participants. Next, business marketing strategies of AUX are discussed, from product management strategy, innovation strategy, service strategy, pricing strategy, professional selling/sales force management, and other promotion strategies. After that, recommendations for manufacturing the long-life electromechanical meter itself and cooperation with a digital meter, upgrading timely repair service by E-commerce are offered to develop business marketing strategies, which help the company serve the needs of a lucrative and complex business market.

[Keywords] business marketing strategy; small and medium enterprises; electricity meter

Introduction

Small and Medium Enterprises (SMEs) are playing an increasingly important role in the economy and in business support organizations. SMEs offer tremendous opportunities not only for themselves, but also for their families and their employees by opening doors to greater self-sufficiency, self-esteem, education, and growth. Thus, there has been increased policy and research interest in the growing number of SMEs and their potential contribution to both the local and global economy. In addition, business marketers serve the largest market of all: The dollar volume of transactions in the industrial or business market significantly exceeds that of the ultimate consumer market. However, special challenges and opportunities confront the marketer who intends to serve the needs of organizations rather than households. Thus, business-to-business customers represent a lucrative and complex market worthy of separate analysis (Hutt & Speh, 2004). A Chinese company, Ningbo AUX Group Ltd. is selected for this research on E-Supply chain management in business marketing management. The reason is that the author wants to gain insights of how this company developed from such a small company with approximately RMB 200,000 debts and eight staff members, to become a giant with total assets of RMB 2.5 billion and a staff of around 1,500 within 18 years.

Overview of AUX

Ningbo AUX Group Ltd. is one of the typical enterprises in the China Electricity meter industry, with total assets of RMB 2.5 billion and a staff of around 1,500. In 2007, AUX had 30% of the market share of electricity meters in the global market. AUX ranks No.1 in China with its production capacity of 25 million units. At present, AUX has more than 160 categories of products with different functionalities. AUX is the first electricity meter manufacturer that has obtained ISO9001 approval and KEMA approval

from world authoritative quality test organization, and it successively passed the “State Test of Quality Control” from 2001 to 2007. The company and its products are on the list of “Recommended Products and Manufacturer for National Electricity Net” created by the State Economic and Foreign Trade Ministry. The DD20 series of long life electrical meters that was self-innovated by AUX is listed in “State Torch Program”, and it is the first one to pass the maximum long life test over 26.6 years by China Poser Science Academy. Three-phase multi-functional electromechanical meter is on the list of “State Key New Product Program”.

Research Methodology

Method

A qualitative methodology was chosen for this research. As Burns & Bush (2003) advocated, “Qualitative research is a study to evaluate the potential of concepts to be further investigated. It can bring out the emotional and value-laden feelings and attitudes rather than numbers or percentages”. Kent (1999) also explained that qualitative research “provides rich data in ideas, insights hypothesis, explanations and suggestions. It answers questions such as ‘what’, ‘why’ and ‘how’...the focus is always on understanding consumers...from their own perspective; it is never a key role to measure the extent to which these views feelings, or behavior are held.” The technique used was the in-depth, personal interview and a semi-structured interview guide was designed according to insights gained from the literature on business marketing. As has been seen in Ying’s (2008) research, semi-structured depth interviews have proven very successful in developing a rich view of a variety of topics. Further, the in-depth interview methodology was expected to be helpful in discovering the problems of the business strategies and offering possible suggestions. In addition, a wide variety of sources, including the Internet, annual reports of the company from 2004 to 2006, industry reports, business marketing journals were used to provide an abundant secondary data and framework for this research.

Respondents

Five interviewees (see Table 1) were selected for this study. Four respondents from Ningbo AUX Group Ltd. offer an insight into its business, while another respondent from Ningbo Yinyi Real Estate Co., Ltd represents the end-user in this research.

Table 1. *The Respondents*

Respondents	Job Title
Mr. Zheng Jianjiang	President of Ningbo AUX Group Ltd.
Mr. Chen Diming	Vice-President of Ningbo AUX Group Ltd.
Mrs. Wang Zongyin	Sales Administrator of Ningbo AUX Group Ltd.
Mr. Lee Xiaolong	Marketing Manager of Ningbo AUX Group Ltd.
Mr. Xiong Xvqiang	President of Ningbo Yinyi Real Estate Co., Ltd.

Formulating Business Marketing Strategy

Product Management Strategy

Generally, there are two categories of electricity meters: electromechanical meters and digital meters. AUX has the competitive advantage in the technology of electromechanical meters, for example, the DD201 and DD202 series, and the DD862B single-phase electromechanical meter all being awarded as

“the revolutionary products in the electricity meter industry”. However, the technology of digital meters has lagged behind several competitors in the past two years. From March 2006, AUX started to standardize the components of their digital meters to regain the competitive advantage.

In the product management aspect, AUX sets two strategies: market orientation and quality control.

Market Orientation. The literature has emphasized the critical role of market orientation in achieving new product success. In 1979, Cooper concluded “a strong market orientation makes all the difference when it comes to separating successful versus unsuccessful industrial new products”. Barclay (1992) concluded that the attribute of “a good market knowledge and strategy” is identified as a success factor in 78% of the studies. An increased market orientation resulted in improved inter-functional co-ordination and higher percentage of successful new product introductions.

AUX uses market orientation as one part of its product strategy. Market orientation doesn’t only include the importance of understanding its customer, but also includes the importance of understanding its competitors. Within the 18 years of development, AUX renewed or created several competitive products in the each era of electricity meter development. For example, in the end of DD28 era (1990-1995), instead of following its competitors to give up the DD28 series, AUX renewed the product by lowering the cost by 10% and improving its performance. The renewed DD282 single-phase electromechanical meter successfully gained the majority market share in the less developed areas in central of China with more competitive pricing and better performance. Another example happened in the DD86 era (1996-2000), realizing the serious competition within the industry, and its less competitive advantage in the technology of producing DD862, AUX chose to develop a long-life electromechanical meter series, the DD201 series with a maximum 26.6 years life time (compared to normal DD862 with 8-10 years life time), to directly compete with DD862 in the market. The longer lifetime of the product helps power companies save time and money for replacement of the old meters; in other words, it offers superior value to customers, therefore, the new DD201 series became quite popular and replaced DD862 in several areas.

Quality Control. As Lemmink and Kasper (1994) said, “product quality improvements are important competitive tools for companies to gain a sustainable competitive advantage”. Hutt and Spoh (2004) also mentioned “increasing competition and rising customer expectations make product quality important strategic priority for marketers”.

Strict quality control is also a part of AUX’s product strategy, from carefully selected raw materials to assembly, calibration and control operations. As Mr. Chen said, “reliability of the products is the key point for AUX to keep top in this industry.” AUX is the first domestic company to get ISO9001 approval and KEMA approval from world authoritative quality test organization. The accuracy, reliability and durability of the products are the key points for AUX to sustain the lead in this industry.

Table 2. AUX (2002-2004) Turnover of Electricity Meter

Type of electricity meter	2002 turnover (thousand)		2003 turnover (thousand)		2004 turnover (thousand)	
	Value	Percentage	Value	Percentage	Value	Percentage
Electromechanical Single-phase	¥ 363,944	64.70%	¥ 278,194	54.70%	¥ 210,180	49.50%
Electromechanical Three-phase	¥ 42,289	7.50%	¥ 62,736	12.30%	¥ 62,099	14.60%
Other Electromechanical	¥ 22,090	3.90%	¥ 18,563	3.60%	¥ 16,359	3.80%
Digital Single-phase	¥ 114,459	20.40%	¥ 112,564	22.10%	¥ 88,583	20.90%
Digital Three-phase	¥ 16,183	2.90%	¥ 34,132	6.70%	¥ 41,746	9.80%
Components	¥ 3,200	0.60%	¥ 2,862	0.60%	¥ 5,834	1.40%
Total	¥ 562,165	100%	¥ 509,051	100%	¥ 424,801	100%

Innovation Strategy

“The long-term competitive position of most organizations is tied to their ability to innovative--to provide existing and new customers with a continuing stream of new products and services” (Hutt and Speh, 2004:301). From Table 3, we can see that AUX continuously increased research and development (R&D) expenses. Currently, AUX employs 51 engineers and specialists in the R&D department, cooperates with several research institutions, and gains 11 patents in the technology.

AUX separates its innovation into two parts: product innovation and process innovation. In the product innovation aspect, AUX has the competitive advantage in the technology of electromechanical meter. For example, the DD20 series of long-life electricity meters self-developed by AUX is listed in the “State Torch Program”. In the process innovation aspect, by standardization of as many components as it could, it enabled AUX to overall reduce production costs and time, while satisfying diverse customer demands. According to the literature review, component-part commonality has a significant influence on supply chain management, such as safety stock (Baker, 1985), planning, and scheduling (Berry, et al., 1992); and on operational performance indicators such as set-up and holding costs (Collier, 1981), order quantity economies (Gerchak, et al., 1988), and inventory costs (Eynan and Rosenblatt, 1996).

Table 3. AUX (2002-2004) Research and Development Expenses

	2002	2003	2004
R&D Expenses(¥ million)	5.6	5.1	11.5
R&D Expenses / Turnover (%)	1.00	1.00	2.70

Service Strategy

It is products supported by services. AUX sets 10 criteria to evaluate its own service quality: reliability; responsiveness; competence; access; courtesy; communication; credibility; security; understanding/knowing the customer; tangibles (e.g. documents). Among these dimensions, reliability (deliver on promise) is the most important criterion to power companies, not only in the delivering the physical electricity meters to them on the promised date, but also in the delivering the repair & maintenance of electricity meters in the residences or industrial & commercial places.

AUX understands that timely delivering of electricity meters to power companies is critical to its business. Therefore, it implemented the ERP system in 2001 to manage effective inventory. Effective inventory management has three advantages: fluent cash flow, just-in-time purchasing, and always being

in stock. All of these advantages help AUX own a stable production process, and deliver products on time.

Pricing Strategy

The pricing strategy of AUX is to reduce the cost to gain a competitive price in the bidding, so therefore, AUX focuses on cost control. On the one hand, cost control comes from process innovation. AUX successfully “standardizes the components of electromechanical meter” and achieves 95% self-produced main components. For example, the DD201 and DD202 series share the core components, which lower the cost by order quantity economies. On the other hand, ERP system has a great impact on the cost control: for example: reduced costs (paper and postage bills cut, reduction in money tied up in stock, manual processing costs); improved cash flow. From Table 4, the Operation Expenses of 2003 decreased by 5.4% compared to 2002, and the Expenses of 2004 declined by 14.5% compared to 2002.

Table 4. AUX (2002-2004) Operation Expenses

Year	2002	2003	2004
Operation Expenses (¥)	18,100,000	17,100,000	15,458,400

Professional Selling/ Sales Force Management

Product selling is the most important demand-stimulating force in the business marketer’s promotional mix. Through the sales force, the marketer links the firm’s total product and service offering to the needs of organizational customers (Hutt & Speh, 2004, p. 433). AUX sales force management can be divided into four aspects: sales force compensation strategy, the standards of successful salespeople, relationship marketing, and right-sizing & organizational design.

Sales force compensation strategy. “The most effective sales organizations have identified an effective balance between the motivating effect of incentive payments and the security and stability provided by fixed salary” (Piercy, et al.,1997). The payment system for sales person in AUX is fixed salary coupled with incentive payments. This stimulates them contribute more on the work.

The standards of successful salespeople.

Table 5. AUX Standards of Successful Salespeople

AUX Standards of Successful Salespeople	
Motivation	Obtain a sense of accomplishment from work.
	Feel a sense of personal growth and development in work.
	Get a feeling of loyal association with the company.
Customer Orientation	Focus on satisfying customer needs.
	Customize their selling approaches to individual accounts.
	Possess expert selling skills.
Team Orientation	Possess extensive product/service knowledge.
	Be willing to accept direction from authority.
	Co-operate as part of a sales team.
Sales Support Orientation	Spend substantial time planning sales calls.
	Perform non-selling activities effectively.
	Perform sales support activities.

Relationship marketing. First, it appoints several relatives of the directors of power companies, to be honorary marketing consultants of AUX. It is a significantly important approach to enlarge the network of AUX, and it is also an efficient way to gain invitations of bidding under the traditional “Guan xi” environment. Secondly, regular invitations for visit to AUX strengthen the relationship with the clients. It is an opportunity for AUX to let client know its strong manufacturing capability, high quality of product, R&D competency, after-sale service in detail, to remove any worries about product from power companies. What’s more, “it is also a good way to give other power companies an image that the products of AUX are quite popular across the nation”, Mr. Lee said.

“Right-sizing” and organizational design. AUX adopts geographical organization as its sales organizations, in order to reduce the travel distance and time between customers, and get more local knowledge. AUX separates the whole of China into seven parts and picks up 3-4 main cities in each area as its target markets. Until 2005, AUX employs 194 sales forces working in the 25 cities in China.

Other Promotion Strategies

As a result of the technical complexity of business products, the relatively small number of potential buyers, and the extensive negotiation process, the primary communication vehicle in business-to-business marketing is the salesperson. However, non-personal methods of communication, including advertising, catalogs, the internet, and trade shows, have a unique and often crucial role in the communication process. (Hutt & Speh, 2004, p. 410). Other promotion strategies in AUX cover three aspects:

Trade show. It ranks second only behind personal selling in influencing buying decisions of industrial purchases (Parasuraman, 1981; O’Hara, 1993). AUX also realizes the significant advantages of trade shows, including: identifying prospects; servicing current accounts; introducing products; improving corporate image; gathering competitor information; selling. In order to attract as much attention as it can to create awareness and recall from customers, AUX sets an innovative strategy for trade shows. It has invited music bands, and martial arts of Shaolin to provide entertainment during the trade shows, which most exhibitors say is “quite attractive”, and it helps AUX gain free publicity as well.

Advertising. It has a supporting role in creating awareness, providing information, and uncovering important leads for sales people. In early 1997, which was the DD86 era (1996-2000), AUX experienced the challenge that most customers suspected the superior functionality of the DD201 series. AUX decided to create an advertising campaign that compared DD201 series with the DD862 in detail, to demonstrate the superior technology of DD201 series. With the support of visual advertising, the sales force worked easily to promote new products in front of the clients, and within a few months, the DD201 series replaced the DD862 in several areas. From this example, it can be clearly seen that business advertising helped AUX increase sales effectiveness and efficiency.

Web press. The Internet provides a powerful medium for AUX enhanced communication with present and potential customers as well. The main advantages can be listed in the following three aspects: it provides visual images of the company; it creates “unlimited shelf space” for products; it reaches customer on a global scale. “It is a virtual warehouse”, Mr. Lee said, “It provides product listing, descriptions, and specifications for over 500 electricity meter”.

Conclusion and Future Recommendations

Recommendations for Product Management/ Innovation

On the one hand, the company should concentrate on the long-life electromechanical meters that AUX has a competitive advantage of production in. Even within the trend of decreasing demand for electromechanical meters, the long-life series still have a relatively bright future since it offers superior value to power companies to help them save time and money for replacement of the old meters. Therefore, it is suggested that AUX should concentrate their production capability of the long-life series of electromechanical meters and, narrow the other production lines of electromechanical meters.

On the other hand, they should also concentrate on the digital meter by cooperation, which is a trend of increasing demand of a multi-functional meter and multi-tariff meter for the future. However, we must realize the relatively weak technical capability of digital meters in AUX. Based on this situation, a recommendation is given to cooperate with foreign companies who have strong technical competency in the digital meter area. Zhejiang Holley Nisko Electric Co. Ltd., another manufacturer ranked fifth in the electricity meter industry, successfully cooperates with the Nisko Company, an Israeli public company, for the development of technologically intensive high precision digital meters and energy measuring systems. AUX can also strengthen its technology of digital meter by cooperation.

Recommendations for Timely Repairing Service by E-commerce

From the analysis of service, we learned the whole process of delivering repair service and maintenance of electricity meters from AUX to the final user. We also found a misunderstanding of who should take responsibility of repair from the perspective of the final user. Therefore, it is suggested that a feedback mechanism to report problems or complaints about broken electricity meter can be automatically forwarded from a final user to AUX by a web-based customer service center or call center. By doing so, the repair service can be faster than the original process; meanwhile, it helps power companies save energy in delivering the information of repair.

Acknowledgements

The paper was sponsored by Ningbo Household Appliance Economy and Talent Development Research Bases; Program of “Xinmiao” Potential Talents in Zhejiang Province: “The Integration of Cultural Creative Industry and Household Appliance Manufacturing Industry – Case Study of Ningbo Household Appliance Manufacturing Industry”; Soft Science Project of Science and Technology Department of Zhejiang Province (No. 2013C35053); Key Research Base of Philosophy and Social Sciences of Zhejiang Province (Research Center of Communication and Cultural Industry) (No. 13JDCB02Z).

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The Environmental Policies and Industrial Restructuring

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[Abstract] *In order to improve the environmental quality while maintaining economic growth, the adjustment of industrial structure has become a necessary and effective measure to solve the dilemma. This paper will examine if pollution abatement could be an effective reversed transmission mechanism for industrial restructuring. We use cross-section data of China's 30 provinces and establish a threshold regression model to pursue an empirical analysis. By sample splitting, we obtain 3 sub-samples. According to the results of the sub-samples' threshold regression, we throw light on the distinctive characteristics and differences of the 3 sub-samples for a further step.*

[Keywords] *pollution abatement policies; industrial restructuring; reversed transmission mechanism; threshold effect*

Introduction

Since the policy of Reform and Opening Up was carried out, China has achieved great success in economy, but has also paid severe environmental costs. China is a developing country, and also an industrialized country. The pollution of the environment in China is significant and very serious. So China's government is greatly concerned with how to adjust the industrial structure with the purpose of improving the environmental quality (Jalil & Feridum, 2011). Some scholars have claimed that in the process of industrialization of the developed countries, environmental problems have emerged in stages over hundreds of years. However, the environmental problems have concentrated in China in several decades (Zhang, et al., 2009). More and more scholars have been aware that pollution abatement could promote the adjustment of industrial structure reversely (Lu, 2007; Xiao & Li, 2013). This paper tries to explain the mechanism of pollution abatement reversely impacting the adjustment of industrial structure. We use cross-section data of China's thirty provinces and establish a threshold regression model to carry out an empirical analysis. According to the results of threshold regression, we throw light on the distinctive characteristics and differences between sub-samples.

Methodology and the Data

Threshold Regression Model Setup

Hansen (2000) developed a statistical theory for threshold estimation in the regression context. Least squares estimation of the regression parameters is considered and an asymptotic distribution theory for the regression estimates is developed. Pollution intensity is one of the key factors that impact industrial restructuring. When the pollution intensity is very great in some areas, the environmental pressure is accordingly increased. So the government would take some measures to maintain a steady economic

growth while abating the emissions of pollutants. In this situation, the adjustment of the industrial structure would become an important tool to abate emissions. However, we think industrial restructuring is not only caused by pollution intensity, but also by the ability to control pollution. So we think that the reversed force effect on industrial restructuring is different among different areas. Therefore, we think the scale of pollution and the ability to control pollution are all-important causes of industrial restructuring. According to this point, we will choose our threshold variables and split the sample.

We determine the pollution intensity (WEI) and the total amount of emissions (WES) to be the variables that could measure the scale of pollution; the pollution abatement ratio (WAR) and pollution control project investment per capita (API) are the variables that measure the ability to control pollution. Then we test the threshold effect and build a threshold regression model as:

$$ISR_i = c_1 + \theta_1(WEI_i + WAR_i) \cdot d(q \leq \lambda_j) + \theta_2(WEI_i + WAR_i) \cdot d(q > \lambda_j) + \varepsilon_i \quad (1)$$

Where i stands for different areas; q is the threshold variable matrix and $q = \{WAR, WES, WEI, API\}$; $\lambda_j (j = 1, 2, 3, 4)$ is threshold parameter; $d(\cdot)$ is indicator function; ε_i is the random variable and $\varepsilon_i \sim iid. N(0, \sigma^2)$.

Explanations of the variables in the model are as follows: (1) Industrial output value proportion (ISR, %): stands for the industrial restructuring. (2) Pollution intensity (WEI, ten thousand tons/one hundred million Yuan): stands for the scale of pollution. This variable is computed by the emissions of industrial waste gas dividing the output value of the industrial sector. The industrial waste gas contains SO₂, soot and dust from industrial sector. (3) Total amount of emissions (WES, ten thousand tons): sum of emissions of SO₂, soot and dust from the industrial sector. (4) Pollution control project investment per capita (API, Yuan per capita): stands for the ability to control the pollution, and is computed by pollution control project investment divided by the total population. (5) Pollution abatement ratio (WAR, %)): describes the effect of pollution abatement and is computed as:

$$WAR = \frac{\text{industrial waste gas emission of last year} - \text{that of this year}}{\text{industrial waste gas emissions of last year}} \times 100$$

Data

Given the situation that data is available, this paper uses the cross-section data of China's thirty provinces. The cross-section data is computed from the annual average value of time series from 1998 to 2010 in order to smooth the time trend. The original data are from China Statistical Yearbook of relative years.

Threshold Estimation and Empirical Analysis

Threshold Test

The first round of threshold test shows that LM values and Bootstrap-p values of each threshold variable are as follows: the LM value of API is 6.4092 and Bootstrap-p value is 0.4590; LM value of WAR is 11.7301 and Bootstrap-p value is 0.0020; LM value of WES is 9.1950 and Bootstrap-p value is 0.0870; LM value of WEI is 6.8790 and Bootstrap-p value is 0.3920. We choose WAR to be our first threshold variable because of its smaller LM value. Figure 1 describes the confidence interval of WAR. The threshold estimation value is $WAR = -3.3679$. The dotted line in Figure 1 means that the confidence value is 7.35, under the 95% significant level and the confidence interval is [-3.6332, -1.0306]. Therefore, we can split the sample into two groups: that is, the "low-abatement-rate" group with sample size of 18 provinces and the "high-abatement-rate" group with sample size of 12 provinces.

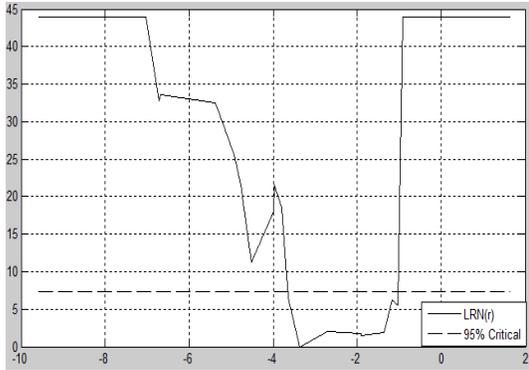


Fig. 1. First threshold variable: WAR

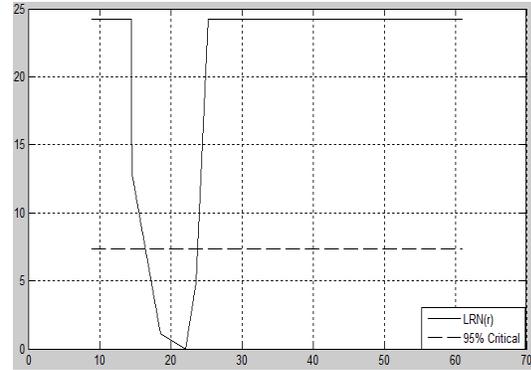


Fig. 2. Second threshold variable: API

The second round of the threshold test for the “high-abatement-rate” group shows that none of the threshold variables is significant, so the sample splitting is over. We will go on with the “low-abatement-rate” group and the threshold variables are $q = \{WES, WEI, API\}$. The results show that the Bootstrap-p value of API is 0.07; the Bootstrap-p value of WES is 0.1230; and the Bootstrap-p value of WEI is 0.4040. According to the test, we will use API as the second threshold variable to split samples. The threshold estimation value is $API = 22.0766$ (per capital) when the value of LR (λ) is minimum. Under the 95% significant level, the confidence interval is $[18.5273, 23.5377]$. Figure 2 describes the confidence interval of API in “low-abatement-rate” group. Based on the second threshold parameter of API, we can further split the samples into two groups, that is, the “low-abatement-rate & low-investment” group and the “low-abatement-rate & high-investment” group.

Results of the third round of threshold test shows that none of the threshold variables is significant. So we can split the thirty provinces into 3 groups, as shown in Table 1.

Table 1. Results of Sample Splitting

Sample splitting	Threshold parameters (%)	Provinces	Sample size
Group 1	$WAR > -3.3679$	Beijing, Gansu, Guangxi, Hainan, Heilongjiang, Jilin, Jiangsu, Liaoning, Shandong, Shanxi, Shanghai, Tianjin	12
Group 2	$WAR \leq -3.3679$ $API \leq 22.0766$	Anhui, Hebei, Henan, Hubei, Hunan, Jiangxi, Qinghai, Sichuan, Yunnan, Chongqing	10
Group 3	$WAR \leq -3.3679$ $API > 22.0766$	Fujian, Guangdong, Guizhou, Inner Mongolia, Shanxi, Xinjiang, Zhejiang, Ningxia	8

Threshold Estimation and Analysis

We use the method of OLS to estimate parameters of three groups. The results are shown in Table 2. We can see that on one hand, parameter estimation of each group passes the t-test, which means the estimation is significant. On the other hand, the differences of parameter estimation between subsamples are obviously corresponding to different values of parameters.

First of all, in the first round of threshold test, there is a threshold effect with $WAR = -3.3679$, which means that WAR is an important factor to influence the second industrial proportion. The “high-abatement-rate” group is named Group 1. WAR and ISR are positively correlated. When WAR increases 1%, ISR will increase 0.1502% correspondingly. ISR and WEI are positively correlated too.

The result indicates that pollution abatement does not play a role in the adjustment of industrial structure or in the development of service sector in Group 1.

Table 2. Threshold Regression Results of Each Sub-Sample

Sample splitting	C	WEI	WAR	R ²
Total Sample	42.9638 (2.7967)	5.1239 (42.09)	-0.8594 (0.4243)	0.1661
Group 1	26.2342 (5.8078)	621.39 (264.19)	0.1502 (0.6428)	0.6205
Group 2	35.5268 (1.7811)	0.3544 (0.1437)	-1.2960 (0.3813)	0.8377
Group 3	42.4871 (2.4930)	0.2076 (0.0568)	-2.0507 (0.9960)	0.5789

Tips: The values in parentheses are the standard deviation.

Secondly, API becomes an important threshold variable in the “low-abatement-rate” group with the threshold estimation of $API = 22.0766$. It is indicated that when the WAR is low in some provinces, API becomes another important factor to influence ISR. According to sample splitting, the “low-abatement-rate & high-investment” group is named Group 3, while the “low-abatement-rate & low-investment” is named Group 2. In Group 2 and Group 3, ISR is all positively correlated to WEI and negatively correlated to WAR. It indicates that WAR can effectively drive industrial structure to adjust and that the reversed transmission mechanism has been established in both Group 2 and Group 3.

Specifically, Group 1 includes three provinces of Northeast China: Beijing, Tianjin and most eastern coastal provinces and cities. In this group, WEI and WAR both have a positive impact on ISR, which means a negative impact on growth of service sector. The result indicates that the reversed transmission mechanism has not been established in Group 1. They are more dependent on the following factors: (1) Depending on geographical advantage and higher openness, provinces like Beijing, Shanghai, Shandong and so on have more chances to introduce advanced foreign technology which is necessary to industrial restructuring; (2) Eastern coastal provinces have a higher globalization degree and attract a large amount of FDI and advanced experience of management. Those factors will not only drive the industrial structure to upgrade, but also promote the development of service industry.

Group 2 contains all provinces in the middle of China except Shanxi province and most southwestern provinces. WEI and ISR are positively correlated. When WEI increases 1%, ISR will correspondingly increase 0.35%. But WAR is negatively related to ISR. When WAR increases 1%, ISR will decline by 1.1296% correspondingly. Group 3 contains almost all of the Northwestern provinces and three eastern coastal provinces as Zhejiang, Guangdong and Fujian. In this group, WEI promotes the rise of ISR with 0.21%, and WAR inhibits the improvement of ISR with 2.0507%. Group 2 and Group 3 obtain a similar result that pollution abatement inhibits the rise in proportion of secondary industry and effectively drive the industrial restructuring. The greater the intensity of pollution abatement, the more optimal the industrial structure will be. As a result, Group 2 and Group 3 have formed a “win-win” situation between pollution abatement and industrial restructuring.

We will explain this empirical result further. The middle, northwest and southwest regions of China are still in the traditional energy-intensive, highly polluting mode of industrialization. The heavy industries, such as thermal power industry and metal smelting industry occupy an important position in the economic growth of those regions, and the economic growth is almost supported by a large amount of

resources input, which makes the industrial structure heavily likely to be seriously polluted. The enterprises would like to put in more resources to earn more profits, but they use low levels of technology and do almost nothing with their pollutant emissions. Based on this situation, when the stringent environmental standard is implemented, the behaviors of enterprises will change. They will change their input structure, decrease the proportion of natural resources and increase the input of clean elements of productions such as human capital and technology capital. Thereby, they can significantly optimize and upgrade industrial structure.

On the other hand, it is worth noting that although the influence of pollution abatement in Group 2 and Group 3 is in the same direction, the coefficient estimations are significantly different. This result indicates obvious regional disparity between Group 2 and Group 3. The reversed transmission mechanism is more powerful in Group 3 than that of Group 2 because the provinces in Group 3 such as Inner Mongolia, Xinjiang, Ningxia and Shanxi are all typical resource-based provinces, which have abundant sources of energy. Given their natural resources endowment, on one hand, the primary manufacturing with high pollution is a large proportion in the economy. On the other hand, Group 3 becomes “pollution heaven”, and undertakes the transfer of pollution-intensive enterprises from Group 1 and Group 2 (Wang & Wang, 2011). In a word, provinces of Group 3 are in a more low-end period of industrialization and have a more serious pollution status. Therefore, the more stringent environmental standard will produce a stronger role in driving the industrial structure to adjust, and the reversed transmission mechanism will be more effective than Group 2.

Conclusion

We obtained our conclusion as follows:

(1) The “high-abatement-rate” group concludes three provinces of Northeast China, Beijing, Tianjin and most eastern coastal provinces and cities. The level of industrialization is significantly higher than the provinces of Group 2 and Group 3. In this group, WEI and WAR both have a positive impact on ISR what means a negative impact on growth of service sector. The result indicates that the reversed transmission mechanism has not been established in Group 1. They are more dependent on other factors such as advanced technology, FDI and advanced experience of management.

(2) Group 2 and Group 3 obtain a similar result that pollution abatement inhibits the rise in proportion of secondary industry and effectively drives the industrial structure to adjust. Those provinces are still in the traditional energy-intensive, highly polluting mode of industrialization with the heavy industries occupying an important position in economic growth. So the greater the intensity of pollution abatement, the more optimal the industrial structure will be. As a result, Group 2 & 3 have formed a “win-win” situation between pollution abatement and industrial restructuring.

(3) However, the reversed transmission mechanism is more powerful in Group 3 than that of Group 2, which indicates obvious regional disparity between those two groups. It is because the provinces in Group 3 are all typical resource-based provinces, which have abundant energy and have a more serious pollution status. The primary manufacturing with high pollution is a large proportion in the economy, and becomes “pollution heaven” of Group 1 and Group 2. Therefore, the more stringent environmental standard will produce a stronger role in driving the industrial restructuring and the reversed transmission mechanism will be more effective.

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Psychological Capital at Work: Toward Understanding the Positive Effects of Ethical Leadership

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[Abstract] *We examined the role that psychological capital plays in the relationships between ethical leadership and followers' desired outcomes, such as job satisfaction, task performance, and voice behavior. The results from two field studies indicate a significant relationship between ethical leadership and psychological capital. A mediated model whereby psychological capital mediates relationships between ethical leadership and subordinates' positive attitude and performance is also supported. Theoretical and managerial implications of our results for understanding ethical leadership behaviors are discussed.*

[Keywords] *ethical leadership; psychological capital; job satisfaction; task performance; voice behavior*

Introduction

The major objective of this study was to extend ethical leadership research to the psychological capital analysis by investigating the mechanisms through which ethical leadership may be related to followers' positive outcomes, such as job satisfaction, task performance, and voice behavior. The aim is to contribute to the understanding of underlying processes of ethical leadership, which may affect desired individual outcomes. Furthermore, by incorporating psychological capital in the study framework, we respond to recent calls for integration of ethical leadership and psychological capital literatures (e.g. Brown & Treviño, 2006; Walumbwa, et al., 2011). These calls have contended that psychological capital is fundamental to linking ethical leader behavior to follower performance, yet to date empirical evidence does not exist. In the current study, we conducted two studies to test our predictions. Study 1 was conducted on a cross-sectional sample of 368 full-time public sector employees working in government departments. In Study 2, we assessed the proposed predictions again on a sample of 213 working adults from multiple industries, but we did so at two points of time.

Theory Background and Hypothesis

At the heart of psychological capital or PsyCap (Luthans, et al., 2006) is the premise that the immediate work environment (including leadership) can shape a positive state by the way in which they structure positive psychology movement (Walumbwa, Luthans, Avey, & Oke, 2011). We argue that the conceptual and empirical developments of psychological capital to date can be expanded to encompass a broader role for leaders. In particular, we suggest that leaders with strong ethical commitments who regularly demonstrate normatively appropriate behavior through personal actions and interpersonal relationships can have an impact on psychological capital, thereby affecting an employee's positive attitude and behavior. However, relatively few empirical studies have integrated psychological capital into ethical leadership to test how and why ethical leadership relates to positive outcomes.

Psychological capital is defined by Luthans, et al. (2006) as one's "positive psychological state of development that is characterized by (1) having confidence (*self-efficacy*) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive expectation (*optimism*) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to

goals (*hope*) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (*resilience*) to attain success.” We argue that because individual psychological capital developed through a series of interactions between leaders and followers, immediate supervisors play a critical role in enhancing psychological capital because of their proximity to employees.

There are a number of ways ethical leadership can be positively related to psychological capital. Ethical leaders are viewed as “moral persons” who are honest and trustworthy and “moral managers” who are principled decision makers caring about the well-being of employees, the organization, and even the whole society (Brown & Treviño, 2006; Brown, Treviño, & Harrison, 2005; Mayer, et al., 2009). Ethical leaders share information to their followers about the benefits of ethical behavior and the cost of inappropriate behavior, which provide employees with opportunities to develop individual intuition and expand their knowledge. This in turn enhances employees’ efficacy, a key component of psychological capital (Luthans, et al., 2006). In addition to efficacy, each of the other psychological resource components of hope, optimism, and resilience that make up psychological capital may also contribute to the relationship between ethical leadership and psychological capital.

There is growing empirical research evidence linking psychological capital to several desired outcomes (Luthans, Norman, Avolio, & Avey, 2008). Psychological capital plays an important role in employee performance by influencing individuals’ effort and persistence (Walumbwa, Luthans, Avey, & Oke, 2011). Having high psychological capital makes it more likely for subordinates to initiate action, pursue it, and sustain persistence. Supporting these arguments, several prior individual and meta-analytic studies reported significant positive relationships between psychological capital and individuals’ desired outcomes (Luthans, Avolio, Avey, & Norman, 2007). Ethical leaders play a central role in facilitating followers’ positive attitude and behavior because of their support for followers’ self-determination. Those attractive and credible values, beliefs, and behaviors of such leaders are used to model the development of followers to make the best choices. Thus, the study’s major hypotheses are the following:

Hypothesis 1. Ethical leadership is positively related to psychological capital.

Hypothesis 2. Psychological capital mediates the relationships between ethical leadership and (a) job satisfaction, (b) task performance and (c) voice behavior.

Study 1

Methods

Sample and procedure. Surveys were distributed to individuals randomly selected in government departments in Zhejiang Province, China. 368 interested participants completely finished. Participants’ average age was 34.42 years (SD = 7.31) and the average tenure with the respondents’ immediate supervisor was 3.04 years (SD = 3.62). Approximately 34% were women.

Measures. Ethical leadership was assessed with Brown, et al. (2005) ten-item measure. Psychological capital was assessed with Luthans, et al. (2007) eight-item measure. Job satisfaction was assessed with Tepper (2000) three-item measure. Task performance was assessed with Williams & Anderson (1991) five-item measure. Voice behavior was assessed with Van Dyne and LePine (1998) six-item measure. All scales were anchored on a five-point scale ranging from (1) “strongly disagree” to (5) “strongly agree”.

Results

Descriptive statistics, internal consistency reliabilities, and correlations among the study variables are shown in Table 1. Multiple regression analysis was employed to test both hypotheses. Its findings are shown in Table 2. In Model 1, the control variables were entered into the regression. In Model 2, ethical leadership was entered, which was found to be positively related to psychological capital ($\beta = 0.56$, $p < 0.001$). Hypothesis 1 was supported. In Model 5, ethical leadership and psychological capital were entered together, which indicated that psychological capital partially mediates the relationships between ethical leadership and job satisfaction. Hypothesis 2a was supported. As the same, Model 8 supported Hypothesis 2b and Model 11 supported Hypothesis 2c.

Table 1. Means, Standard Deviations, and Correlations among Variables (Study 1)

Variables	Mean	s. d.	1	2	3	4	5
1. Ethical leadership	3.65	0.98	(.92)				
2. Psychological capital	4.00	0.72	.56**	(.87)			
3. Job satisfaction	4.39	1.47	.33**	.33**	(.77)		
4. Task performance	4.31	0.90	.49**	.52**	.40**	(.92)	
5. Voice behavior	4.08	0.96	.51**	.49**	.49**	.69**	(.93)

Note. $n=368$. Values in parentheses are alpha reliabilities.

** $p < 0.01$ (2-tailed).

Table 2. Multiple Regressions of Hypothesized Relationships (Study 1)

Variables	Psychological capital		Job satisfaction		
	Model 1	Model 2	Model 3	Model 4	Model 5
Control variables					
Gender	0.09†	0.11*	-0.01	-0.01	-0.03
Age	0.04	0.02	0.09	0.07	0.07
Tenure with supervisor	0.04	0.01	-0.02	-0.04	-0.04
Predictor variables					
Ethical leadership		0.56***		0.33***	0.21***
Mediator variable					
Psychological capital					0.21**
R^2	0.02	0.33	0.01	0.11	0.14
Adjusted R^2	0.01	0.32	-0.00	0.11	0.13
ΔR^2	0.02	0.31	0.01	0.11	0.03
F	1.87	44.20***	0.76	11.72***	12.10***
ΔF	1.87	168.63***	0.76	44.32***	12.18***

Note. $n=368$. Statistical significance is based on a two-tailed test. We tested and interpreted hypotheses using standardized regression coefficients.

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$.

Study 2

Methods

Sample and procedure. Data came from 400 employees and their immediate supervisors in companies located in the eastern China. At Time 1, employees were asked to report their supervisors' ethical behaviors. At Time 2 (approximately 8 weeks later), employees were asked to complete measures of psychological capital and job satisfaction, meanwhile their supervisors were asked to rate their task performance and voice behavior. 213 individuals (53.25% response rate) who provided complete data for our variables of interest in this study at both survey time periods. On average, participants' age was 30.07

years (SD = 7.94) and the average tenure with the respondents' immediate supervisor was 2.67 years (SD = 3.29); 47.8% were women.

Measures. All variables were assessed with the same measures as in Study 1.

Table 2 (continued). Multiple Regressions of Hypothesized Relationships (Study 1)

Variables	Task performance			Voice behavior		
	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Control variables						
Gender	0.01	0.02	-0.02	0.02	0.03	0.00
Age	0.04	0.02	0.01	0.16**	0.14**	0.13**
Tenure with supervisor	0.01	-0.01	-0.02	0.03	0.01	0.00
Predictor variables						
Ethical leadership		0.49***	0.29***		0.51***	0.35***
Mediator variable						
Psychological capital			0.36***			0.29***
R^2	0.00	0.24	0.33	0.03	0.29	0.34
Adjusted R^2	-0.01	0.23	0.32	0.02	0.28	0.33
ΔR^2	0.00	0.24	0.09	0.03	0.26	0.06
F	0.24	28.90***	35.40***	3.80*	36.27***	37.31***
ΔF	0.24	114.63***	46.82***	3.80*	129.64***	29.91***

Note. n=368. Statistical significance is based on a two-tailed test. We tested and interpreted hypotheses using standardized regression coefficients.

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$.

Results

Descriptive statistics, internal consistency reliabilities, and correlations among the study variables are shown in Table 3. Multiple regression analysis was employed to test both hypotheses. Its findings are shown in Table 4. In Model 1, the control variables were entered into the regression. In Model 2, ethical leadership, was entered, which was found to be positively related to psychological capital ($\beta = 0.32$, $p < 0.001$). Hypothesis 1 was supported. In Model 5, ethical leadership and psychological capital were entered together, which indicated that psychological capital partially mediates the relationships between ethical leadership and job satisfaction. Hypothesis 2a was supported. As the same, Model 8 supported Hypothesis 2b and Model 11 supported Hypothesis 2c.

Table 3. Means, Standard Deviations, and Correlations among Variables (Study 2)

Variables	Mean	s.d.	1	2	3	4	5
1. Ethical leadership	3.92	0.81	(.94)				
2. Psychological capital	3.83	0.79	.37**	(.93)			
3. Job satisfaction	3.89	0.97	.57**	.33**	(.74)		
4. Task performance	4.33	0.71	.30**	.52**	.26**	(.95)	
5. Voice behavior	3.93	0.74	.35**	.49**	.19**	.67**	(.93)

Note. n=213. Values in parentheses are alpha reliabilities.

** $p < 0.01$ (2-tailed).

Table 4. Multiple Regressions of Hypothesized Relationships (Study 2)

Variables	Psychological capital		Job satisfaction		
	Model 1	Model 2	Model 3	Model 4	Model 5
Control variables					
Gender	0.10	0.04	0.08	-0.02	-0.03
Age	-0.08	-0.04	0.06	0.14†	0.15†
Tenure with supervisor	-0.19*	-0.16†	-0.12	-0.05	-0.02
Predictor variables					
Ethical leadership		0.32***		0.60***	0.55***
Mediator variable					
Psychological capital					0.16**
R^2	0.08	0.17	0.02	0.34	0.36
Adjusted R^2	0.06	0.15	0.00	0.33	0.35
ΔR^2	0.08	0.09	0.02	0.33	0.02
F	5.87**	10.48***	1.05	27.08***	23.66***
ΔF	5.87**	22.52***	1.05	103.64***	6.90**

Note. n=213. Statistical significance is based on a two-tailed test. We tested and interpreted hypotheses using standardized regression coefficients.

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$.

Table 4 (continued). Multiple Regressions of Hypothesized Relationships (Study 2)

Variables	Task performance			Voice behavior		
	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11
Control variables						
Gender	0.02	-0.03	-0.05	0.11	0.06	0.04
Age	-0.13	-0.09	-0.08	-0.07	-0.03	-0.01
Tenure with supervisor	-0.01	0.03	0.10	-0.12	-0.08	-0.02
Predictor variables						
Ethical leadership		0.29***	0.14*		0.31***	0.18**
Mediator variable						
Psychological capital			0.47***			0.41***
R^2	0.02	0.10	0.28	0.05	0.13	0.27
Adjusted R^2	0.01	0.08	0.27	0.03	0.12	0.25
ΔR^2	0.02	0.08	0.19	0.05	0.09	0.14
F	1.36	5.57***	16.43***	3.34*	8.06***	15.40***
ΔF	1.36	17.88***	54.16***	3.34*	21.26***	38.87***

Note. n=213. Statistical significance is based on a two-tailed test. We tested and interpreted hypotheses using standardized regression coefficients.

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$.

Conclusion and Implications

We suggest that leaders with strong ethical commitments who regularly demonstrate ethically normative behavior can have an impact on psychological capital, which in turn will be evidenced by indications of enhanced job satisfaction, task performance, and voice behavior. Results provide support for a mediated model whereby psychological capital mediates relationships between ethical leadership and subordinates' desired outcomes.

Our findings extend previous research in several important ways. First, this study confirms that ethical leadership has positive effects on psychological capital. These results broaden the contribution of organizational leaders in psychological capital or PsyCap. Second, our study also confirms that psychological capital is an important intervening factor in translating the positive effects of ethical

leadership to followers' attitudes and performance. These results integrated psychological capital into ethical leadership to test how and why ethical leadership relates to positive outcomes.

Our study has several important implications for managers. First, by showing psychological capital as mediator, our results suggest that when determining how to influence employee performance, managers should consider the psychological state of their direct reports and how to raise employees' positive emotion. Secondly, our findings also suggest that ethical leadership may not only be normatively appropriate but is also instrumental for the effective functioning of organizations. Specifically, our results demonstrate that ethical leadership can have an impact not only on positive attitudes, but also on both in-role and extra-role performance.

Acknowledgements

This research was sponsored by two Research Grants of the National Natural Science Foundation of China (No. 71302058 & 41371526), and a Research Grant of the National Social Science Found (No. 12BJY008).

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Impact of Trust on Cooperation Between the Main Bodies in Fresh Agriculture Product Supply Chain

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[Abstract] Trust is a major factor affecting the main downstream supply chain to establish cooperative relations. Therefore, the research of supply chain of trust between the main production mechanisms, and trust research cooperation, etc., has been a hot issue by scholars. However, studies for the manufacturing industry are popular, but studies for farmers of the fresh produce supply chain are still lacking. This paper will be based on the perspective of the upstream peasant households, through home interviews, guiding peasant households to fill in the questionnaire survey form to get information. First, we analyzed the cause of trust and the influence from trust to cooperation. Then, we discovered several questions. Finally, we make recommendations to enable the fresh produce supply chain to have better operational efficiency.

[Keywords] fresh produce supply chain; trust; partnership

Introduction

At present, the farmers are in the upstream of the fresh agricultural products supply chain; their production and operation are dispersed. There are so many individuals involved in the production. The producers do not have a high level of intensity and scale. Throughout the whole supply chain of fresh agricultural products, there is not a high level of reliance between agricultural production operators, which can be reflected in the fragile relationship between farmers and other agricultural products operators. The default phenomenon between farmers and wholesalers occurs frequently, and cooperative relations between the main body are extremely unstable. Their collaborations are of narrow fields, most of which are limited to trade cooperation. This also makes the increasingly prominent problem occurring between the “small farmers” and the “big market”. From all aspects and at all levels needing enhancement, there are varied problems to be solved to improve the mutual trust between the subject of fresh agricultural products supply chain, to promote the stable cooperation between each node of the supply chain, to improve the operation efficiency of the fresh agricultural products supply chain, and to alleviate the conflict between farmers and market.

This study will provide the fresh agricultural products supply chain’s upstream of the farmers as the breakthrough point, so as to realize the situation of upstream farmers and analyze the causes of trust and the influence on cooperation that is between farmers and other agricultural products manager.

Theoretical Foundations

The Definition of Trust

Early research in social psychology defined trust as the individual’s optimistic expectations of something’s consequence. Deutsch (1958) defined trust as “Expecting something appears, and adopting a behavior accordingly.” Late psychology researchers turned the definition of trust from under specific

interaction scenarios and individual profiles to interpersonal trust under specific contacts. Rousseau, et al. (1998) defined trust on the new feature that was summed up in 1998 in the United States at the Academy of Management Review as “a psychological state that one’s willing to expose his weaknesses and to accept the risk of being damaged which based on the positive expectations of other party’s behavior.”

Based on sociological perspective, Barber (1983) defined trust as “Individual acquisition of an expectation for others in social interaction, formed in the society and the organization it locates, influences individual’s understand about life and society.”

In the category of economic theory, trust is always defined as a calculating process or a subjective probability of human judgment, using the methods of game theory and cost-benefit. On this basis, some scholars also embedded some social and relational factors into the definition to make it more systematic. They believe that trust is not only a rational individual behavior when faced with risk, but also a social evaluation of others and the whole society that one is faced with.

The Dimensions of Trust

About the dimensions of trust, scholars also put forward different point of view from the perspective of their own research and different criteria. Williamson (1993) divided trust into three types: computational trust, institutional trust and personal trust. According to different levels of trust, Lewicki & Bunker (1994) divided trust into institutional trust, understanding type of trust and recognition based trust. They believe that different types of trust are connected in continuously repeated process and they insist that if one level of trust reached, the generation of next level of trust could be promoted. Similarly, McAllister (1995) divided trust into cognitive type and affective type. Cognitive trust means people revered formal system more while they are going to trust others. They observe the contract and fulfill their contractual obligations on the basis of the ability and the former performance of others; Affective trust is the emotional bond between members regarding that both sides are willing to go beyond conventional business and specialized relationship and give more effort for each other to meet other people’s requirements.

Based on Chinese social and cultural characteristics, the domestic scholar Yang Jing (2006) divided trust into “computational trust” and “relational trust”. Computational trust is based on utilitarian relationship, coming from the calculation of limit on the interest in the contract; relational trust is based on understanding, produced by the predictability of both side’s behavior. It includes the trust based on affection that was brought by the existence of the present relationship as well.

The Classification of Partnership between Organizations

Many scholars classified trust according to different degrees in the study of cooperation and relationship. For example, depending on the difference of reliability degree, Das & Teng (1998) divided cooperation into a joint venture, a few fair cooperations, and non-equity cooperation; Williams (1988) and Nooteboom, Berger, and Noorderhaven (1997) divided cooperation into legal institution based, material-interest based, ethics based and cooperation under friend relationship-based. Domestic scholar Yang Jing (2006), based on the dimensions of trust division, divided cooperation of different trust levels into computational cooperation and relational cooperation. Liru Fu (2012), who based his theory on the evolution process of cooperation, also with the depth of trust, classified cooperation into three stages as transactional cooperation, coordination cooperation and synergy cooperation.

Review of the Literature

Based on the related literature at home and abroad, the author found that the domestic and foreign scholars pay more attention to the trust degree of cooperation among enterprises' set up, development and cooperation effect. According to different studies and criteria, scholars divided the trust dimensions, and on this basis, divided the types of cooperation. But in the study, few considered the special circumstances of Chinese and even less considered China's rural society rooted in their genetic, geographical, industry, and geographical relationship.

Based on the above analysis, considering China's rural social and cultural background and the perspective of the upstream farmers, this paper chose the domestic scholar Jing Yang's definition, which classified trust into two dimensions: "computational trust" and "relational trust". We follow this research idea to study the influence of trust between the main supply chain bodies.

Methods

Respondents

In accordance with the purpose of the survey, we chose the most upriver peasant households of the supply chain of the fresh agriculture product, and other agricultural operators are our entry points as well. Therefore, we chose peasant households as respondents and distributed questionnaires to them. According to the actual situation of China's rural areas, the major collaborators of farm households are rural cooperatives and large agricultural peddlers with whom framers often precede trading and temporary cooperation at a low level. In this case, we focus on the trust and cooperation issues between farm households and cooperatives.

Measurement

As Table 1 shows, the trust scale can be divided into computational trust and relational trust. The computational trust toward cooperatives consists of its management capabilities, technical capabilities, logistics capabilities, penalty cost and system security, etc. The relational trust consists of blood relationship and region relationship.

Table 1. Quantization Table of Trust-Related Variables

Measured \geq Variable		Measurement Options
Computational Trust	Management capabilities	Cooperative can grasp information about the market and market trends
		Cooperative serves great help for the sales of agricultural products.
	Technical capabilities	Cooperative can put forward guidance and advice for technologies of agricultural production.
	Logistics capabilities	Cooperative can provide transportation, warehousing and packaging services.
	Penalty cost	Cooperative's penalty cost is very high
		Cooperative is known for its honesty in the same industry
	System security	Cooperative has no price discrimination to any other partners.
Terms of the contract signed by this cooperative is fair		
Internal management system of the cooperative is very standardized		
Relational Trust	Blood relationship	You have relatives or friends in the cooperative.
		Status of your relatives (friends) in the cooperative is very important.
		Relatives (Friends) have many years of cooperation with the cooperative.
		Relatives (Friends) of great ability join in the cooperative.
		Suggestions about joining in the cooperative that Relatives (Friends) give you.
	Region relationship	Farmers near the area join in the cooperative.

The trust scale mainly investigates the factors considered by farm households when they decide to join in the cooperative. The scale adopt the Likert five scale, which request the respondents to assess each question using the number from 1 to 5. Number 1 represents “Totally not concerned”. Number 5 represents “Totally concerned”. Analysis shows that reliability of computational trust is 0.943, and reliability of relational trust is 0.949.

Analyses

Influence Factors of Trust

According to the investigation, farm households pay different degrees of attention to the influence factors of the trust towards the cooperative. Compared to the relational factors, farm households form their trust towards the cooperative, which is more originated in computational trust.

The attention mean of computational factors up to 4, while relational factors are only up to 3.70. At the same time, dispersion degrees of computational factors are less than relational factors' dispersion degrees. To put it more specifically, farms form their trust to the cooperative in the following way. First, the computational trust originates in their inspection and calculation of the cooperative' operating ability which reflects its ability of acquiring marketing information and helping farms to sell their products. The next factors they consider are technical capabilities, penalty cost and system security of the cooperative. The last factor affecting computational trust' formation is the logistics capability of the cooperative. As for the relational trust, it is first influenced by the blood relationship, and the region relationship is in second place.

Trust's Influence on Collaborations

Trust's impacts on farmers' wishes to join cooperatives. From Table 2, we can see that farmers' desires to join in the cooperatives can be affected by both computational trust and relational trust. To be specific, their wishes have the most significant correlations with the following factors of the cooperative: management capabilities, technical capabilities, and system security. The management capabilities mostly mean that the cooperative can grasp information about the market and market trends. It also means that the cooperative provide great help for the sales of agricultural products. The technical capabilities represent that the cooperative can put forward guidance and advice for technologies of agricultural production. System security mainly represents the following three items: the cooperative has no price discrimination to any other partners; terms of the contract signed by this cooperative are fair; internal management system of the cooperative is very standardized. System security primarily focuses on the degree of standardization of the internal management system of the cooperative. It also focuses on the fairness of the terms of the contract signed by the cooperative. In addition, it also focuses on whether the cooperative has no price discrimination to any other partners or not. The survey data indicates that the more corresponding abilities the cooperative processes, the more benefits the farmers believe the cooperative will bring to them, and the stronger desire of joining the cooperative the farmers will get. Meanwhile, the cooperative should improve and perfect their system security to protect the members' interests. The data also shows that the more consummate system security the cooperative has, the more firmly the farmers will believe their interests will not be impaired after joining the cooperative. What is more, if one has relatives (friends) or neighbors in the cooperative, he will emotionally trust the cooperative, and finally he will be more willing to joining the cooperative.

Table 2. Correlation Analysis of Trust Dimensions and Willingness of Joining in the Cooperative.

		Computational trust						Relational Trust		
		Management Abilities	Technical Abilities	Logistic abilities	Penalty Cost	System security		Blood relationship	Region relationship	
Willingness of joining the cooperative	Pearson correlation	0.462**	0.333**	0.268*	0.276*	0.395**	0.462**	0.291**	0.272**	0.291**
	Sig. (bi-lateral)	0.000	0.004	0.022	0.018	0.001	0.000	0.013	0.020	0.013

Note 1: **. Correlation is significant at the 0.01 level (2-tailed).

Note 2: *. Correlation is significant at the 0.05 level (2-tailed).

Trust's Impact on Farmers' Willingness to Invest in Shares of the Cooperative

As Table 3 shows, Pearson correlation index of farmers' willingness and computational trust is 0.169**, sig. <0.01. We can also see that farmer's willingness has a significant correlation with both of the two factors: penalty cost and system security. The other factors like management abilities, technical abilities and logistic abilities, have a non-significant correlation with farm households' desires of joining the cooperative. However, all three factors have a positive correlation with farmers' aspire of becoming one of the members of the cooperative. What is more, the farmers' willingness to invest in shares of the

cooperative has a positive correlation with relational trust (including blood relationship and region relationship). But the correlation was not significant, which can be attributed to the difference between joining the cooperative and investing in its shares. When considering investment in shares of the cooperative, the investors focus more on the penalty cost and the system security of the cooperative. Only when the penalty cost is high and the interior management system is consummate, can the interests of the farmers not be easily impaired; hence their desire to join the cooperative will be stronger.

Table 3. Correlation Analysis of Trust Dimensions and Willingness of Investing in Shares of the Cooperative

		Computational trust								Relational trust
		Management abilities	Technical abilities	Logistic abilities	Penalty cost	System security		Blood relationship	Region relationship	
Willingness to invest in shares of the cooperative	Pearson correlation	0.137	0.197	0.205	0.189*	0.160**	0.169**	0.099	0.036	0.088
	Sig. (bilateral)	0.100	0.095	0.081	0.022	0.017	0.000	0.059	0.763	0.065

Note 1: **. Correlation is significant at the 0.01 level (2-tailed).

Note 2: *. Correlation is significant at the 0.05 level (2-tailed).

Conclusion

The formation of the farmers’ trust towards cooperatives. According to our survey, it can be found that farmers pay different degrees of attention to the different dimensions of trust toward the cooperative. Generally speaking, during the formation of the computational trust to the cooperative, there are more computational factors than relational factors to be concerned. Specifically, first of all, the farmers’ trust computing model is the result of investigation and calculation of the abilities of the cooperative, namely the cooperative's ability to grasp the market information and help farmers sell agricultural products. The next factors are cooperative technical ability, default cost and system security. The last is logistics capability. However, the relational trust production is mainly influenced by blood relationship, then region relationship fellows.

The influence of different dimension of trust on the cooperation way. On the basis of the investigation data, there is a significant correlation between the calculation model of trust and willingness to invest in stocks of farmer cooperatives. The stronger the computing trust, the more intense willingness the farmers have to invest in stocks of the cooperative. The default cost and the improvement of the system guarantee, in particular, have a significant influence on farmers’ investment decisions. On the contrary, there is less obvious relationship between the relational trust and investing willingness. As stated above, it can be seen that farmers are extremely cautious and rational in making decisions to invest, and they only make their choices after sufficient risk assessments.

Implications

To improve the management and technical capability of farmers cooperative organization. The farmer cooperative organization is an important subject in the supply chain and its management, and technical capability is an important factor for farmers in considering whether to join the organization. Improving

the ability of management and technology not only can effectively help farmers increase production, but also can promote their trust in the cooperation organization and the co-operation stability. The above measures have a realistic significance for perfecting the fresh agricultural products supply chain.

To strengthen the institutional construction of farmer cooperative organization. Mencius said, not a rule, not into the surrounding area. Naturally, strengthening institutional construction of farmer cooperative organization, reducing the price discrimination, standardizing the default cost, and improving the internal management system of farmer cooperative organization are beneficial to promote farmers for cooperation organization's trust, reduce farmers of conflict and cooperation organization and make the supply chain to realize win-win between the main part.

To strengthen policy and financial support. On the one hand, the government needs to create a good institutional environment, improve the system of relevant laws and regulations, establish and improve the law enforcement system, give preferential policy and help the development of fresh agricultural products supply chain fresh agricultural products supply chain subject to help. On the other hand, financial institutions should strengthen funding support on farmer cooperative organizations, boost the improvement of agricultural industrialization, and integrate a fresh agricultural products supply chain.

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The Practical Difficulties and Strategies of Transformation about the Synchronous Lifting of the Level and the Quality in Urbanization

– A Case Study in Zhejiang Province of China

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[Abstract] Urbanization is an important historical task for the development of economic and social transformation in China. In this article, through the study of Zhejiang province we found out that the level and the quality of urbanization presents us with a situation of “non balanced development”, which has caused a situation of obvious “one-way diffusion type urbanization”, and it is necessary to put the situation fair to realize people’s development and the overall progress in the promotion of humans as the fundamental starting point, and service in the goal of the strategy of expanding domestic demand as a realistic point, to crack the current development of the urbanization of the “three mismatch” as the strategic emphasis, and to promote development of urban and rural areas with the “agglomeration-diffusion” as the basic path to achieve the level and quality in urbanization with the sustained and healthy development.

[Keywords] quality of urbanization; unbalanced development; strategic ideas; dynamic mechanism

Introduction

“Firmly grasp the strategic focus of expanding domestic demand“ is the objective requirement that China needs in order to transform the mode of economic development (Bloom, Canning, & Fink, 2008; Davis, & Henderson, 2003). “Urbanization is the greatest potential to expand domestic demand“, and the current advance of urbanization is the strategic focus of deepening reform to seek a sustained and healthy road to the development of urbanization. It is Zhejiang province that always attaches importance to the process of urbanization and emphasizes “urbanization determines the future of China’s development.”

Looking from the realistic situation, domestic and various provinces and cities generally pay attention to the development of urbanization and focus on upgrading their levels of urbanization. Zhejiang, as the eastern coastal province, takes the lead in implementing the reform and opening up, and has worked for a long time in national economic development. What’s more, it undertakes the historical mission of the transformation and upgrading of their own needs and the first test.

The realistic background of Zhejiang’s urbanization is that the level of urbanization is much higher than the national average. After the international financial crisis, the development strategy of expanding domestic demand and readjusting the structure, which is in the town to a carrier, is put forward by our country. The development of Zhejiang’s urbanization should focus on improving the “urbanization” based on the consumer, and pay more attention to improve the “urbanization quality” in order to expand consumption, and then realize the level of urbanization and improve the quality of synchronization.

Therefore, the Chinese Democracy Promotion Association Committee of Zhejiang province in 2013 was invited to participate in a government and political affairs investigation group of “the implementation of Zhejiang urbanization level ‘quantity’ and ‘quality’ synchronous lifting countermeasure research” through literature retrieval, field survey, case area, and finishing statistical analysis questionnaire

methods. They had a comprehensive understanding of the basic situation of Zhejiang urbanization development, found the problem and put forward some suggestions, hoping to provide reference to urbanization level and quality improvement.

The Level and the Quality of Urbanization Presents a Situation of “Non-Balanced Development” in Zhejiang Province

The development of urbanization has long been higher than the national average level in Zhejiang province. Its industrial cluster and specialized market, as the foundation of the construction of small towns, formed on the spot on the road of town with regional characteristics, and it has accumulated rich experience in practice and provided valuable experience for other regions of China (Jones, & Romer, 2009). At the same time, the urbanization of Zhejiang is similar to other areas, and there is an inertial importance of thinking of the level of urbanization and ignoring the urbanization quality to make the improvement of current level and the quality of urbanization face great difficulty (Sheng, 2009).

The outstanding performance is a “three mismatches” problem: namely “urbanization of land” and “population urbanization” mismatch; “the space of urbanization” and “industry urbanization” does not match; and “the production of urbanization” and “the life of urbanization” does not match.

Table 1. 2001-2012 Rate of Urbanization Changes and the Comparison with that of the Country in Zhejiang Province (unit: %)

The year	Zhejiang province		The country		The comparison of Zhejiang and the country
	The rate of Urbanization	The rate of growth	The rate of Urbanization	The rate of growth	
2001	50.90	/	37.66	/	13.24
2002	51.90	1.00	39.09	1.43	12.81
2003	53.00	1.10	40.53	1.44	12.47
2004	54.00	1.00	41.76	1.23	12.24
2005	56.00	2.00	42.99	1.23	13.01
2006	56.50	0.50	44.34	1.35	12.16
2007	57.20	0.70	45.89	1.55	11.31
2008	57.60	0.40	46.99	1.1	10.61
2009	57.90	0.30	48.34	1.35	9.56
2010	61.60	3.70	49.95	1.61	11.65
2011	62.30	0.70	51.27	1.32	11.03
2012	63.20	0.90	52.57	1.30	10.63

Note: The rate of growth = the rate of urbanization of this year - the rate of urbanization of last year

The source of data: The 2001-2002 data of urbanization derived from the Zhejiang 60years compilation of Statistic”, 2003-2004 years comes from the “Zhejiang Statistical Yearbook 2005”, 2005-2012 years comes from the “Zhejiang statistical yearbook 2013”; the national urbanization data from the “China statistics yearbook 2013”.

“The Urbanization of Land” and “The Urbanization of Population” Doesn’t Match

It is similar to the strategy of urbanization with all parts of the country, and the urbanization of Zhejiang province is considering the main production of various kinds of elements to the city agglomeration, and to pay more attention to expanding the geographical scope of the city at the same time. During 2001-2010, 11 prefecture-level cities of Zhejiang’s urban built-up areas increased from 777 square kilometers to 1453 square kilometers, increasing by 87% during 10 years. Over the same period, the total population of the 11 cities in Zhejiang increased from 12,511,900 to 15,008,200, the increased proportion less than 20% at the end of the year.

For example, if the new residents who live and work in urban areas for more than 6 months are included, the index of the resident population will be changed. During 2001-2010, the province’s urban resident population increased from 23,029,300 people to 33,544,300 people, an increase of 45.62%, which was far lower than the expanding proportion of the urban built-up areas at the same period. From this, we could judge that the urbanization of Zhejiang simultaneously promoted the urbanization of land and urbanization of population, but the speed of urbanization of population was far less than that of the urbanization of land.

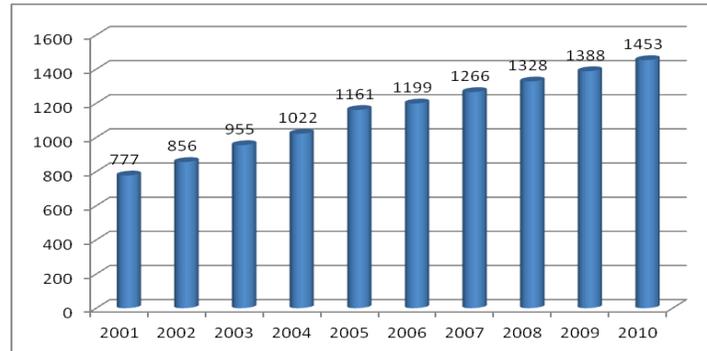


Figure 1. 2001-2010 Urban Built-up Areas of 11 prefecture cities in Zhejiang Province (Unit: square kilometer)

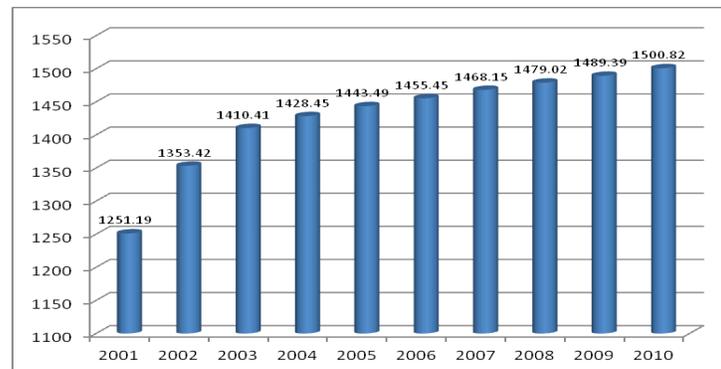


Figure 2. 2001-2010 Urban Total Population of 11 Prefecture Level Cities in Zhejiang Province (unit: million)

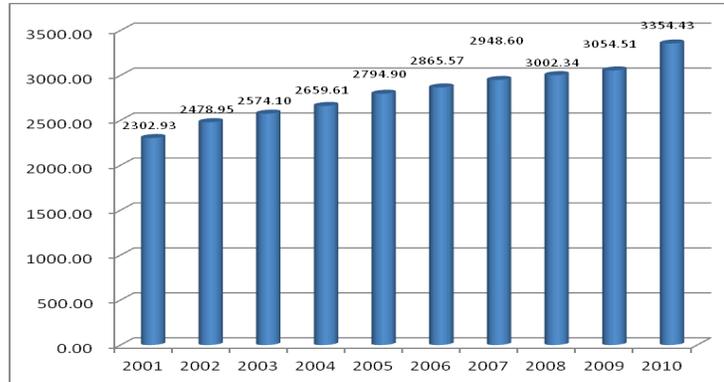


Figure 3. 2001-2010 Urban Resident Population in Zhejiang Province (Unit: million)

“The Urbanization of Apace” and “The Urbanization of Industry” Doesn’t Match

Along with the continuous expansion of land area of urban built-up areas, city region space scope is continuously expanded, forming the cluster expansion of city space scale, but the development must be based on economic development, and the city industry’s sustained and healthy development is the main driving force of economic development.

From the industrial structure, during 2005-2012, the proportion of primary industry in the urban industrial structure of 11 prefecture-level cities in Zhejiang decreased from 3.91% to 2.60%, and fell 1.31 percentage points during eight years; the proportion of secondary industries was from 51.07% to 46.86%, down 4.21 percentage points; the third industry accounting for the proportion rose from 45.03% to 50.55%, rising 5.52 percentage points.

In terms of the structure of employment, during 2005-2012, the proportion of third industry practitioners had an upward trend, rising from 35.13% to 42.45%, improving 7 percentage points in the social structure of urban practitioners in 8 prefecture-level cities of Zhejiang (except Ningbo, Wenzhou and Shaoxing). In the same period, the first industry jobholders proportion decreased from 19.66% to 10.07%, a decline of nearly 10 percentage points, then second industry professionals share increased slightly, rising from 45.17% to 47.48%, but it still accounted for the largest proportion.

Thus, it can be seen, although the Zhejiang city industrial structure takes a downward trend in the service industry, the agricultural and industrial proportion gradually declined. However, the transition of velocity of this structure is very slow, and the proportion of third industry is still far below than the level of development of the main city at home and abroad, and even less than the world’s level from the 1980s to the 1990s, which leads to the mismatch of the space’s urbanization and the industries’ urbanization in the process of the development of urbanization in Zhejiang.

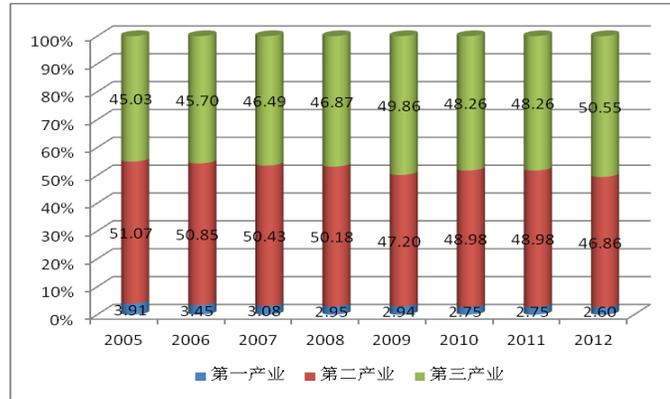


Figure 4. 2005-2012 Three-industry Structure of 11 Prefecture-Level Cities in Zhejiang Province (unit: %)

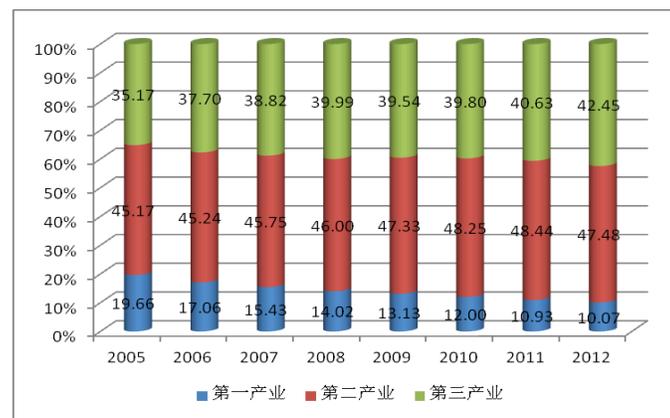


Figure 5. 2005-2012 Three Industrial Social Practitioners Structure of 8 Prefecture-Level Cities in Zhejiang Province (unit: %)

Table 2. 1980-1990 Third Industry Main Proportion of the City Urban Areas of Domestic and Foreigners (unit: %)

City	The proportion of GDP of the third industry	The proportion of employee of the third industry
New York (1989)	80.00	86.70
Paris (1988)	72.70	77.90
Tokyo (1988)	72.50	70.00
Seoul (1989)	68.90	63.20
Hong Kong (1990)	73.20	63.30
Beijing (1997)	59.56	57.7
Shanghai (1997)	48.41	46.9
Guangzhou (1997)	55.13	53.8

“The Urbanization of Production” and “The Urbanization of Life” Doesn’t Match

The important sign of the improvement of quality of urbanization is the public life of the urbanization, the concentrated expression for the new city concept of life, the way of life, and the level of consumption urbanization (Ni, & Hu, 2010). According to the overall statistics, in the period 2001-2011, the rate of final consumption decreased from 51.88% to 46.54% in Zhejiang province, and was particularly lower

than 50% for the first time since 2003, and fluctuated from 45.80-47.64%. Over the same period, the rate of residents' consumption declined from 73% in 2001 to 33.56% in 2004, and rose slightly to 36.03% in 2011. In addition, the percentage point of the overall decline was up to 1.7, and most of the years were below the national level during the same period. What's more, the final consumption rate is the highest difference of nearly 10 percentage points, and the gap of the highest consumption rate is more than 8 percentage points, forming a real paradox of the gradually rising rate of urbanization and the decreased rate of consumption.

From the sample survey, we found out that new city family average monthly living expenses were 2597.16 Yuan in 2012 and this is lower than the average level of city residents. If prior to the survey scope extended to the 80's of the city service workers, this level should be lower through a questionnaire survey of 369 workers in Zhejiang Province who are the post 80s new city people.

The display of the same questionnaire is that 80s new city people are most dissatisfied with five aspects about the service site, in turn: income level, living conditions, social security, work environment and the education of women. In addition to the work environment, the remaining four are closely related with the level of consumption, especially the income level and social security.

Thus, although China has introduced various measures to encourage the transfer of agricultural population urbanization in recent years, the statistics are also will be living in towns more than half of the rural population as the urban population. On the whole, these have characteristics of "employment in the city, the household registration in rural income being lower than the city, way of life social welfare being more close to the countryside", which belongs to the typical "Semi urbanization", and the urbanization of life style has not kept pace with the production mode of urbanization, and the mismatch leads to both sides, and then influences the quality of urbanization (Ye, 2009).

Table 3. 2001-2011 Comparison of the Rate of Consumption Between the Country and Zhejiang Province
(unit: %)

Year	Zhejiang province		The country		The comparison of Zhejiang province and the country	
	<i>The rate of final consumption</i>	<i>The rate of residents' consumption</i>	<i>The rate of final consumption</i>	<i>The rate of residents' consumption</i>	<i>The rate of final consumption</i>	<i>The rate of residents' consumption</i>
2001	51.88	37.73	61.4	45.3	-9.52	-7.57
2002	50.76	35.92	59.6	44.0	-8.84	-8.08
2003	47.64	34.40	56.9	42.2	-9.26	-7.80
2004	46.50	33.56	54.4	40.5	-7.90	-6.94
2005	47.31	34.55	53.0	38.9	-5.69	-4.35
2006	47.71	35.53	50.8	37.1	-3.09	-1.57
2007	45.97	34.71	49.6	36.1	-3.63	-1.39
2008	45.80	34.45	48.6	35.3	-2.80	-0.85
2009	47.26	36.19	48.5	35.4	-1.24	0.79
2010	46.05	35.34	48.2	34.9	-2.15	0.44
2011	46.54	36.03	49.1	35.4	-2.56	0.63

The source of data: data about the rate of final consumption about Zhejiang province comes from the "Statistical yearbook of Zhejiang in 2007", and "Statistical yearbook of Zhejiang in 2012"; data about the rate of final consumption about the country comes from the "Statistical yearbook of china in 2007", and "Statistical yearbook of china in 2012".

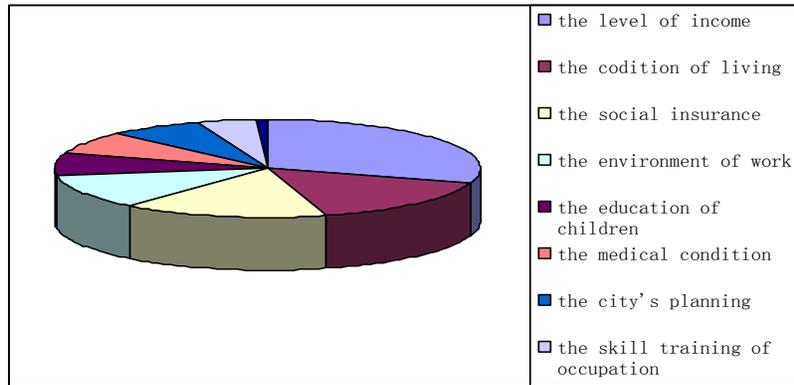


Figure 6. People Born in 1980s are Not Satisfied with the Service of the Site

Analysis of the Deep Reason Why the Development About the Level and Quality of Urbanization is Unbalanced in Zhejiang Province

Although Zhejiang is one of the most market-oriented provinces where private economy is the most active. But like other regions of the country, many policies and systems of inverse urbanization have not fundamentally broken in the planned economy era, which is the deep root of causing “unbalanced development” of the level and the quality of urbanization in Zhejiang province.

The Statistically Significant Demographic Urbanization

In recent years, it is Zhejiang province that is in the process of urbanization to strive to achieve “the urbanization of basic land” and “the urbanization of population”, and in particular, to pay more attention to the suburb of landless peasants in urbanization. Therefore, the large input in Zhejiang Province as China’s inter provincial labor outside employment, to digest more than a huge 10 million army of migrant population is very difficult. However, the current level of urbanization in the statistics about the national standards will be living in towns more than half of the rural population and it is classified as “urban population”. So that is, the existing urban population includes a large number of rural household population, and that they are the statistical significance of the urban population, and not the real meaning of the urban population, which belongs to the “semi urbanization” population. Some experts estimate, this kind of “semi urbanization population urbanization rate” of the virtual high effect at 10 percentage points above (Ye X., 2009).

The Urbanization of Industry is Based in Industry

In the current performance appraisal system of our country, the government’s primary task is to increase security, create GDP and form the government-led urbanization. The investment of the government as the primary is the direct result of urbanization and is the industry preference. At the beginning of new China, as a large agricultural country, to get rid of poverty and backwardness, achieve rapid economic development and “catch up”, and the implementation of a development strategy in industrialization, has realistic rationality. It has achieved an historic achievement. However, along with the unceasing industrialization advancement, the disadvantage of the long leaning heavily industrial development is increasingly exposed, keen on “large projects of construction with large engineering”. A great investment in railways, highways, and airport infrastructures, not only easily leads to excess capacity, but also has a

social investment crowding out effect, which inhibits the development of main investment private capital in the field of service industry.

The Urbanization of the Administrative Leadership

Due to the impact of the environment on the overall national system in Zhejiang province, the process of urbanization still has the obvious characteristic of administration leading the way and it has easily come to the deviation of the urbanization road. This is the deepest reason that leads to our discussion. In the past, the fear of “urban diseases” places government restraints on a city, especially the development policy of a big city, resulting in the lag of the process of urbanization. With the concerns from all walks of life to urbanization in recent years, what let the local government put the construction of urbanization as a political project? In generally, there is a tendency of going in for grandiose projects and fast construction. The government pursuits of speed and scale are blind and largely ignore the real quality and efficiency of urbanization. For instance, the implementation of the construction of the new city can not form proper economic agglomeration in a lot of places in a short term (Ni & Hu, 2009).

There are Some Countermeasures and Suggestions to the Promotion of Synchronous Lifting about the Level and Quality of Urbanization in Zhejiang Province

Urbanization is one of the overall strategic problems relating to the city and rural areas, economy and society, and population and resources. To jump out of inertia thinking of urbanization to enhance the level, we need to pay more attention to the optimization of the quality of urbanization. And it is necessary in the general idea to achieve transformation of innovative strategy and to grasp the regional the characteristics and the strategic emphasis.

Construction of “The Three-Point Line” About the Development Ideas of Urbanization

It is necessary to jump out of the inertia thinking of the original simple level of attention of urbanization promotion to adapt to changes in the environment of internal and external development. More energy will be used to focus on improving the quality of urbanization development. This will require the construction of urbanization development ideas of the three-point line”. That is based on the starting point: identifying the starting point, grasping the basic line, choosing the right key, and then realizing the strategic target of synchronous lifting.

The overall progress to achieve fair development, and promote humans as the fundamental starting point. The ultimate goal of human economic and social development is to realize all-round development of human beings. Urbanization is an important carrier and engine of economic and social development, and comprehensive in the pursuit of efficiency and fairness, so we should pay more attention to the progress of development. Generally speaking, they have the right to choose showing full respect for all members of the society, and to follow the mass route; this is only the intrinsic value of the pursuit of the core of urbanization.

Put in the service of the strategy of expanding domestic demand and target as a realistic starting point. In the post financial crisis era, the developed countries went toward the generalization and low carbon of new trade protectionism, using the leverage of the global industrial structure adjustment, meaning that the long-term dependence on external market “large”, the end of the era of extensive development, which requires taking urbanization as the carrier to stimulate consumption, expanding domestic demand, and the adjustment of economic structure, transform the mode of development, to

achieve long-term sustainable development. It is not only the reality that demand of Zhejiang province took the lead in the transformation and upgrading, but also for the national pilot, to explore the objective requirements of the development and the accumulation of experience. Therefore, it is the realistic starting point to enhance the quality of urbanization of Zhejiang to the upgrading of the consumption power.

To crack development in the process of urbanization. At present there is the “three no matching” as the strategic focus. As mentioned before, the unmatching of the urbanization of land and the urbanization of population, the urbanization of space and the urbanization of industry and the urbanization of production and the urbanization of life has become the important bottleneck of urbanization quality promotion. If it does not resolve these three problems, with the urbanization of population density, the quality of production and consumption as the core density will be impossible.

The basic route is to promote the development of urban and rural areas of “agglomeration and diffusion”. Simply focusing on the level of urbanization tends to cause a path of urbanization development of unidirectional expansion type”, leading to the city “pie” thereby weakening the scale effect. Therefore, the urbanization enhances the quality of both diffusion and agglomeration, as well as traffic through the perfect network system, to achieve city and countryside complementary inter-working of various resources.

The Four Major Power Focus on the Implementation of Improvement the Quality of the Urbanization

In the Post Crisis Era, with the expectations of the international community on our start as consumer, and the new round of reform opportunity of domestic to change the mode of economic development as the main line, the key to enhance the quality of urbanization lies in the construction of system and mechanism and policy system of urbanization driving consumption.

With the true urbanization of population improves the quality. From a practical perspective, it is the primary task to promote urbanization with the current existence of a large number of the transfer of agricultural population.

- To adapt the reality demand of government vigorously to the scale expansion of the urbanization of space and to take effective measures will be the first town into the scope of suburban area of the agricultural population, and the residents of urban areas enjoy the same social power and welfare.
- Conform to the objective background of a large number of the transfer of agricultural, Recommendations in accordance with the responsibilities of the equality principle, and classification of agricultural for the transfer of population step-by-step, for work in the city reached a certain age, and have a stable occupation and residence, especially if their families moved to the town of agricultural population transfer should take the lead in urbanization.
- According to the original foundation of the development of cities and towns and its future trend, build agricultural population transfer as the main carrier of Citizen in small city based in Zhejiang province.
- Focus on the biggest difficulty in the transfer of agricultural population's urbanization; agricultural population transfer will be incorporated into the same with urban residents of the social security system as soon as possible. It is important to build public rental housing and to build a housing security system of affordable housing.

To enhance the urbanization quality based on the social investment. Social capital is different from government investment lies in the pursuit of GDP, to create a high growth rate target; the core target of social investment is to improve economic benefit. Different objectives lead to different results. The former is likely to produce a tendency of “production for production”, and it is easy to cause excess capacity and lead to invalid GDP; the latter goal finally must be to realize through consumption. Thus, with social investment-led urbanization is more likely to start consumption. For this purpose, it is important for Zhejiang province to make full use of their advantages. And it is crucial to tap into the huge potential in Wenzhou with the representative of the folk capital, and form a good situation of the private capital participating in the development of the construction of urbanization.

- It is the way to create job opportunities and increase income in the situation of encouraging the social capital investment. For instance, to open the restriction of social capital to enter the town of monopoly industries, the implementation of the “non - prohibited to enter”, enhance the vitality of the market; to establish and perfect the policy system to encourage and support social capital investment venture, for instance, give preferential treatment in business loans and tax breaks.
- To optimize consumption environment in encouraging social capital investment.
- For instance, to encourage social capital to invest more in the service industries closely related to people's livelihood, especially according to local actual, through collective investment, or construction of melt, live, eat, play in one of the consumption area, or the construction of high-grade collection of cultural recreation health on the whole consumption area.

To enhance the quality of urbanization in the service industry lead. Zhejiang province, as one of the important manufacturing areas with many local characteristics, feels the impact of national industrial cluster. However, the production of manufacturing industry to service industry through the connection and consumption, the low consumption rate and service industry development relative lag has an obvious positive correlation. Therefore, the transformation of the long-term industry as the leading urbanization strategy, and vigorously promote the development of service industry is very necessary.

- Formulate long-term planning that adapts to the urban economic and social development trends and the position of the service industry, and has clear strategic aim that the service-led urbanization is the future development.
- The need for a reasonable planning and layout of urban service industry development in order to help to promote the regional division of labor and the layout of consumption, to improve the consumption environment.
- Build service industry core area of high quality, and give full play to the urban agglomeration and diffusing effect.
- Plan to revitalize the development of urban service of industry, and focus on improving proportion and income of employment in the service industry.

To improve the quality of urbanization in the dominance of the market. Current administrative division and the resulting urban division has hindered urbanization, and it is necessary as soon as possible to break the current administrative system and administrative barriers from bondage, to get rid of the mode of resource allocation under the leadership of administration, and to give full play to the market allocation of resources advantage, which pushes the urbanization in accordance with the needs of economic and social development and lays the economic basis for starting consumerism. From a practical

perspective, if Zhejiang quickly forms a new pattern of economy-dominated town in the effective role of the government, there are three main paths:

- Cultivating small city focusing on characteristic industrial clusters. Zhejiang should make full use of accumulated and characteristic industrial clusters based on township enterprises since the reform and opening up. On the effective reference to foreign experience and in-depth summary in its practice, it should explore Hangzhou Guali Town; Wenzhou Longgang Town was upgraded to a county-level or vice County small city.
- Cultivating medium city focusing on the developed county territory economy area. According to the “fundamental ideas to the construction of Economic Zone Administrative Region”, provide strong policy support for the healthy development of sustained economic zone. Proposals will be developed into a medium-sized city county economic zone construction that has certain regional influence and power, as the recent focus on the construction of Yiwu economic zone.
- Cultivating City Group (metropolitan area). Focus on taking the core growth poll. At present, the core of regional competition is the competition of city. To win in the provincial competition, Zhejiang needs to the original core city as the basis, to encourage merging or zonal geographic location, traffic a well-developed communication network, close economic links of the region, to positive develop city group (metropolitan area). For example, Hangzhou city group (metropolitan area) and Ningbo city group (metropolitan area).

Focus on the Implementation of Scheme to Improve the Quality of the Urbanization

Set the classification of the planning of development about the urbanization. Plan the development of city into three categories with the quality of urbanization. The first point is the development of Longgang Town, Guali town as the representatives of the 27 Zhejiang small cities, we should give full play to the advantages of industrial cluster and specialized market. The second point is the National Reform Testing District in Yiwu, Wenzhou, Zhoushan and so on as the representative, “to leverage the power of pilot”, and to actively explore the development of the secondary city. Third, is the provincial to Hangzhou, Ningbo as the representative of the internal administrative economic and social cultural center, to scientifically formulate development planning of metropolitan area or city group.

Build a system of three-dimensional synergy. The population density, density and density of production life is the core index system construction, and improves the quality of urbanization. The first is a refinement of the city within the scope of land consolidation, the comprehensive improvement of suburban land and the expropriation and demolition of rural land and other kinds of land system, to form an effective constraint on the development and utilization of land. The second is to improve public service to realize to residence based supply system, weakening the household registration status of public service binding. The third is to encourage regional development basis and advantage with the planning of industrial development and the corresponding policies and measures.

To explore the establishment of unified specifically responsible for the coordination of urbanization and the development of functional departments. At present, development of urbanization involves a number of government departments, easily forming the phenomenon of mutual buck passing, and directly adds an independent department with basic principles and requirements with the national administrative system reform that does not match. Here are some suggestions: the first kind of method is the existing correlation function as soon as possible into one comprehensive department, such as the national

development and Reform Commission. The second way is to set up a high level leading group, held by government leaders.

Gradually form a decision-making and evaluation mechanism of “expert-masses-Official” interaction of the development of urbanization. The results of the development of the city will benefit every city resident, and the relationship with the production and life closely; therefore, city residents have the right to participate in the development of urbanization. There are some suggestions: first, the relevant departments should regularly announce the city development matters, and public the major problem in temporary; second, set up the development of the city group of experts, containing non-governmental sector experts and scholars, to provide professional advice of important city development matters; third, give the role of supervision of each link in the news media, social organization in city development.

Summary

Through in-depth analysis of the typical case of Zhejiang, it is found out: the level of urbanization and the quality of urbanization presented us the situation of “unbalanced development”, which shows us three non-matching areas: “urbanization of land” and “urbanization of population”; “urbanization of Space” and “urbanization of industry”; “urbanization of production” and “urbanization of life”, which has caused obvious “one-way diffusion type of urbanization”. Tracing its source, not only is the statistical significance of the urbanization of population and urbanization of industry, but also the executive led urbanization. Therefore, now it is in great need of constructing “urbanization development ideas of the three-point line”, that is, to achieve balanced development and all-round progress as the fundamental starting point, to serve the strategy of expanding domestic demand as the starting point to the target reality, to crack development in the process of urbanization at present “three no matching” as the strategic focus, to promote the “agglomeration diffusion” urban and rural development. As the basic path, striving to achieve the level of urbanization and a sustained and healthy development quality of urbanization.

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Relationships Among Work Satisfaction, Organizational Citizenship Behaviors, and Work Achievements, Based on Corporate Social Responsibility

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***[Abstract]** This study seeks to use the structural equation model to investigate the relationship between corporate social responsibility (CSR) and several factors related to attraction, retention and loyalty of employee talents. We find that: (1) CSR significantly contributes to staff work satisfaction; (2) organizational citizenship behavior (OCB) is able to increase work achievements; (3) staff work satisfaction is closely linked to OCB; (4) staff work satisfaction could forecast work achievements; and (5) staff work satisfaction mediates the relationships between work satisfaction and work achievements. These findings indicate that CSR implementation is a helpful activity in terms of building enterprises' social image and it can improve the relationships between the enterprise, the public, and government. Moreover, CSR can also improve human resources development and management patterns and strategies, and it stimulates staff enthusiasm and productivity.*

***[Keywords]** corporate social responsibility; work satisfaction; organizational citizenship behavior; work achievements*

Introduction

Corporate social responsibility (CSR) refers to enterprises that are not only aimed at creating profits for shareholders, but also taking responsible for a wider range of stakeholders such as employees, consumers, the community and the environment. The implementation of CSR includes the compliance with business ethics, production safety, and occupation health, protecting the workers' legitimate rights and interests and protecting environment, etc. In fact, this is concordant with "unification of righteousness and benefit" of the Confucian spirit, and becomes the basis for harmonious development of enterprises and society.

Under the current financial crisis and global economic downturn, enterprises operating in China should make structural adjustments promptly, including industrial and labor structures, as well as two aspects, that is, to not only pay attention to their economic performance, but also pay attention to its social performance, establish a good corporate image, and enhance their long-term profitability, in order to cope with various crises. The social responsibility of the enterprise image has become the inevitable choice for enterprises to cope with various crises, such as the continuous evolution of Sanlu milk powder incident, and the reflection caused by the entire dairy industry, and social responsibility should regress to enterprises' basic need and become a strong voice; the public demands for CSR.

From the theoretical analysis and practical management, CSR will play an important role in employees' job satisfaction, organizational citizenship behavior and work performance. The research on the investigation of the implementation of CSR and the relationship between these variables has important theoretical significance and wide application prospect in the field of human resources management.

Literature Review and Theoretical Hypothesis

Research on CSR and its After-Effect Problem

The social responsibility standard (Social Accountability 8000, SA8000) is the world's first social accountability international standard applicable to third party certification (Wang, 1998). It was issued by the Social Accountability International (SAI), and after public consultation and in-depth research, was published in December 2001, and aims to improve and guarantee the global working conditions (SAI, 1997; Larson & Cox, 2003). SA8000 can provide a new external pressure to the enterprise; in addition to stimulating creative thinking, it can enhance the advantages of enterprise technology and services. Even more important, it is beneficial to cultivate the enterprise reputation advantage. Enterprises follow the SA8000 social responsibility, can show the social image of enterprises, and win the core competence for enterprises. From the labor rights (Health and Safety, Working Hours, Remuneration), the protection of human rights (Freedom of Association & Right to Collective Bargaining, Forced & Compulsory Labour, Discrimination, Disciplinary Practices) and social management system's (Management Systems) three aspects (nine items), SA8000 put forward a series of minimum requirements for enterprises to fulfill their social responsibility. Employees' benefits are the most direct and important content of CSR, which is different from the evaluation of ISO series' technical index. This study will be based on the SA8000 content from three aspects: labor rights, human rights protection, and social responsibility management system, to reflect the CSR.

The research of CSR's after effect involves the following aspects: the public, consumers, and the loyalty of employees, etc. Any enterprise or organization that applies for and passes the SA8000 certification will transfer their good image of social responsibility information to customers, the public and staff, which can improve customers' loyalty, and gain public praise and employees' trust. For example, Backhaus, et al. (2002) researched job seekers' views on the importance of corporate social performance (CSP), and they explored the influence of CSP dimension on organizational attractiveness. They found CSP is important in the job seekers' mind; that is, the environment, community relations, and diversity dimensions have the most important effect on attractiveness ratings during the procedure of job seeking. The results showed that "potential job seekers are interested and concerned about a firm's record of corporate social performance when considering firms as prospective employers" (Backhaus, & Stone, et al., 2002). Mackey (2007) proposed a theory of a supply and demand model to illustrate that the increase of social responsibility investment will increase the market value of enterprises. Deborah Rupp, et al. (2006) discovered that employees' perceived CSR affected their subsequent feelings, attitudes and behavior, and the motivation or need was the mediating variable. Avery and McKay (2006) examined the relationship between race, diverse workforce and employee turnover, and they showed that the blacks turnover was more serious than whites when the staff believed that organization did not value the diversification of staff. Aguilera, et al. (2007) proposed the reason of corporations engaging in CSR's reform based on a multi-level theoretical model. The model included the motivation and mechanism of CSR, explained why there are more and more business organizations engaged in CSR activities, and showed the potential influence on positive social change. Driven by personnel, the organization itself, and national and international factors, organizations engaged in CSR, and these factors affect the transformation of the whole society (Aguilera, 2007). Terry B. Porter (2008) discussed the organization's sustainability combined with the social responsibility. Ilaria, et al. (2009) discussed the strategies of transfer social responsibility to consumers by binding CRM and its 'dark side'. They said, "Cause related

marketing (CRM) is a strategy that aims to communicate a company's striving for CSR and to improve brand image. A strategy to increase consumers' emotional involvement toward a product-cause association is to describe the cause in vivid terms." These findings expanded the space of CSR image management, demonstrated a broad application prospect, and quickly became a hot research field. Thus, it can be seen that, the significance of the CSR goes far beyond the organization itself, relates to the progress and changes of the whole human society.

In China, there are many theoretical researches on CSR after effect, but few of them are from an empirical point of view. Overall, Chinese enterprises have a number of problems about taking social responsibility; not all of entrepreneurs realize the importance of CSR. Due to environmental, cultural and other reasons, many enterprises do not standardize operations; their internal management is confused. Business owners lack long-term planning for the future development of enterprises; they appoint people by favoritism, and lack attractiveness to talent. In particular, the present situation of human resource management is not optimistic. There are many corporations that have not fully established a social responsibility concept, mainly for the issues of environmental pollution, labor contracts, labor disputes, production safety and occupation health, working hours and overtime, social insurance and protection of women rights issues, which are the reasons that social responsibility crises have occurred frequently in recent years. Fulfilling social responsibility can help enterprises attract and retain the best talent, and acquire the pass of the international market. Zhang Ruimin, of the Haier group, had pointed out, "Responsibility and profit were not the game-playing relationship. People had made investigation of century-old shops, which all advocated social responsibility was in the first place, profit was second". It should be said that the reasons of CRS not only include economic, but also moral and institutional. Li Haiying, et al. (2006) showed that the reason our enterprises took society responsibility lies in the economy. Through the analysis of the model, they believed in a certain economic system, enterprises would take social responsibility during the pursuit of greater economic benefits. Through fulfilling more or higher levels of CSR activities, enterprises will be able to gain more competitive elements in the finite system, which can promote the development of enterprises; that is to say, the social responsibility of the enterprise will become one of the key elements of enterprises competition (Li, & Zhai, et al., 2006). Shen Zhiyu (2008) put forward the thought of state-owned enterprises' (SOEs, hereafter) reform in China based on social responsibility. He thought SOEs must establish the perfect social responsibility system, and strengthen the supervising mechanism construction to ensure that they fulfill their social responsibility.

As for governance mechanism, SOEs should carry on the civilization governance pattern reforming (Shen, & Liu, et al 2008). Tsinghua University's National Construction and Development Research Center (2008) put forward their own point of view combined with the dairy crisis in 2008. They thought that the crisis highlighted China's dairy companies collective lack of business ethics, particularly a complete lost of sense of responsibility on ensuring the safety of consumers. This fully showed that the Chinese dairy industry, in terms of performance of the CSR, had been lacking respect for the basic bottom line and nature spirit, namely the absolute guarantee consumer safety, leading to collective business ethics moral decay. It could not but cause alert and reflection in the business. In the performance of the CSR, the enterprise must return to its basic bottom line and the spirit of nature. This is to achieve the basic requirement of consumer value, and after that, we could say to maximize shareholder value, maximize firm value, employee value, and social value. It should be said that the international SA8000 standard places higher requirements on the enterprise, representing a new trend for future development of enterprises. The enterprises in our country must refer to the standard, fulfill people-oriented, continuous

improve labor conditions; the corporation should take more social responsibility while pursuing profits, and they should also improve the corporate image and the quality of enterprises. Only in this way can enterprises improve international competitiveness, ultimately moving towards the better world. Social responsibility provides an opportunity for the image management of enterprises in China; we are facing many new topics at the same time.

Concepts and Connections between Job Satisfaction, OCB and Work Performance

Job satisfaction refers to the employees' attitudes or opinions on the work itself and their relevant environment; it is the role of emotional response as a whole. For example, Locke (1976), a management psychologist, took job satisfaction as a kind of reaction or attitude towards emotional and cognitive, and he thought that the job satisfaction was "a happy or positive emotional state evaluation based on individual work or work experience.". People would have a good mood when they felt that work could satisfy or help meet their work values.

Now we generally use Organ's definition of the Organizational Citizenship Behavior (OCB), "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (Organ, & Ryan, 1995). An effective organization should have one of the basic functions, that is, staff must have creative and spontaneous behaviors, which go above and beyond the requirement of the job description, and spontaneously burden some additional things for the organization. The spontaneous behaviors include cooperative behavior, the behavior of maintains organization system, and enhance organization's external image, etc. Aryee, Budhwar, & Chen (2002) divided OCB into two dimensions, OCBI (organizational citizenship behavior to individuals) and OCBO (organizational citizenship behavior to organization). This research refers to Aryee's dimension classification method, and assesses the organizational citizenship behavior of employees.

Performance refers to people's achievements in the work. For organization, performance means tasks are completed in aspects of quantity, quality and efficiency; for individuals, it is the evaluation made by superiors, colleagues, and employees themselves on their work situation. This kind of subjective performance reflects the degree to which individuals help organizations achieve organizational goals (Chen, & Xie, 2003). This research mainly adopts this definition: performance is employee's awareness and evaluation of their job performance.

Domestic and foreign researches show that job satisfaction is closely related to OCB. For example, Organ (1988) argued that OCB was correlate of job satisfaction measured by job descriptive index. Job satisfaction affected the altruistic behavior of OCB, which means the higher job satisfaction, the more you demonstrated a positive emotional state, and thus, put forward the generation of altruistic behavior. Organ and Lingl's research (1995) showed that the individual factors and job satisfaction had significant impact on human altruism of OCB. In recent years, there are also some Chinese researches on the relationship between job satisfaction and OCB. For example, Chen Xi (2003) analyzed the domestic and foreign scholars' studies on employee satisfaction, and she agued that job satisfaction and OCB were significantly positive correlated. Shi Lei (2008) argued that job satisfaction was significantly positively related to OCB; job satisfaction dimensions, that was "leadership, colleagues, work reward, working environment and self-development dimension" were significantly positively correlated with OCB.

From the perspective of the existing literatures, people have different views on the relationship between job satisfaction and job performance. For instance, Newstorm and Davis (1997) found that

employee satisfaction level would increase or reduce the loyalty, and then loyalty would influence the employee's effort and affect the performance in the end. Many researchers believe that the relationship between job satisfaction and job performance is affected by the intermediary variable; indeed, a lot of researches have found some intermediary variables, such as Norris and Niebuhr (1984) who carried a sampling survey on 1300 employees of a medium-sized industrial company, and the results showed that the organization internal factors such as challenging work, and development opportunities were the main mediating variables between job satisfaction and performance; high challenging work was positively related to job satisfaction and performance, but with less challenging work, their relationship was still uncertain. The relationship between job satisfaction, caused by external factors such as environmental protection, and community status, is not strong. Wang Weisong and Tang Chunyong (2006) argued that job satisfaction influences not only employees' job behavior and job performance, but organization performance as well. Therefore, job satisfaction, work behavior and work performance are correlated.

Researchers hold different views on the relationship between the organizational citizenship behavior and performance. Podsakoff and Mackenzie's research (1996) indicated that OCB explained 17% of the employees work performance variation. Yao Yanhong and Xiao Shiyong (2006), through an empirical study, found that there was positive correlation between organizational citizenship behavior and employee performance, and four kinds of organizational citizenship behavior influenced employee performance in various degrees. Wang Yibao, et al. (2008) pointed out that the five dimensions of OCB that included "organizational identification, provide assistance to colleagues, keep peace with others and not pursue personal gain, separate personal and business matters, professionalism" had a significant role in promoting task performance and the surrounding performance. No matter what the difference is between the views, these studies all support the view that OCB and work achievements are interrelated. OCB is a kind of voluntary cooperation behavior; it not only can maintain the normal operation of the entire organization and reduce the occupied for scarce resources, but also can maximize the use of organizational resources, making its input in various production activities, thereby improving the production efficiency.

To sum up, there have been a plenty of theoretical and empirical researches on CSR and employee job satisfaction and OCB, but many of the opinions are not uniform, and some of them even conflict, such as the conclusions of the CSR's after effect research are very different. Secondly, there are lots of researches on employee job satisfaction and OCB and work achievements, but they lack the research from the perspective of social responsibility. Thirdly, the study about CSR for the impact of employee's psychological and behavioral is not deep, such as the research about the relationship between CSR, employee job satisfaction, OCB and work achievement is relatively weak; this became the focus of this study.

Hypothesis of the Research

The existing research results can be used as the starting point of this study. Based on reading and reviewing the domestic and foreign CSR research, job satisfaction, organizational citizenship behavior and job performance researches, this study explores the relationship between job satisfaction, organizational citizenship behavior and job performance mainly from the perspective of CSR. The basic structure and theoretical assumptions of the study will be CSR as the premise variable, and at the same time, the study follows the basic theory and logical thinking as follows: premise variable (CSR),

psychology variable (job satisfaction), behavior variable (OCB) and the actual effect variable (work performance); the model hypothesis is shown in Figure 1.

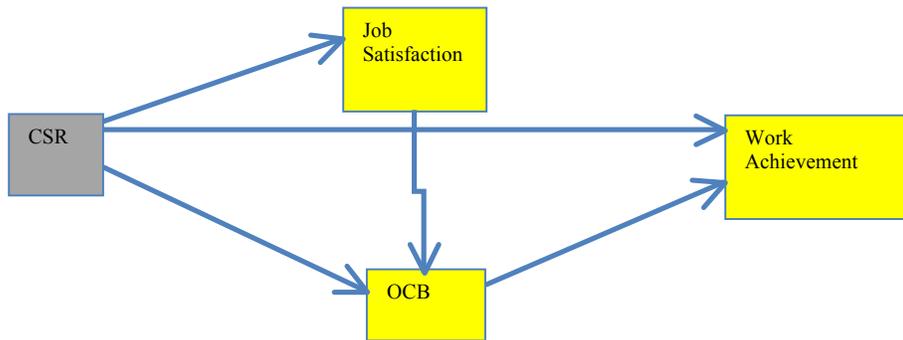


Figure 1. Model Hypothesis

In this model, the CSR variable is reflected from the labor rights, human rights protection, and social responsibility management system, based on the SA8000. According to Brayfield’s job satisfaction index, the job satisfaction variable is reflected from the work itself, pay benefits and self-development (Brayfield, & Rothe, 1951). OCB variable is based on the Aryee's two dimensions (Aryee, 2002).

The study focuses on the relationship between the employee job satisfaction based on CSR, organizational citizenship behavior and performance. On the basis of theory research, the research presents the assumptions as follows:

H1, H2, H3: The CSR can significantly predict job satisfaction, OCB and achievement achievement;

H4: Employee job satisfaction has significant effects on OCB;

H5: Employee job satisfaction and OCB have significant effects on work achievement.

The Research Methodology

Design and Analysis of the Questionnaire

The questionnaire was divided into two parts: the first part was the personal attributes, including gender, age, working years, educational background, position and the nature of enterprise. The second part was the questionnaire text, including social responsibility, employee job satisfaction, OCB and performance.

Subject Selection

According to the aim of the present study, we further investigated a total of more than 60 enterprises, and chose 210 participants. The male staff (129 people) accounted for 61.4%, and the female staff (80 people) accounted for 38.1%; one of the participants' gender lacked information; the age range of under 25 years accounted for 4.8%, 25-35 years old accounted for 60.6%, 36-45 years old accounted for 29.3%, and 45 years of age accounted for 5.3%; college and below accounted for 9.5%, bachelor degrees accounted for 65.2%, master degrees or above took about 25.2%; senior managers and technical staff accounted for 5.2%, middle managers and technical staff accounted for 21%, first-line managers and technical staff accounted for 30%, and the normal staff accounted for 43.8%.

Questionnaire's Preparation, Prediction and Modification

In order to understand the relationship among CSR and job satisfaction, OCB and work performance, we designed the questionnaire of CSR according to the SA8000 standard. At the same time, we revised the job satisfaction, OCB and work performance questionnaire with reference to the relevant research. After predicting and revising the questionnaire, formal testing excluded lower discrimination entries, such as 2 entries of "No Child Labor" in CSR. Formal questionnaire included the CSR image (18 entries), employee job satisfaction (12 entries), OCB (10 entries), and work achievement (4 entries). This study adopted 4 levels of the Likert questionnaire form to evaluate all entries; that is, 1 represented completely disagreeing and 4 stands for completely agree.

Reliability and Validity Analysis of the Questionnaire

The CSR Questionnaire in this study was designed according to the three parts of the SA8000 (9 items), in order to ensure content validity of the questionnaire. In this study, we use Cronbach alpha (α) to test the reliability of the questionnaire. Two items relating to child labor were excluded from the CSR image questionnaire (checking the discrimination did not meet the requirements). The alpha values of three-dimensional of labor rights (Health and Safety, Working Hours, Remuneration), the protection of human rights (Freedom of Association & Right to Collective Bargaining, Forced & Compulsory Labor, Discrimination, Disciplinary Practices) and social management system (Management Systems) were: 0.80, 0.72, and 0.76; the overall questionnaire homogeneity reliability coefficient $\alpha=0.894$. According to the measurement requirements, internal consistency achieved acceptable range, and the inherent consistency and level of reliability were both high.

Employee Job Satisfaction scale was compiled according to Brayfield & Rothe's job satisfaction index (Index of Job Satisfaction); it is a popular employee satisfaction survey tool, and it allowed the staff to evaluate their satisfaction on pay, promotion, management, the work itself and the company (Brayfield, & Rothe, 1951). The questionnaire in this study represented 12 items; the scale's total alpha was 0.889. The alpha values of three-dimensional of Work Itself (Job Autonomy, Decision-making, Leadership Relations, Respect & Fairness), Compensation & Benefits (The Salary, Welfare, Working Hours, Rest and Vacation) and Self-Development (Training, Promotion, Occupation Planning, Management Level) were: 0.81, 0.79, and 0.83. This shows that the scale has high degree of internal consistency and high levels of reliability.

Organizational Citizenship Behavior (OCB) used the two dimensional scale of Aryee, et al. (2002), and included 10 items. The scale's total alpha was 0.86, and the alpha values of OCBO (OCB to organization) and OCBI (OCB to individuals) were: 0.80 and 0.83. This shows that the scale has high degree of internal consistency, and has a high level of reliability.

Work achievement consulted a one-dimensional scale used in Long Lirong's study (2002), with a total of 4 entries; the $\alpha = 0.843$. The homogeneity reliability coefficient meets the test requirements. In addition, the 50 subjects were tested with two questionnaires separated by two weeks in this study. We calculated 9 main dimensions on the test-retest reliability indexes of $RS \geq 0.62$, $PS \leq 0.01$. The test has certain stability, good test-retest reliability.

Results and Discussion

Descriptive Statistics of Variables

The descriptive statistics of CSR evaluation, employee job satisfaction, OCB and work achievement showed that the highest mean value of CSR evaluation was “social responsibility management system” dimension (3.2876 ± 0.6199), and the lowest was “human rights protection” dimension (3.1505 ± 0.5240). These implied that Chinese enterprises needed to be improved in social responsibility, especially in “protecting employees freedom of association and collective bargaining rights, work time shall not exceed the provisions in China, no gender and racial discrimination”. The highest mean value of employee job satisfaction was “job itself” dimension (2.9016 ± 0.5002), and the lowest was “self development” dimension (2.3325 ± 0.6265). China’s enterprises should be more concerned about the staff’s “self development”, which covers training, promotion, occupation planning, and management level. The highest mean value of OCB was “OCB on individuals” dimension (3.5029 ± 0.4383), and the lowest was “OCB on organization” dimension (3.1885 ± 0.5285). The enterprise should stimulate OCB of employees on the organization. According to Table 1, the overall evaluation of the investigation of CSR and OCB was medium-high, and the evaluation of employee job satisfaction was relatively lower. Enterprises should be more concerned about the staff and be people-oriented to improve employee job satisfaction.

Correlation Analysis

The correlation coefficient between the employee evaluation on CSR and job satisfaction, OCB and work performance is shown in Table 1.

Table 1. The Correlation Coefficient, the Mean and Standard Deviation (N=210)

	CSR	Job Satisfaction	OCB	Work Achievement
CSR	1.0000			
Job Satisfaction	0.7003**	1.0000		
OCB	0.5854**	0.5034**	1.0000	
Work Achievement	0.3948**	0.2727**	0.4445**	1.0000
Standard Deviation	0.4781	0.4893	0.4288	0.5316
Mean Value	3.2303	2.6871	3.3344	2.9852

Note: **means $p < 0.01$

Among all the variables in the table are significant positive correlations, and they reach the 0.01 level of significant correlation. This shows that CSR is closely connected with job satisfaction, OCB, and work achievement. That is, there is a significant positive relationship among employee evaluation on CSR and job satisfaction, OCB and work achievement.

Analysis of structural equation model. In order to quantitatively define the relationship among CSR and job satisfaction, organizational citizenship behavior, and work performance, and to verify the theoretical model, this study established a structural equation model among these variables by using EQS6.1 statistical software.

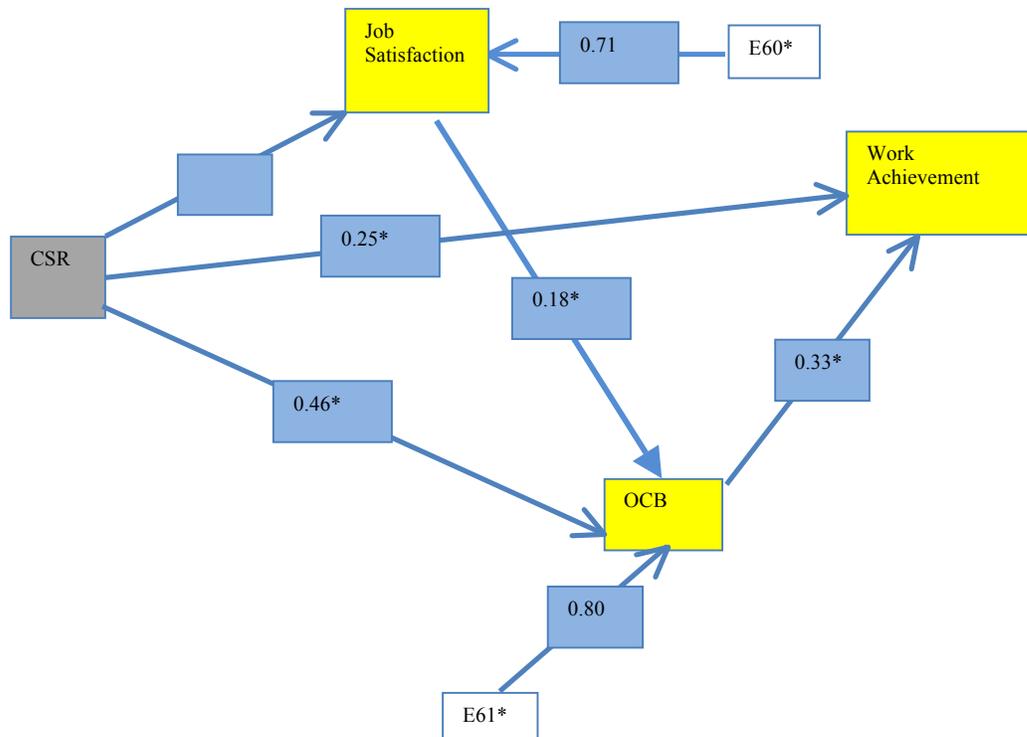


Figure 2. Structural Equation Model

In Figure 2, fit index $\chi^2=0.564$, $P = 0.45 > 0.05$, shows that same theoretical assumptions and data phase (indifference), with NFI (Normed Fit Index) = 0.998, NNFI (Non-normed Fit Index) = 1.011, CFI (Comparative Fit Index) = 1.00, RMSEA (Root Mean-Square Error of Approximation) = 0.001 (confidence interval of 90% is [0.000,0.175]). According to the theory of Bentler (1989), more than 0.9 for the fit index standard acceptable (close to 1 as possible, allowing a little more than 1), these indexes are consistent with the data model. The EQS also calculates the corresponding index of Lisrel, GFI (Goodness-of-Fit Index) = 0.998, AGFI (Adjusted Goodness-of-Fit Index) = 0.985, and a good agreement are found.

Therefore, a theoretical model was established, namely the H1 model was verified, and the model of the relationship among CSR, employee job satisfaction, OCB and work performance was established (Figure1).

The structural equation model showed the quantitative relation among variables: CSR had significant prediction on employees' job satisfaction, OCB and work performance, and the regression coefficients were respectively: 0.70, 0.46, and 0.25; job satisfaction could predict the role of OCB, $\beta=0.18$; OCB could predict work achievement ($\beta=0.33$).

According to the correlation analysis and structural equation model's test result, we can see that these results support H1, H2, and H3 hypotheses, namely, the CSR has significant prediction on employee' job satisfaction, OCB and work performance. At the same time, the results support the hypotheses of H4, and H5; that is, employee job satisfaction can predict OCB; OCB has prediction effect on work achievement. Based on the front data, the results also show: CSR also play a role on work achievement by employee satisfaction and OCB; employee satisfaction also plays a role on work achievement by affecting the employee's OCB. These results are consistent with the view of the

relationship between job satisfaction and work achievement is affected by some intermediary variables (Norris, & Niebuhr, 1984).

From the view of the management practice, the result shows: enterprises can shape their own image of social responsibility to improve employee job satisfaction, OCB and ultimately improve employee work achievement.

Concluding Remarks

Through descriptive statistics, correlation analysis and structural equation model analysis, this study provides data support to the hypotheses proposed. According to the results of the study and analysis, the following conclusions can be drawn. There is a significant positive relationship between employee's evaluation on CSR, job satisfaction, OCB and work achievement. The relationship between CSR, employee job satisfaction, OCB and work achievement model is successfully made. The CSR has significant prediction on employee job satisfaction, OCB and work performance; employee job satisfaction has prediction effect on OCB; OCB have prediction effect on work achievement. The CSR plays a role on work achievement by employee satisfaction and OCB, and the contribution of employee satisfaction on work achievement is indirect, it effects work performance by effecting employee's OCB.

In conclusion, this study investigates the relationship among the CSR status of employee job satisfaction, OCB and work performance, it expands new space for the related research, and provides the scientific basis for enterprises to attract and retain the best talents. Therefore, it has an important theoretical significance and wide application prospect in the field of human resources management. Looking over the existing domestic and foreign researches and literatures, we find that the study on the after-effect problem about CSR needs to be solved by scientific research. In this field, the basic research in China is not enough; this study is mainly concerned with setting up the general model, and there are some problems which need to make a thorough study. In this study, we only examined the simplified model without using factor models that includes various dimensions, and there is no difference analysis for some demographic variables. The future research can further pay attention to these problems, and enrich the studies in the aspects horizontal and vertical.

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Research on Happiness Marketing Strategies of the Qiandao Lake Tourism Industry

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[Abstract] *Tourism activities are leisure activities based on aesthetic nature, with the objective of being enjoyable and contributing to improve people's wellbeing. Qiandao Lake tourism chooses happiness marketing as a starting point to make consumers happy, loyal to the products and satisfied from four aspects: satisfaction, service, speed, and sincerity. Future development of Qiandao Lake tourism industry will be focused on more customized, service-oriented characteristics, and persist for the purpose of happiness marketing*

[Keywords] *happiness marketing; satisfaction strategies; speed strategies; sincerity strategies*

Literature Review of Happiness Marketing

The daily development of science and technology has slowly permeated our daily life, and fundamentally changed the way people live and the mode of production, bringing more complex social and economic environments and more intense global competition. Marketing is an applied science, and marketing scholars create and put forward many marketing theories to adapt to the changing of the marketing environment, including, on the basis of the Internet, they have used digital information and network media interactive information to assist in network marketing. They have also adhered to being customer-oriented, making full preparation, well in process, and perfecting after-sales service to service marketing. With micro-blogging service providers as a platform, they have taken the customer as the center of precision marketing and service marketing combination of active Weibo marketing. It is not hard to see, the marketing concept is quietly changing, and at the same time, people have also been completed from the necessity, developing into enjoyment of the consumption process. Therefore, happiness marketing arises at the historic moment to catch the customer's heart for "happiness" as marketing main points.

Subjective Well-Being

Subjective well-being refers to the evaluators setting standards of the life quality themselves. It has four dimensions of the structures, including satisfaction of general life, satisfaction of specific life areas, positive affection and negative affection. Positive emotional experience and negative emotion experience are relatively independent; personality differences, social cultures, social relations are the factors affecting the level of subjective well-being; money does not necessarily bring happiness; the amount of money is not proportional to the level of subjective well-being (Lu, & Zhang, 2011). People's perceptions of happiness are different because of different social and cultural backgrounds. She puts forward the internal mechanism and external impact factors model of consumer happiness under Chinese situation (Fei, 2010).

Consumption is the main areas of people's life in China, both in domestic and external demand. So marketing activities directly affect the efficiency and quality of people's consumption. In recent years, many businesses have had increasing negative effects on consumers, to a certain extent, reducing the consumption confidence and consumer satisfaction, and indirectly influencing the subjective well-being

of the people. With the improvement of living standards, customers now not only focus on the quality of the products, but also the product service to improve customers' subjective well-being.

Satisfaction Marketing

In the age of emotional consumption, the enterprises changed the management idea from company satisfaction to customer satisfaction and customer loyalty. Striving for and maintaining the market share is no longer the main marketing goal for modern enterprises, while enhancing the product loyalty and maintaining the customer share has become the focus of the enterprise marketing strategy. As a result, satisfied marketing theory has become a crucial marketing tool for many enterprises. Satisfaction marketing is an integrated marketing concept to enhance enterprise competition ability in the trade, improve enterprises in the development of effective management way, and set up the good image in the customer mind (Zhang, 2011).

From customer satisfaction to people's happiness, from satisfaction marketing to happiness marketing is a kind of inevitable trend of social development. It is not difficult to see that satisfaction marketing is to provide customers with comprehensive, thoughtful humanized service to provide customer satisfaction based on customer requirements through the process of before, within and after. In order to make customer satisfaction into the brand in the emotional resonance, enterprises have to change ideas, including identifying customers' needs and meeting them, offering products and services above the customers expectations, improving after-sales service to encourage customer complaints, and building a customer feedback mechanism.

Happiness Marketing

Happiness has the characteristics of subjectivity, stability and integrity. Consumer's happiness is created by our products and services, and created from customer satisfaction to make them feel happy. Because of the increasing pressure of modern work and study, many people choose to travel as a way to relax. During travelling, people can temporarily escape from repressive environment, and intense work. Instead, within a fun and enjoyable journey, couples, families and partners could experience that long-unseen happiness in their hearts (Ma,& Zheng, 2013).

Current Development of the Qiandao Lake Tourism Industry

Qiandao Lake, as town of leisure, attracts many visitors to relieve themselves in an environment that's full of beautiful lakes and mountains. So many visitors appreciate it, and it brings them not only satisfaction, but also joy and happiness.

Stimulate Happiness from Different Levels

The essence of happiness marketing is equal to consumer's emotional marketing, which means making consumers feel happy in their hearts. An enterprise or industry only attached to the consumers' inner feelings can truly make them feel happiness in their hearts (Kong, 2013). Happiness marketing is promoted according to different situations with different happy elements. The Water Festival of Qiandao Lake is a local grand festival for ChunAn citizens, which displays the ecological environment, rich tourism resources, traditional culture history, and is full of fun to local people and tourists. "Qiandao Lake, make the leisure life better" was the theme of Water Festival in 2013. "Love in Qiandao Lake" China's large commonweal collective wedding ceremony was held in Qiandao Lake to practice low carbon environmental protection while full of a boundless happiness to set the goal of becoming the Chinese Top honeymoon city. People who used to sit in office, tired of the gym could experience the special outdoor

fitness in Qiandao Lake. Green rides of 130 km around circle Qiandao Lake attract many tourists. Those green rides are all built on the lakeside with beautiful lake sightseeing. Meanwhile, they connect to the B&B, organic farms, and fruit parks closely to bring more happiness to the tourists in the cycling.

Pass Happiness from Online Channels

With the development of economy and technology, great changes have taken place in people's consumption channels. For example, more and more people are choosing online shopping, and online entertainment. The Internet is one of the most important medium of dissemination of happiness and joy. A micro-blog contest of “Impressed Water festival” was organized by Tencent Weibo to interact with visitors. With the theme of “leisure life”, the citizens and tourists can send beautiful scenery, wonderful moments, and elegant pictures to the micro-blog to describe their joy in the journey.

Enjoy Happiness from the Experience

The feeling of joy is the result of the consumption experience, which means when the product brings customers emotional experience, the brand in the user's heart gets a perfect sublimation. The feeling of joy is from the nature of emotional resonance, and the pursuit of happiness is human nature. Qiandao Lake tourism is trying to bring a connection of landscape series, orchards, and villages into a line, to transform the area from sightseeing-oriented into being leisure-oriented. Chen Ying discusses the relations between modern agriculture and rural leisure tourism, saying farmers make full use of farmland, farmhouse, the landscape, and ecological resources, to increase their own income. At the same time, it has also contributed to the regurgitation feeding from city to countryside.

Marketing Strategy Analysis of Qiandao Lake Tourism Industry

The 4s marketing strategy is a market-oriented strategy of “consumers possession”, emphasizing the importance of consumer demand. It requires that the enterprises make consumers feel happiness, and loyalty to their products is the main goal, through continuously improving products, service, and brand, etc. The 4s respectively refers to: Satisfaction, Service, Speed, and Sincerity.

Satisfaction Strategy Analysis

Customer satisfaction is the biggest recognition to the enterprise, its products, services and employees. It is also the direct comprehensive evaluation of the product or service of the enterprise and employees provided. Customer satisfaction is evaluated by the value of a product or service. Qiandao Lake is a major component of national key scenic spots (Fuchun River, Xin'an River, and Qiandao Lake). It is full of scenic water spots, a thousand islands, natural landscape, and an ecological environment. The satisfaction of tourists traveling to Qiandao Lake scenic landscapes is the recognition of its tourism. In order to express the unique charm of the water in Qiandao Lake, they have focused on the ecological environment, rich tourism resources, long history of culture, and since 2001, the Qiandao Lake water festival is held every two years with a series of activities. It is an important platform to bring satisfaction and joy to the local people and tourists.

Service Strategy Analysis

The service strategy should be analyzed from two aspects: consumer satisfaction and customer happiness.

Service means to provide customers with product full of added value and potential value. The Qiandao Lake Water Festival is the main platform combined with local scenery to express ecological resources, and economic and social development. Considering overwork every day in the office, outdoor

exercises are now becoming more and more popular. “Qiandao Lake, making leisure life more beautiful”, was the theme of the Water Festival in 2013. There were a bundle of activities such as the voyager, Harley motorcycling, self-driving, passion drift, and an organic cultural festival, which satisfies tourists from different aspects.

Meet the various needs in the process of the customer visit. It implements the “Warm” user management strategy, which moves the customers with considerate service. With the increasing strengths of Qiandao Lake tourism, a group of high quality, high standard, superior service hotels are springing up. In 1996, there were only 28 hotels in ChunAn. As of August 2010, it increased to 169. Today, Hilton, Sheraton, Kaiyuan and other star-rated hotels have gradually opened in Qiandao Lake to provide warm hotel service the tourists.

Speed Strategy Analysis

The Speed Strategy is refers to the development of new products, competition ability, and changeability of channel. Speed means market share, profit, and the influence of the enterprise in a new market. The advantages and core competitiveness of Qiandao Lake are its first-class ecological environment, natural landscape, unique architectural style, important historical value formation of the ancient villages, and the pursuit of simple folkway delicious, etc. However, Qiandao Lake is located in the Zhejiang province full of tourism resources. Tourism resources in Shanghai, Hangzhou, Suzhou, Nanjing, Ningbo and other economically developed cities may threaten the tourism industry of Qiandao Lake.

Since the “2011 China’s county-level city tourism competitiveness ranking” was published, Shaoxing, Tongxiang, Fenghua, and Jiashan are on the list, which brings a threat to the tourism industry of Qiandao Lake. Therefore, innovation is required to compete in similar scenic spots between cooperation and competition.

Sincerity Strategy Analysis

Sincerity generally refers to sincere service for the customers; this is the indispensable lubricant from person to person. But the sincerity strategy here refers more to any enterprise or industry showing sincerity of cooperation to consumer, cooperators, and society in the process of operation. Admittedly, Qiandao Lake tourism is developed with more than 20 years with promoted policy, and inspired atmosphere. However, with the development of market economy, and peer competition, the market disorder phenomenon is becoming more and more serious.

Suggestions of Happiness Marketing of Qiandao Lake Tourism Industry

Customized-Oriented, Respect for Personality

According to the survey, it would be 300 billion tourism consumption a year of 130 million elderly people in China, while the current market only reached 50 billion. As a result, many travel agencies and tourism regions are actively exploring the development of this huge potential market. For the elderly tourist market, there are many problems that need to be solved: lack of uniqueness of scenic spot design, single tourism product, low customized tourism service, and low degree of specialization, etc.

Elderly people, due to their own health, life experience, and so on and so forth, differ from other age groups, and have the following characteristics: priority to pure tourism activities, priority to comfortable team travel of high quality service, and priority to short-distances rather than long-distance. How should Qiandao Lake Tourism Industry design to make the elderly group play with happiness?

Family tourism product development. Qiandao Lake has been advocating the concept of “green, health, low-carbon”, which attracts the elderly to enjoy the family time with young generations. The driving roads are built along the lakeshore line and the whole family could taste the landscape and scenery at the same time.

Improve the infrastructure to provide convenience for the elderly. The main transportation of Qiandao Lake is a ship, which the elderly may not adapt. Thus, the ship should be equipped with specialized medical personnel, in order to respond to emergencies. At the same time, it should strengthen the island's restroom signs, and develop convenient walking paths to solve the practical problem of old people.

Quality-Oriented, Smile Service

It is proven that the regional tourism business card is not related to luxury facilities, or grand activities, but instead the spring breeze attitude and meticulous service. Service with a smile is a kind of power, which brings social benefits as well as the feeling of warm heart to customers, and to a great extent improves the work efficiency. Whether hotel staff or tour guide, each employee needs to smile from the heart. The modest attitude and polite tone is the embodiment of the service with a smile. Only if you are smiling sincerely and serving at the same time, will tourists visit and feel happy.

Unique-Oriented, Adding Features

Tourism is a kind of high consumption of goods, which people enjoy the services, appreciate the beauty and have the cheerful mood at the same time. As people's travel enthusiasm increases, products of tourism need to constantly be chased after in a novelty way. Nowadays, tourism products and patterns are relatively single, and Qiandao Lake has to dig its own characteristics and present them in an innovation way. Innovation is not an easy thing; we should combine all the local characteristics to attract tourists.

“A Bite of Qiandao Lake”. With the program of “A Bite of China”, the population for food tourism has emerged. Food tourism is in people's demand from simple “eat” to the pursuit of health, happiness, as well as the unique food culture. MiGuo is one of ChunAn local snacks. With Qiandao Lake tourism flourishing, MiGuo become one of favorable tourism products of traditional culture.

The awakening of an ancient underwater city. More than 50 years ago, the first Chinese hydropower station was built along Xin'an River. There were 290,000 ChunAn people that left from their homes to contribute to it. Nowadays, there are some sites remaining underwater to show the long history of prosperous town of annihilation.

Submarine underwater sightseeing can satisfy visitors with curiosity, mystery and eccentricity. Qiandao Lake, if having this unique style of ancient art and full of fantastic underwater submarine underwater sightseeing, it is sure to be an innovation products to attract more tourists to come.

Develop cultural tourism. Culture is the soul of the city. Lack of culture support, the urban tourism can appear pale and empty. ChunAn needs to pay attention to the excavation of the historical culture penetrated into the city tourism.

Sustainable Development-Oriented

The tourism environment is directly related to the quality of tourism, and also directly related to the entire image of the tourism. We need to put the environment construction throughout the process of the county tourism development, build a good tourism environment, and continuously upgrade the reputation of Qiandao Lake tourism.

Conclusion

With the enlargement of Qiandao Lake brand influence and fast development of tourism, the tourism market brought some negative influence to the Qiandao Lake brand, which severely restricted the thousand island lake tourism quality to a higher level of development. We must take tough measures, strengthen the comprehensive improvement of the market order and standardize management, and purify the tourism environment. We should highlight the travel agencies, tour guides, hotels, and tour boats in the formulation and implementation of standardized service. A tourism market comprehensive supervision mechanism should be improved with the integration of tourism, public security, urban management, industry and commerce, and the power of the commodity price departments.

Acknowledgement

This paper was sponsored by Soft Science Project of Science and Technology Department of Zhejiang Province (No. 2013C35053), Key Research Base of Philosophy and Social Sciences of Zhejiang Province (Research Center of Communication and Cultural Industry) (No. 13JDCB02Z).

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Research on Regional Differences of Urbanization Level Based on Principal Component Analysis and Clustering Analysis

– An Example of Liaoning Province of China

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[Abstract] *According to statistic data, this paper researched 2013 regional differences of urbanization levels in cities of Liaoning Province by making use of Principal Component Analysis (PCA) and clustering analysis. Analysis results of every indicator system show that the urbanization levels of Liaoning Province can be grouped into five categories. This result indicates that urbanization development process in Liaoning Province has significant regional differences and urbanization development is unbalanced. Therefore, facing the contradiction, the best solution is to construct the strategy of new-type urbanization.*

[Keywords] *level of urbanization development; principal component analysis; clustering analysis; Liaoning Province*

Introduction

Urbanization is one of the important phenomena in social and economic development in the current world, as well as a significant symbol of measuring a nation's and region's economy and social development level. With the rapid development of the economy, the urbanization development level of Liaoning Province is also constantly improving. In recent years, the urbanization rate of Liaoning Province improved to 62.1% in 2013, from 56% in 2003. However, the urbanization level of cities in the province is impacted by unbalanced regional economic development. Therefore, this paper, according to Liaoning's statistic data in 2013, we researched the urbanization development levels of Liaoning's 14 cities using principal component analysis and clustering analysis, divided them into two categories and analyzed characteristics and causes of every category.

Data Source and Research Method

Overview of Research Area

Liaoning Province is located in the southern area of our northeast. Its east longitude is from 118°53' to 125°46' and northern latitude is between 38°43' and 43°26'. It covers a total area of 145700 square meters and has a temperate continental monsoon climate. Until the end of 2013, the entire province has a total of 14 prefecture-level administrative units, and 100 county-level administrative units. Its permanent resident population is 438,900 people, while the urban population accounts for 62.1%. Gross domestic product (GDP) is 2.70777 trillion Yuan. Proportion of added values for primary industries, secondary industries and tertiary industries in gross domestic product is changed into 8.6:52.7:38.7 from the last year of 8.7:53.2:38.1. Per capital gross domestic product is 61694.46 Yuan and exceeds the 41804.71-Yuan of national average. Urban per capital disposable income is 25578 Yuan and rural per capita net income is 10523 Yuan.

Indicator Selection and Data Resource

The purpose of this paper is to conduct clustering division on 14 cities in Liaoning Province, so as to find out the similarity of various types. Therefore, with the principle of abiding by scientific comparability and system hierarchy, on the basis of urbanization assessment indicator system of existing research achievements, combined with operability, an urbanization assessment indicator system of Liaoning is constructed, as shown in Table 1 (Xue, 2013). The indicator system contains four aspects and 13 indicators. Part of data in every indicator data was obtained by statistical bulletins in every city's social and economic development and reports on the work of the government, while part of data was acquired by field research collection and simple calculation.

Table 1. Urbanization Assessment Indicator System

Target Layer	Primary Indicator	Second Indicator	
Urbanization Level	Population	Proportion of Urban Population in Total Population (X_1)	
		Per Capita Living Space (X_2)	
		Employee Proportion of Tertiary Industry (X_3)	
	Economy		Per capita GDP (X_4)
			Proportion of Industrial Output in GDP (X_5)
			Proportion of Tertiary Industry in GDP (X_6)
			Local Financial Revenue (X_7)
	National Lives		Retail Sales of Consumer Goods (X_8)
			Urban Per Capita Disposable Income (X_9)
			Rural Per Capita Disposable Income (X_{10})
	Society		The Number of Hospital and Health Center in Every Hundred (X_{11})
			Water Popularity Rate of Urban Population (X_{12})
			Green Coverage Ratio in Built-up Area (X_{13})

Research Method

Principal component analysis is a kind of important statistical approach to research how to translate the problem of multiple indicators into fewer aggregative indicators. It can translate higher space or the problem of multiple indicators into low-dimensional space to dispose, so as to make the problem become easier and intuitive (Xue, 2013). Moreover, there is no relation between these fewer aggregative indicators, which also can provide the vast majority of information of original indicators. Clustering analysis is a significant computing method in data mining. It takes advantage of the relation between sample data variables to stand for the relation between samples (Gergen & Harmanescu, 2012). By making use of clustering, the same or similar object can be divided into a category or a cluster to calculate the average center of the same kind, which can be considered as the class center of this kind. Class center can embody the common property of these objects. By calculating relations between different class centers, differences between diverse categories can be obtained (Gergen & Harmanescu, 2012).

According to Urbanization Assessment Indicator System in Table 1, principal component analysis is conducted on data of established indicator system by making use of statistical software SPSS17.0, so as to obtain principal component scores and synthesis score of every city. Finally, clustering analysis is conducted on synthesis score of every city.

Result and Analysis

Principal Component Analysis

Characteristic value and variance contribution rate of principal component can be obtained by making using of SPSS17.0 to conduct principal component analysis on standardized indicator, as shown in Table 2. It also can obtain loading matrix, as shown in Table 3. It must regard the component whose characteristic value is larger than 1 and accumulated contribution rate is up to 80% as the principal component.

It can be observed from Table 3 that characteristic values of front four principal components are larger than 1 and accumulated variance accounts for 81.09% of the total variance, namely it contains 81.09% of original data information. As a result, the front four principal components can replace the original thirteen variables. These four principal components are Y_1 , Y_2 , Y_3 and Y_4 , respectively. Characteristic values of Y_1 , Y_2 , Y_3 , and Y_4 are 4.990, 2.409, 1.968 and 1.176 successively. Their contribution rates are 38.382%, 18.528%, 15.137% and 9.043%, respectively.

Table 2. Eigenvalue and Variance Proportion

Principal component	Initial Eigenvalues			Principal component load sum of squares		
	Eigenvalues	Percentage %	Cumulative percentage %	Eigenvalues	Percentage %	Cumulative percentage %
1	4.990	38.382	38.382	4.990	38.382	38.382
2	2.409	18.528	56.909	2.409	18.528	56.909
3	1.968	15.137	72.046	1.968	15.137	72.046
4	1.176	9.043	81.090	1.176	9.043	81.090
5	0.885	6.804	87.894			
6	0.571	4.390	92.284			
7	0.466	3.581	95.865			
8	0.205	1.576	97.441			
9	0.161	1.235	98.676			
10	0.101	0.781	99.457			
11	0.046	0.355	99.812			
12	0.024	0.188	100.000			
13	1.355E-5	0.000	100.000			

Table 3 represents the degree of correlation between the original target variable and the common factor. Generally speaking, the larger absolute value the factor has, it represents the explanatory of the target variable is better. Principal component Y_1 , has larger loading on X_1 , X_4 , X_7 , X_8 , X_9 and X_{10} . All of them are over 0.8. Proportion of urban population, per capita GDP, local financial revenue, social consumable total retail sales, urban per capita disposable income and rural per capita disposable income reflect urbanization level of economic life. So Y_1 is called as the factor of economic life. Y_2 has larger loading on X_3 , X_5 and X_6 . All of them are over 0.6. Employee proportion of tertiary industry, proportion of industrial output in GDP, and proportion of tertiary industry in GDP embody the urbanization level of industrial structure. So Y_2 is considered as the factor of industrial structure. Y_3 has larger loading on X_2 and X_{13} . All of them are over 0.7. Per capita living space and green coverage ratio in built-up areas indicate the urbanization level of residents' living conditions. So Y_3 is the factor of living condition. Y_4 has larger loading on X_{11} and X_{12} . All of them are over 0.6. The number of hospital and health centers in

and water popularity rate of the urban population reflect the urbanization level of social life. So Y_4 is called as the factor of social life.

Table 3. Load Matrix of Each Principal Component

Factor	Principal component			
	Y_1	Y_2	Y_3	Y_4
X_1	0.809	-0.206	0.259	0.119
X_2	0.057	-0.502	0.764	-0.161
X_3	-0.079	0.617	0.549	-0.416
X_4	0.867	0.334	0.027	0.198
X_5	0.281	0.823	-0.143	-0.138
X_6	0.416	-0.684	-0.215	-0.040
X_7	0.923	-0.265	0.183	-0.063
X_8	0.880	-0.274	0.181	-0.165
X_9	0.833	0.350	-0.272	-0.170
X_{10}	0.896	0.142	-0.046	0.110
X_{11}	-0.238	-0.047	0.170	0.680
X_{12}	0.266	0.399	0.341	0.605
X_{13}	0.264	-0.161	-0.813	0.043

According to Table 3, principal component scores and synthesis scores of urbanization are calculated. Scores of principal component Y_1 , Y_2 , Y_3 and Y_4 are as follows, respectively:

$$Y_1=0.809X_1+0.057X_2-0.079X_3+0.867X_4+0.281X_5+0.416X_6+0.923X_7+0.880X_8+0.833X_9$$

$$+0.896X_{10}-0.238X_{11}+0.266X_{12}+0.264X_{13}$$

$$Y_2=-0.206X_1-0.502X_2+0.617X_3+0.334X_4+0.823X_5-0.684X_6-0.265X_7-0.274X_8+0.350X_9$$

$$+0.142X_{10}-0.047X_{11}+0.399X_{12}-0.161X_{13}$$

$$Y_3=0.259X_1+0.764X_2+0.549X_3+0.027X_4-0.143X_5-0.215X_6+0.183X_7+0.181X_8-0.272X_9$$

$$-0.046X_{10}+0.170X_{11}+0.341X_{12}-0.813X_{13}$$

$$Y_4=0.119X_1-0.161X_2-0.416X_3+0.198X_4-0.138X_5-0.040X_6-0.063X_7-0.165X_8-0.170X_9$$

$$+0.110X_{10}+0.680X_{11}+0.605X_{12}+0.043X_{13}$$

Contribution rate of every principal component is regarded as the weight. Synthesis scores of every city's urbanization level can be obtained. The formula is as follows:

$$ZF=Y_1 \times 38.382 / (38.382 + 18.528 + 15.137 + 9.043) + Y_2 \times 18.528 / (38.382 + 18.528 + 15.137 + 9.043)$$

$$+ Y_3 \times 15.137 / (38.382 + 18.528 + 15.137 + 9.043) + Y_4 \times 9.043 / (38.382 + 18.528 + 15.137 + 9.043)$$

Every city's principal component scores, ranking and synthesis scores are shown in Table 4.

Table 4. Every City's Principal Component Scores, Ranking and Synthesis Scores

City	Y ₁		Y ₂		Y ₃		Y ₄		Total Score	Rank
	Score	Rank	Score	Rank	Score	Rank	Score	Rank		
Shenyang	9.12	2	-1.04	10	1.66	3	-1.30	13	4.24	2
Dalian	11.55	1	-1.80	13	0.13	7	0.57	5	5.15	1
Anshan	2.51	3	-0.59	8	-1.91	12	-0.07	7	0.69	4
Fushun	-2.66	10	0.04	6	-0.87	11	1.77	2	-1.21	9
Benxi	0.04	6	0.56	3	-2.85	13	0.33	6	-0.35	7
Dandong	-1.93	7	-3.01	14	-0.18	9	1.80	1	-1.44	10
Jinzhou	0.18	5	0.19	5	0.49	6	-0.43	10	0.17	5
Yingkou	-2.15	8	-0.50	7	3.47	1	-0.08	8	-0.49	8
Fuxin	-3.24	11	-1.29	11	-0.05	8	0.61	4	-1.77	12
Liaoyang	-2.28	9	2.22	2	0.75	4	1.31	3	-0.29	6
Panjin	2.32	4	7.14	1	-0.23	10	-0.18	9	2.67	3
Tieling	-3.78	13	0.54	4	0.67	5	-0.92	11	-1.64	11
Chaoyang	-6.05	14	-0.97	9	2.69	2	-1.25	12	-2.72	13
Huludao	-3.63	12	-1.50	12	-3.80	14	-2.17	14	-3.01	14

Clustering Analysis

In order to further figure out results of principal component analysis, clustering analysis on synthesis scores of Liaoning's urbanization level are used, as shown in Table 4. It can draw clustering analysis tree diagram of urbanization, as shown in Figure 1. It can be observed from Figure 1 that Liaoning's urbanization has obvious regional differences. Urbanization development is unbalanced. Therefore, urbanization of 14 cities of Liaoning can be divided into 5 categories:

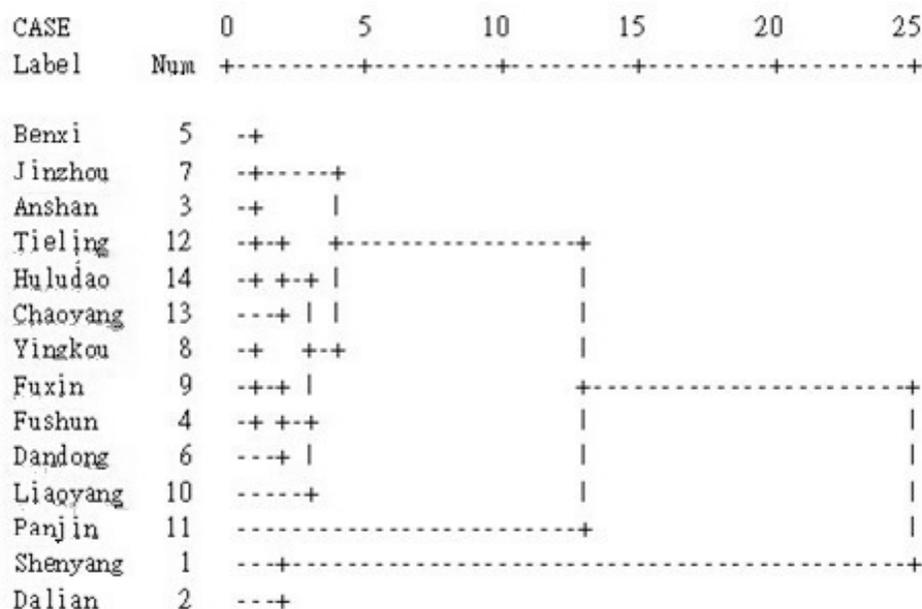


Figure 1. Clustering Analysis Tree Diagram of Urbanization

First, cities with high urbanization levels: Dalian and Shenyang. Shenyang, as a large-scale city and the provincial capital of Liaoning Province simultaneously, has higher urban primacy ratio and higher overall

level of civilization. Its synthesis scores of urbanization rank in the second place. Urban population of Shenyang occupies a considerable proportion. In addition, with the fundamental support of its old industrial city, it has a higher overall urbanization level, but its regional economic development has obvious unbalanced. Urbanization of social life only lists in the 13th place. Urbanization of industrial structure ranks in the 10th place. Shenyang is developed with its position of capital city and Shenyang old industrial bases. Urbanization foundation makes it stay in the leading position of regional urbanization level of the province. However, its urbanization level still has a distance from Dalian (Wang, 2010). Dalian is an industrial city that gives priority to garment making, and the light industry, etc. (Zhang, 2012). In addition, its tourism and service industry stays in a national leading position. Furthermore, geographical condition of Dalian city is special. Advantaged natural conditions and acquired reasonable urban development policy make it stay in the first place of urbanization level in Liaoning.

Secondly, cities with higher urbanization levels: Panjin. Panjin is an industrial city. Its value of industrial output accounts for greater proportion of GDP. Urbanization of its industrial structure ranks in the primary position. Economic development level is in a higher level of the entire province. Per capita GDP of Panjin accounts for the second place in Liaoning Province (Wang, 2010). In recent years, due to reasonable urban planning of the government, the urbanization level of Panjin stays in a higher position. However, compared to Shenyang and Dalian, Panjin also need to further improve. Its urbanization of living life ranks behind (Tian, 2014).

Thirdly, cities with medium urbanization levels: Anshan, Jinzhou and Benxi. Anshan's metallurgical industry is its principal industry. Single function is very obvious, which brings multiple negative results to cities. These cities have more industries with high-energy dissipation and water consumption and serious pollution, which intensifies the imbalance between supply and demand of water and energy sources and environmental pollution. Moreover, excessive professionalization makes the urban development lack strain force and elasticity, and they also goes against diffusion of enterprises to small towns and rural areas, resulting in slow local economy and urban corporate development. Only urbanization indicator of social life in Panjin ranks behind, and its other indicators rank in the front. According to situation of Jinzhou, it indicates that development of urban urbanization depends on economic development to a great extent, while urban economic development also requires for a suitable social environment to coordinate its development (Li, 2012). In this way, the urbanization process can mutually promote with economic development and social progress.

Fourth, cities with lower urbanization levels: Liaoyang, Yingkou, Fushun, Dandong and Fuxin. Social economic development level in these cities is not high, but they have unique development potential. Fushun is an important transportation junction. In geographic position, Liaoyang and Fuxin are adjoined to capital Shenyang, so they are impacted by spread of the central city. Yingkou and Dandong are port cities with excellent ports and convenient land and water transportation; they also have comparatively developed economy and have stronger ability to attract and appeal to advanced science technology, as well as have extensive supporting hinterlands (Zhang, 2012). All of these factors can drive the development of the regional economy to some extent. By fully taking advantage of these conditions, and by large-scale planning of cities in the entire province or even the entire nation, this work plays a great role on promoting well-aligned and sustainable development of these regions, coordinating development and maintenance of population, resource, environment and construction in the region and driving the economy development (Jenerette & Potere, 2010).

Fifth, cities with low urbanization levels: Tieling, Chaoyang, and Huludao. Urbanization level of these three cities is the lowest. These cities have low rankings in the factors of economic life and social life. The factor of industrial structure and living condition in Tieling rank in the front. The factor of living condition of Chaoyang ranks in the second place of the entire province, but its factor of industrial structure ranks behind. Every ranking of Huludao ranks behind (Tian, 2014). Characteristics of these urban developments are underdeveloped regional economies, low urbanization levels, but they have stronger delayed effects of development. Various indicators of Huludao are inferior to the average level of the whole province, which means the urbanization level of Huludao is also inferior to other cities.

Conclusion

In the urbanization development process, Liaoning has obvious regional differences and unbalanced urbanization development. Only the three cities of Dalian, Shenyang and Panjin have better urbanization development. Urbanization development level of the other cities is generally lower. Most cities are in the initial stage of urbanization development, but they still have development potential. Facing contradiction and constraint of Liaoning's urbanization development, the best solution is to construct a strategy of Liaoning's new-type urbanization (Li, 2012). First of all, it should respect principle of urbanization development and give consideration to various constraints comprehensively. Under the idea of "people first and sustainable development", it should construct new-type rural areas and cities, and shape new-type rural citizens and urban citizens (Reinhard & Yasin, 2010). Secondly, it must realize integration of county cities, regional center and urban agglomeration on the development road of new-type industrialization development, so as to reach the integration of industrial adjustment, space planning and system safeguard, ensure the balanced urbanization development of Liaoning and make urbanization of Liaoning step on a new stage.

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Research on the Dynamic Mechanism of the Environmental Policies and Industrial Restructuring

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[Abstract] In order to explain the dynamic mechanism of the environmental policies and industrial restructuring, we use panel data of China's 30 provinces from 1999-2011 and pursue Unit Root test and Granger causality test. The result shows that industrial restructuring is the one-way Granger cause of pollution abatement ratio, while investment policies of the environment are the one-way Granger cause of industrial restructuring. It indicates that industrial restructuring is an active factor in pollution abatement, and that investment policies of environment can positively impact industrial restructuring.

[Keywords] environmental policies; industrial restructuring; Granger Causality test

Introduction

Because of the limitation of the stage of development and the low technological level, China's economic growth relies heavily on the input of natural resources, which would produce and emit large amounts of pollution. As a result, the contradiction between economic growth and environment has become more and more serious. As the situation of the environment has become rigorous, the pressure to reduce the pollution emission has increased day by day. According to the statistics from the World Bank, China's financial losses every year caused by air and water pollution equal 8% to 12% of its GDP.

How industrial restructuring, which is one of the most effective measures to reduce pollution emission, influences the pollution abatement has been analyzed deeply. However, many scholars have been aware that the relationship between industrial restructuring and pollution abatement is not simply unidirectional, but bidirectional. That is, pollution abatement could also promote the industrial restructuring reversely. After reviewing the existing literature about industrial structure and environmental economics, this paper tried to explain the dynamic mechanism of the environmental policies and industrial restructuring.

Literature Review

There are a lot of researches on the relationship between environmental problems and industrial restructuring, but with a wide divergence of conclusions. First of all, many researches show that industrial restructuring did not promote the pollution abatement; on the contrary, it is a direct factor driving the pollution emissions to increase (Shandra, et al., 2008; Huangjing, 2009; Zhang, 2010; Libing & Zhao, 2011). Secondly, part of the scholars thought that industrial structure did not have a significant effect on pollution abatement. It mainly depended on technological progress (Levinson, 2009; Gaohui, 2009; Cheng, 2011).

Different from the scholars above, Jalil and Feridum (2011) believed that the decrease of secondary industry's proportion and development of the financial sector would reduce the carbon emissions because rapid development of the financial sector could provide enough funds to introduce new technology and equipment for environmental protection. Chunmei, et al. (2011) found that development of the service

sector was the Granger cause of low-carbon development in China. Fu Jingyan (2009) claimed that very small changes in the industrial structure could also cause a large variation of the average density of pollution. Cai Shenghua, et al. (2011) estimated the impact of industrial restructuring on the intensity of carbon emission. The results showed that changes in proportion of secondary industries, especially the decrease of the proportion of heavy industries and an increase in the proportion of service industries would promote CO₂ abatement.

Environmental Policy System of China

An Overview of China's Environmental Policies

Command-and-control policy. The command-and-control policy mainly refers to environmental standards. For example, the government makes a law to set a certain environmental standard, which requires Beijing to reduce sulfur dioxide emissions by 10 percent this year over last year, and other standards like that. This kind of environmental policy mainly depends on the government using administrative measures. So the main characteristic of the command-and-control policy is its coerciveness, and that could quickly obtain pollution treatment effect. In practical terms, the command-and-control policy can be further divided into 3 categories: the ambient standard, emission standard and technology standard. Sometimes the government makes technology standard and demands the factories to use a certain kind of technology to produce goods or to solve the pollution problems.

Incentive-based policy. The second kind of environmental policy is the incentive-based policy. While the command-and-control is ordered by the government, the incentive-based policy relies on the market mechanism. The incentive-based policy contains the pollutant charges, environmental tax, subsidies and transferable discharge permits. We will take the transferable discharge permits as an example to explain how the incentive-based policy works. First, the government configures the total emissions of a certain kind of pollutant and divides discharge permits into many shares, then allocate them between the factories. The factories that have surplus discharge permits could sell them, and the factories that need more discharge permits than their initial share could buy them from the former. Further, when a lot of factories participate in this trade, a market about discharge permits is established.

International environmental agreements. The third kind of environmental policy is international environmental agreements. We all know that, the environmental problems are not just about one country, and not just about China, but instead an important global issue. So in order to solve those problems, cooperation is needed around the world. As a result, some countries signed international environment agreements. For example, when solving the greenhouse effect, every country needs to reduce its emissions of carbon dioxide. But some country's economies are very bad so they don't have the capability to finish their tasks. In that situation, the country may sign international environment agreements with developed countries and ask the developed countries for help.

The Effect of China's Environmental Policies

Facing the serious situation of environmental pollution, the Chinese government has made many policies to improve the quality of the environment. Let's see Figure 1. It is about the tendency of so₂ emissions and the industrial soot and dust emissions from 1991 to 2010.

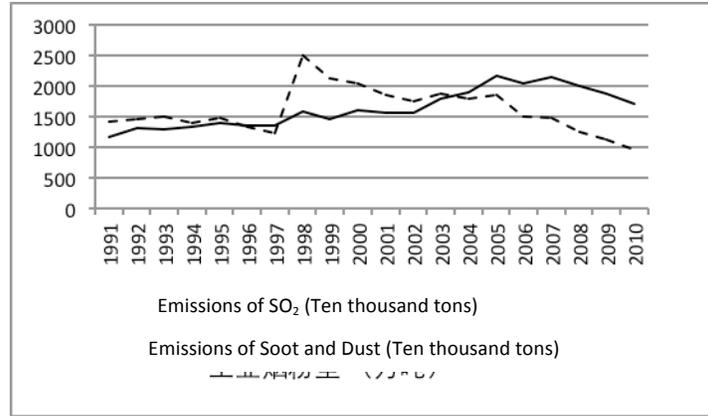


Figure 1. Trend of waste gas emission from China's industry

Figure 1 shows that the solid line stands for the discharge value of industrial sulfur dioxide, and the dotted line stands for the discharge value of the industrial soot and dust. First, let us see the solid line. We can see that since 1991, the industrial sulfur dioxide emissions have been increasing significantly. This trend lasts until 2007.

On the other hand, the industrial soot and dust emissions have a very different tendency. The emissions reached a peak in 1998 and then went down. But the emissions significantly declined from 2005, which was almost the same as the tendency of sulfur dioxide emissions. The reason is that the year 2006 was the beginning of China's 11th five-year period. Energy conservation and emission reduction are important goals of the 11th five-year plan. So the government made a series of environmental policies to improve the environmental quality and to solve the serious pollution problems, especially industrial pollution. So starting in 2006, the emissions of almost all kinds of pollutants decreased. It follows that China's environmental protection has been preliminary success.

Methodology and Data

Model Building

This paper builds a panel model to analyze the relationship between China's environmental policies and industrial restructuring. The model is as follows:

$$ISR_{it} = \beta_0 + \beta_1 GASR_{it} + \beta_2 INVR_{it} + \eta_i + \theta_i + \varepsilon_{it} \quad (1)$$

Where i stands for provinces, t stands for years, ISR_{it} measures industrial restructuring which equals ratio of output value of the tertiary industry and the second industry output value. $GASR_{it}$ measures pollution abatement ratio to describe the effect of environmental policies and is computed as

$$GASR = \frac{\text{industrial waste gas emission of last year} - \text{that of this year}}{\text{industrial waste gas emissions of last year}} \times 100$$

$INVR_{it}$ measures the intensity of investment environmental policies and is computed by pollution control project investment dividing GDP of the second industry. In order to reflex the regional differences and time effect of variables above, we also introduce a fixed effect variable of η_i and time effect variable of θ_i . ε_{it} is the random variable.

Data

Given the availability of the data, this paper uses the panel data of China's 30 provinces, which did not include Tibet from 1999 to 2011. The original data are from China Statistical Yearbook of relative years.

Empirical Analysis

Panel Unit Root Test

In order to examine if the data is non-stationary, we carry out Unit Root Test on all variables. If the regression coefficients of the cross-section individual are same, the testing methods can be divided into two categories: one kind is with same regression coefficients, for example, Levin-Lin-Chu (LLC) Testing, Breitung Testing and Hadri Testing; the other kind is with different regression coefficients, for example, Im-Pesaran-Shin (IPS) Testing, Fisher-ADF Testing and Fisher-PP Testing. We chose the LLC Testing and Fisher-ADF Testing with trend and intercept to verify whether the variables meet the modeling requirements. Test results are in Table 1.

Table 1. Results of Unit Root Test

Variables	Test method	
	LLC	Fisher-ADF
ISR	0.9212 (0.8215)	26.6140 (0.9999)
ISR(-1)	-3.1512 (0.0008)	81.1759 (0.0357)
GASR	0.5994 (0.7255)	85.1942 (0.0179)
GASR(-1)	-14.5404 (0.0000)	106.2650 (0.0002)
INVR	-8.5529 (0.0000)	84.8369 (0.0191)
INVR(-1)	-4.6472 (0.0000)	117.9720 (0.0000)

Tips: Numbers in parentheses are P-values of the corresponding statistical tests.

From Table 1, we can see that, there is not a unit root in the first-order difference series of each variable of ISR, GASR and INVR. That is, guaranteed at 1% and 5% significant level, the three first-order difference series are stationary. Based on the analysis above, all of the coincident indexes ISR, GASR and INVR are the entire series of first order, which met the prerequisite of Granger causality test.

Granger Causality Test

The basic foundation of the Granger test is that future cannot predict the past. If the change of y is caused by x , then the change of x must happened before that of y . If x is the cause of y 's change, x can help to forecast y . That is, when regressing the past value of y , adding the past value of x can significantly increase the explanation ability of regression. Then we call that x is the Granger cause of y . If the explanation ability does not increased significantly after adding lagged variable of x , then x is not the Granger cause of y .

Unconditional limit model:

$$Y_t = \alpha + \sum_{i=1}^m \alpha_i \Delta Y_{t-i} + \sum_{j=k}^k \beta_j \Delta X_{t-j} + \varepsilon_t \quad (2)$$

Conditional limit model:

$$Y_t = \alpha + \sum_{i=1}^m \alpha_i \Delta Y_{t-i} + \varepsilon_t \quad (3)$$

Where ε_t is the random variable; α , β is regression coefficient; t is sample size; m and k are lagged differences of Y_t and X_t ; ESS_1 is the residual sum of squares of Equal (2); ESS_0 is the residual sum of squares of Equal (3).

Null hypothesis is $H_0: \beta_j = 0$; alternative hypothesis is $H_1: \beta_j \neq 0 (j = 1, 2, \dots, k)$. Establish the statistical magnitude as follows:

$$F = \frac{(ESS_0 - ESS_1)/m}{ESS_1/(n - k - m - 1)} \sim F(m, n - k - m - 1)$$

F-statistics obey F distribution with the first degree freedom m and the second degree freedom $n - (k + m + 1)$. If F-statistics are greater than the critical value of standard F distribution, we should reject the null hypothesis, which means x is Granger cause of y .

The data must be stationary when makes Granger Causality Test. According to results of Unit Root test, we can do Granger causality test to examine the relationship between ISR and GASR, as well as ISR and INVR. The results are in Table 2 and 3.

Table 2. Results of Granger Causality Test of ISR and ISR

Null Hypothesis	Obs.	F-Statistic	P-Value
GASR does not Granger Cause ISR	300	6.4773	0.0018
ISR does not Granger Cause GASR		0.1046	0.9007

Table 3. Results of Granger Causality Test of ISR and LNVR

Null Hypothesis	Obs.	F-Statistic	P-Value
INVR does not Granger Cause ISR	300	0.1439	0.8661
ISR does not Granger Cause INVR		9.6875	8.E-05

From the Table 2, we can see that, under the 95% of probability level, GASR and ISR have a one-way Granger causality relationship: GASR is not Granger cause of ISR, however, ISR is the Granger cause of GASR. It indicates that, generally China's environmental policies do not significantly promote industrial structure to adjust; however, industrial restructuring is an active factor in pollution abatement. From the Table 3, we can see that, under the 95% of probability level, INVR is ISR's Granger cause, but ISR is not INVR's Granger cause. It indicates that investment policies of environment can positively impact industrial restructuring. This result proves that the relationship between industrial restructuring and pollution abatement is not simply unidirectional, but bidirectional. On one hand, by adjusting industrial structure, the proportion of the second industries will decline, especially pollution-intensive industries, while the proportion of tertiary industries will increase. So the industrial structure could adjust successfully. On the other hand, investment policies of environment can be an important lever of industrial restructuring. Therefore, in order to achieve a win-win situation between industrial restructuring and pollution abatement, we should pay an important attention on investment policies of environment.

Conclusion

In order to explain the dynamic mechanism of the environmental policies and industrial restructuring, we use panel data of China's 30 provinces from 1999-2011 and pursue Granger causality test. After Unit Root test and Granger Causality test, we obtain our conclusions as follows: GASR and ISR, INVR and ISR all have a one-way Granger causality relationship. ISR is the Granger cause of GASR, but GASR is

not Granger cause of ISR; INVR is ISR's Granger cause. It indicates that industrial restructuring is an active factor in pollution abatement, and that investment policies of environment can positively impact industrial restructuring.

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The Effects of Dynamic Capabilities on Innovation Performance: The Moderating Effects of Strategic Orientation

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[Abstract] Existing research on the relationship between dynamic capabilities and innovation is still at the theoretical derivation level, and research on the boundary conditions mainly focus on the environmental factors, ignoring the firm strategic factors. This study divides dynamic capabilities into two dimensions, namely an external integration-oriented opportunity-recognizing capability and internal integration-oriented opportunity-exploiting capability, and empirically tests their impact on innovation performance and its contingencies. The result shows that opportunity-recognizing capability and opportunity-exploiting capability have a significant positive impact on innovation performance. Both technology orientation and market orientation positively moderate the relationship between opportunity-recognizing capability, opportunity-capitalizing capability and innovation performance.

[Keywords] dynamic capabilities; opportunity-recognizing capability; opportunity-capitalizing capability; technology orientation; market orientation

Introduction

In the knowledge economy, the ability to continuously conduct innovation has become the deciding factor responding to market competition. However, firms will face great risk and uncertainty in the innovation process (Marsh & Stock, 2006). Teece, et al. (1997) argued that firms owning dynamic abilities could quickly adapt to the external changing environment. Through the rapid integration of external resources, firms could expand the resource base, identify external opportunities and make timely decisions to drive innovation (Teece, 2007). Therefore, the success of firms' innovation depends on the difference of their dynamic capabilities.

Existing research on the relationship between dynamic capabilities and innovation still stays at the theoretical derivation level, and ignores the specific mechanisms of each dimension of dynamic capabilities on innovation empirically (Teece, et al., 1997; Teece, 2007; Ellonen, et al., 2009). Through literature search, we can find that Ellonen, et al. (2009) demonstrated that the ability to sense, capture and restructure has a significant impact on innovation through exploratory case study on four publishing companies. However, Ellonen, et al. (2009) also further pointed out that the affecting mechanisms of dynamic capabilities on innovation performance require a large sample of empirical testing. Except that, a lot of empirical research treats dynamic capability as a uni-dimensional construct (Wu, 2007). Through a review study, Barreto (2010) found that dynamic capabilities must be a multi-dimensional construct, covering the whole process of recognizing and capturing opportunities.

In addition, research on the boundary conditions of dynamic capabilities mainly focuses on the environmental factors (Teece, et al., 1997), such as technology and market dynamics, ignoring the firm strategic factors (Barreto, 2010). Given Teece, et al. (1997), in their earlier study framework of dynamic capabilities, highlight that “dynamic capability is an ability to respond to changes in the external environment”, therefore empirical scholars mainly focused on examining the moderating effect of

environmental factors. According to the logic of strategic matching theory, a firm's performance is not only determined by internal resources, but also by the matching levels of resources and strategy (Slater, et al., 2006). Therefore, as a kind of special resource, the effect of dynamic capabilities not only depends on environmental factors, but is also bound to be affected by firms' internal strategic orientation.

In view of this, this study examines how two dimensions of dynamic capabilities help enhance innovation performance and the moderating effect of technology and market orientations in China's emerging economy. This research enriches the dynamic capability theory and can guild the firm to develop dynamic capabilities and corresponding strategy to enhance innovation performance.

Theory and Hypotheses

Dimension of Dynamic Capabilities

Existing research has demonstrated that the success of innovation depends on the ability to integrate various resources (Kogut & Zander, 1992; Cetindamar, et al., 2009). Teece, et al. (1997) further defined it as dynamic capability. Nowadays, researchers have not reached an agreement on the connotation and dimensions of dynamic capabilities, but argue that integration capabilities are at the core of dynamic capabilities, including external integration-oriented and internal integration-oriented capabilities (Eisenhardt & Martin, 2000; Liao, et al., 2009). Opportunity-recognizing capability is the external integration-oriented capability, and refers to using existing resources to recognize outside opportunity, corresponding with the sense capability of Teece (2007). Opportunity-capitalizing capability is the internal integration-oriented capability, and refers to exploiting the sensed opportunity through restructuring and reconfiguring inside resources and organizational structure, corresponding with the seizing and reconfiguring capability of Teece (2007).

Dynamic Capabilities and Innovation Performance

Opportunity-recognizing capability and innovation performance. Opportunity-recognizing capability enhances innovation performance from two aspects. On the one hand, firms with strong opportunity-recognizing capability can search rich innovative knowledge and information from a lot of channels (Liao, et al., 2009). The more information it gains, the more options it selects to cope with outside environment, which can lead to higher innovation success rate. On the other hand, firms with strong opportunity-recognizing capability tend to own rich knowledge stocks that help firms recognize opportunity and further promote innovation (Wu, 2007). Therefore, we propose the following hypothesis.

H₁: Opportunity-recognizing capability is positively related to innovation performance.

Opportunity-capitalizing capability and innovation performance. Opportunity-capitalizing capability enhances innovation performance from two aspects. On the one hand, firms with strong opportunity-capitalizing capability can easily overcome the innovation barrier and speed up innovation decision. Teece (2007) argues that firms tend to resist innovation, which can be solved by reconfiguring and recombining internal resources and organizational structure. On the other hand, firms with strong opportunity-capitalizing capability can easily exploit the outside opportunity. Through resources reconfiguration and recombination, firms can promote the inside knowledge diffusion, increase internal coordination efficiency, and enhance innovative resources leveraging efficiency (Zhou and Wu, 2010). Therefore, we propose the following hypothesis.

H₂: Opportunity-capitalizing capability is positively related to innovation performance

Contingency Effects of Strategic Orientation

According to the strategic matching theory, the performance difference of dynamic capabilities depends on the matching level with strategic orientation (Slater, et al., 2006). Strategic orientation reflects the operation philosophy, determines the daily operations rules (Zhou, et al., 2007), and thus significantly affecting the performance difference of dynamic capabilities. In our studies, we mainly focus on technology orientation and market orientation (Zhou & Li, 2010).

Technology orientation. Technology orientation reflects the philosophy of technology driven, which believes that customers are inclined to high-technology product and service (Gatignon & Xuereb, 1997; Zhou & Li, 2010). Therefore, technology-oriented firms pay enough attention to R&D investment, obtaining and using new technology. When searching outside the firms' boundary, firms focus on some new technology and information, and consider whether and how can it be integrated into firm's innovation process (Zhou, et al., 2005). When obtaining technology resources, technology oriented firms endeavor to go to great lengths to exploit the knowledge through resources reconfiguration and recombination, in order to reflect it in their new products. Therefore, we propose the following hypothesis.

H_{3a}: Technology orientation positively moderates the relationship between opportunity-recognizing capability and innovation performance

H_{3b}: Technology orientation positively moderates the relationship between opportunity-capitalizing capability and innovation performance

Market orientation. Market-oriented firms show a continuous, proactive disposition toward identifying and meeting customers' expressed and latent needs (Zhou, et al., 2005). With customer-oriented values, firms excel in creating and maintaining bonds with customers and obtain timely feedback from them, which leads to fully understanding customer needs change. Market-oriented firms also actively collect competitor-related information and monitor rivals' behavior to survive the fierce competition (Zhou, et al., 2007; Sainio, et al., 2012). When searching outside the firms' boundary, market-oriented firms will obtain a lot of customer and competitor-related information, which is conducive to firms' innovation. Moreover, when market-oriented firms obtain information from customers and competitors, they will integrate the knowledge into their products at first time through resources reconfiguration and recombination. Therefore, we propose the following hypothesis.

H_{4a}: Market orientation positively moderates the relationship between opportunity-recognizing capability and innovation performance

H_{4b}: Market orientation positively moderates the relationship between opportunity-capitalizing capability and innovation performance

Methodology

Sample and Data Collection

We use questionnaires to collect data from Chinese manufacturing firms. This research prepares the measures in English and then translates them into Chinese following the back-translation process for accuracy. We use our social network to collect data from MBA and EMBA lessons, and government departments. Finally, we issue 400 questionnaires, and obtain 179 valid questionnaires, with a valid response rate of 44.75%. Among the responding firms, 30.73% are in the electronic information industry, 20.67% in special equipment manufacturing, 12.29% in transportation equipment manufacturing, 11.73% in ordinary machinery manufacturing, 8.94% in metal product industry, and 15.64% classified as others.

Measures

Innovation performance is the dependent variable. Following the study of Chen, et al. (2011), and Zhang and Li (2010), we use six items to measure innovation performance. We ask the respondents to rate the extent to which their firms are successful relative to their major competitors in terms of the six items, as shown in Table 1.

Dynamic capabilities are our independent variable. Following the study of Teece (2007) and Liao, et al. (2009), we use four items to measure opportunity-recognizing capability, and use seven items to measure opportunity-capitalizing capability. Strategic orientation is the moderating variable. Consistent with Zhou, et al. (2005) and Zhou and Li (2010), strategic orientation consists of two sub-constructs: technology and market orientations. We use four items to measure technology orientation, and four items to measure market orientation.

This study includes four control variables: firm size, firm age, R&D intensity, and industry type. Firm size (FS) refers to the natural log of the number of full-time employees. Firm age (FA) refers to the number of years since founding (Zhang & Li, 2010). R&D intensity (R&D) refers to the share of R&D expenditure in total sales (Filatotchev, et al., 2009). We use a dummy variable to measure industry type (IT), 1 indicates electronic information industry, and 0 indicates the others.

Reliability and Validity of the Constructs

We assess the reliability of the multi-item constructs with Cronbach's alpha, and all scales have reliabilities greater than the recommended 0.80, which indicates a good reliability. We conduct a confirmatory factor analysis to assess the convergent and discriminant validity of the multi-item constructs. As presented in Table 1, results of the confirmatory factor analysis indicate that the measurement model fits the data well ($\chi^2 = 414.554$, $\chi^2/df = 1.564$, NNFI = 0.954, CFI = 0.963, IFI = 0.963, RMSEA = 0.056), and the path coefficients from the latent constructs to their corresponding manifest indicators are statistically significant ($p < 0.001$), which indicates a good convergent validity. Except that, the average variance extracted (AVE) for the five constructs is far greater than the corresponding inter-construct squared correlations, which indicates a good discriminant validity.

Table 1. Measurement Scales and Properties

Constructs/Measurement items	Loadings	AVE	α
Opportunity-recognizing capability			
1. Detecting customer's needs/problems successfully	0.854	0.685	0.895
2. Monitoring innovative behavior of competitors actively	0.784		
3. Establishing friendly cooperation ties with suppliers or vendors	0.820		
4. Observing the latest scientific and technological discovery usually	0.850		
Opportunity-capitalizing capability			
1. Transfer knowledge learned outside to the whole organization	0.761	0.644	0.926
2. Weigh multiple approaches to capitalize on the opportunity	0.785		
3. Integrate new ways of doing things without stifling their efficiency	0.866		
4. Apply lessons learned outside in some areas of the organization	0.740		
5. Reconfigure relationship networks of both within and outside the firm	0.836		
6. Redesign the operation procedure during the innovation process	0.791		
7. Adapt the organizational structure to the innovation demand	0.833		
Technology orientation			
1. Use high technology in new products usually	0.739	0.605	0.839
2. The firm always stands at the leading edge of technology	0.766		
3. R&D based technology innovation is easier to be accepted within the firm	0.824		

4. Technology innovation is easier to be accepted in project management	0.691		
Market orientation			
1. The competitive advantage is based on understanding customer's need	0.763	0.572	0.860
2. The firm always measure customer satisfaction systematically	0.808		
3. Marketing personnel always share information about competitors	0.771		
4. Top managers always study their competitor's strategy	0.769		
Innovation performance			
1. The number of new products	0.954	0.915	0.985
2. The ratio of new products sales to total sales	0.959		
3. The speed of new product development	0.948		
4. The success ratio	0.953		
5. The number of patent applications	0.968		
6. The novelty of new product	0.958		

All standardized coefficient loadings are significant at $p < 0.001$.

AVE = Average variance extracted for each multi-item construct in the research model.

Empirical Results

Assessment of the Measures

Table 2 presents the means, standard deviations, and correlations among the variables examined in the study. Opportunity-recognizing capability ($r=0.540$, $p < 0.01$), and opportunity-capitalizing capability ($r=0.517$, $p < 0.01$) are positively correlated with innovation performance.

Table 2. Descriptive Statistics and Pearson Correlations

	Mean	S.D.	1	2	3	4	5	6	7	8	9
1 FS	7.56	1.40	1								
2 FA	15.82	9.44	0.396**	1							
3 IT	0.31	0.46	0.244**	0.434**	1						
4 R&D	0.05	0.03	0.057	0.055	-0.104	1					
5. TO	4.46	0.92	0.054	0.039	-0.059	0.262**	1				
6. MO	4.21	0.91	-0.007	-0.031	-0.049	0.123	0.457**	1			
7 ORC	4.08	1.129	0.260**	0.009	-0.003	0.216**	0.088	-0.022	1		
8 OCC	4.81	1.09	0.079	-0.213**	-0.185*	0.192**	0.056	-0.016	0.471**	1	
9 IP	4.02	1.67	0.218**	0.015	-0.078	0.437**	0.139	-0.001	0.540**	0.517**	1

** $p < 0.01$; * $p < 0.05$ (two-tailed test)

Hierarchy Regression Analysis

Table 3 presents the results of the regression models. To reduce the potential problem of multicollinearity, predictor and moderator variables are mean-centered prior to the creation of interaction terms. Model 1 only includes controls. Model 1 includes controls and moderating variables. Model 3 adds the main effects of opportunity-recognizing capability and opportunity-capitalizing capability. The results show that opportunity-recognizing capability ($\beta=0.302$, $p < 0.001$) and opportunity-capitalizing capability ($\beta=0.310$, $p < 0.001$) both are positively related to innovation performance. Hypothesis 1 and hypothesis 2 are supported.

Model 4 adds the interaction terms of technology orientation, opportunity-recognizing capability and opportunity-capitalizing capability. The results in Model 4 suggest that the interaction term between technology orientation and opportunity-recognizing capability is positive and significant ($\beta=0.177$, $p < 0.01$), the interaction term between technology orientation and opportunity-capitalizing capability is positive and significant ($\beta=0.133$, $p < 0.05$). Hypothesis 3a and 3b are supported.

Model 5 adds the interaction terms of market orientation, opportunity-recognizing capability and opportunity-capitalizing capability. The results in Model 5 suggest that the interaction term between market orientation and opportunity-recognizing capability is positive and significant ($\beta=0.188$, $p < 0.01$), the interaction term between market orientation and opportunity-capitalizing capability is positive and significant ($\beta=0.149$, $p < 0.05$). Hypothesis 4a and 4b are supported.

Table 3. Results of Standardized Regression Analysis

	Model 1	Model 2	Model 3	Model 4	Model 5
FS	0.239***	0.237***	0.088	0.085	0.076
FA	-0.078	-0.082	0.036	0.001	0.038
IT	-0.059	-0.058	-0.025	-0.014	-0.035
R&D	0.422***	0.418***	0.301***	0.251***	0.246***
TO		0.053	0.026	0.017	0.032
MO		-0.080	-0.038	-0.055	-0.063
ORC			0.302***	0.311***	0.259***
OCC			0.310***	0.299***	0.279***
ORC × TO				0.177**	
ORC × MO				0.133*	
OCC × MO					0.188**
OCC × TO					0.149*
R ²	0.240	0.246	0.481	0.537	0.554
F	13.748***	9.328***	19.664***	19.515***	20.896***
Max VIF	1.395	1.399	1.476	1.497	1.478

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$ (two-tailed test); All beta values reflected standardized beta values.

Discussion and Conclusion

Existing research on the relationship between dynamic capabilities and innovation performance still stays at the theoretical derivation level, and research on the boundary conditions mainly focuses on the environmental factors, ignoring the firm strategic factors. With a sample of Chinese manufacturing firms, we examine the impacts of opportunity-recognizing capability, opportunity-capitalizing capability on innovation performance, and the moderating role of technology and market orientations. We find that opportunity-recognizing capability, opportunity-capitalizing capability have a positive relationship with firms' innovation performance. This demonstrates that firms with strong dynamic capabilities can sense outside opportunity and quickly exploit it through resources reconfiguration and recombination. This study further deepens the research of Ellonen, et al. (2009), and empirically demonstrates that the two dimensions of dynamic capabilities, namely opportunity-recognizing and opportunity-capitalizing capabilities can enhance innovation performance.

Moreover, we find that technology and market orientations positively moderate the relationship between opportunity-recognizing capability, opportunity-capitalizing capability and innovation performance. This proves that the performance difference of dynamic capabilities depends on the matching level with strategic orientation. Technology-oriented firms will pay enough attention to the technological knowledge and consider how to use it in firms' innovation process. Market-oriented firms will pay enough attention to the information related to customers and competitors and consider how to use it in firms' innovation process. This study enriches the contextual conditions of dynamic capabilities, directly responding to the call of Barreto (2010).

Our findings also have important practical implications. Managers should recognize the importance of dynamic capabilities, broadening the opportunity searching scope and reconfiguring inside resources to exploit the opportunity, and set up appropriate technology and market orientations to fully enhance the innovation efficiency of dynamic capabilities. For policy makers, it is necessary to formulate some policies to encourage firms to integrate outside resources.

This study still has limitations that also suggest directions for future research. The study has examined the contingent roles of strategic orientation on the relationship between dynamic capabilities and innovation performance. Further research can examine the roles of other firm characteristics, such as TMT leadership, or comprehensively examine the joint contingent roles of firm characteristics and environmental factors.

Acknowledgement

This research is supported by China Post doctoral Science Foundation (2014M561452).

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The Influence of Organization-Level Factors on Employee Innovation in Organizations

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***[Abstract]** The need for organizations to innovate is highlighted throughout the management literature on innovation. This paper focuses on the role of organization-level factors management, especially leadership, reward and recognition system, as well as training in enhancing employee innovation in organizations. In particular, this paper attempts to review the innovation and organization-level factors literature in a systematic way. From the literature review, a model of management mechanism for encouraging employee innovation is proposed. This paper paves the way for future studies in innovation management to further examine and develop the possible model that incorporates employee innovation and common organization-level factors management. The managerial implications for encouraging and enhancing employee innovation will be addressed.*

***[Keywords]** employee innovation; leadership; reward; recognition system; training*

Innovation and Its Importance

There is an increasing emphasis on innovation in today's world because innovation is the key to success (Mumford & Gustafson, 1988). Following McAdam and Keogh (2004), innovation is vital for organizational competitiveness and success. Yuan and Woodman (2010) also suggested that innovation has been widely considered as an important source of competitive advantage for organizations that want to prosper and grow. Therefore, it is not surprising that a significant amount of literature has been generated on the subject of innovation, and it covers many research areas such as organizational behaviour, education and sociology.

Innovation can be seen as the introduction of new and improved ways of doing things at work. As King, et al. (1992) suggested, the common features that underlie innovation include the concepts of novelty, potential usefulness to the organization, and implementation. According to the extant work including Pitt (1998) and Demerest (1997), there are three broad categories of innovation identified in the literature:

- Strategic innovative management to assist the organization in the challenges faced by its environment;
- Management of innovative change initiatives;
- Innovation through knowledge creation and application.

Employee Innovation Within Organization

Innovative behavior by employees is at the root of every innovation. Employee innovativeness is considered to be the key factors to create the organization's innovation performance (Sun, 2010). The

previous studies including Lu and Li (2010) suggested that employee innovation is important for organizations survival. To meet the needs of global competition and the uncertain environment, as Axtell, et al. (2000) stated, organizations need their employees to undertake not only basic duties, but also make extra efforts to act beyond the routine performance of their duties in order to engage in innovative behavior in work processes. This shows that the innovative behavior of employees deserves research attention.

The literature revealed the importance of organization's influences on employee innovation. It has been claimed that the generation of new ideas and the translation of the ideas into useful practices are functions of the interactions between employees and situations (Hunter, et al., 2007; Scott & Bruce, 1994). In line with this, Anderson (1975) suggested that a supportive work context plays an important role in supporting and encouraging employees' innovative efforts. It also suggests that management should consider their organizations' effects on employees if they are interested in maximizing their employees' innovative behavior in the workplace.

Specifically, Shalley and Gilson (2004) suggested that for innovation to occur in organizations, management needs to support and promote it, as they have considerable influence over the context within which idea generation can occur. In this way, as Amabile (1988) stated, the context in which an employee performs a task influences his or her intrinsic motivation, which in turn affects innovative achievement. Seibert, et al. (2006) suggested that employees are most likely to engage in activities that promote their ideas when both a supportive work context is present and they have a proactive personality.

The present study addresses the research need by reviewing the literature on the influence of organization on employee innovation in a systematic way. This study is expected to improve the understanding of employee innovation within organization and pave the way for future studies to further examine and develop the possible model that incorporates employee innovation and common organization-level factors management.

Leadership

Leadership can be defined as "the art or process of influencing people so that they will strive willingly and enthusiastically toward the achievement of the group's mission" (Wehrich & Koontz 1993, p. 397). It means leadership can be seen as a process of influencing people towards achieving outcomes.

In line with this, the importance of an effective leader for influencing employee innovation has been recognised (e.g. Basadur 2004; De Jong & Den Hartog 2007; Kanter, 1988). Existing work on the relationship between leadership and employee innovation has studied participative leadership, transformational leadership, and leader-member exchange (LMX) theory. They demonstrated a positive relationship between transformational leadership and creativity (Kahai, et al. 2000; Shin & Zhou 2003), and a positive relationship between employee innovative behaviour and employee participation (Axtell, et al. 2000).

Specifically, previous work has indicated that leaders have a powerful source of influence on employees' innovative behavior at work (Cummings & O'Connell, 1978; Yukl, 2002). It has been suggested that leaders can create the contexts and conditions for employee innovation by setting goals and motivate followers to engage in innovative efforts to accomplish their goals (Redmond, et al., 1993), and influence organizational culture as well as climate (Amabile, et al., 1996, 2004). Leaders also can develop and maintain a system that rewards creative performance through compensation and other human resource-related policies (Jung, et al., 2003).

Overall, the literature suggested that leadership is the driving force for introduction of new idea, setting goals and encourage subordinate (Mumford, et al., 2000), and leaders could play an important role in developing the context to encourage and enhance employee innovation in organizations.

Training

Innovation could be viewed as a complex process that involves a set of investment possibilities. In this investment perspective, knowledge must be considered a sort of capital (Carneiro, 2000). In this way, theorists have highlighted the importance of training in developing the employee skills and knowledge needed for innovation (Chen & Huang, 2009; Mumford, 2000; Shalley & Gilson, 2004).

Specifically, training can enhance employees' knowledge and skills, which are important to increase innovative thought processes and provide opportunities that enhance task-domain expertise (Lau & Ngo, 2004). Researchers also concluded that training can serve as paths for diffusion of innovations, through training employee will be encouraged openness to new ideas and share their successful experiences (Argote, et al., 2003). In addition, since individuals are unlikely to assess their tasks critically and make constructive proposals for change where they are preoccupied with day-to-day survival at work (Cohen & Levinthal, 1990), training can provide basic knowledge and skills for employees to perform their duties in some new ways. This indicates the importance of training for organizations to encourage their employees to innovate in the workplace.

However, a few empirical studies show that training has no significant effect on employee creativity. Walz and Wynekoop (1994) found that training does not enhance students' creativity. Kabanoff and Bottger (1991) also noticed that the trained and untrained subjects (MBA candidates) do not differ in originality. It is argued that there are no sufficient empirical evaluations of training for the management of innovation (Birdi, 2007). This implies that more attention is needed to investigate the influence of training on employee innovation.

Reward and Recognition System

The extant literature (e.g. Barton, 2002; Deeprose, 1994; Jiang, et al., 2012) suggested that the reward and recognition system in organizations might play an important role in encouraging and motivating employees to innovate at work. When employees perceive that the organization values them by sharing profits (incentive rewards) and so on they will making more efforts on their jobs and more willingness to provide suggestions and to experiment with new ways of doing their jobs (Blau, 1964; Adams, 1963).

It is noticed that when organizations provide intrinsic and extrinsic rewards for efforts to acquire new skill sets and engage in innovative work approaches, employees' desire to engage in innovative endeavours will be constantly reinforced (Jung, 2001). Specifically, extant literature (e.g. Amabile, 1996) suggested that extrinsic rewards such as bonus pay could be effective motivational tool. Recent studies also suggest that organization and peer recognition (Antikainen & Väättäjä, 2010; Muhdi & Boutellier, 2011) can encourage employee innovation. Intrinsic rewards, such as job security, doing challenging and meaningful work, achieving results, providing fairness, and serving the public's interest, may be equally or even more effective at motivating employees (Jiao & Zhao, 2014; Perry, 1996; Perry, Mesch, & Paarlberg, 2006).

However, there are different opinions about the different effects of rewards and recognition on employee innovation (Deci, et al., 1999; Glucksberg, 1962; Kohn, 1993). It is argued that the extrinsic rewards are more oriented towards rewarding efficiency, short-term objectives, and past performance

(Galbraith & Merrill, 1991), and to encouraging routine and less risky behaviour (Gomez-Mejia & Welbourne, 1988). On the other hand, intrinsic rewards are widely used to motivate innovation, and effect on creativity (Allen & Kilmann, 2001; Shaw et al. 2001).

The effect of a reward and recognition system has been researched (e.g. Allen & Kilmann, 2001; Amabile, et al., 1996; Kohn, 1993; Deci, et al., 1999; Shaw, 2001), but there still remains a need for more in-depth research in this area regarding the influence of reward and recognition on employee innovation at work.

Conclusion and Recommendations

This paper has presented a review of the literature relevant to the relationships between employee innovation and four common organization-level factors. The literature suggested that the effects of the organization-level factors on employee innovation has been well discussed, but there have been relatively few attempts to put relevant factors together within a comprehensive system, which would help firms to understand how firms use those factors together into a institutional system to facilitate employee innovation. Based on the literature review, this paper emphasized that the essence of innovation process can be viewed as an interaction between employees and the environment provided within organization. Investigating the joint effects of the different organization-level factors on employee innovation process could be one possible direction for future studies. There is a need for more integrative theory, providing conceptual paradigm to identify organization-level factors that would influence employee innovation.

From a practical perspective, there are some recommendations for business that are interested in enhancing employee innovation within organizations. First, business managers could provide organizational support such as maintaining efficient management of the organization's database and resources, and providing training opportunities for their employees. By doing so, it might help to maximise employee innovative behaviour by providing them various sources of knowledge and skills. Additionally, tracking employees' learning process might also help to turn employee's knowledge into team/organization's knowledge.

Second, investing in reward and recognition from employees' perspective might encourage employees' enthusiasm and making extra efforts in the workplace. Third, given the importance of the environment's effects on employee innovation, this paper recommends developing a comfortable environment that encourages employees to share and communicate. A good environment including encouraging leaders, participation, transparent information might help to maximize employees' potential to innovate and to facilitate the diffusion of new ideas at work.

Future research could consider synthetic interactions of different-level factors, including employee, team and organization levels on employee innovation, rather than investigate their influences separately. In particular, it is recommended that future research examine the combined effects of such personal and contextual conditions on employee innovation in the workplace.

In summary, this paper attempted to improve the understanding of employee innovation in organizations, and suggesting ways for business to develop efficient organizational innovation systems.

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Study of The Relationship Between Compensation Dispersion of the Top Management Team, The Relative Compensation Level and Turnover of Senior Executives – The Empirical Study Based on Data of A-Share Listed Companies in China

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[Abstract] With the increase of executive compensation levels, the phenomenon of executives' turnover is also increasing. This research studies the interaction between the compensation dispersion of executive team, internal and external relative compensation and the turnover from the angle of vertical and horizontal through the executives data of the A-share listed companies in Shanghai and Shenzhen stock market in 2013. This paper draws the following conclusions: (1) The compensation dispersion of top management team has significant effect on individual departure; (2) The executive's internal and external relative compensation level has significant impact on individual departure; (3) The compensation gap of top management team and the executive's internal and external relative compensation level has the mutual effect on executive's individual turnover; (4) Compared with the executive who is in the team with the smaller compensation gap, the larger pay gap of the top management team, the greater influence of internal and external relative compensation level for executives' turnover.

[Keywords] top management team; compensation dispersion; internal and external relative compensation level; executives' turnover

Introduction

By resource-based view of firms, the top management team is the essential part of human capital. However, although the compensation levels of executives are constantly increasing, the phenomenon called “shake of human affairs earth” becomes more. This suggests that increasing economic incentives cannot stimulate output of executives, even the large pay gap causes the negative competition, leading to an increase of the executives' turnover. The present research about the pay gap of top management team focuses on its effect, but the points of view are at opposite poles. Based on Tournament Theory, many studies suggest that the pay gap should be expanded to encourage executives' output to improve organizational performance (Main, 1993). However, by Behavioral Theory, in order to increase the team cooperation, and thus to facilitate the organization performance, many researches think that the pay gap should be narrower (Zhang, 2007). Besides, many scholars think that many factors such as team size (Conyon, 2002), rights of management, duality (Lu, 2010), organizational political behavior (Lazear, 1989), organization internal specification and so on influence the impact of the compensation dispersion.

Academic research focused on the impact results and influencing factors of executives' turnover. Executive's turnover would influence the stock market by the combination of short-term damaging information effect and long-term constructive real effect (Quan & Wu, 2009). At the same time, many studies suggest that factors such as company's performance (Dahayet, 2002), corporate governance structure (Huson, 2001), senior population characteristics, and compensation levels (Shen, 2010) affect the executive's departure.

At present, there is not a lot of research at home and abroad about the relationship between the pay gap and executive's turnover; only part of the studies from abroad confirmed that the pay gap of top management team and executive's turnover are significant positively correlated (Messersmith, 2011). But the objects of these studies generally are foreign athletes, university teachers, and truck drivers, etc., which are not appropriate for corporations and the context of China. So, this paper chose the executive data of the A-share listed companies in Shanghai and Shenzhen stock market in 2013 and combined the Tournament Theory with the Behavioral Theory by Maslow's Hierarchy of Needs to study the mutual influence between the compensation dispersion of top management teams, internal and external relative compensation levels and executive turnover.

Compensation Dispersion of Top Management Team and Turnover of Senior Executives

This paper defines the top management team as all the senior executives published in the listed company's annual report. Senior management team pay gap is defined as vertical and horizontal gaps (Hambrick, 1997). Due to people having a different hierarchy of needs, not only demands for materials, but also for a fair treatment, which only dominated by different requirements in different phases and situations. When an executive individual is in a relatively lower level of demand, they will stay in the organization and actively participate in the competition for high pay and opportunities for advancement, and thus there is a negative relationship between the pay gap of top management team and executive's turnover in this stage. When material pursuit reaches a certain level, executives will focus on respect, fairness, personal career development, etc., and the relationship becomes positive.

Hypothesis 1: Compensation dispersion of top management team has significant effect on executive individual departure.

Compensation Dispersion of Top Management Team, Internal Relative Compensation Level of Senior Executives and Turnover of Senior Executives

According to the Equity Theory of Adams, employees in the team will have their own perceptions about pay gap and may also affect their behavior of the individual output. Based on the Tournament Theory, when the compensation dispersion is large within the team, the personnel who wins the tournament achieves higher compensation. On the contrary, the loser who is at a low administrative level would leave for another competition opportunity in some other organization. By the Behavioral Theory, the large compensation dispersion means honor and status in the team, which causes unfairness to the employee who gets a low compensation. Soothing the loser of the competition and unfairness increases the possibility of executive's turnover.

Hypothesis 2: The compensation gap of top management team and the executive's internal relative compensation level has the mutual effect on executive's individual turnover, and compared with the executive who is in the team with the smaller compensation gap, the greater pay gap of the top management team, the greater influence.

Compensation Dispersion of Top Management Team, External Relative Compensation Level of Senior Executives and Turnover of Senior Executives

By the Equity Theory of Adams, the employees compare their compensation with others who do similar work or have the same capacity in other organizations. When an employee gets a higher compensation

than in other organizations, although they lose in the tournament, they will stay for higher payment. However, by the Behavioral Theory, the larger compensation dispersion and higher external relative compensation would attract candidates out of the organization and bring attention to the executive from other organizations. The most important thing is that the executive who gets high external relative compensation level in the team within large pay gap means that he has a lot of material wealth, work experience, and industry contacts, which contributes to his own self-actualization need like seeking for better working platform or doing pioneering work, such as when the vice president of Vanke led over a dozen men to leave for self-employment.

Hypothesis 3: The compensation gap of top management team and the executive's external relative compensation level has the mutual effect on executive's individual turnover, and compared with the executive who is in the team with the smaller compensation gap, the greater pay gap of the top management team, the greater influence.

Study Design

Our study was based on the A-share listed companies in the Shanghai and Shenzhen stock market in 2013 as samples for analysis, and data from Taian CSMAR database. Meanwhile, the hypothesis model is as follows (Figure 1).

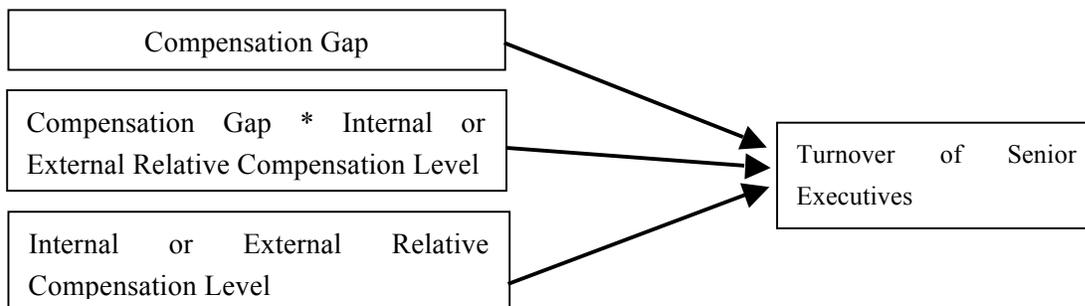


Figure 1. Hypothesis Model

There are 7 models and 12 variables in total (Table 1). Control variables are in Model 1. In addition to the control variables, pay gap measured by vertical gap, Compensation Gap * Internal Relative Compensation Level and Compensation Gap * I External Relative Compensation Level are in Models 2, 3, and 4, sequentially. Model 5, 6, 7 are the same as Model 2, 3, 4, but the compensation dispersion is measured by horizontal gap.

Table 1. Variable Description

Name	Code	Operational Definition
Dependent Variable		
Turnover of Senior Executives	Turnover	In 2013, executives have left is coded as 1, otherwise 0.
Explanatory Variable		
Compensation dispersion	Paygap	Pay gap equals to divide CEO compensation by average compensation other than CEO.
	CV	Coefficient of variation = σ / μ , σ is standard deviation of the executive compensation and μ is average compensation in the team j.
Internal Relative Compensation Level	Inpaylevel	The ratio of the individual compensation and the average compensation in the team j.
External Relative Compensation Level	Expaylevel	The ratio of the individual compensation in the team j and the average compensation of the industry.
Control Variable		
Gender	Sex	Men are coded as 1; women are coded as 0.
Age	Age	If the annual report has revealed that are used directly, or use 2013 minus the year of birth
Working time	Tenure	Use the time, December 31, 2013, minus the start time in this company as a senior manager.
Position	Position	CEO, general manager or President is coded as 1, otherwise is coded as 0.
Both senior manager and director	Duality	The senior manager is the director at the same time that coded as 1; otherwise is coded as 0.
Team size	Teamsize	The number of executives in the team in 2013.
Corporate performance	ROE	Net assets profit of 2012 reveled in annual report of listed companies.

Conclusion

The correlation between variables in the models shows that position, duality, internal and external relative compensation have an significant negative effect on executive turnover, and other variables except for age and ROE have an significant positive effect. (Due to the layout, the data were not shown, and if necessary please contact the author.) Because executives' turnover is a binary classification variable, change it on the logical transformation, and at the same time, eliminate collinearity processing of data, and then use the linear regression method to verify these hypothesis.

Compensation Dispersion Measured by Paygap (Table 2)

Hypothesis 1, 2, 3 predict that pay gap, internal and external relative compensation level mutually influence executive turnover. Model 2 confirmed that pay gap had positive relationships with turnover ($p < 0.05$). Compared with Model 2, pay gap had no effect on executive turnover in Model 3, which explains internal relative compensation reduction or even eliminates the influence of pay gap on departure. The “compensation gap * internal relative compensation level” had significantly positive relationship with executive turnover ($p < 0.01$), which suggested that the larger pay gap, the bigger influence that internal relative compensation level effect has on departure. The regression results of Model 4 is the same as Model 3, which demonstrated that the larger pay gap, the bigger influence that external relative compensation level effect has on turnover ($p < 0.01$). So, Hypothesis 1, 2, and 3 were all verified.

Table 2. The Regression Results for Compensation Dispersion Measured by Paygap

Variable	Model 1		Model 2		Model 3		Model 4	
	β	t	β	t	β	t	β	t
Constant		-5.161***		-3.620***		-2.368**		-4.580***
Position	-.033	-2.140*	-.029	-1.390	.064	3.619***	.016	.989
Duality	-.028	-1.812(*)	-.032	-1.654(*)	-.004	-.275	-.024	-1.562
Sex	.000	.036	.008	.511	.007	.486	.003	.220
Age	.054	3.906***	.057	2.905**	.038	2.789*	.051	3.700***
Tenure	.062	4.505***	.034	2.143**	.079	5.762***	.071	5.176***
Teamsize	.127	9.529***	.075	3.501***	.125	9.415***	.127	9.532***
ROE	.009	.645	.002	.136	.010	.759	.009	.658
Paygap			.028	1.785*	-.005	-.299	.014	.907
Inpaylevel					-.236	-7.565***		
Paygap* Inpaylevel					.075	2.524**		
Expaylevel							-.170	-6.425***
Paygap* Expaylevel							.068	2.551**

Explanation: (1) N=5607; (2)(*) $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Compensation Dispersion Measured by CV (Table 3)

The regression results of Model 5 showed that compensation dispersion significantly influenced turnover ($p < .001$). Model 7 demonstrated that the larger the Compensation Dispersion, the bigger influence that external relative compensation level effect had on turnover ($p < 0.05$). However, the regression results of Model 6 suggested that “compensation gap * internal relative compensation level” had no effect on executive turnover. The reason is possibly that the standard deviation of variation coefficient of the sample team is less, and at the same time, the average internal relative wages is close to 1, which reduces the explanation for the product after making pay gap and internal relative compensation. So hypothesis 1 and 3 were confirmed.

Table 3. The Regression Results for Compensation Dispersion Measured by CV

Variable	Model 5		Model 6		Model 7	
	β	t	β	t	β	t
Constant		-6.112***		-2.869**		-5.242***
Position	-.031	-2.022**	.065	3.605***	.021	1.252
Duality	-.028	-1.822	-.005	-.304	-.024	-1.565
Sex	.003	.219	.008	.615	.005	.398
Age	.052	3.819***	.038	2.754**	.049	3.597***
Tenure	.063	4.614***	.080	5.827***	.073	5.297***
Teamsize	.118	8.721***	.117	8.763***	.118	8.797***
ROE	.007	.552	.008	.641	.007	.521
CV	.047	3.520***	.032	1.591	.048	3.074**
Inpaylevel			-.243	-4.734***		
CV*Inpaylevel			.073	1.458		
Expaylevel					-.214	-4.783***
CV*Expaylevel					.099	2.207*

Explanation: (1) N=5607; (2)(*) $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In this paper, the research showed that human needs and perception are very complex, and reflected the complexity of the incentive mechanism. It is not only the increase of the compensation that can solve the problem, but also we should pay attention to the compensation structure for the senior management team at the same time. The virtuous development of the team is very important for enterprises.

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Explore the Influence of the Government Behavior Under the Background of New-type Urbanization

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[Abstract] The development of urbanization is the inevitable trend of economic and social development. Based on traditional urbanization, the new-type of urbanization adds new meanings to the urbanization construction. At present, the construction of urbanization in most areas has made some achievements in which the functions of the government's role is significant, however, there are still some defects in the functions of the government. In this paper, the construction of a northern town of Anting city is taken as a case study to make us understand the situation of urbanization and building of a new town in the north, and then to summarize relevant experience in construction management.

[Keywords] new-type of urbanization; functions of the government; the northern town of Anting city; relevant experience

Introduction

Through the collection of related data, we can see that the urbanization played a positive role in improving the level of the rural population living, which quickly boost domestic demand and promote the rapid development of social economy (Jinhua, & Qiaosheng, 2007). And the new-type of urbanization is more urgent for small and medium-sized cities (Qing, & Zhou, 2013). We also urgently want to know whether the functions of the government for the new-type urbanization have played a role that it should play. What are the functions of the government in the construction and what results have been achieved? What positive aspects have been made under the current government function in building a new-type of urbanization, and in what way the loopholes and deficiencies exist? Even said, some unreasonable government functions prevent the development of new-type urbanization, rather than promote it. By studying the functions of the government in the process of the urbanization of Anqing city, compiling the general train of thought of new-type urbanization in small and medium-sized cities, so that we can improve the government behavior in the new-type urbanization of other cities.

The Transformation of Government Functions in the Construction of New-type Urbanization

The concept of urbanization has come later than “city”, put forward by Chinese scholars (Ni, 2013). Different scholars hold different opinions for the concepts of urbanization and city. This paper believes that the level of social and economic development and city development in China remains to be improved, and if the concept is used to generalize the development model in China, it will deviate from the reality of the present stage in China. The importance of the development mode of China lies in the county (District) level towns or lower, and their numbers are huge. In addition, urbanization development needs a reasonable radius – a radius to narrow the development, to promote efficiency and the effect of the urbanization development more effectively, which is the advantage of advocating the urbanization development. Therefore, what is imminent for China now is urbanization development, practicing the

“city driving the town” development model. Urbanization requires that in a certain geographical radius, there is a need to enable the rural population, and get second and third industries to transfer to cities and towns, in order to make the towns increase in number and expand in scale, which will last longer in the historical process.

New-Type Urbanization

“New” of the new-type urbanization lies in the richness and sublimation of traditional urbanization, and also puts forward higher requirements to the development of subject and object (Wang, & Wang, 2014). This is mainly manifested in two aspects: on the one hand, it asks to absorb the essence from the experience of traditional urbanization, and on the other hand, it adds new meanings to the urbanization development based on socialist economic development in the new change. Based on the development of urbanization and many years of experience in China. The new-type urbanization puts forward new requests to the development of subject and object (Wang, 2014). First of all, the new-type urbanization requires transition from rural to urban, balancing the urban and rural development towards the second or third industries driving the urbanization development, advocating a livable appropriate industry, providing ecological harmony and sustainable development of the new-type urbanization. Secondly, the education, housing, employment, medical care, and other public services and public infrastructure should be improved, and the new situation coordinated development of rural, town and city should be opened.

The Transformation of Government Functions

The transformation of government functions:

Weaken the function of economy construction. Weaken the function of economic construction in finance. In the condition of new-type urbanization, the government public finance should not be largely used in the field of economic construction, which should be affected by the market. Considering that the amount of public finance is limited, if a large amount of public finance is used in the economic construction and other fields, the amount of it, used in public services, is sure to be reduced, accordingly, so it will be difficult to guarantee the quality and quantity of public services. By weakening the investment in construction of public finance, increasing the investment of public infrastructure and public services, and ensuring the quality of new-type urbanization, “people-oriented”, the important principle of new-type urbanization, is to be achieved.

Change “leading” into “guide”. The new age gives the new-type urbanization connotation, which is more profound, and the focal point of urbanization has also undergone significant changes (Wu, 2014). A simple economic development to build a town siege should be avoided in the new-type urbanization, while more attention should be paid to the all-round development of the society. At present, the development model of urbanization is not only to force the development of the economy, but also to focus on promoting the all-round development of the people, and to improve the quality of urbanization development. Under this background, the development needs to work closely with the development of urbanization development and government function, and refuse to mechanically control the development of urbanization for the name of government, and instead, it should decompress the local government, decentralize the devolved functions to the market, and change the government dominated urbanization into government guided urbanization, which requires the government to act as a guide for urbanization.

Service, rather than at the helm. New-type urbanization emphasizes the important concept of “people-oriented”, paying more attention to urban and rural development, and focusing on improving the quality

of urbanization.(Wang, Li, & He, 2014). This paper argues that the infrastructure construction and public service of government is one of the important embodiments of the urbanization quality. Or, the construction of infrastructure in a region and the degree of public service level directly reflects the quality level of new-type urbanization. This requires in the new-type urbanization process that the government should change the functions of government priorities, providing service into the core function of government. Service, rather than at the helm, is a kind of new public administrative idea proposed by the famous scholar Denhat couples in the USA. They think public officials implement public policy and manage public organization, and at the same time, they must put the importance on civil power in serving for citizens and, “at the helm” and “paddle” should not be the focus of the work of the government. The government public administration should establish a set of government functions that have obvious and complete integration of force and response execution system.

The Implementation of the Functions of the Government in Anqing Northern New Town Construction

The northern part of Anqing is located in Dalongshan town of Anqing city in Anhui province, which is in the north of Anqing city, and is only a short distance from city center. From the geographical point of view, it is the northern gate of Anqing city. From the view of traffic conditions, the Dalongshan town covers a total area of 53.38 square kilometers, and State Road 206, State Road 318, and nine railways pass through it. In the southeast, it is closely linked with the civil aviation and railway freight location. In the southwest, Shimen Lake terminal directly connects the Yangtze River shipping, so it is very convenient because the traffic network leads in all directions. Since the beginning of 2005, according to the administrative division adjustment requirements, Yixiu District was set up by Anqing city, and located in a new Anqing northern town, so as to create a new city development in the new platform. After the zoning adjustment, the development space of Anqing urban and rural has been greatly expanded and extended.

According to the government’s request, the new northern town strives toward the development goals – “The quality of new town”, and constantly expands the scale of investment to attract big domestic and foreign enterprises, and strives to build a multifunctional area with distinct regional characteristics, setting office, education, science and technology, commercial, and residential as one. From the development of advantages, the advantages of Anqing in the northern new town development are mainly reflected in the aspects of location, transportation, cultural, ecological, and construction cost, etc. Since 2005, it has built a modern city framework of 10 square kilometers and the municipal road network of 33 kilometers, and a total investment of 30 billion yuan counted. In 2010, the overall Yixiu District government moved into the new town smoothly. With the continuous advance in the construction of Anqing northern new town, it has already been a regional vice center position. In 2013, the northern new town achieved 11 billion yuan of investment in fixed assets, added new city framework of 1 square kilometers, and started construction of 6 kilometers of city roads. At present, the infrastructure in the northern new town is close to perfect. After years of building, perfecting and coordination with government in various aspects, the landscape is now taking shape.

The Establishment of Construction Management in the Northern New Town of Anqing City

Organized by the Yixiu district government, the main functions and the personnel configuration of construction management of the northern new town of Anqing city are as follows: the function allocation contains: Finance Department, which deals with the financial management and financial planning and

other matters; Construction Department, which is responsible for the construction project in the town; Comprehensive Department, which is responsible for the administration of internal and external things, coordinate the internal and external relations, and contact the aspects of things; Business Service Center, which is responsible for attracting foreign investment, receiving visitors customers, and at the same time, contacting municipal and district merchants; Investment Service Center, which is for providing Follow-Up Services for enterprises to settle down in the city, and helps enterprises in various problems of coordination and further improves the investment environment in the new city; Planning Group, which is responsible for the town regional planning revision; and Land Approval Group, which is responsible for the work of the approval transferring land indicators.

Table 1. The Functional Departments of Management in the North New Town of Anqing City

Functional Department	Personnel Employment	The Content of Duty
Finance Department	Financial affairs: 2 staffs; Northern New town Construction Investment Development Company: 1 staff; Financing: 2 staffs;	Dealing with the financial management; Contacting the district development and Reform Commission, bureau of finance, commercial banks.
Construction Department	The municipal group: 2 staffs; Housing construction team: 4 staffs; Municipal road team: 4 staffs; Landscaping: 2 staffs;	The management of engineering construction; Contacting the City Project Construction Committee, Yixiu District Construction Bureau, district level safety supervision bureau and other relevant units.
Comprehensive Department	Archives: 1 staff; Personnel: 1 staff; Publicity: 1 staff; Printing room: 1 staff; Driver: 1 staff;	Responsible for assigned affairs; Contacting the district Party committee office, district government office and other regional organizations.
Business Service Center	2 staffs	Attracting foreign investment; Receiving visitors customers; Contacting municipal and district merchants.
Investment Service Center	Project cost: 1 staff; Contacting with water, electricity and gas: 1 staff; Change of contract: 1 staff;	Helping enterprises in various problems of coordination; Further improving the investment environment in the new city.
Planning Group	3 staffs	Responsible for the town regional planning revision; Contacting planning bureau, design institute and other departments.
Land Approval Group	1 staff	Responsible for the work of approval of transferring land index; Contacting the Land Bureau and other departments.

The Performance of Government Functions in the Construction of the Northern Town of Anqing

The public finance support. The construction and development funds of the Anqing northern town mainly have the following items: national special funds, municipal financial appropriation, bank loans and land transfer tax. In recent years, the fixed assets investment of northern town continues to rise – 1.1 billion yuan in 2013 and 1.24 billion yuan in 2014. The funds are mainly used for infrastructure, public infrastructure construction, and tourism development etc., and at the same time it is also the key of the

town construction. In the above several sources of funding, transferring land capital is flexible. But since 2013, with the Anqing city government policy adjustment, all land use rights have belonged to PUC. This also means that the capital of the construction has changed, from obtained through the sale of land within land leasing, into mainly relying on government funding. This fully reflects the characteristics of Anqing city, a game of chess to consideration.

The social management and public service to the town. In 2013, Yixiu district drew up “several opinions” on speeding up the development of service industry, and put forward many preferential measures, mainly in areas of culture, tourism, finance, science and education, logistics, transportation, and many other aspects of fiscal policy, which are very specific and detailed. With the continuous construction of the new town, the continued expansion of the scale of foreign capital and foreign large-scale introduction, northern Anqing service industry is becoming more and more perfect. In public health, the government not only strived to improve the new rural cooperative medical system, but also consolidated the grass-roots medical results. Everything is in good order and well arranged.

Attracting investment. Based on the stability of local enterprises, the construction administration of the northern town of Anqing actively attracted foreign investment to get the introduction of more powerful financial support for the further development of the town, and also further gathered popularity and built fame. The Anqing government formulated the “provisions of Anqing Municipality on encouraging foreign investment” in 2013. Preferential policy about the Yixiu district investment work basically originates from this. However, the situation changed rapidly, whether this provision is applicable to the current or future foreign investment is yet to be researched. From the way, Yixiu district government cooperated with others through “one policy for one thing”, “one plan for one policy”, and “one discussion for one thing”, which increased flexibility. From the results point of view, some well-known enterprises such as Jiangsu Guoxin group, the Zhejiang economic cooperation group, Jiangsu Hetai company, and Huilong shares participated in the construction of the town, and Carnival, Red Star Macalline and some other well-known enterprises and major projects are also into the depths of the negotiation stage. Led by Yixiu district government, the Dalongshan town government and the construction management of northern part of Anqing jointly, formed a powerful force, and jointly promoted the investment work, injecting fresh blood for the construction of the northern town, to bring about new development opportunities.

Information disclosure. The development of the new-type urbanization needs joint participation of the public. The construction of the northern part of Anqing is high profile, so government information publicity is essential. The construction management Bureau of the northern town of Anqing set up a special website to release all kinds of information about the construction of the town, mainly from the planning and construction, investment and conventional project aspects of information disclosure. In the system of public disclosure, “system for test government information disclosure of the construction management bureau in the northern town of Anqing”, “working system in government information disclosure of the construction management bureau in the northern town of Anqing”, and “work attendance checking system of the construction management bureau in the northern town of Anqing”, etc. comprise the main part of the related system. People can consult what they want to know in the northern town website, Yixiu district government website and Anqing municipal website, and understand timely the relevant circumstances of the town. However, what must be paid attention to is that the publicity of government information is not equal to simply establish a few websites and open several micro-blogs.

From the current operation status and effect of the websites, it does not seem to have played a role as expected. There are several reasons for that. First, the information update in the site is not timely, the information content is obsolete, and it is not even for public information. Second, maintenance of equipment management, and technology and administration are inadequate. Third, there is no information interaction and the interaction is not strong, and the information output is simple, so it is difficult to achieve the expected results.

Conclusion

There exist several problems about government behaviors of the construction of new town, so we put forward corresponding improvement opinions, which will lead to more critical reflection and action.

1. Perfecting analysis and appraisal of planning policy.
2. Strengthening the construction of staff of Public Administration
3. Strengthening the idea of public service in government

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Trivariate Causality between Water Resources Consumption, Economic Growth and Urbanization in Zhejiang Provinces of China

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[Abstracts] This paper investigates the causal relationship between water resources consumption, economic growth and urbanization in the case of Zhejiang in China, while utilizing the data over the period of 1982–2013. I applied unit root tests to examine the stationarity properties of the series, finding the data series are stationary. Then, I employed the ARDL bounds test to investigate long run relationships. The Granger causality test was subsequently used to examine the direction of causality between water resources consumption, economic growth and urbanization. My results indicate the existence of long run relationships. I further find there is a bidirectional causality between water consumption and economic growth. Feedback hypothesis is observed between water consumption and urbanization, and between economic growth and urbanization. Consequently, the relevant authorities should boost clear water resources as one of the means of achieving sustainable urbanization in the long run.

[Keywords] water resources; economic growth; urbanization

Introduction

Water is increasingly becoming a major force in the pursuit of sustainable development. Studies have shown that global water resources consumption have increased eight times in the 19th century and doubled every 15 years, while water utilization for agriculture, industry and living increased 7, 20 and 12 times respectively (Liu & He, 1996). In the 20th century, while the world population doubled, the water utilization increased five times – and this is despite the fact that water demand realized zero growth in some developed countries (World Water Council, 2000). In the 21st century, water resources consumption will become key factor or place a limit on water demand in progress of urbanization (Bao & Fang, 2007). China's total water resource availability is estimated about 2800 km³ per year, accounting for 6.59% of the world. As it has the biggest population, 1.34 billion or 20% of the world at the end of 2010, its water possession per capita is only about 2100 m³, less than one-third of the world average (Wu & Tan, 2012). Overall, China is short on water resources; in particular, the water shortage situation is much more serious in its populous and rapid urbanizing regions such as the eastern coastal provinces. Eastern coastal provinces are China's priority beneficiaries of the opening-up and economic reform policy. As economy booms, characterized with expanding cities and growing urban industries, they, without exception, have to face major water shortages and water environment problems, in particular, the Zhejiang province. Zhejiang province is one of the fastest provinces of urbanization in the eastern coastal provinces. Rapid urbanization is the dominant social and economic phenomena in Zhejiang since the late 1980s. The urban population in Zhejiang province increased to 34.4 million in 2012, and its share in total population went from 31.17% in 1990 to 63.2% in 2012. At same time, it is noteworthy that the economic growth is fast in Zhejiang since the 21st century. The GDP increased from 603 billion RMB in 2000 to 3756.8 billion RMB in 2012.

Along with rapid urbanization and economic development, urban water demand and consumption kept up at a record pace, aggravating the urban water shortage. At the same time, the water environment

is worsening gradually. I think there should be a causality between water, economic grows and urbanization.

There are many studies on the interaction between urbanization and economic growth, between water resources and urbanization. Solarin and Shahbaz (2013) applied the Granger causality to examine causal relationship between economic growth and urbanization in the case of Angola, in which the feedback hypothesis is found. Brückner (2012) used a panel of 41 African countries during the period 1960–2007, to study the effects that economic growth had on the urbanization rate, finding that increases in the urbanization rate had a significant negative average effect on GDP per capita growth. The literature on water resources and urbanization linkage are wide spread, thinking that water is a key factor for urbanization (Srinivasan, et al, 2013).

In my study, I investigated the direction of causality between economic growth and water consumption by incorporating urbanization as a potential determinant of both water consumption and economic growth in the case of Zhejiang. It is vital to explore the nexus between these variables for Zhejiang, because as one of the fastest growing economies in the China, it is faced with water resource challenges in trying to meet its growing water needs.

Materials and Methods

Study Area

Zhejiang province is one of economic developed regions in the Chinese eastern coastal regions with a land area of 101,800 km² and population of 5.477 million, accounting for 1.04% and 4% of China, respectively. However, the GDP accounts for 6.7% of China, the fourth in China. The GDP is 3756.8 billion RMB in Zhejiang province in 2012, with a growth rate of 8.0% more than last year; the GDP per capita is 63266 RMB (10022\$), with a growth rate of 7.7% more than last year.

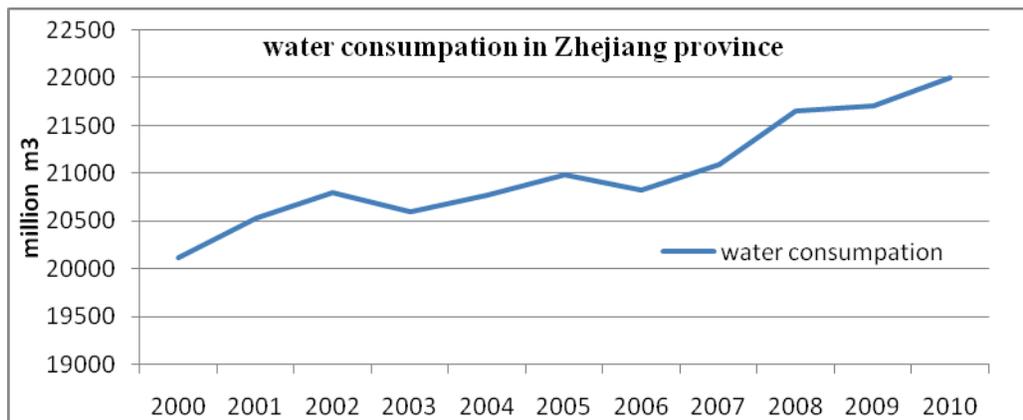


Figure 1. Total Water Consumption in Zhejiang Province from 2000 to 2010.

In the period of 2000-2010, with the economy growing, water consumption per capita was decreasing due to growth of population, and water consumption of per ten thousand GDP also decreased as technology improved in Zhejiang province (see Table 1). While total water consumption increased from 20.115 billion m³ in 2000 to 22.008 billion m³ in 2010 (see Figure 1).

Table 1. Water Consumption Per Capita and Water Consumption of Per Ten Thousand GDP in Zhejiang Province from 2000 to 2010 (unit: m³)

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
WPC*	439.42	436.53	437.68	427.65	424.82	423.37	413.92	412.61	417.89	413.94	410.52
WG**	327.55	302.23	271.78	234.64	206.76	185.23	136.30	120.42	112.34	103.33	93.60

*WPC is water consumption per capita; ** WG is water consumption of per ten thousand GDP.

The Data

This paper took statistical data as the main data sources. The statistical data are originally from Zhejiang water resources yearbook, and the Zhejiang natural resources and statistical yearbook in environment in 2011. The socio-economic and urbanization data of study area are obtained in the statistical yearbooks for the years 1982 to 2013 in Zhejiang province.

The Methods

In this paper, we applied a model, used by Solarin and Shahbaz (2013), in which the exogeneity of each series is not determined a priori. The models appear in a double-log functional specification, which yields better results relative to the linear functional form because of the logarithmic transformation:

$$Y_t = f(WC_t, URB_t)$$

Y_t is the real GDP per capita, WC_t is the water consumption per capita, and URB_t is urbanization, defined as the population in urban centers divided by total population. The estimates yield elasticities of independent variables with respect to the dependent variable, because the series are in logarithmic form. Unit root tests have been applied to test the order of integration of the variables, inclusive of the Augmented Dickey Fuller (ADF) test by Said and Dickey (1984). I applied the ARDL bounds testing approach to examine the existence of long run relationship between the variables. Bound testing is relevant, irrespective of the series being purely $I(0)$, $I(1)$ or mutually cointegrated. Different from the Johansen cointegration approach, which requires a large data sample, bound testing is more suitable for small sample size data. Further, critical values often quoted for the Johansen cointegration test are inappropriate, where as the ARDL approach operates on standard(s) critical values. The approach of bound testing entails the ordinary test squares (OLS) technique on an unrestricted error correction model:

$$Y_t = \xi_0 + \xi_1 T + \sum \xi_2 \Delta Y_{t-1} + \sum \xi_3 \Delta WC_t + \sum \xi_4 \Delta URB_{t-1} + \lambda_1 Y_{t-1} + \lambda_2 WC_{t-1} + \lambda_3 URB_{t-1} + \mu_{1i} \quad (2)$$

$$WC_t = \xi_0 + \xi_1 T + \sum \xi_2 \Delta WC_{t-1} + \sum \xi_3 \Delta Y_t + \sum \xi_4 \Delta URB_{t-1} + \lambda_1 Y_{t-1} + \lambda_2 WC_{t-1} + \lambda_3 URB_{t-1} + \mu_{2i} \quad (3)$$

$$URB_t = \xi_0 + \xi_1 T + \sum \xi_2 \Delta URB_{t-1} + \sum \xi_3 \Delta Y_{t-1} + \sum \xi_4 \Delta WC_t + \lambda_1 Y_{t-1} + \lambda_2 WC_{t-1} + \lambda_3 URB_{t-1} + \mu_{3i} \quad (4)$$

Here Y is GDP, WC is water consumption, URB is urbanization, and all the variables are in logarithmic form. The residuals μ is assumed to satisfy the classical properties assumption. The null hypothesis of no cointegration is $H_0: \lambda_1 \neq \lambda_2 \neq \lambda_3 \neq 0$ while the alternate hypothesis of cointegration is $H_a: \lambda_1 = \lambda_2 = \lambda_3 = 0$. In addition, this paper implements the critical values that Narayan (2005) produced, which are better suited with small sample data. According to the bound testing procedure, if the computed T-statistics is less than the lower bound critical value, then the null hypothesis is accepted, signifying the non-existence of cointegration. If the computed T-statistic is more than the upper bound critical value, the null hypothesis is rejected, demonstrating cointegration. The result becomes inconclusive, if the computed T-statistic falls within the critical bounds.

This paper assesses the possible direction of causation(s) within the series with the Granger causality test, after establishing any long run relationship. Contingent on the non-occurrence of cointegration, Granger causality is conducted within the framework of a Vector autoregression model (VRM).

Empirical Findings

I did a variable time trend chart for GDP, water consumption, and urbanization. We can see from Figure 2, the three variables have the same time trend. So I used unit root test standard by considering time trends. In this paper, I applied the ADF, and PP unit root tests. According to the test Schwert (1989) suggested, the largest lag order number is $p_{max} = 12 * (T/100)^{1/4}$, with the largest number nine. And I gradually reduced the lag order number until significant under 5%, contrasting with McKinnon approximate P value. The findings of stationarity tests are presented in Table 2.

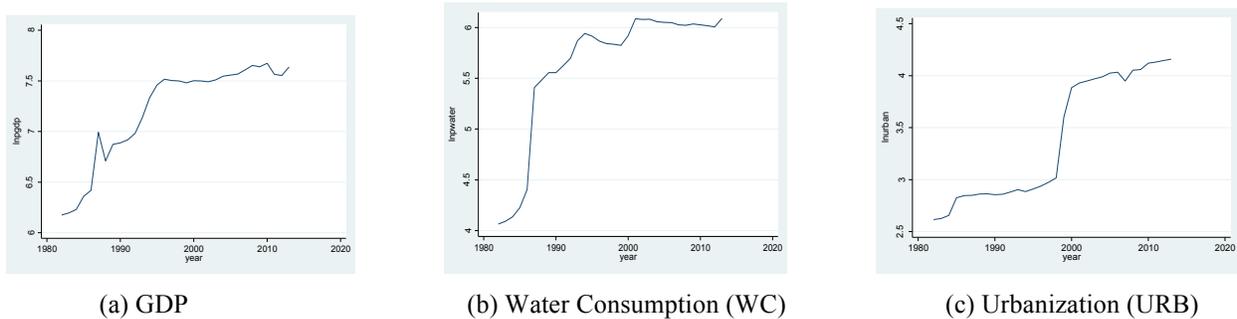


Figure 2. Time Trends of $\ln GDP$, $\ln WC$, $\ln URB$.

The ADF and PP test results are reported in Table 2. Beginning with the ADF test, all number of nine stage from 22 to 30 is indistinctive, except one, so the null hypothesis of unit root is rejected for all the variables. We can see from Table 2, in the PP test, the t-stat number of $\ln GDP$, $\ln WC$, $\ln URB$ is -1.389, -1.664, and -1.880, which is more than 1% critical value, and MacKinnon approximate p-value for T-stat is 0.8640, 0.7663, and 0.6648 respectively. This means I can reject the null hypothesis. While the results indicate that three variable are at the stationary level, there are no structural breaks for the three series. So, I can apply the ARDL bounds testing approach to examine Granger Causality test between the variables for long-run relationship.

From Table 3, we can see the result of Vector Autoregression Model. Water resources are the driving power of economic growth, with water consumption increasing by 1 unit, the rate of GDP increases 0.83 unit. This means we need more water resources if we have more rate of economic growth. At same time, the results indicate that water resources are constraint force of urbanization, and economic growth is driving force of urbanization. It needs 1.1 unit water consumption if the rate of urbanization increases 1 unit. However, the if GDP increases by 1 unit, the rate of urbanization increases about 1.5 unit.

Table 2. Unit Root Test

Variable	ADP			T-Stat					
	22	23	24	25	26	27	28	29	30
Number of obs	22	23	24	25	26	27	28	29	30
lnGDP	-3.112	-2.494	-1.959	-2.455	-0.345	-2.22	-1.894	-1.749	-1.271
lnWC	-2.324	-2.577	-2.393	-3.066	-2.350	-11.583	-3.887	-2.826	-2.226
lnURB	-2.402	-2.172	-2.304	-2.511	-2.261	-2.338	-2.362	-1.996	-2.159
	PP		1% critical value	5% critical value	10% critical value				
	T-Stat	T-stat(rho)	<i>t</i>	<i>rho</i>	<i>t</i>	<i>rho</i>	<i>t</i>	<i>rho</i>	
LnGDP(3)	-1.389	-3.691							
LnWC(3)	-1.664	-3.761	-4.325	-23.268	-3.576	-18.356	-3.226	-15.888	
LnURB(3)	-1.880	-7.172							

Note: in ADP, every number is indistinctive. In PP test, MacKinnon approximate p-value for T-stat is 0.8640, 0.7663, 0.6648 respectively.

Table 3. Vector Autoregression Model

Dependent Variable	Vector Autoregression Model		
	<i>lnGDP</i>	<i>lnWC</i>	<i>lnURB</i>
lnGDP	0.665***	-0.176*	-0.621
lnWC	-0.292	1.093***	0.161
lnURB	0.372*	-0.088*	1.068***

Note: *, ** and *** show significance at 10%, 5% and 1% levels, respectively.

Table 4. Granger Causality Tests

Equation	Excluded	F	p
lnGDP	lnWC	1.507	0.471
lnGDP	lnURB	0.137	0.934
lnGDP	All	1.914	0.752
lnWC	lnGDP	0.689	0.708
lnWC	lnURB	0.412	0.814
lnWC	All	1.439	0.837
lnURB	lnGDP	8.736	0.013
lnURB	lnWC	5.689	0.058
lnURB	All	10.151	0.038

In Table 4, I report the results of the Granger causality, which are very pertinent to players in the realm of water resources, urbanization, and economic policy-making. The results indicate that water resources are the causality of economic growth, and water resources and economic growth are the causality of urbanization. In the period of the full sample, I detected a long run positive influence of economic growth on urbanization. However, water resources are the driving force for economic growth and urbanization in prior period (1982-2000), but a constraint force in a long run.

Conclusion

This study investigates causality between economic growth, and water consumption in Zhejiang province in China over the period 1982-2013. The model is augmented with urbanization as a control variable. We

applied the ARDL bounds testing approach to examine stationary and the Granger causality approach to detect direction of causal relationship between the variables. Three vectors autoregression model were established, suggesting the existence of long run relationship between the variables. Results illustrate the causality between water consumption and economic growth. Feedback hypothesis is observed between water consumption and urbanization, and between economic growth and urbanization.

These results imply that maker of urbanization policy must not only continue to develop economy, but also protect water resources to ensure enough clear water in Zhejiang province. Though water quantity is enough in Zhejiang province, water quality is worsening with the process of economic growth and urbanization, which become obstacles for economic growth and urbanization. So, relevant authorities should boost clear water resources as one of the means of achieving sustainable urbanization in the long run. Comforting to people of Zhejiang province, the “Five water total treatment” work (*it is a water resources policy of Zhejiang province to solve water environment problems, including “sewage water treatment, flood control, drainage water, water supply, water saving”*) which started in 2013 by Zhejiang Government to solve water environment problems.

Acknowledgements

This research was funded by Project supported by Study of the humanities and social science of the Ministry of Education (No. 11YJC630111), the National Natural Science Foundation of China (No. 41201596), Zhejiang Province Social Science Fund (No. 14SWH13YB), and Postdoctoral Science Foundation of China (2013M540479).

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Industry Transformation and Upgrading of Shenyang Economic Zone under the Background of New-type Urbanization

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[Abstract] In the new period of strategic opportunities, new-type urbanization is a key support that could contribute to the industrialization of Shenyang economic zone. But there are some issues in the process of urbanization, such as the slow industrial development pattern, convergence of industrial structure, weak industry innovation, imbalance of industrial layout, disjointing of industrial development and urbanization, and so on, which influence the level and quality of new urbanization. Industrial transformation and upgrade is the fundamental motivation to speed up the construction of new-type urbanization, and the purpose of this paper is to put forward the path selection about optimizing the industrial structure and improving the quality of Shenyang economic zone's urbanization.

[Keywords] new-type urbanization; industrial development; transformation and upgrading; Shenyang economic zone

Introduction

The Shenyang economic zone, as the traditional heavy industrial district of China, mainly relies on their superiority industry and leading enterprises of resource-dependent cities. It has formed the relatively complete system of heavy industry represented by metallurgy, machinery, petroleum, coal, electric power and building materials. But the region belongs to the resource-oriented city with a deep industrial accumulation, higher suck costs, serious path lock-in, and it has undertaken many historical burdens and debts. In the process of the construction of new-type urbanization, there are still a series of problems about industrial development. Therefore, under the background of new-type urbanization, the upgrade of industrial industries, the optimization of their layout, and the integration of industry and urbanization are inevitable.

The Meaning of Industrial Transformation and Upgrading to Urbanization

Industry is the key support that propels the town's development, the optimization and upgrading of industrial structure, and plays an important role in improving the quality of urbanization. First of all, the industrial's transformation and upgrading of Shenyang economic zone could play a function of industrial agglomeration and transformation; it is beneficial to cultivate and strengthen industrial cluster to enhance the competitiveness of industry and to provide more fiscal support for the zone, thus forming a multi-functional comprehensive economic center which are the engines of urban and rural commodity economic growth (Duo, 2014). Secondly, it can increase the functions of industrial radiation and extension; it is conducive to the formation of specialized division of labor cooperation system, thus forming the special and competitive industrial chain (Shen, 2013). Thirdly, the optimization and upgrading of industrial structure contributes to promoting the quality of regional employment, the improvement of employment structure and resident's income. Besides, senior talents are gathered and

thus could improve the level of urban consumption, providing dynamic support for the development and transformation of region urbanization.

Existing Problems about Industrial Development of Shenyang Economic Zone

Shenyang economic zone is given priority to resource-oriented cities, as shown in Figure 1, the comparison of Shenyang Economic Zone, Liaoning and the Nationwide, with a leading position about GDP growth rate from 2006 to 2012. But with the change of social economy, followed by the disadvantages of incomplete urbanization, there exists a series of problems in terms of industrial development.

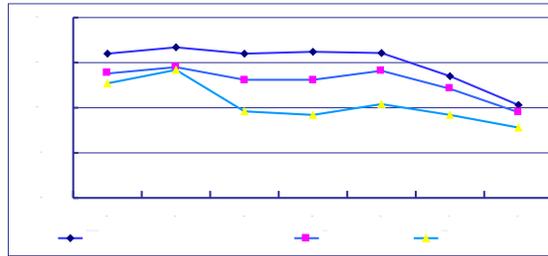


Figure 1. GDP Growth Rate

The Extensive Pattern of Industrial Development and the Low Level of Industrial Structure

Shenyang economic zone is the base of heavy industry, and mainly consists of resource-oriented cities, so therefore, problems caused by the extensive development mode and low quality of development are more prominent. The industrial's structural advantage of this urban agglomeration focuses on resource exploitation, and the level of industrial structure is not high. Heavy industry's internal structure hasn't jumped out of the pattern of resource development and raw materials primarily processed have not changed timely into a high degree of machining and technology intensive yet.

Observed from Table 1, we can easily see that from 1985 to 2012, the proportion of secondary industry is significantly decreased and the tertiary industry is gradually rising. Though the structure of industrial has improved and upgraded in a certain extent, but is still dominated by the secondary industry. The tertiary industry of Shenyang economic zone accounted from 42% in 2006 to 39% in 2011; the second industry accounts for a very high proportion in the three industries. In addition, the area's services have focused on the traditional service industries such as commerce, catering, storage and so on, resulting in that the development of other modern service industries is insufficient, such as finance, information services, logistics, and the service industry is still in the low level of hierarchy.

Table 1. Three Industry Structure of Shenyang Economic Zone

The Industrial's Structure (%)												
<i>Industrial</i>	<i>The primary industry</i>				<i>The secondary industry</i>				<i>The tertiary industry</i>			
Year	1985	2009	2010	2012	1985	2009	2010	2012	1985	2009	2010	2012
Total	14.8	6.9	6.7	8.7	63.1	52.7	53.7	53.8	22.1	40.4	39.6	37.5
Shenyang	8.4	4.9	4.6	4.8	60.9	49.8	50.4	51.2	30.7	45.3	45.0	44.0
Anshan	9.8	4.8	4.4	5.1	79.0	52.8	54.3	53.2	14.2	42.4	41.3	41.7
Fushun	9.0	6.7	6.1	6.9	78.3	56.1	58.7	59.6	12.7	37.2	35.2	33.6
Benxi	10.0	5.6	5.0	5.4	73.5	59.5	62.3	60.6	16.5	34.9	32.7	33.9
Yingkou	20.1	8.4	7.7	7.5	60.3	56.3	55.3	53.5	19.6	35.3	37.0	39.0
Liaoyang	16.7	6.6	6.2	8.5	68.1	63.0	63.2	68.7	15.2	30.4	30.6	32.9
Fuxin	15.1	22.1	24.5	19.7	38.9	74.8	41.8	52.9	10.1	36.7	33.7	28.2
Tieling	39.1	20.7	19.7	62.7	40.2	51.4	52.8	63.2	20.7	27.9	27.5	30.6

Industrial Structure Convergence and Redundant Construction

The industrial labor division of Shenyang economic zone is vague; each city's development characteristics are not prominent, including the convergence of industrial structure, and the tendency seemed to suppress the overall linkage effect of the urban agglomeration. Some industries such as steel, petrochemical, machinery, building materials, and metallurgy exists in almost every city, resulting in redundant or similar construction. At the same time, poor coordination and communication channels, and a shortage of regional economic ties; all of these factors impose a negative impact on the vertical disintegration and horizontal cooperation of the industrial chain, leading to low efficiency of resource allocation (Chen, 2013). Under the baton of local's GDP, this convergence structure inevitably caused competition with each other, association and cooperation is hard to spread, thus affecting the whole process of urbanization.

Weak Capability of Industry Innovation and Low Quality of Urbanization

Because the innovation ability is not strong, industrial development of Shenyang economic zone is mainly relying on the primary elements of production such as land, resources, labor and so on. The industrial value chain focuses on the middle-low link of the production and processing manufacturing industry, and the shortage of the high value-added links such as research and development design, supply chain management, marketing, brand, directly leads to a lack of competitiveness in its development (Huang, & Yang, 2014). In recent years, the equipment manufacturing industries of Shenyang economic zone have grown rapidly, but most companies are still in the lower end of the value chain of international equipment manufacturing industry. The independent innovation ability is so weak that it's difficult to provide technical support for product upgrades and grab high-profits; there is a big influence on the improvement of the quality of urbanization.

The Scattered Layout of Industrial and Low Agglomeration Degree

The development of urban and rural areas of Shenyang economic zone are unbalanced leading to an unreasonable industry layout is. In the eight cities, Shenyang and Yingkou belong to primarily manufacturing product cities - Anshan, Fushun, and Benxi - Tieling belongs to the resources city which is

mainly relies on raw materials, but the connection between these processing industrial cities and raw materials industrial is small, and far away from forming an industry chain (Zhang, 2011). Each city has its own advantages, but most of the industry concentration is not high, and hasn't formed a reasonable depth of processing level yet. Forward related industry development lags behind; the industrial connection is relatively small, and failure to form a complete industry link network system. Besides, the separation of urban and rural industry has weakened the internal relations between urban and rural areas, and hindered the elements such as capital, talent, and information that flowed rationally between urban and rural areas, resulting in an adverse influence to the urban-rural integration. The imbalance of industrial distribution caused or aggravated that urban scale structure, and functional structure and spatial pattern is not reasonable (Zhou, 2013).

The Fragile Ecological Construction

Shenyang economic zone is one of the most important classical industrial bases in the period of planned economy. The main resources cities are Anshan, Fushun, Benxi, Fuxin, Diaobingshan and so on. These cities mainly consists of mineral resources supply such as coal, steel, building materials, chemical products, and primary products processing, technology intensive industries account for a relatively low proportion, the exploitation of high strength and unreasonable economic structure has caused tremendous damage to the ecological environment (Wu Bing, 2013). Overall, the evaluation of water quality is V class, and the atmospheric environmental capacity is overloaded in Anshan, Benxi city. In the process of the urbanization, the capacity of ecological environment is very weak. When the rural population transformed into urban population in the local, the environmental pollution and ecological crisis resulted from the material flow, energy flow, the high concentration of population flow has appeared.

The Path that use Industrial Transformation and Upgrading to Promote the Construction of New-Type Urbanization

As known to all, the historical debt of the resources city is very great. They give priority to heavy industry development and rely heavily on material resources. So under the background of new-type urbanization, Shenyang economic zone tried to speed up the industrial upgrading and lay a solid industrial foundation to promote the quality of urbanization.

Change the Mode of Development and Speed up the Upgrading of Industrial Structure

From the pattern of economic development, we should promote the development of industry shift from relying mainly on material resource consumption to innovation and gradually to the new mechanism of innovation drive. From the perspective of industrial structure, the Zone should actively build the three industrial structures as follows. First of all, put the development of service industry as a strategic priority of optimization and upgrade the industrial structure, cultivate and introduce the productive service industry, integrate advanced manufacturing industry with productive service industry, and improve the level of the town's economic and modernization. Secondly, labor-intensive industries should actively adjust to the industrial structure, optimizing the technology, closing down outdated production facilities, promoting energy saving and emission reduction. Thirdly, speed up the development of modern agriculture, and build the modern agricultural industry system, thus improving the ability and level of rural public service.

Focus on Industrial Agglomeration and the Improvement of Independent Innovation Capability

Speed up the development and integration of industrial clusters. Build Shenyang as an agglomeration of equipment manufacturing industry; Anshan, and Benxi tend to become the first-class level of steel manufacturing and processing industry clusters; put Fushun, Liaoyang in the petrochemical industry as the mainstay of petrochemical and chemical industry group; make Tieling as agricultural industrialization demonstration base and so on. The construction of industrial clusters will guide the spatial agglomeration, to promote the extension of industry chain and industry linkage development of Shenyang economic zone, driving the development of small, medium-sized cities and towns gathered nearby.

To improve the industry's capacity for independent innovation of the economic zone, the first thing is to realize the industry value chain from a pure production, assembly and other low-end links to design, marketing, brand cultivation, technical services, supply chain management and other high-end link conversion (Zhang, Y., 2011). Secondly, pay attention to the introduction and cultivation of the whole industry chain and increase the relation and synergy between different industries. Thirdly, the investment of innovative technologies should be increased to exploit key and core technologies to improve the ability of original and integrated innovation.

Optimize the Industrial Layout and Promote the Pattern of New-Type Urbanization

The Shenyang economic zone, as the leading industry characteristics and the section of complete industrial systems, should be vigorously developed with high and new technology industries and transform traditional industries using high and new technology. On the basis of this, we could reshape the leading industry's new advantages of the Shenyang economic zone. Small and medium-sized cities of Shenyang need to rely on its industrial base and advantages, aiming to develop characteristic industrial chain and promote urbanization agglomeration with industry association cluster (Yang, 2013). At the same time, strengthen the specialization and cooperation between the big cities and small towns, undertake the transformation of advanced manufacturing industry, productive service industry and high-tech industries actively from the megacities and the center city, to speed up the traditional industries and the general processing industry transforms to small towns, raising the level of industrialization of the small towns, and to promote its development to the characterization and specialization. Take a different urban development road based on their own particular advantages and strengths, and build a new-type urbanization pattern of complementary advantages, rational division of labor, and the dislocation competition to avoid the problem such as industrial isomorphism, redundant construction and so on.

Strengthen the City Integration with Industry and the Interaction Development

Promote regional transformation of industry upgrade and small towns' aims to the development of city integration with the city. On the regional development of Shenyang economic zone, first of all, strengthen the industrial connection and interaction between urban and rural areas, build the connection of three industries, link the urban region with rural areas, integrate development, science and technology, then foster the formation of a new industry sector and become a new economic growth point between rural and urban areas, and promote the integration of urban and rural development (Han Lei, 2013). Secondly, give full play to the advantage of resource, land, space, and human resources of each city, promoting regional industrial collaboration, as well as the fusion development of the industry choice and city features, establish a system of regional industry with different characteristics, and small and medium-sized cities actively undertake the outsourcing industry of the central city (Yu, H., 2013). Thirdly, it is important to

note to strengthen the organic link of urban function with industry layout, and avoid the problems such as towns functioning with a lack of industry support, separation from the development of industry, and so on.

Ecological Civilization Constructions to Promote the Development of Industry

We should try to make and implement regulation including environmental taxes, ecological compensation, formulate an emission and water rights trading system, resource consumption and environment loss "internalization" for the enterprise production, and management cost. Government should introduce the idea and strategy such as green production, green marketing and green reengineering into the production management of enterprises. Strengthen the awareness of ecological cities and towns, pay attention to land saving, energy saving, water saving, and material saving, and the development of circular economy. The rural towns should combine with the industrial district construction and pay special attention to the urban industrial pollution source management. What's more, we should also define the boundary of town growth, improving the use of efficiency of urban land construction and promoting urban compact layout, aimed at intensive development.

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The Mechanism of Land-Lost Farmers' Entrepreneurial Consciousness: A Preliminary Exploration Based on Grounded Theory

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[Abstract] The living of the land-lost farmers has been a major problem to be solved. Through the in-depth interview, we applied ground theory to explore the deep impact factors influencing the land-lost farmers' entrepreneurial intentions. The results found that farmers generally show some entrepreneurial intention, and the main factors affecting entrepreneurial intention include external environment factors and individual factors. The former includes venture capital, entrepreneurial model, policy support, and the support of friends and family, and the latter includes entrepreneurial experience, return on entrepreneurship, entrepreneurship preparation, achievement motivation, and entrepreneurial self-efficacy. Finally, the article puts forward the relevant supporting policies.

[Keywords] land-lost farmers entrepreneurship; entrepreneurial consciousness; grounded theory

The Introduction

New urbanization has adopted a huge amount of land, and produced a number of land-lost farmers. They get part of the compensation and a resettlement house, but this brings a series of problems for their future survival and development. Land-lost farmers sacrificed for the urbanization process in China, and their future way of life should be necessarily solved.

The effective method to solve this problem is to encourage farmers to start a business. Encourage entrepreneurship to create more employment opportunities, promote the consumption and production, and to promote the new urbanization. On September 10, 2014 Summer Davos, in the opening ceremony, Li Keqiang said to break all the institutional obstacles, let entrepreneurs have their own businesses, and let innovation flow freely in the whole society. Through reform and innovation, encourage grassroots entrepreneurship. This is the opportunity that every entrepreneur should seize.

Entrepreneurial motivation and entrepreneurship consciousness are closely linked together, pioneering consciousness first; if no pioneering consciousness, there would be no motivation, and they wouldn't produce entrepreneurial activity. How to improve the land-lost farmers entrepreneurship consciousness, and thus improve the rate of entrepreneurial farmers? This paper argues that we should begin from the micro perspective to explore the influence factors of farmers' entrepreneurship consciousness, and then to focus on the pertinence and effectiveness of policies.

The Literature Review

Entrepreneurship is a multi-dimensional and complicated process; Ajzen's Theory of Planned Behavior (TPB) and Shapero Entrepreneurial Event model (SEE) in the use of the cognitive research field has been more mature. Both have pointed out "entrepreneurship is behind the entrepreneurial intention" (Krueger, 2007). Entrepreneurial intention reflects that the individual will decide to consciously plan or to take action on motivation, and this is a precondition for entrepreneurial behavior factors (Fayolle & Gaily,

2004; KoIvereid, 1996), to a certain extent. It reflects the desire of the individual entrepreneurship as a career and preferences.

In the field of entrepreneurship, entrepreneurial intention has proven to be a fundamental and common variable (Bird, 1988; Krueger, 2000; Wilson, 2007). From the existing research, the influence factors of entrepreneurial intention mainly can be divided into external environment factors and individual factors.

The study of individual factors has focused on the personal characteristics of entrepreneurs, attitude and cognition. Planned Behavior Theory confirms three variables: the attitude of the behavior result, subjective norm, and perceived behavior control. The Entrepreneurial Event Model (Shapero & Sokol, 1982) assumes that individual entrepreneurial intentions are directly affected by “perceived desirability”, “perceived feasibility”, and “propensity to act”. Perceived desirability refers to the degree of individual’s prospects to set up a company; perceived feasibility refers to the degree that the individual believe they have the ability to set up a company; propensity to act refers to take action. Some scholars have pointed out that further research can be subdivided into perception and emotional attitude (Yu, 2008). Prof Wang (2006) pointed out that under the background of China’s individual entrepreneurial intention includes innovation, achievement orientation, and self-respect; entrepreneurial feasibility includes personal control and responsibility. On the basis of the Shapero model, Krueger (1993) added prior entrepreneurial exposure to the model. The former affects entrepreneurial intention by feasibility indirectly; the latter is linked to perceived desirability. Zhang Guanghua believes that farmers’ entrepreneurship consciousness can be divided into three different levels according to development stage: entrepreneurial cognition, entrepreneurship emotion, and entrepreneurial behavior (Zhang, G., 2010).

In terms of the external environment changes, Henri Grundsten (2004) pointed out that in the correction of the entrepreneurial intention model, emotional factors such as social identity, role model, and social norms, and rational factors such as perceived opportunities, market entry, and social capital have an impact on entrepreneurial intention. Some scholars think that entrepreneurship education will help to improve the entrepreneurial intention (Zhao, & Souitaris, 2005). Researchers also think entrepreneurship education should pay attention to entrepreneurial role models in promoting students’ entrepreneurial intentions (Auken, 2006).

The Research Methods

This research adopts the unstructured interview questionnaire for land-lost farmers. The author chose 15 random villagers in Jiubao, with the method of individual in-depth interviews, and we conducted an investigation into their entrepreneurial intention. Respondents’ basic information is shown in Table 1.

Table 1. Respondents Basic Information

Number	Respondents	Gender	Age	Job
01	Ms. Zhou	F	41	Accessories store clerk
02	Ms. Liu	F	28	Hardware store clerk
03	Mr. Zhou	M	48	The security guard
04	Mr. Liu	M	35	The packing shop supervisor
05	Ms. Zhou	F	40	Cleaners
06	Ms. Zhao	F	31	Factory staff
07	Mr. Shen	M	25	The insurance company staff
08	Mr. Yu	M	26	The bank clerk
09	Ms. Zhu	F	26	Real estate sales
10	Mr. Zhao	M	26	A securities company staff
11	Ms. Zhang	F	26	During the graduate
12	Mr. Zhou	M	23	Junior student
13	Ms. Fang	F	25	The bank clerk
14	Ms. Zhou	F	27	Company employee
15	Mr. Wang	M	29	Company employee

Each interview took about 1 hour or so to make sure that respondents had relatively sufficient time to think and express; the interviewer also carefully observed external appearance and inner psychology, to gain an in-depth understanding of the participants' entrepreneurial consciousness as much as possible. Through the text data are Open coding, Axial coding and Selective coding, and 3 steps to build the land-lost farmers entrepreneurial intention model. In the process of data analysis, we use Constant comparison to refine the theory.

The Results and Analysis

Open Coding

Due to the amount of initial data, the concept is very complex and there is a certain degree of cross transfer; open coding is a new classification of concept and category combination, so we further obtained the initial concept and the category. In the category, we eliminated repetition frequency of less than 2 times for the initial concept, and just chose those with frequency of more than three times.

Table 2. Open Coding Category

Category	Raw data statement (initial concept)
Venture capital	A14 Start-up capital is not enough A02 Can't put all the money in A04 To work a few years to accumulate experience A10 I will start a business if money is enough
Entrepreneurial model	A06 The relatives and friends' entrepreneurial success A02 Aspire to become entrepreneurs A10 The influence of parents' business A11 Entrepreneurs' case analysis A13 Entrepreneurs make more money
Policy support	A04 The government's policy support is very important, especially in a country like China A05 More daring with government's policy support A09 Everything will be more convenient with government's policy support A07 Lack of relevant training
Support from family and friends	A02 Parents don't support my business, I am very hesitant A10 Parents support my business, but I am lack of social experience A01 Not young, and life is pretty well A06 I have to take care of the whole family
Entrepreneurial experience	A15 I am waiting for the opportunity A01 hope to lead a safe life A12 do a small business when in school
Entrepreneurial returns evaluation	A04 work hard, then you can make money A10 as an entrepreneur, you make your own money A01 Entrepreneurship must have risk A08 make more money
Entrepreneurship preparation	A04 my friends in this industry can provide a little help A09 I've done some research A07 I pay attention to industry information A02 I often chat with entrepreneurs A14 I've taken entrepreneurship courses
Entrepreneurial self-efficacy	A08 I need more practice D08 the condition is not mature A03 Now it is the age of young people, we can't keep up with the situation A12 my character is suitable for entrepreneurship
Achievement motivation	A10 Want to do something to prove myself A08 Young people need to strive for something A01 glad to make achievements A04 want to be the pride of my family

Axial Coding

Axial coding finds category potential logical relationships between the development of the main category and its categories. In this paper, according to the relationship of different categories on the conceptual level and logical order, we summarized them into two main categories. The main categories corresponding to its open coding categories are shown in Table 3.

Table 3. Axial Coding Form the Main Category

The Main Categories	Corresponding Category	The Connotation of the Category
The external environment factors	Venture capital	Startup capital acquisition costs and convenient degree will affect their entrepreneurial behavior
	Entrepreneurial model	Parents, relatives and friends have entrepreneurial experience will affect entrepreneurial cognition
	Policy support	The government's policy support, including the capital, entrepreneurship training and preferential policies from all sides will affect the entrepreneurial behavior
	Support from family and friends	Support from family and friends will affect entrepreneurship emotion and entrepreneurial behavior
Individual factors	Entrepreneurial experience	Breadth of entrepreneurial experience and enthusiasm will affect land-lost farmers entrepreneurship emotion
	Entrepreneurial returns evaluation	Changes of lifestyle and the improvement of life quality will affect entrepreneurial behavior
	Entrepreneurship preparation	Entrepreneurship preparation will affect entrepreneurial cognition
	Entrepreneurial self-efficacy	Entrepreneurial ability and confidence will affect entrepreneurship emotion and entrepreneurial behavior
	Achievement motivation	Individuals try to constantly improve themselves, the original psychological motivation to beyond the others affect land-lost farmers entrepreneurship emotion

Selective Coding

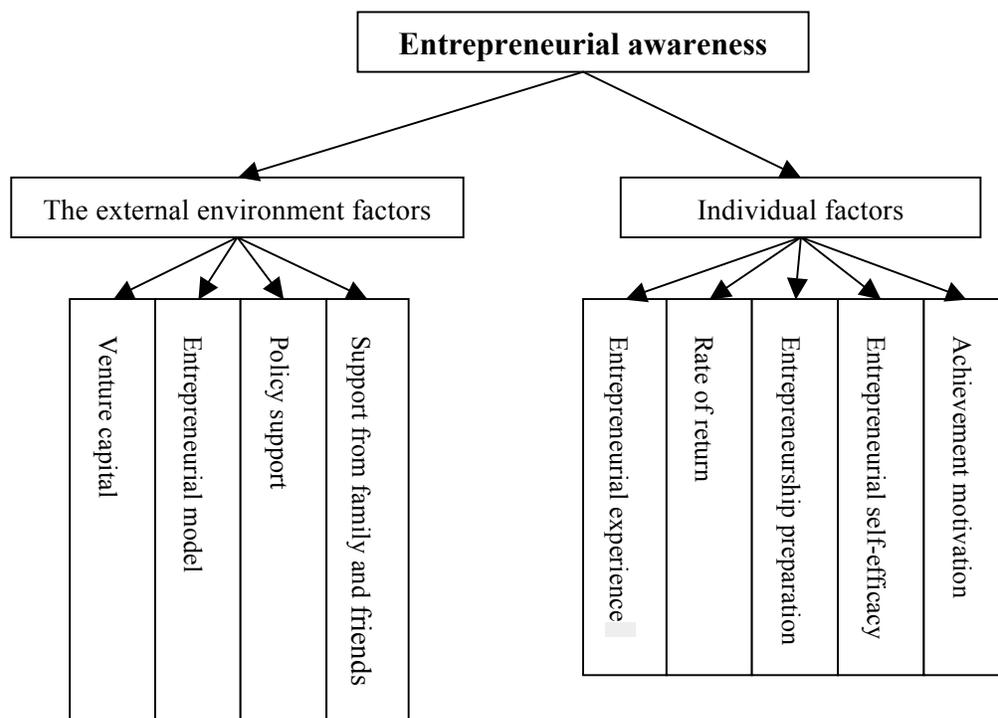


Figure 1. Factors Affecting Land-Lost Farmers Entrepreneurial Intention Model

Fifteen (15) respondents all showed some entrepreneurial intentions. Entrepreneurial intention showed an obvious drop with the increase of age, and at the same age of land-lost farmers, the intensity of entrepreneurial intention was also different, some people say "have always had this idea, but conditions is not mature enough, others just show" the idea", factors affect the intensity of the entrepreneurial intention are shown in table 2. About environmental factors, the land-lost farmers most care about the problem of venture capital. Landless farmers suffered a widespread insecurity, while get a certain amount of compensation, few land-lost farmers use the compensation to take risk, and insufficient funds are relatively large obstacles. Farmers always start with the relatives and friends, so the support and help from friends and relatives, also can affect entrepreneurship consciousness. Land-losing farmers "business model" plays an important role in their Enterprise consciousness, in a village with culture of entrepreneurship, the farmers' entrepreneurship consciousness are significantly higher. The success of the business model, their spirit of hardwork will affect the land-lost farmers' consciousness. In terms of individual factors, those who have entrepreneurial experience (understanding of entrepreneurial cognition and entrepreneurial process) will be more inclined to take the first step, individual with stronger entrepreneurial intention expect more of entrepreneurial returns while they pay closer attention to industry.

Most respondents with entrepreneurial intention indicated their motivation mainly is to improve the living standards, mainly survivability, land-lost farmers with higher level of education pay more attention to the realization of self-worth, open a shop is the main form of entrepreneurship. Land-lost farmers are not very satisfied with their income and work status; this is the main factor of entrepreneurial motivation.

Conclusion and Recommendations

Strengthen Policy Propaganda Guidance

Through interviews, we found that even in the same village, farmers' cognition of policy was very different; some respondents were clearly informed of a series of entrepreneurship trainings provided by the government and entrepreneurship support policies, and some respondents said there were no similar policies directly. This shows that work in land expropriation about entrepreneurship support policy propaganda is not enough. Relevant government departments need to promote the related policies, and ensure the land-lost farmers have access to policy information. In addition, business leaders' propaganda should be strengthened. In addition, ensure that relevant policy is in place, and strengthen the government's credibility is necessary.

Entrepreneurship Training Courses

The key to promote entrepreneurship is to shift land-lost farmers' conservative ideas, strengthen market consciousness and entrepreneurship consciousness. Under the background of the new urbanization, entrepreneurship training, first of all, needs to strengthen market economic consciousness, and training farmers' ability to adapt to the market through training to improve their understanding of market economic law degrees and the ability to adjust itself according to changes in the market demand. Then, we should strengthen the consciousness of farmers' entrepreneurship. Entrepreneurial activity occurred when there was a pioneering consciousness; to promote entrepreneurial farmers must strengthen their pioneering consciousness, and strengthen business training. Third, we need to strengthen the practical technique training of farmers through targeted training, so farmers can master the practical employment technology, and provide technical support for their entrepreneurship.

Provide Financial Support

For a lack of entrepreneurial hardware such as “insufficient funds”, policy makers should reduce the cost of land-lost farmers’ entrepreneurs. The government should provide financial aid for propaganda work, and at the same time, improve business convenience, such as simplified bureaucratic procedures, opening up of the green channel, innovation of a service platform, and the financial support (MFIs), etc. In addition, business insurance measures should be provided to the farmers to provide a certain amount of insurance for land-losing farmers.

Acknowledgement

This article has received support from the Humanities and Social Sciences Foundation of Zhejiang province (Grant No. 2013GH007)

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Impact of Political Cycle on Performance of Environmental Regulation: Based on the Annual Data of Energy Consumption Intensity from 1978 to 2012 in China

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***[Abstract]** Although positive correlations exist between the intensity of environmental regulation and the environmental performance in logic, there are few literatures that probe the characteristics from the angle of the political cycle. We argue collective opportunism behaviors of local officials in their tenure result in the political cycle of environmental regulation. We use the annual data of the energy consumption intensity from 1978 to 2012 by empirical research in this paper. The empirical results show that there are conspicuous correlations between the cycle of NPC & CPPCC and the cycle of energy consumption intensity. We demonstrate that the political cycle has some effect on the decrease of energy consumption intensity.*

***[Keywords]** environmental regulation; political cycle; official opportunism; environmental performance; the intensity of energy consumption*

Introduction

With the development of the economy, China has accomplished mainly the industrialization process. Now, China has been in the later period of industrialization. The compressibility industrialization, urbanization and compound ecological environmental problems are the prominent characteristics. The development of the economy is limited by the resources and environment. In particular, the energy gap problem is the most serious.

In 2012, the GDP of China reached 8.34 trillion dollars, accounting for 10% of the world economy. However, the energy consumption was approximately 20% of the world. According to the Twelfth Five-year Plan, the energy intensity is set to decrease 16% in 2015, and the corresponding policies are drawn up. However, during the first two years of the Twelve Five-year Plan, the energy intensity has decreased 5.5% nearly, see Figure 1. It means that the energy intensity should decrease by 3.84% in the next three years.

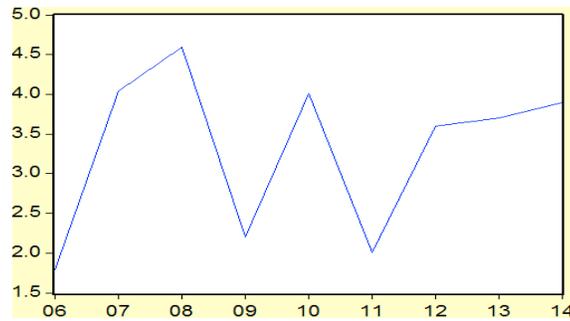


Figure 1. Decline of Unit GDP of Energy Year-on-Year in 2006-2014

In recent years, the trend of the environment getting worse had been stemmed in general. Through strategy of the scientific development, some index has been spiral. But the trend is not steady. The foundation of the environmental performance is not set in stone. The central, but not only value, the development of economy, also takes the improvement of environment seriously. On the other hand, the local government officials take the short-term profits more seriously because the investment in environment protection makes greater burdens on the local fiscal government. So the local government officials are more willing to develop economy and ignore the environment. Therefore, the goal of the energy saving and emission cannot be accomplished on time.

Under the current appraisals system of officials, local government officials have the opportunism behaviors during environment regulation process. Some researches find The NPC & CPPCC not only had some influence on the economy, but also led to aggravation of energy intensity volatility. The annual difference and periodic feature of environmental regulation deviated from the strategy of sustainable economic development and ran counter to the goal of a well-off society in an all-round way. Therefore, it is important to study the relationship between the political cycle and environmental regulation.

There is a lot of literature about the political cycle. Scholars abroad preferred the officers' behavior during political cycle. The politicians would carry out some policies to interfere in the economy, according to their benefit, and thus resulted in economic cycles (Hibbs, Jr, 1975). Based on the data of OECD from 1951 to 2006, the economic performance formed economic cycles (Potrafke, 2012). The economic impact of the political cycle had negative effects on the macro economy (Franzese Jr., et al. 2006). The political parties will take economic measures to cope with the deficit policies in the political cycle (Eslava, M., 2006).

Somewhat differently, Chinese scholars were interested in the impact of the political cycle on the Chinese macro-economy. The NPC & CPPCC are closed linked to economic fluctuation. Especially, the growth of GDP is obvious in the year of the session are holed and the year after the sessions (Mei, et al., 2014). The rate of GDP will increase when local officials may be promoted (Opper, et al., 2007; Yao, Y., & Zhang, M., 2013). The economy of China is influenced by a large amount of factors. The impact of local government is about 30%. The corruption of local government officials impact the short-term behavior significantly (Li, M., & Shen, K., 2010). The increase of the environmental regulation affects every region. According to the absolute amount, the eastern region is more affected. The western region is more affected in the relative amount (Li, G., et al., 2012; Bao Qun, et al., 2013).

The literature above scarcely mentioned anything about the political cycle and environmental regulation, so this issue will be discussed as a topic.

The Behavior Logic of Environmental Regulation Cycle Characteristics – Based on the Whole Game

Assuming that the central government draws up some assessment indexes, if the local governments is opportunistic, then $a=1$; if not $a=0$. The quantity of local governments is i , $i \in [0, 1]$. The stand for the degree of the policies is implanted of central government. If the policies are implemented, $z=1$, if not $z=0$.

For local governments, if it is opportunity, the expected revenue is t-s-r-f. the “r” and “f” are carried out or not according to the quality of local government which is $A = \int_0^1 a_i da$, $i \in [0,1]$. If $A > 0$, the policies will become invalid as a result of a large number of local government are opportunities. On the contrary, the policies will be implemental and the local government will be punished, and the expected revenue is t-s-r-f.

The “ θ ” is unknown for local government. Assuming the $\theta \in [0, 1]$, the local governments speculates the “ θ ” based on the private signed “ $x_i = \theta + \varepsilon$, $\varepsilon \sim N[0, \beta^{-1}]$, $y = \theta + \varepsilon$, $\varepsilon \sim N[0, \partial^{-1}]$ ”, “ ε ” stands for the observant error, ∂ and β are public information, and $\partial, \beta > 0$. So the “ x_i ” and “ y ” follow

Gaussian distributions $N(\frac{\beta x_i + \partial y}{\partial + \beta}, \frac{1}{\partial + \beta})$. The only equilibrium is $\beta > \frac{\partial^2}{2\pi}$, unless

$\theta > y + \frac{1}{\sqrt{\partial + \beta}} \Phi^{-1}(\frac{S}{t})$, then the environmental protection policies will be resisted.

Hence, when the energy saving and emission reducing policies are in conflict with the benefit of local government, and the local officials will communicate with each other. It may be real community or observation. Finally, the policies will lose effectiveness and the management exists in name only. For local officials, the central restriction is the retirement age. It means that the political career is limited. In the whole process, the officials cannot predict when the finitely repeated game will be disrupted so that the punishment and menace is credible. From the current situation, if the pollution is serious, the main leaders will be punished. But the penalties are less and the scope is narrow. It transfer a sign to local officials that the “ θ ” is tiny and the “ $x_i=1$ ” nearly. In their official term, their integral opportunisms cause the cycle in environmental regulation.

Empirical Analysis

Model

Variable selection and data. Energy intensity is calculated and arranged from China Statistical Yearbook. The case period of GDP is 1978. The standard coal data stands for energy consumption. The data of NPC & C PPCC resource are from the meterias of authority.

vH-P filter is a method to analysis time-series data. It is equalent tothe linear filter of minimum variance. In terms of the time-series data “ $Y_t(t=1, 2, \dots T)$ ”, it satisfies the trend of Formula (1):

$$\min \left\{ \sum (Y_t - Y_t^T)^2 + \lambda \sum [(Y_{t+1}^T - y_t^T) - (Y_t^T - Y_{t-1}^T)]^2 \right\}, \quad t=1, 2, \dots T \quad (1)$$

The “ λ ” stands for the weight according to the degree of the trend. The optimum of the “ λ ” is “ $\lambda = \sigma_1^2 / \sigma_2^2$ ”. The “ σ_1^2 and σ_2^2 ” are the standard deviation of trend component and cycle component in time-series data. The cycle component is “ $CY_t = Y_t - Y_t^T$ ”. Then we take the variable of policy and the rate of economic change in the formula (1) and judge the cycle characteristics of every time-series data.

Regression analysis of dummy variables. The OLS analysis of Formula (2) can estimate accurately the explanation degree of the political cycle to energy intensity.

$$LNH_i = \partial_0 + LNH_{(i-1)} + \partial_2 cg + \gamma_i \quad (2)$$

The “ LNH_i ” stands for the change of the energy consumption. The “ $LNH_{(i-1)}$ ” stands for the previous change of energy consumption. The “ cg ” stands for the value of NPC&CPPCC (hold=1; not hold=0). This paper uses co-integration test and causality test to study how the political cycle affects energy consumption.

Quantitative Analysis

The basic judgement of the political cycle to energy intensity. From Figure 2, we can find the fluctuation of energy intensity is irregular, especially before 1985. But if we neglect it, the trend and pattern corresponds to the political cycle so that we will check the effect of the political cycle on energy consumption.

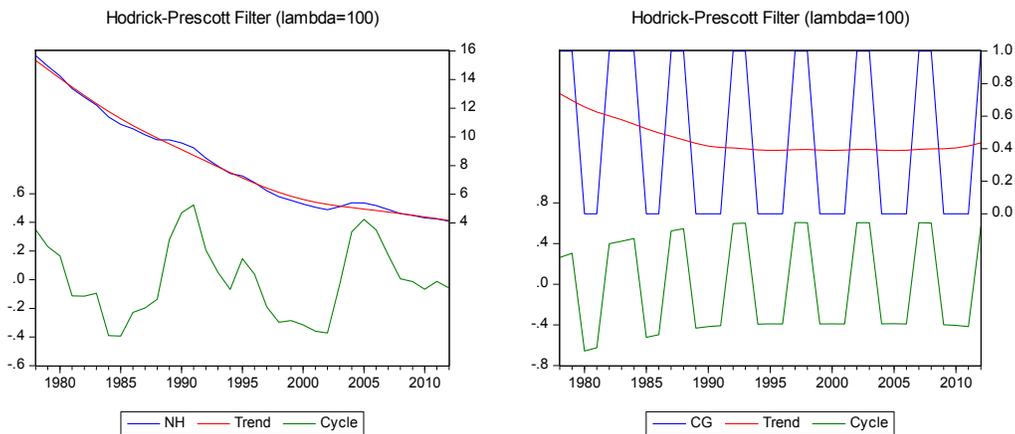


Figure 2. Energy Cycle and Political Cycle

Dummy Variables Regression and Causal Judgement

1. Unit Root Test of Sample Data - the data of GDP energy intensity is processed by logarithmic method in order to eliminate heteroscedasticity and denoted it “LNH”.

Table 1. The Stationarity of Unit Root Test by ADF Test

Variable	Difference	ADF Statistics	Critical Value			D.W Value	Conclusion
			1%	5%	10%		
LNH	Zero Order Difference	-1.22066	-3.65373	-2.95711	-2.61743	1.992361	Non-Stationary
	First Order Difference	-3.26635	-3.65373	-2.95711	-2.61743	1.989935	Stationary
cg	Zero Order Difference	-1.67326	-3.67017	-2.96397	-2.62101	2.094384	Non-Stationary
	First Order Difference	-20.0041	-3.67017	-2.96397	-2.62101	2.120082	Stationary

From the result of Table 1, “LNH” and “cg” are more than critical value in the 5% confidence level. The result shows that “LNH” and “cg” all have the unit root and they are non-stationary series. If we apply the regression analysis method directly, it appears to be spurious regression. Then we apply the first order difference to test them. The results show that “LNH” and “cg” are too stationary series under the 55 confidence level so that we can use the co-integration analysis.

2. OLS Regression of Dummy Variables – The value of the political cycle variables are “0” and “1”. Then we use the OLS regression method to analyze it.

$$LNH = 0.007224 + 0.980334LNH(-1) - 0.015229cg \quad (3)$$

(0.291574) (91.39864) (-1.564545)

$R^2 = 0.9887243$ D.W = 0.829533

Because the D.W value is only 0.829533, it shows that the error are positive autocorrelation. At this time, though the predictive value is unbiased, it is not efficient. The significant test fails. Equation (3) cannot show the long-term equilibrium, so we add AR (1) in the original regression. The D.W value is 1.67 after addition. The autocorrelation is emission.

$$LNH = 0.032978 + 0.966640LNH(-1) - 0.015916cg + (AR(1) = 0.596889) \quad (4)$$

(0.587717) (33.82517) (3.703620) (-2.071038)

$R^2 = 0.996669$ D.W = 1.673582

It shows that the political cycle impact the energy consumption intensity. The coefficient is -0.015916 and the t-score is 3.703620, so the result is significant. The result shows that the energy consumption will decrease 1.5% in each political cycle.

3. Granger Causality Test – The causality between the political cycle and the energy consumption intensity is test with Granger representation theorem.

Table 2. Granger Causality Test (Lag=2)

Null Hypothesis	Lag=2		Conclusion
	F	P	
LNH is not the Granger cause of cg	0.7289	0.4914	Accepted
cg is not the Granger cause of LNH	3.31293	0.0511	Refused

According to the result, the political cycle is the Granger cause of energy consumption intensity in the 10% significant level, namely the political cycle causes the fluctuation of energy consumption intensity.

Conclusion and Policy Implications

We focused on the relationship between political cycle and energy consumption intensity, and these results can be explained as follows. First, it is a principal-agent relationship between the central and local

government and the information is seriously asymmetric. The local governments have huge advantages in information and action. As an agent in the game, the local government may have adverse selections and moral hazards. According to the result of the game, if the cost of supervision is less or punishment is bigger, the probability of opportunism is lower. If the net profit or punishment is bigger, the probability of opportunism is bigger too.

Secondly, though the central government formulates the policies of incentive and punishment, the local government does more. They also can implement opportunism according to the attitude of other local governments and the central government. Besides, if the majority of them are opportunistic, the central government has no way to punish them. Therefore, the local officials are opportunistic in their official terms. The decrease of energy consumption presents the “go-slow now to go-fast later” situation.

Thirdly, according to the empirical analysis, the cycles of CPC & CPPCC impacts the decrease of energy consumption intensity. It is highly correlated between the current period and the previous period. Local officials will adjust their strategies according to the previous period.

Based on the conclusions above, some suggestions may be given as follows. First, establishing a lifelong liability system can be used to force local officials to build the consciousness of environmental protection. Secondly, it is necessary to use the “Carrot and Stick” to aggravate punishment of the opportunism of local officials who destroyed the environment, including demotion, and bearing legal liability, while increasing the subsidy of energy consumption and emission reduction. Thirdly, and more importantly, improving the system of supervision, assessment and promotion are the key measures to let officers adhere to environmental regulation from beginning to end.

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Applying Perceptual Marketing Methods to Promote the Philosophy of Green Development

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[Abstract] This paper first introduces the basic connotation of green development and its significance, given related concepts of perceptual marketing and a detailed description of the people's cognitive process. Then we illustrate perceptual marketing its application status and analyze the problems that exist in the perceptual marketing application in the expansion of the concept of green development, and finally point out the expanded application of the perceptual marketing method to give direction for its better use in the promotion of the philosophy of green development.

[Keywords] philosophy of green development; promotion; perceptual marketing; expanded application

Introduction

Since the 1960s, mankind's reflection relating to the high growth, high consumption, high pollution which was brought about by the industrial civilization, promoted a fundamental shift of the value of the economic development. As an important carrier of social production and living, a city's green development problem has become the hot topic in countries that want to develop a green economy. The problems of resource consumption, environment pollution and ecological destruction caused by rapid urbanization have made the city over-burdened in space, transportation, housing and public service. Urban development is facing a complicated pattern of pollution and the degradation of ecological function, which seriously hinders the regional green development process. As the theory of green development is increasingly mature, the concept and practice of the urban green development is beginning to infiltrate to various aspects such as ecological urban plans, finance and trade, industrial economy, culture, education and so on. At the same time, how to further promote the green development concept in all aspects of social production and living is an urgent problem that needs to be considered. This article applies the approach of perceptual marketing in the field of marketing to promote green development concept and provides a new solution to the problem of how to promote the green development philosophy.

The Necessity of Implementing Green Development

The Basic Connotation of Green Development

Green development is a development mode that has characteristics of sustainable development of environment and resources, harmony of man and nature, and it makes the environment a kind of inner productivity. In green development, the environment is not only a productive force, but also a kind of embodiment of international competitiveness. Green development should include environmental factors in the productivity function, be reflected in the GDP accounting, and include environment wealth in the accounting system of national wealth.

The Meaning of Green Development

The needs of building the well-off society. The Chinese government set a goal of promoting the whole society onto a civilization development road of production development, a wealthy life, and good ecology as one of the four goals of building a moderately prosperous society in an all-round way. Therefore, whether we can realize the goal of environmental protection is directly related to the realization of the goal of the all-round well-off society.

The needs of promote the balanced regional development. The overall level of China's green development is low and green development levels have significant differences between regions: the eastern developed regions have begun to shift towards green development, the central and western regions still belong to the two high and one low development model. So we should develop a national green development strategy plan as soon as possible, coordinating the layout on the land, environment and economy, optimizing the allocation of resources, and promoting regional onto the road of green development as soon as possible.

The greening of economic development in China has huge potential. There is a large gap in China's resources and energy utilization efficiency, and units of output of pollutants emission levels compared with the developed countries, but this gap can also improve our potential. On the one hand, there is a large population and relatively insufficient resources; on the other hand, there is low efficiency and serious waste. These two phenomena in the Chinese economy make a strong contrast. In order to meet the needs of sustainable development of economy, resources and environment, we should draw lessons from the development experience and advanced technology of developed countries, and try to seek the development road of saving resources and reducing pollution emissions, to realize green growth (Wang, J., 2006).

The Analysis of Perceptual Marketing Related Theory

The Definition of Perceptual Marketing

The so-called perceptual marketing refers to emotional enterprise marketing activities, letting the "emotional" thread go through the whole process of marketing activities. It has two main aspects: one is to develop a human kindness product or service, and the second is to promote methods full of human kindness (Kun Qi, 2005).

People's Cognitive Process

People's cognitive process is a very complicated process; it refers to the process of understanding objective things, and it is the process of the information processing, and is one's psychological activity which reflects the characteristic and the inner link of the objective things from phenomenon to essence. It consists of a person's feelings, perceptions, memories, thinking, imagination and other cognitive elements. People's cognitive processes are shown as Figure 1.

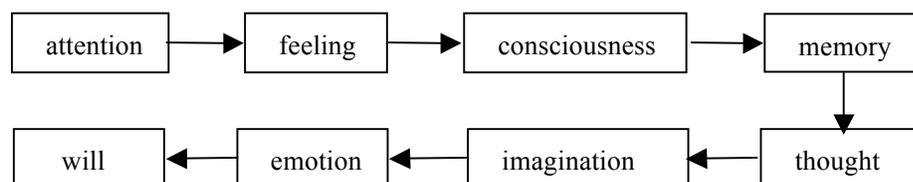


Figure 1. People's Cognitive Process

Attention. Attention can be divided into no attention, voluntary attention and post attention. No attention refers to having no intention in advance, and they also do not need to have the will to pay attention to it. Voluntary attention refers to having a reservation – you need to have certain effort. Post attention refers to having a deliberate conscious purpose, but does not require a will effort that is usually diverted from voluntary attention.

Feeling. It is the starting point for us to know the world; this is one's direct reflect process for individual properties of objective things. The information people receive is provided by audio-visual accounts for 80% ~ 90%. Therefore, when organizations carry out public relations activities, they must fully consider the public audio-visual feeling.

Consciousness. Consciousness is the brain's overall comprehensive reflection of the objective things that have a direct effect on their senses. And it is a complex psychological phenomenon and the result of comprehensive processing what the brain has to do with different sensory information.

Memory. Memory is a structural information processing system, composed of three subsystems: they are the sensory memory, short-term memory and long-term memory subsystems. The long-term memory refers to the permanent storage of information, that a person generally can keep for years or even for life, and forms the individual's knowledge and experience of the outside world and their own world.

Thought. It is the general and indirect reflection process in which the objective things' general attribute and the inner link in people's minds. It is what is reflected in the essence and general law of things.

Imagination. Imagination is a psychological process to create a new image through the modification of the existing appearance on the basis of perception. It not only can create image of things never perceived, but can also create images that do not exist or could not have been in reality.

Emotion. Emotion has the characteristics of stability, profundity and persistence; it is a stable attitude experience about people and things. It is always under the control of the consciousness, and always exists in an implicit form or show in subtle ways.

Will. Will is a mental activity which can makes one consciously determine the purpose, and according to the purpose to control, adjust their actions, overcome various difficulties, so as to realize the purpose.

In the process of promoting green development we should make full use of the above several cognitive processes' effects on human perception to promote the green concept promotion and make sure it is accepted and understood, and then contribute to green development practice.

The Perceptual Marketing Application Status in the Promotion of Green Development Philosophy

Using the Sensory Experience to Inspire Positive Mood in the Masses

Sensory experience is a foundation experience; it is mainly created by a sensual experience from aspects such as sight, smell and taste.

Visual experience. For example, green products are sold in the form of stores, supermarkets and direct marketing and sales, and at the same time, they are complementary with certain propaganda, and communicate with consumers. So for consumers, green products' visual elements including product packaging, counters, website, and promotional materials, etc., to be their first impression of the product source.

Hearing and smell experience. City pollution phenomena such as air pollution and noise pollution

greatly influence general public life and work. Green development promotes a healthy living environment, and advocates expanding urban green space area to reduce atmospheric pollution and smell pollution, to create a green living environment, so as to promote the spread of the concept of green development.

Create an Emotional Experience by Using Emotion.

Emotional experience is the experience of being moved, mainly realized through communication. For example, public service ads to protect the environment affect the public's mood so as to arouse their awareness of environment protection in the form of mass media.

Introducing thinking experience by culture communication. Thinking experience is convinced experience, although more and more domestic consumers join in green consumption, but they know little about knowledge and culture of green consumption, so it is necessary to spread the green consumption culture to consumers. The Chinese government has used a variety of ways to publicize the green development concept to the public for years. For example, create a green development concept promoting a column in influential radio and newspapers, and play all kinds of environmental protection feature films in prime television time.

Attract the public to experience through action. Action experience is a kind of experience mobilizing one's enthusiasm and initiative so make him willing to participate in the experience, and by participating it leaves an unforgettable impression on the people. For example, environmental groups invite influential people on a tour to an uncontaminated landscape, and let them feel a healthy, natural life. Through these activities, we should publicize the importance of the ecological environment, and lead the public to consciously involved in the action of protecting the environment.

Problems Analysis of Perceptual Marketing Application in the Promotion of Green Development Philosophy

Do Not Make Full Use of Sensory Experience

For example, the present perceptual marketing of green products mainly created a sensual experience from the aspects such as vision, smell and taste, and the visual experience mainly focused on the visual elements such as product packaging, website, promotional materials, and neglected the storefront, service personnel and other visual elements.

Overall Promotion Culture of Green Development Concept is a Relative Strength, Specific Character is Not Obvious

We should have different pollution propaganda and education for different types of pollution, and let people know what action they should take in facing specific pollution and we should not only just promote an overall concept to prevent pollution.

Show the Phenomenon of Wasting Resources

Government regularly held large green development concept promotion activities, and it promoted the concept of green development unceasingly, but the waste and pollution made in the process may weaken the value of the advertising itself.

Perceptual Marketing's Expand Applications in the Process of the Promotion of Green Development Philosophy

Promoting Green Products in the Perceptual Marketing Way

Green products consumption group is divided into four types as shown in Table 1, and each group has its own consumption characteristics and product knowledge, so we must use different promotions according to the cognitive process of each consumer groups.

Table 1. Green Product Types Consumer Groups and Characteristics

Class	Consumption Group	Consumption Characteristics and Trends	Product Cognition
A	Political circles	Spending power is strong and growing faster	Using green products stands for a status symbol
B	Business circles	Spending power is strong and rise steadily	Using green products leads a healthy life style
C	White-collar workers and the petty bourgeoisie	Large cardinal number and great development	Using green products stands for the pursuit of emotional appeal and grade
D	The mass consumer	The quantity is big, but low consumption and slow growth	

In the attention and feeling stage, the four types of consumer groups have the same requirements for green products' taste, smell and appearance. In the process of production and packaging, we must pay attention to the visual and taste effect of the products, and let consumers have a positive emotion to the product. The four types of consumer groups are different, but in the end we must make four types of consumers get positive products they feel they need. We must let class A consumer groups feel the product is in line with their own identity, let class B consumers feel that the products are healthy, and let C and D class consumers feel that using products has grade. In the process of promotion of green products, we can also use the following perceptual marketing methods: highlight the product's individuality, develop new tastes, and keep things fresh and so on.

Perceptual Marketing Application in the Promotion of Green Development Philosophy

The choice of promotional venues.

1. Choose the promotional venues that have emotional atmospheres – Now people pay more attention to a comfortable feeling, so don't confine only to publicize the content, but provide the audience with perceptual environment in line with the content too and the audience will be moved because of the small detail.

2. Make sure that the layout of the site has integrity – If people only remember a few details and have no concrete impression when they think of the propaganda site then that is equal to remembering nothing. Attention should be paid to the overall coordination of the site layout, so people can remember the propaganda field characteristics, and thus more firmly remember the contents of the publicity.

3. Play music or videos related to propaganda for the audience – Music can move people, and make people produce emotional resonance, while videos direct visual effects to the person, leaving people with a more profound impression, and the effect is better (Chen, G., 2009).

Publicist Selection

1. Make use of the influence of word of mouth – The first audience who accepted and understood the propaganda is the best advocator. In the digital age, the network is an important tool of verbal communication.

2. Select perceptual publicist – When hiring, give a priority to the applicants who enjoy working with people. Liking the work of contact with people is the premise of providing good quality services.

3. Give propaganda people firm service standards through rigorous training – When all the people go through the theory education and practice, and firmly grasp the standards of service, not only related business knowledge will increase, but also the team spirit will quietly take root in them.

Conclusion

China has become an important force for the world's economic growth and sustainable development with its peaceful rise and rapidly rising international status. The world not only hopes China plays a decisive role in the process of the world reshape sustainable development, but a green China is also needed (Wang, Y., 2010). The perceptual marketing idea can come into contact with the inner emotional world of the public, make the concept of green development better understood, accepted and practiced. With the advent of the era of perceptual consumption, it is an inevitable trend to apply the perceptual marketing method to the promotion of the Green Development Philosophy.

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An Evaluation of Regional Land Comprehensive Carrying Capacity and Spatial Disparity Analysis – A Case of Jiaxing City, Zhejiang Province

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[Abstract] The promotion of land carrying capacity and optimization is important to ecological civilization construction in the context of the new urbanization. By inheriting the predecessor's research results and combining resources endowment in Jiaxing City, this paper creates an index system, performs an evaluation and analyzes the spatial disparity of land comprehensive carrying capacity from the ecological, economic and social aspects. The results indicate Jiashan is the highest in the regions, which has an index of comprehensive carrying capacity of 0.7857. In contrast, Xiuzhou's index is the lowest at 0.6222. However, the gap between the regions isn't evident, indicating an approximately balanced state of ecological, economic and social development.

[Keywords] land comprehensive carrying capacity; index system; spatial disparity; Jiaxing City

Introduction

Currently, China has come into the rapidly advanced stage of industrialization and urbanization. The limited land resources are confronted with carrying economic and social activities of larger scale and greater intensity. Prospective urbanization is even confronted with numerous new challenges and requirements, such as promoting the quality, low-carbon green development, pattern optimization and cooperation of China's new industrialization, informatization, urbanization and agricultural modernization. Under the background of new urbanization, it is key to construct an ecological civilization that improves the land carrying capacity and optimizes the pattern of development. It is related to the modernization construction in China. The study of carrying capacity was researched for a long time, however, it was not until 1921 that Park and Burgess (1970) exactly put forward the concept of carrying capacity – “under the certain environmental condition, the highest limit of a certain number of individuals' existence”. In 1949, Fugate gave the exact definition of land carrying capacity: “the ability of land servicing for complex civilization life”. The research of land carrying capacity in China emerged in the late 1980s. Though starting late, the development has been rapid, and very fruitful providing all kinds of work and research results. In the late 1990s, many scholars used the SD model (Yang & Zhang, 1993) and 3S technology (Jia & Zhang, 2008) to research land carrying capacity. As a whole, academia's

research on the model of land carrying capacity and the method of calculation presents a tendency of reinforcement and densification.

The Index System and Method

The Establishment of the Index System

In the late 1980s, the Chinese Academy of Sciences started to conduct research on the population carrying capacity of land resources. The giving definition on the population carrying capacity of land resources is the productive capacity of land resources under certain production conditions and the carrying population's limitation under certain standards of life (Chen, 1989). Since then, the research on land carrying capacity has been concentrated on the relation of arable land, grain and population. In the early 20th century, Wang Shuhua put forward the concept of land comprehensive carrying capacity for the first time, "under certain periods, space and environmental conditions of social, economic and ecological resources, land resources can carrying the bench mark of scale and intensity of human activities" (Wang, Mao, & Zhao, 2001). He expanded the main body of carrying from arable land to all land. Thinking of it as the basis and platform, they carried the whole human social system. The human social system is a composite system that consists of an ecological subsystem, economic subsystem and social subsystem. It is a complicated dissipative system (Zhang, C. 2001). Therefore, the land comprehensive carrying capacity corresponds to the ecological carrying capacity subsystem, the productive carrying capacity subsystem and the living carrying capacity subsystem. They provide the corresponding carrying support. According to the ecological, productive and living subsystems of the land comprehensive carrying capacity, this paper established a framework of an assessment index system about land comprehensive carrying capacity.

Based on summarizing the predecessors' research results and analysis (Wang, Mao, & Zhao, 2001; Zhang, C., 2001; Chen, Lei & Wang, 2011) of regional resource endowment, this research introduced the degree of coordination between water and land and the average index of using rank and expressway mileage per capita to establish the assessment index system of land comprehensive carrying capacity.

Table 1. The Index System and Weight of Land Comprehensive Carrying Capacity

Criterion Level B	Index level C	Index Unit	Index type	Weight
The index system of ecological carrying capacity (B1) 0.4164	C1 Area of Land	sq. km	Positive	0.0559
	C2 Per Capita Amount of Arable Land	ha	Positive	0.0490
	C3 Per Capita Amount of Water Resources	cu. m	Positive	0.0705
	C4 Public Green Areas Per Capita	sq. m	Positive	0.0214
	C5 Ratio of Paddy Rice Fields in Cultivated land area	%	Positive	0.0237
	C6 Water Use Amount Per Ten Thousand Yuan GDP	cu. m	Negative	0.0492
	C7 Multiple Cropping Index	-	Positive	0.0623
	C8 The Degree of Coordination between water and land	-	Positive	0.0583
	C9 Average Index of Using Rank	-	Positive	0.0262
The index system of economic carrying capacity (B2) 0.2404	C10 Per capita GDP	10,000 yuan	Positive	0.0289
	C11 Gross Output Value of Farming, Forestry, Animal Husbandry and Fishery	10,000 yuan	Positive	0.0765
	C12 Economic Density	10,000 yuan /sq. km	Positive	0.0529
	C13 Fixed Asset Investment Per Square Kilometre	10,000 yuan /sq. km	Positive	0.0687
	C14 Output of Grain Crops Per Hectare	kg/ ha	Positive	0.0134
The index system of social carrying capacity (B3) 0.3432	C15 Density of Population	person/ sq.km	Negative	0.0505
	C16 Natural Growth Rate	‰	Negative	0.1468
	C17 Disposable Income of Urban Residents	yuan	Positive	0.0188
	C18 Per Capita Annual Net Income of Rural Households	yuan	Positive	0.0079
	C19 Level of Urbanization	%	Positive	0.0508
	C20 Expressway Mileage per Capita	m	Positive	0.0684

Standardization of Evaluation Index

Before data analysis, the indexes should be standardized to eliminate differences of dimensions between different indexes to solve the comparable problem of data. The relativity is best between the result that is based on the range transformation method and primary data; it is a method that is more suitable for the standardization of a positive and negative index. Therefore, in this paper, we deal with evaluation index using the range standardization method, and then we can get the standardization value, shown in Table 2.

For positive index.

$$Z_{ij} = \frac{y_{ij}}{y_{\max}} \tag{1}$$

y_{ij} is the primary data of i criterion level on the j index. y_{\max} is the maximum of j evaluation index.

For negative index.

$$Z_{ij} = \frac{y_{\min}}{y_{ij}} \tag{2}$$

y_{ij} is the primary data of i criterion level on the j index. y_{\min} is the minimum of j evaluation index.

Determine the Weight of Index

The weight of index is determined using standard deviation decision-making method. The method that can get higher accuracy weight coefficients of index and be suitable for the condition that requirements of evaluation are more stringent is a common one among objective weight determinations. In addition, the standard deviation decision-making method is almost unrestrained on non-dimensional method of index. It is suitable for a wide range (Wang, 1999). The steps of weight determination as follows:

- (1) Calculate the average value of random variable: $E(G_j)$.

$$E(G_j) = \frac{1}{n} \sum_{i=1}^n Z_{ij} \quad (3)$$

- (2) Calculate the mean square error of G_j : $F(G_j)$

$$F(G_j) = \sqrt{\sum_{i=1}^n [Z_{ij} - (E(G_j))]^2} \quad (4)$$

- (3) Calculate the weight coefficient of index G_j : $W(G_j)$

$$W(G_j) = \frac{F(G_j)}{\sum_{j=1}^m F(G_j)} \quad (5)$$

According to this method, we can get the weight coefficient of the assessment index system of land comprehensive in seven counties (districts or cities) of Jiaying City, as shown in Table 1.

The Calculation of Index on Land Comprehensive Carrying Capacity

The system of land carrying capacity is a complex and open system that consists of multi-levels and multi-factors. It has an irreplaceable effect on comprehensive carrying capacity that the subsystems and factors can affect and restrict each other. Therefore, the calculation of index on land comprehensive carrying capacity used the comprehensive index method. The formula is shown as the following.

$$D_i(W) = \sum_{j=1}^m Z_{ij} W_j \quad (6)$$

Z_{ij} is the standardized value of assessment index. W_j is the weight coefficient of index.

Table 2. The Normalized Value of the Indices of Land Comprehensive Carrying Capacity

Index/Region	Nanhu	Xiuzhou	Jiashan	Pinghu	Haining	Haiyan	Tongxiang
C1	0.586	0.7455	0.6974	0.7387	0.9188	0.6988	1
C2	0.6174	0.8342	0.7869	0.7304	0.6678	1	0.7813
C3	0.4825	0.6266	0.5721	0.5562	0.8041	1	0.7547
C4	1	0.902	0.8844	0.8435	0.9476	0.9238	0.8571
C5	0.881	0.9101	1	0.9561	0.9782	0.875	0.837
C6	0.9382	0.7078	0.7657	0.7595	0.9947	0.7678	1
C7	0.7422	0.7905	0.8039	1	0.6372	0.9279	0.541
C8	0.649	0.6238	0.6038	0.6324	1	0.8305	0.8022
C9	0.9389	0.9454	0.8951	1	0.8353	0.812	0.9389
C10	0.8714	0.7875	0.85	0.8738	1	0.9765	0.9008
C11	0.7765	0.5136	1	0.5559	0.7911	0.6366	0.9838
C12	1	0.676	0.758	0.8763	0.9683	0.6598	0.8065
C13	1	0.4501	0.6247	0.642	0.6847	0.5911	0.5287
C14	0.9048	0.9655	0.9224	0.9371	0.9391	0.906	1
C15	0.5888	0.7872	0.7577	0.6738	0.6978	1	0.7548
C16	0.0078	0.011	1	0.0233	0.0103	0.0144	0.0206
C17	0.8924	0.8924	0.9661	0.9954	0.9987	1	0.971
C18	0.9415	0.944	0.9552	0.9578	1	0.9671	0.9495
C19	1	0.6656	0.6457	0.6841	0.6486	0.6834	0.6432
C20	0.6818	1	0.5682	0.5932	0.7944	0.6474	0.4694

The Evaluation Results of Carrying Capacity and the Characteristics of Spatial Distribution

The Evaluation Results

The index of land comprehensive carrying capacity of seven counties (districts or cities) in Jiaxing City is calculated based on the evaluation models mentioned above. Jiashan's index of comprehensive carrying capacity is 0.7857, the highest in all the seven regions. By contrast, Xiuzhou's index is 0.6222, the lowest in the all seven regions, as shown in Table 3. However, the gap between the regions is not so evident, which indicates an approximately balanced state of ecological, economic and social development.

Table 3. The Evaluation Results of the Indices of Land Comprehensive Carrying Capacity

Index Category / Region	Nanhu	Xiuzhou	Jiashan	Pinghu	Haining	Haiyan	Tongxiang
The index of ecological carrying capacity	0.2940	0.3127	0.3068	0.3196	0.3529	0.3642	0.3397
The index of economic carrying capacity	0.2183	0.1417	0.1964	0.1708	0.2003	0.1646	0.1937
The index of social carrying capacity	0.1525	0.1678	0.2824	0.1390	0.1507	0.1580	0.1317
The index of land comprehensive carrying capacity	0.6649	0.6222	0.7857	0.6295	0.7039	0.6868	0.6651
Rank	5	7	1	6	2	3	4

In terms of overall trend, the land comprehensive carrying capacity of Jiaxing City includes three subsystems. Among them, the level of the index ecological carrying capacity is the highest, and the spatial distribution of it is not obvious. On one hand, it's mainly due to the weight of the ecological carrying capacity of the land comprehensive carrying capacity is the largest. On the other hand, it owes to a good ecological environment and resources endowment of Jiaxing City and their small spatial differentiation. The difference of economic and social carrying capacity is more significant than ecological carrying capacity in different regions. Especially, the variation of the social carrying capacity

is the widest in spatial scale. Therefore, the spatial differentiation of social carrying capacity has the most evident effects on the spatial differentiation of the comprehensive carrying capacity.

The Analysis of Spatial Differentiation of Carrying Capacity

According to the evaluation results of the indices of land comprehensive carrying capacity, the 7 regions in Jiaying City are classified into three groups by using the K-Means clustering algorithm in SPSS Statistics 19.0. The three groups are the high-level carrying capacity subregion, the mid-level carrying capacity subregion and the low-level carrying capacity subregion. The high-level carrying capacity subregion, whose index of land comprehensive carrying capacity is no less than 0.7857, and is only Jiashan. The mid-level carrying capacity subregion, whose index of land comprehensive carrying capacity is between 0.6649 and 0.7039, with the average being 0.6802, includes Haining, Haiyan, Tongxiang and Nanhu. The low-level carrying capacity subregion, whose index of land comprehensive carrying capacity is no more than 0.6222, consists of Pinghu and Xiuzhou.

The high-level carrying capacity subregion. There is only one region, Jiashan, with an index of land comprehensive carrying capacity of 0.7857, and belongs to the high-level carrying capacity subregion in Jiaying City. The indices of carrying capacity of Jiashan in the ecological, economic and social criterion levels are 0.3068, 0.1964 and 0.2824, ranking sixth, third and first. Thus, Jiashan has advantages on economic carrying capacity and social carrying capacity, and the advantages, in some extent, close the gap in ecological carrying capacity between Jiashan and other regions. Natural growth rate of Jiashan is the lowest in Jiaying City, which bring a great edge in social carrying capacity. In the index system of economic carrying capacity, Jiashan is the top of Jiaying City in the gross output value of farming, forestry, animal husbandry and fishery; that's an expression of high-level economic carrying capacity. However, the ecological carrying capacity of Jiashan is relatively low. The main limiting factors include the area of land, the per capita amount of water resources, the public green areas per capita and the degree of coordination between water and land.

Mid-level carrying capacity subregion. In the mid-level carrying capacity subregion, the average of the index in ecological carrying capacity, economic carrying capacity and social carrying capacity are 0.3377, 0.1942 and 0.1482. The index of ecological, economic and social carrying capacity is relatively balanced in Haiyan and Haining. Among them, Haiyan has advantages on the ecological carrying capacity and economic carrying capacity. However, comparing with other regions, the gap of economic density of Haiyan impacts on the level of economic carrying capacity. To Haining, the ecological, economic and social carrying capacity is the most balanced in Jiaying City. Like Haiyan, the ecological carrying capacity and economic carrying capacity are its dominant aspects. By contrast, the advantages and disadvantages of Nanhu and Tongxiang are distinct. Nanhu, the economic center of Jiaying City, has the highest economic carrying capacity of the seven regions. In the index system, its economic density and the fixed asset investment per area have a predominance. But the ecological carrying capacity of Nanhu is the lowest in Jiaying City, which results from the limitation in area of land, per capita amount of arable land, and per capita amount of water resources. In social carrying capacity, Tongxiang come in last in Jiaying City, limited by expressway mileage per capita and the level of urbanization.

Low-level carrying capacity subregion. The ecological carrying capacity, economic carrying capacity and social carrying capacity in the low-level carrying capacity subregion, in which the average value is 0.3162, 0.1562 and 0.1534, is lower than the mid-level. The index of comprehensive carrying capacity of

Xiuzhou is the lowest in Jiaxing City, and the social carrying capacity is lower than the ecological carrying capacity and social carrying capacity. The current situations are mainly attributed to its dropping behind in the per capita GDP, gross output value of farming, forestry, animal husbandry and fishery and fixed asset investment per square kilometer. Pinghu's ecological carrying capacity, economic carrying capacity and social carrying capacity are relatively average. The limiting factors are not evident in Pinghu's index system, but they are poor in overall level.

Advice

To Jiashan, where the land comprehensive carrying capacity is the highest, it's more important to apply scientific outlook on development to enhance the economic carrying capacity and social carrying capacity through the development of a green economy and circular economy, the introduction of high-tech industries, and the achievement of people-centered urbanization and infrastructure construction.

For the mid-level carrying capacity subregion, on one hand, Haiyan and Haining should develop their economy, increase economic density, and improve their levels of urbanization. Meanwhile, the relationship with the resources and the ecological environment should be coordinated. On the other hand, Nanhu, the political, economic and cultural center of Jiaxing City, with an expected trend that area of land is limited, per capita amount of arable land and water resources should be reduced gradually, they should also try to increase the public green areas per capita and reduce water use amount per ten thousand yuan GDP. Furthermore, Tongxiang mainly needs to increase their investment in infrastructure construction and livelihood projects. With the improvement of social carrying capacity, the economy should be vigorously developed.

It's the primary task that low-level carrying capacity subregion improves the level of economic development. In the premise of ensuring the ecological civilization and sustainable development of resources and environment, economic carrying capacity should be improved steadily so that land comprehensive carrying capacity can be led to a higher level.

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Study on Organizational Citizenship Behavior: The Perspective of Social Exchange

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[Abstract] *This study has done the empirical analysis to analyse relationships among perceived organizational support (POS), psychological empowerment, work engagement, and organizational citizenship behavior (OCB) under the framework of social exchange theory. Hierarchical regression equations were used to examine the mediating effect of work engagement on the relationship between POS and OCB, and the moderating effect of psychological empowerment on the relationship between POS and work engagement. The results showed that: (1) The effect of POS on OCB had been found to be significant and positive; (2) The effect of POS on work engagement had been found to be significant and positive; (3) The positive effect of POS on OCB was fully mediated by work engagement; (4) Psychological empowerment positively moderated the relationship between POS and work engagement. Finally, practical implications and directions of future research were discussed.*

[Keywords] *perceived organizational support; psychological empowerment; work engagement; organizational citizenship behavior; social exchange*

Introduction

As global competition intensifies, organizations are facing more and more uncertainty and complexity. How to effectively stimulate potential of employees and create more value for the organization has become the focus. OCB as an extra role behavior has got concerns widely from academic researchers. Good organizational citizens can improve the ability of organizations on allocating the scarce resources efficiently by simplifying organizational control and release productive resources. Even though OCB cannot be reflected in the formal reward system, it is a voluntary act of employees that improves the effectiveness of the organization (Organ, 1997).

In order to increase the degree of employee attachment to organizations, we need to change their knowledge and attitude. One effective way is to create viscosity between the organization and their employees by increasing the perceptions of employees on organizational support. The extent to which organizational support is felt is defined as perceived organizational support (Rhoades & Eisenberger, 2002). And POS refers to the perception of how organization helps and improves the degree of their well-being. According to the social exchange theory (Cropanzano & Mitchell, 2005), when resource, assistance, and authorization are given by organizations, the staff may increase their sense of duty to return reciprocation to their parties.

There is little research on the relationship between POS and OCB under the Chinese context. We use work engagement as a mediating variable on the relationship between POS and OCB. In addition, psychological empowerment is introduced as a moderating variable to analyze the effect of POS on work engagement.

Literature Review and Theoretical Assumptions

Relationship Between Perceived Organizational Support and OCB

OCB was an autonomous behavior of employees that may be beneficial to enhance organizational effectiveness on the whole. OCB was divided into five dimensions: altruism, conscientiousness, sportsmanship, courtesy, and civic-virtue (Bies, 1989). OCB was regarded as a return to organization in the form of social exchange. Such a spontaneous behavior, to a certain extent, is affected by the extent of treatment that applied to employees positively (Cardona, Lawrence, & Bentler, 2004).

Resources provided by the organization can be divided into two categories: (1) Objective resource, including salaries, services from superiors, information, and tools, etc. (2) Social emotional resources, including respect, recognition, and praise, etc. A basic principle of social exchange is reciprocal or gratitude. So employees will have a sense of obligations in return for the resources invested by organization. Thus, employees will generate a sense of interest in organization efficiency and output, a responsibility to achieve organizational goals. Moreover, their performance levels and work quality will be higher than the job requirements. Increasing in reciprocal awareness may lead extra role behavior of employees to a high frequency, such as assisting colleagues in handling affairs, taking measures to safeguard the rights and interests of the organization, and proposing constructive solutions, so as to achieve the balancing exchange relationship between the organization and employees (George, & Brief, 1992). Enhancement in organizational effectiveness, in turn, can strengthen the support from the organization and superiors. Thus, the beneficial exchange relationships of organizations-employees, employees-employees can be continuously strengthened. Therefore we formulate:

H1. Perceived organizational support is positively related to OCB.

Relationship Between Perceived Organizational Support and Work Engagement

On the basis of two dimensions (happiness and excitement) of well-being, work engagement was defined as an individual's positive, successful emotional and cognitive state toward their work, which was characterized by vigor, dedication, and absorption (Schaufeli & Salanova, 2010). According to job demands, – the Resource Model, high level of work engagement – need more work resources. That is, physical, psychological, social, organizational and other resources should be given to people who are willing to become involved in their work, so as to reduce role stress arising from work requirements, then leading to a higher level of work engagement. Operating resources, such as social support, supervisor guidance, performance feedback, had a positive forecast for the work engagement (Bakker, Albrecht, & Leiter, 2007). Employees will have a sense of responsibility and obligation of reciprocating to their organizations when they feel supported. The degree of vigor and dedication of work will be enhanced, which will gradually increase the level of work engagement. Therefore we formulate:

H2. POS is positively related to work engagement.

The Mediating Role of Job Engagement

More and more scholars and managers are paying attention to the relationship between employees' work engagement and OCB. Employees who fall into the work input state may make a voluntary contribution to the organization through additional form of time and brain power, and energy, etc. (Towers Perrin 2003; Talent Report, 2004). Employees who are emotionally dependent on the organization and had a very strong degree of work involved, would make additional work beyond the requirements of duties to

achieve their employer's goals (Markos & Sridevi, 2010). Moreover, they could combine their behavior with organizational goals efficiently. That is, in addition to the achievement of task performance, individuals who preserve high level of job involvement will make more contextual performance (including OCB) (Bakker, Albrecht, & Leiter, 2011). Individuals will put greater enthusiasm and energy into their daily work and are full of enthusiasm to undertake the task, to put forward a proposal, to take a participation in organizations, when they feel supported by resources that their organizations supply (Hu & Schaufeli, 2011). Therefore we formulate:

H3. The positive effect of POS on OCB is mediated by work engagement.

The Moderating Effect of Psychological Empowerment

Psychological empowerment is an individual's experience of authorization which is a cognitive system of individuals about their job roles and job control, including four cognitive dimensions: meaning, self-efficacy, autonomy and influence. Employees on different levels of psychological empowerment may be caught in inconsistencies in the decision-making on whether they should pay energy to get involved in their work and the degree of efforts. Compared to employees on the low level of psychological empowerment, employees on higher level of psychological empowerment may be more positive in acceptance of organizational resources and the corresponding work challenges. Employees on low levels of psychological empowerment may lack of confidence and a sense of competence to complete the challenge given by their organizations, thus tending to take a conservative attitude to complete existing work. Therefore we formulate:

H4. Psychological empowerment moderated the relationship between POS and work engagement.

Research Methods

Measurement

All measurement scales in this study adopt Likert scale at 7 points; the score from 1 to 7 indicates the attitudes from "completely disagree" to "completely agree".

1. The measurement of POS refers to the scale developed by Kottke. The scale includes 16 items (such as help is available from my organization when I have a problem) (Kottke & Sharafinski, 1988). The Cronbach's value is 0.928.

2. The measurement of psychological empowerment refers to the scale developed by Spreitzer, including 12 items (such as the work I do is very important to me) (Spreitzer, 1995). The Cronbach's value is 0.907.

3. The measurement of work engagement refers to the scale developed by Schaufeli, including 17 items (such as I am enthusiastic about my job) (Schaufeli & Bakker, 2006). The Cronbach's value is 0.960.

4. The measurement of OCB refers to the scale developed by Farh, including 5 items (such as willing to stand up to protect the reputation of the company) (Farh & Earley, 1997). The Cronbach's value is 0.795.

5. Control variables. The control variables in this study include gender, age, educational background, the nature of the unit and seniority.

The Sample

The data of this study was gained from five enterprises of Hangzhou, Wenzhou city. The industries include logistics, real estate, IT industry, and the financial sector. From 233 valid questionnaires, the proportion of males is 29.6%, and females is 70.4%; on age, the proportion of 20 ~ 25 years is 42.6%, 26~30 years is 39.6%, 31~35 years is 12.4%, 36 years and above is 5.4%. On education, the proportion of college degrees and following is 17.2%, undergraduate is 74%, and graduate is 8.8%; on enterprise nature, the proportion of state-owned enterprises is 34.9%, the private enterprise is 45%, and the overseas-funded enterprise is 20.1%. On the company length of service, the proportion of 1~2 years is 47.3%, 3~5 years is 32.5%, 6~8 years is 11.2%, and 9 years and above is 9%.

Descriptive Statistics of Variable and Correlation Analysis

The mean value, standard deviation, correlation coefficient of the variable and the reliability coefficient of scales are shown in following table. Table 1 illustrates that the reliability coefficients of these variables are all above 0.7, which means that all of the scales are reliable. What's more, the correlation index of the all variables is statistically significant at the 0.01 level.

Table 1. Mean, SD, Correlation Coefficient

Variables	1	2	3	4	5	6	7	8	9
1. Gender	—								
2. Age	-0.216**	—							
3. Education	0.022	0.153*	—						
4. Seniority	-0.207**	0.679**	0.116	—					
5. Properties	0.095	-0.234**	-0.027	-0.157*	—				
6. POS	-0.019	-0.008	0.056	-0.051	0.049	(0.928)			
7. Psychological empowerment	-0.078	0.159*	0.103	0.095	0.025	0.620**	(0.907)		
8. Work engagement	0.006	0.093	0.063	-0.001	0.048	0.672**	0.774**	(0.960)	
9. OCB	-0.086	-0.008	0.038	-0.064	0.212**	0.469**	0.627**	0.618**	(0.795)
MEAN	1.700	1.810	1.920	1.820	1.930	4.635	4.767	4.557	4.113
SD	0.458	0.873	0.505	0.955	0.884	0.996	0.940	1.113	0.614

Note: * <0.05 , ** <0.01 , *** $P<0.001$, the same below. The data on the diagonal is Cronbach's index.

Hypothesis Testing

In this study, hierarchical regression is used to test the hypothesis, and the specific results of the analysis are shown in Table 2 and Table 3.

Table 2. The Impact of POS and Work Engagement on OCB

Variables	OCB			Work Engagement	
	M_1	M_2	M_3	M_4	M_5
Gender	-0.114	-0.099	-0.119	0.014	0.036
Age	0.097	0.076	-0.011	0.187	0.156
Education	0.046	0.018	0.014	0.050	0.008
Seniority	-0.123	-0.083	-0.049	-0.120	-0.060
Properties	0.228**	0.205**	0.183**	0.073	0.039
POS		0.453***	0.081		0.669***
Work engagement			0.556***		
R^2	0.067	0.270	0.434	0.024	0.467

In Table 2, Model 2 shows that POS has a significant positive effect on the OCB ($\beta = 0.453$, $p < 0.001$). Thus, Hypothesis 1 is supported. Model 5 shows that perceived organizational support has a significant positive impact on work engagement ($\beta = 0.669$, $p < 0.001$). Thus, Hypothesis 2 is supported.

In Table 2, Model 3 shows that when POS and work engagement are included in the regression equation simultaneously to explain OCB, the mediating effect of work engagement is significant ($\beta = 0.556$, $p < 0.001$), but the effect of POS on OCB is not significant ($\beta = 0.081$, ns). That is, relationship between POS and OCB is fully mediated by work engagement. Thus, Hypothesis 3 is supported.

Table 3. The Effect of POS and Psychological Empowerment on Work Engagement

Variables	Work Engagement		
	M_6	M_7	M_8
Gender	0.010	0.124	0.129
Age	0.051	0.001	0.009
Education	0.266**	0.236***	0.235***
Seniority	-0.034	0.009	0.011
Properties	-0.115	-0.057	-0.063
POS		0.377***	0.372***
Psychological empowerment		0.417***	0.363***
POS \times Psychological empowerment			0.155*
R^2	0.091	0.570	0.591

Models 6 and 7 show that the ability to explain the model increases ($\Delta R^2=0.479$, $p < 0.001$) when POS and psychological empowerment are incorporated into the regression equation simultaneously. Model 8 shows that the ability to explain the model increases to 59.1% ($\Delta R^2=0.021$), and the interaction term regression coefficient of POS and psychological empowerment is significant ($\beta=0.155$, $p < 0.05$), which indicates that psychological empowerment positively moderated the relationship between POS and work engagement. Thus, Hypothesis 4 is supported.

Conclusion and Implications

Conclusion and Discussion

The results showed that:

1. The effect of POS on OCB had been found to be significant and positive: with the increase in the amount of resources, employees' altruistic role behavior will become more frequent;
2. The effect of POS on work engagement had been found to be significant and positive: when employees feel the level POS is increased, then their psychological fortification will be reduced and they can effectively improve the degree of enthusiasm and involvement.
3. The positive effect of POS on organizational citizenship behavior was fully mediated by work engagement: an increase in POS will stimulate the vitality of employees effectively and promote their willingness to undertake the task duties actively beyond requirements;
4. Psychological empowerment positively moderated the relationship between POS and work engagement: when employees believe their work is meaningful and have confidence to complete it, POS is easier to muster work engagement.

Implications and Limitations

1. The ascension of employee's POS can effectively increase the frequency of OCB. In order to motivate employees to show more OCB, managers need to show care and attention on the welfare of employees. When setting goals, they should fully express the organization's expectations, so as to reflect the common goal of employees clearly. Managers also need to give employees full emotional resources, such as giving affirmation and praise to the achievements of employees.

2. In order to effectively stimulate the work enthusiasm of staffs, leaders need to balance individual characteristics, organizational characteristics and leadership situation.

3. There are also several approaches to enhance the level of psychological empowerment. Employees should clarify job content, clearly define job relationship among power, responsibility and interests. When carrying out the task, organizations need to allow them to freely take work methods and procedures within a reasonable range. Organization should fully respect employees' proposals, and do the objective evaluation.

The limitations of this study are as follows: Despite certain measures to minimize interference homologous variance, the measurements of all variables are tested at the same time, which leads to a decrease in the ability to explain the mechanism inevitably. The time lag method can be used in future research. Future studies may explore in depth along this line of thought, which focuses on different OCB.

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Resources, Global Network Ties and Upgrading of Local Firms

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[Abstract] There are two views on firm upgrading: one focuses on the internal resources of firms, and the other takes the external network environment as network resources. Based on resource theory and network theory, this paper explores the relationship between resources, global network ties and upgrading of local firms. The findings of this study provide some guidance for the accumulation of resources and network construction.

[Keywords] upgrading; basic resources; organizational resources; global network tie

Introduction

Under economic globalization, the international production system and division of labor forms have changed greatly. Thus, raising the technical level, expanding the international market, and exerting more value of the industrial chain are the inexorable choices for Chinese local companies. The majority of Chinese companies are still in the low-end value chain, and the core problems are how to break through the difficulties and realize leap-forward development. To solve this problem, the fundamental items are to promote the ability of acquiring value in the global value gain, and to get rid of the low-end locking situation, namely to realize the upgrading of firms.

Scholars in this field initially started their studies of firm upgrading from core competitiveness and the dynamic capabilities of enterprises (Zhang, 2004). On the resource perspective, firm upgrading theory points out that enterprises get their dynamic capabilities through the processes of building, adjusting, integrating, and reconstructing resources and abilities inside or outside the organization. Instead of viewing modern enterprises as independent atoms, network theory considers strategic behavior of firms to be happening in a network environment, and it also points out that a firm's upgrading ability is decided by the network it is embedded in.

Therefore, enterprise network theory analyzes the enterprise's strategic choice and implementation from the outside environment, while resource theory does this from the inside environment. These two ways of analyses are complementary to each other. On this basis, some scholars integrate these two theories and apply the comprehensive perspective to the research of firm upgrading, and they considered that the way of firm upgrading depends on its own resources and the external environment. Although the integration study has made a certain progress, the depth of research is not enough. The following questions still need to be answered: how do the enterprises' resources and outside network ties affect the process of firm upgrading? Which factor is more important? How does the global production network (GPN) impact firm upgrading? Why do those local firms that had established network ties with the leading international companies get caught in the dilemma of "Low-end locking" and descending to "World Factories"? Based on these questions, we offer discussions about how do the enterprises' resources and outside network ties affect the process of firm upgrading has theoretical and practical significance.

Theoretical Basis and Research Hypothesis

Resources and Updating of Local Firm

Firm updating has been described as a process of moving into more technology-intensive and capital-intensive economic areas from which a firm can appropriate higher returns. It also means a process of enhancing the firm's abilities to work on technology-intensive or capital-intensive economic activities (Gereffi, 1999). The essence is to promote enterprise capabilities and implement higher added value. For that reason, we removed abilities from resource classification. According to previous studies and Chinese local firms' reality, we divided inner-enterprise resources into two categories: The basic resources which consist of two assets, one is a tangible asset such as fixed-asset investment scale, and technical equipment, etc., and the other is an intangible asset such as property rights, and employee skills etc.; the organizational resources consist of organizational value and culture, which have an obvious organization characteristic and will influence an enterprise's reputation, relationship, as well as knowledge accumulation.

The basic resources can transform into abilities through using them, and then utilization of these abilities will be further used to generate new knowledge. For example, some local firms with tangible and intangible operation resources can reduce production costs, ensure product quality, and raise the speed of delivery. At the same time, these firms can accumulate technical know-how and technical ability in the productive process through learning by doing. Therefore, basic resources like fixed assets, technical equipment, intellectual property, and employee skills, help the firms to lessen the difficulties of technological and intellectual learning, then accelerate the speed of absorbing the external knowledge and finally accomplish firm updating. At the same time, this helps enterprises to complete production and operation activities efficiently.

The organizational resources directly determine its employee attitude, team leaning, and management level, and they also have significant impacts on the conflict solving mechanism, the working environment, as well as the way of decision making of an enterprise (Yang, et al., 2009). So we know that even though with same basic resources, but entirely different abilities, the final result of a firm will be obtained because of the different organizational resources. In a highly dynamic development of the global network environment, local firms owning innovation-oriented organization resources, such as a sense of change and learning, will encourage innovation and risk-taking, discovery of external opportunities and urge their organization to obtain, digest, transform, and make full use of new knowledge as to intensify their learning ability. But firms with market-oriented and long-term relationship oriented organizational resources such as quality consciousness and service consciousness emphasize on creating superior value for clients and cooperative partner. In this way, these firms possess more aspiration of updating.

To sum up, this research assumes enterprise resources have a direct impact on firm updating.

H1a: The basic resources have a positive effect on the updating of local firms.

H1b: The organizational resources have a positive effect on the updating of local firms.

Network Tie and Updating of Local Firms

It is time-consuming and expensive to develop resources and abilities for an enterprise. Network ties supply enterprises the channels to discover and obtain the external opportunities and resources. Thus, the demands for resources have become the major motivation of building network ties. Ahuja (2000) identified three forms of accumulated capital – technical, commercial and social – from the perspective of

tie formation inducements and opportunities. Most local firms in developing countries are “being caught” in the low value-added segment namely production-manufacturing. So filling the gap of the high-end in the value chain is becoming the main driving factor for the local firms to build global network ties. With the help of existing research results, this paper proceeds from the motivation of building global network ties and divides the global network ties into two types: one is technology relational embeddedness with the purpose of obtaining technological resources, and the other is commerce relational embeddedness with the purpose of gaining commercial resources.

Network theory suggests that network ties have a positive impact on knowledge sharing and learning potential (Inkpen & Tsang, 2005). Local firms can enhance competence and establish knowledge transfer mechanism through embedding GPN led by the advanced enterprises, and finally implement firm updating (Ernst, et al., 2002). In technology relational embeddedness, the leading firm generally supplies the blueprints, technical descriptions and technical assistance to make the quality of products manufactured in local companies meet their technical requirements. In this process, a trust relationship can be built between the leading firms and the latecomer firms through mutual communications and understanding (Larson, 1992), and tacit technical knowledge including technical know-how can be transferred. Commerce relational embeddedness obtains diversified business information and innovative knowledge through building connections with upstream suppliers and downstream clients or sharing the marketing network with foreign firms (Granovetter, 1973). All of this information and knowledge are helpful for the local firms to scan the market environment to establish the target market, to recognize, seize the market opportunities, to increase the probability of commercializing the innovative output, and finally to promote updating.

The above arguments suggest network ties in GPN have a positive influence on firm updating.

H2a: Technology relational embeddedness has a positive effect on the updating of local firms.

H2b: Commerce relational embeddedness has a positive effect on the updating of local firms.

Moderated Effect of Network Ties

Under the background of GPN, the ability of building network of a firm determines the level of the network tie with the foreign companies. Through accumulation of experience and continual leaning, the more relational embeddedness a firm builds with outside partner, the stronger abilities of absorbing external knowledge and integrating internal or external resources (Wang & Chen, 2010). Technology relational embeddedness aimed at obtaining technical resources can help an enterprise to solve technical problems encountered in the innovation process by way of sharing knowledge with the outside partners. The trust relationship can be built between the local companies and foreign partners through solving questions together. That relationship can urge both sides to strive jointly for developing new products and technologies. This novel mechanism of knowledge learning and transfer increases local firms’ efficiency of producing new knowledge and of transforming its internal resources into abilities, which is helpful for the firm to achieve updating. Commerce relational embeddedness directed at obtaining commercial resources makes it easier for the local firms to contact new areas and acquire various information and knowledge, and thus promote and accelerate innovation (Rogers, 2003) Both of the relational embeddedness types are helpful for local firms to utilize their resources better, and to combine the internal resources with their external resources. Then they can match their basic resources and

organizational resources with the market better and promote firm updating. Thus, the more abundant the network ties that local firm has, the more obvious the affect that the enterprise resources will put on the firm updating.

The above arguments suggest the following two hypotheses.

H3a: The impact of internal resources on upgrading is moderated by the technology relational embeddedness.

H3b: The impact of internal resources on upgrading is moderated by the commerce relational embeddedness

Data Analysis and Results

Data Collection

Objects of this study are local Chinese manufacturing firms that have cooperative relationships with foreign enterprises. These firms have no less than 50 employees and have 3 or more years of international operations. The sample mainly comes from Yangtze River Delta region where there has been the development frontier of private economy. In total, we issued 220 questionnaires and acquired 116 effective questionnaires; the effective return ratio is 52.7%. The combined final sample included 10 primary industry groups: food processing, textiles, chemicals, electronics, plastics, metals, and auto components, etc.

Results

Table 1 is the correlation coefficients matrix of the main variables. Among the variables, enterprise scale, basic resource, organizational resource, and technology embeddedness have a positive correlation with firm updating, and correlation coefficients are respectively 0.337 (P<0.05), 0.376 (P<0.01), 0.606 (P<0.01) and 0.267 (P<0.05). Embedding age and commerce embeddedness have no significant correlation with firm updating. Comparing the correlation coefficients between independent variables and firm updating, we found organizational resource's correlation is the greatest, and basic resources, enterprise size, and technology embeddedness network ties are in the next place.

Table 1. Correlation Coefficients Matrix of Main Variables

Variables	1	2	3	4	5	6	7
1. Firm updating	1.00						
2. Embedding age	0.219	1.00					
3. Enterprise size	0.337*	0.369**	1.00				
4. Basic resource	0.376**	0.405**	0.018	1.00			
5. Organizational resource	0.606**	0.086	0.227	0.000	1.00		
6. Technology embeddedness	0.267*	0.254	0.144	0.346**	0.215	1.00	
7. Commerce embeddedness	-0.002	0.185	-0.082	0.233	-0.096	0.000	1.00

** Represents that the correlations are significant at 1% level; * represents that the correlations are significant at 5% level.

Table 2. Results of Regression Analysis of Influencing Factors

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Embedding age	0.131	-0.076	-0.073	-0.029	-0.079	-0.026	-0.065
Enterprise size	0.243	0.180	0.178	0.172	0.181	0.121	0.188
BR		0.437***	0.439***	0.436***	0.443***	0.421***	0.407***
OR		0.497***	0.496***	0.482***	0.494***	0.559***	0.520***
TE			0.000	0.011	-0.001	0.016	-0.003
CE			-0.019	-0.064	-0.016	0.003	-0.012
BR×TE				-0.156			
OR×TE					0.035		
BR×CE						0.215**	
OR×CE							-0.078
R ²	0.100	0.525	0.526	0.546	0.527	0.565	0.530
Adj R ²	0.061	0.482	0.458	0.469	0.446	0.490	0.450
ΔR ²		0.425***	0.001	0.020***	0.001	0.039***	0.004

The numbers in the table are standardized regression coefficient; R² in Models 4-7 are the results compared with Model 3.

* represents P<0.10, ** represents P<0.05, and ***represents P<0.01.

Table 2 shows the results of multivariate regression analysis of local firm upgrading. Model 1 is the regression model of the control variables on the dependent variable – upgrading of enterprises. Model 2 adds to the control variables the set of independent variables: basic resources (BR) and organizational resources (OR). Model 3 is the main effect model which tests how control variables, independent variables, and moderator variables influence firm upgrading. Models 4-7 are the full effect models to see the interaction effects. According to the general practice, this research puts interaction terms into main effects model one-by-one, which can avoid multicollinearity between interaction terms.

The results of Model 2 indicates that model explanation power can be remarkably increased ($\Delta R^2=0.425$, $p<0.01$) when adding two independent variables (BR and OR) to the control variables. In addition, OR has a positive correlation with firm upgrading ($\beta=0.497$, $p<0.01$), which supports Hypothesis 1b; BR has a positive correlation with firm upgrading ($\beta=0.437$, $p<0.01$), which supports Hypothesis 1a. The results of Model 3 manifests that explanation power of the model has not significantly improved when adding technology embeddedness (TE) and commerce embeddedness (CE) as moderator variables, and neither has the correlations between firm upgrading and TE or CE. As a consequence, Hypothesis 2a and 2b have not gotten any support.

The results of Model 4 indicates that explanation power of the model has remarkably improved ($\Delta R^2=0.020$, $p<0.01$) if we add interaction item between BR and TE, but the coefficient of the interaction term between BR and TE is statistically non-significant. The result of Model 5 indicates that explanatory power of the model has not improved remarkably when adding the interaction item between OR and TE, and the coefficient of the interaction term between OR and TE is statistically non-significant. Hypothesis 3a is not supported.

The results of Model 6 manifests that the explanation power of the model has remarkably improved ($\Delta R^2=0.039$, $p<0.01$) if we add the interaction item between BR and CE into the main effect Model 3; The result of Model 7 indicates that when adding the interaction item between OR and CE into the main effect Model 3, its explanation power gets no remarkable increases, and CE has a weak moderating effect between OR and firm upgrading. Therefore, Hypothesis 3b is partially supported.

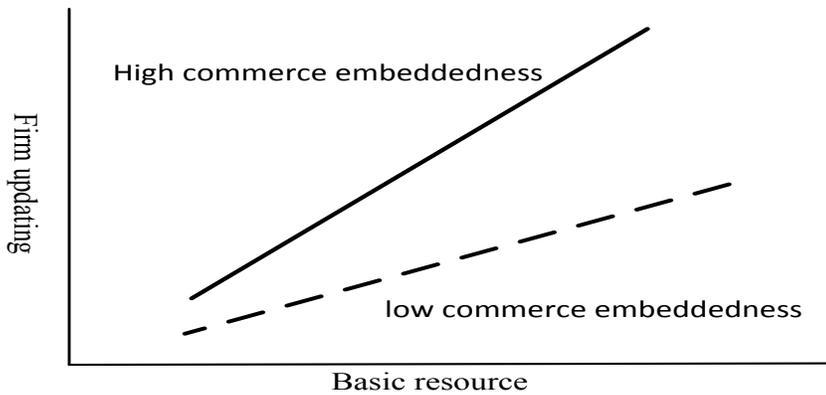


Figure 1. The Interaction Effect of CE on the BR-Updating Relationship Embeddedness

In order to reveal the moderating effect of CE on BR and firm updating, we plotted the trend showing the relationship between BR and firm updating at both high and low levels of CE (as shown in Figure 1). Figure 1 presents the interaction plots, showing that the BR–updating relationship varies depending upon the level of CE. The plots show that the higher the commerce embeddedness is, the stronger the basic resource–updating positive relationship is, and the lower the commerce embeddedness is, the weaker basic resource–updating positive relationship is.

Conclusion and Implications

Based on the resource-based theory and social network theory as the theoretical sources of our research, we study the action mechanism of enterprise resources, network ties and firm updating. Then, we made some empirical research and obtained some meaningful results. First, this research found that the resources that an enterprise possesses will have a direct positive effect on its updating process, but the network ties between local firms and foreign business partners do not affect the updating process. Second, the study also found that network ties have quite a different moderation effect on the relationships between firm updating and different dimensionalities of resources. Among these different kinds of resources, only commerce embeddedness has a positive moderation effect on the basic resources – enterprise updating relationship – while the others do not.

The results of this research supply significant enlightenments for enterprise updating. On the one hand, local firms should effectively organize value chain activities and cultivate the consciousness of service and higher quality. They should also encourage employees to study continually and cultivate their innovating spirit so they accumulate and promote their basic resources and organizational resources. On the other hand, relying on their low cost production and operation ability, enterprises that have some basic resources need to initiatively construct various commerce embeddedness type of network ties with foreign advanced companies so that they can acquire high-end network resources and diverse information, increase the ability of utilizing their resources, and finally achieve updating.

Acknowledgements

The authors are grateful for the financial support from the National Social Science Foundation of China (Grant No. 12BGL006), and the Humanities and Social Science Foundation of Ministry of Education of China (Grant No. 11YJC630192).

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Spatial Analysis on the Experienced Utility of Recreational Tourism

– Taking Hangzhou as a Tourist Source

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[Abstract] The quantitative research has a great impact on recreational tourism experienced utility. The time between Hangzhou to the tourist attractions in Zhejiang province, and what was spent in these tourist attractions are the subject of this article. We established a recreational tourism experienced utility function model and index map which clearly revealed the actual situation of scenic experience utility, and fully realized the analysis of micro leisure economy and the construction of traffic network. It could contribute to the quality of the journey and the construction of visiting time and tourist traffic, which can also increase attraction of tourism scenic.

[Keywords] Hangzhou; recreational tourism; function model of experienced utility; partial analysis

Introduction

Recreational tourism has been approved by more and more experts, scholars and government, and has become the hot spot of the domestic scholars' recent researches. They have been mainly about consumption model, mode, structure and the recreational way, etc. But such small quantity of research impelled us to investigate the angles of tourists' experienced utility especially from the spatial pattern to index. It was chiefly confined to the short development history the specialized background and the poor leisure industry statistics system. This study took the angle of the spatial distribution of leisure travelers' leisure experience utility index as a starting point, and calculated the model, which regarded Hangzhou as the tourist-generating region. In this background, a map of recreational tourism experience index would be finished, based on analyzing the space structure features of recreational tourism destination which provides a method of scientific thinking to make a good space planning of the recreational tourism industry, to raise the tourists' leisure travel experience utility, and to improve the competitiveness of the recreational industry.

The Theoretical Foundation

Leisure travel experience utility index refers to the tourism consumers from the leisure tourism consumption about touring time. It combines the magnitude of the geographical data in GIS, Auto CAD, perfecting the design of the function, space of the traditional economics, new leisure economics, the central place theory, spatial economics, economics of leisure, symbiosis theory and other scientific theory into the research process. Based on the research, the use of the function model, rational analysis, evaluation of scenic spots and the suitability of transportation problem, it provides industry association, the tourism enterprises, and the district government proposals for science and technology support.

The Application of W. Christaller Center Geographical Theory

W. Christaller center geography theory states that producers seek maximum profit, and master big markets as far as possible, which leads to the distance between the producers. Consumers are consciously drawn to the nearest center for goods or obtain services in order to the costs. Rating is an important concept central to the geographic theory. According to the central place's service scope, it could be divided into high-level and low-level tourist centers. Tourist center place meets residents' daily recreational activity, and superior tourism center contented to higher levels of tourism experiences. In the system of urban tourism space, senior tourism center usually is the tourism center city, and the intermediate center usually was the travel town, and low-level center usually was a travel village (Christaller, 1998).

Symbiosis Theory

As one of the core theories of population ecology, the Symbiosis Theory's content includes researching the mode and environment for the information transmission among the population, the communication between materials, the energy transmission, and the cooperation and symbiosis. It has a good compatibility and applicability to the cross boarder tourism cooperation in Zhejiang (Leng, & Zhang, 2007). The core content of the development of cross regional tourism was the joint development of the tourism industry, namely in the exploiting of tourist attractions; the enterprises, industry associations and regional governments took the cooperation activities which regard the movement and new configuration of production elements (transportation, catering, and hotels) as the main content in the tourism development so as to achieve a common interest.

The Relationship Between Recreational Travel and Transportation

The traditional recreational travel focuses on the leisure content of tourist attractions, such as building high-grade and fresh facilities to attract tourists, or pursues local characteristics, but does not consider that there have been many similar tourist attractions. In order to achieve the short-term benefits, they charged money for admission blindly, which makes visitors flinch. Any kind of tourism consumption is formed by transportation network and the tourist attraction. Tourist traffic related to the time that consumers spent to reach the scenic spots in the journey, and visiting time was that consumers go actual sightseeing in the process of visiting (Zheng Wang, 2002). All signs indicate that present visitors paid more and more attention to cost performance of tourism. Especially for most tourist groups – young people, they could only enjoy the tour service on vacation. Thus, they focused more on the distribution of travel time and the traveling project service they enjoy. The leisure tourism experience utility index theory was produced at the background of combining with the current market environment. This study has a solid theoretical meaning and realistic meaning (Li, 2010).

The Construct of the Experienced Utility Index of Recreational Tourism

Research Thoughts

Recreational eco-tourism has become the leading production of the travel industry in the 21st century. Hence, it is important to research the experienced utility index of recreational tourism, provided we only took the time spent in tourist attractions and commuting into consideration, in spite of tourists' income, age and the length of holiday. First, in order to define the research range clearly, the research regards Hangzhou as the tourist-generating region, and we took ten cities of Jinhua, Ningbo, Zhoushan, Quzhou,

Lishui, Wenzhou, Huzhou, Taizhou, Jiaxing and Shaoxing as the travel destinations. Secondly, we made a chart of the experienced utility index of recreational tourism by means of consulting the travel agencies, surfing online and so on. We recorded the number of tourist attractions, from Hangzhou to Jinhua, Ningbo, Zhoushan and so on, and the time spent in each single tourist attraction. By comparison between the time of traveling and commuting, we created the table of the utility index of recreational tourism based on the tourist-generating region of Hangzhou. Furthermore, we drew a chart of the consumption utility index of recreational tourism of the tourist attraction based on the table. Third, we made a map of the experienced utility index of recreational tourism based on the chart of the experienced utility index of recreational tourism. We took measures of the tourist attractions for which the index is less than one. By improving and completing the road transport network to reduce the time spent on the road, and increasing the tourism projects to enhance the time of traveling. All of these make a big difference to the travel agency, government department and travel consumer. However, according to the map of the experienced utility index of recreational tourism, we knew the urban system of the tourist attraction and the space structure of travel. Moreover, we deeply read the experienced utility index of recreational tourism which indicates what was actually happening locally, and the effect of the experienced utility index of recreational tourism that was made by the urban transportation system.

Assumption

First, we only took the time spent on the road and the choice of the travel destinations into consideration, in spite of cost, psychology, holiday system, health and any other special situations. Second, in the given time, the production of every tourist attraction is the same; the consumers receive the same service in the different tourist attraction. Third, all of the mentioned statistics are from travel agencies, telephone and internet. Because the statistics of travel agency, travel time, social factors and all change from time to time, we used statistics, which were obtain in the normal situation (high season), and are kind of different from the actual statistics. Fourth, considering the variety of actual travel routines, the following chart shows the routines with the tour groups of one-day tours or two-day tours except for driving tours, traveling for many days or any others. The routines are commonly the fixed line. Fifth, the time spent on the road of every tourist attraction is as same as most tourist groups; Hangzhou was the tourist generating region, based on the common road conditions, without considering the different roads in Hangzhou or other factors, the travel time was subject to the average time of traveling with the group actually.

The Mathematical Model

T_1 : the time of traveling. T_2 : the time spent on the road from the tourist-generating region to the destination. Build the function model of the experienced utility index of recreational tourism:

$$F = \frac{T_1}{T_2}$$

It was therefore concluded that the time of traveling is directly related to the experienced utility index of recreational tourism, and vice versa. Under the same of T_2 , the longer time of traveling, the higher of the experienced utility index of recreational tourism; the more attractive of the production to consumers; provided under the same time of traveling, the longer time spent on the road, the lower of the experienced utility index of recreational tourism.

Collect and Analyze the Statistics

In order to combine the theories with reality, we collected the materials of six famous tourist attractions except Hangzhou in Zhejiang province. According to the materials, we knew that these places are mostly the destinations traveled by the group travelers. We obtained and analyzed the materials, which concluded the various ways of traveling, such as one-day tours and two-day tours, of the top 11 travel agencies in Hangzhou. We made sure of the time spent on the road and in the traveling, the tourist project, price and ticket. The ordinate denoted the travel time, and the abscissa was the time spent on the road, and then we worked out the experienced utility index of recreational tourism of each tourist attraction and the chart of the consumption utility index of recreational tourism, see Figure 1.

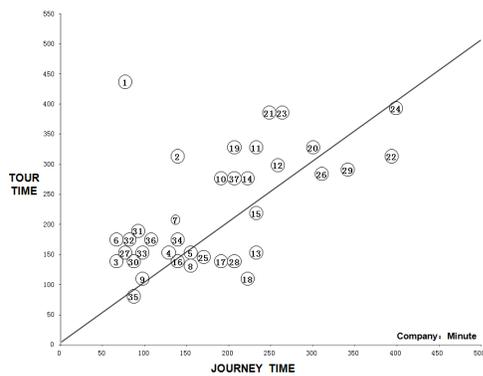


Figure 1. Distribution of the Experienced Utility Index of Recreational Tourism of Tourist From Hangzhou

Distribution Analysis on the Experienced Utility Index of Recreational Tourism

The Characteristics of Curve Distribution

In order to facilitate the drawing of the maps, the experienced utility index of recreational tourism is divided into five grades, namely, 1.5, 1.3, 1.0, 0.8, and 0.6. The current situation of tourist attractions was displayed directly on the index chart by way of contour lines. Obviously, the tourist attractions and the surrounding areas are different. The contour lines and the peak and valley lines have changed dramatically, alternating obviously. Xitang, Putuo, Nanbei Lake and so on are significantly different from their surroundings. After visiting a tourist attraction, the experienced utility index of recreational tourism trends to reduce. The reason is that the tourism projects of the surrounding areas are reducing suddenly. Although some small tourist attractions or scenic spots are built attached to some larger scenic spots, they could not attract the customers naturally because these small tourism projects are less in quantity and less than two hours will be enough to visit.

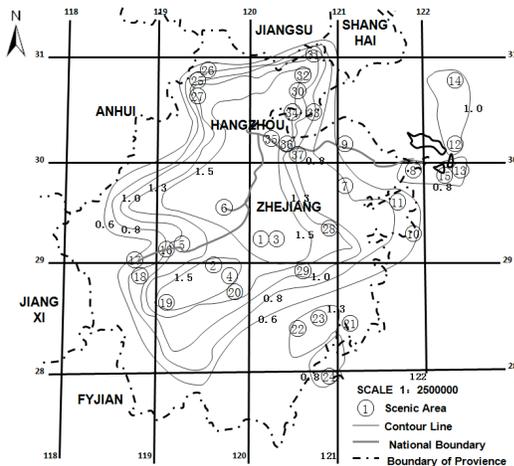


Figure 2. The MAP on the Zhejiang Province Experienced Utility of Recreational Tourism

From the chart, we could draw the conclusion that although the experienced utility index of recreational tourism in some tourist attractions were the same or close, they were far away from Hangzhou. Take Wuzhen, or Wuyi, the southern home of the first as an example, they were far away from Hangzhou, but the experienced utility index of recreational tourism is the same – 1.5. We should think deeply about the causes. During the research of the experienced utility index of recreational tourism, we found that in addition to the important influence index of the traffic mileage on tourism consumption, the tourism projects of the attractions was another major consideration; that is the time to visit.

The map of the experienced utility index of recreational tourism taking Hangzhou as the tourist source was the reflection about the traffic mileage and the tourism projects of the experienced utility index of recreational tourism on different tourist attractions. It is distributing as a ladder from Hangzhou to the surrounding areas, and becoming a special zone in the coastal areas. It was forming the peak of the experienced utility index of recreational tourism as a center of Wuyi and Hangshao area.

The map based on “the chart of the experienced utility index of recreational tourism taking Hangzhou as a starting”, and to improve the accuracy of the map, the highest value, 4.3636, of Hengdian studio, the lowest value, 0.4646, of Days Longmen, Yaowang mountain ridge were taken out from the statistical data. Take the highest value as a standard about the different experienced utility index of recreational tourism in the same area.

Tourist Space Structure and Urban System

Throughout the tourist attractions in Zhejiang Province, the influence of the central place in scenic spots was not strong except the AAAAA level of tourist attractions: the West Lake in Hangzhou, and Yandang Mountain in Wenzhou. The distribution order and space structure of different sizes and levels of central places in the same area had a certain balance. Therefore, the central region and the west area of Zhejiang lacks a senior tourism center, in fact. There is a certain developing space and developing potential in the central region and the west area of Zhejiang during the development of tourism in the future.

From the level of the central place, we could learn that the levels of the tourist attractions close to the prefecture level cities were higher than any other area, and have good transportation facilities. They serve areas of scenic increases accordingly because of the influence of the prefecture level cities, and the consideration of the capability in attracting investment in the prefecture level cities.

The structure of the Yangtze River Delta with Shanghai as a single center, and the urban system in Zhejiang presents multicenter structures, and influence the developing system in Zhejiang tourism. Hangzhou, and Ningbo were the first class central cities, and then Jiaxing, Shaoxing, Wenzhou, Taizhou, Jinhua and Huzhou; Lishui, and Quzhou were the second-class central cities (Lv, & Wang). The tourist attractions of central cities in different classes were connected with main roads and surround their central areas presenting as a radial pattern, and very few tourist attractions are built across the cities. The development of Zhejiang tourism was spreading gradually from the central cities. Hangzhou, Ningbo and their administrative areas form the main earned income areas, and the rest of the tourist cities are the local tourist city areas. (Most tourist attractions develop relatively slow except some scenic spots.) This kind of space structure has formed gradually through the highly developing of the economy in Zhejiang in recent years, and would influence the development of tourism with restrictive effect (Huang, 2009).

The Surface Domain Structure of Tourism Spatial Structure

On the map of the experienced utility index of recreational tourism, we could learn directly that the recreational landscape scenic spots in Zhejiang are piling up with or two or three, and the adjacent scenic spots are distributed closely. It was generally available in the area of Mogan Mountain in Anji, Huzhou, the area of Fenghua, Ningbo, the area of Zhoushan islands, the area of Xianju, Taizhou, Lanxi Longyou of Jinhua and Quzhou, and Jiulong Mountains in Quzhou. These areas are mainly based on scenic spots of landscape travel and vacation travel, and these scenic spots are relatively concentrated on the development district. This was the general way to attract customers by means of the nearby tourist attractions (Xu, & Zhang, 2005).

We also observe that the experienced utility index of recreational tourism, which in the most regions are different. For example, the Hidden Dragon Waterfalls, the Jiangnan Tianchi, the Bamboo expo garden, and the Zhongnan herb were in the Mount Mogan. In fact, they were the different developments of tourism projects in the same mountain. However, the experienced utility index of recreational tourism in this district changed a lot in gradient and across three stages: 1.3, 1.0, and 0.8. The tourist consumption index in the Bamboo expo garden is 1.3333. The Bamboo expo garden was not only famous for its bamboo, but also horse races, motorcycle races, camping, barbecue, fishing, visiting pandas and so on. But the index in skiing in the Jiangnan, Tianchi is 0.7389, and actually, the Jiangnan Tianchi also provides tourism projects, sightseeing and skiing, but the cost is high. It followed that the attractions of adjoining areas were different, because of the different forms of the tourism, and the differences are obvious. So we could associate that if these scenic spots increase some different and unique tourism projects to improve the tourist consumption index, especially in the cultural connotation of tourism projects, then they will stand out and attract consumer markets.

Zhejiang tourist development is based on the joint participation of 10 cities. This project makes up the symbiotic unit of Zhejiang tourism, which is mainly based on the paradise Hangzhou as it radiates from every prefecture level. Taking the West Zhejiang as an example, the leading tourism types are landscape travel and ecological tours in Quzhou and Lishui, according to the Zhejiang province tourism development planning. The two cities are adjoined to each other geographically, and the developing policy in the main area was in common. Consequently, if they were utilized properly, the regional specialization mode caused by the regional centralization of tourism could make the two city complementary development.

The Map of Traffic System and the Experienced Utility Index of Recreational Tourism

The tourist traffic was divided into two parts: the traffic between the starting place and the scenic spots, and the internal traffic in the scenic spots. At present, Zhejiang Province has developed a tourism network that is mainly based on West Lake, Hangzhou, and the east, the south, the west, and the north is in different characteristics. The tourist traffic of Hangzhou to other places in Zhejiang is mainly based on coaches and buses. Hence, the national highway and provincial highway were the main ways for tourist traffic in Zhejiang Province. The national highways (104, & 320) have built the highway traffic network in Zhejiang (Zhang, & Yang, 2000).

In addition to the cross-sea bridge, the traffic is not one of the tourism projects because it is an important means for consumers heading to tourist destinations. So the national highway and the provincial highway are becoming a valley line. However, most tourism projects were built in the optimum principle of traffic. The tourism projects from Jinhua to Quzhou, and Ningbo to Tiantai were close to the main traffic lines. Therefore, the consumer index of the traffic lines on both sides was much higher than the road areas. It was mentally increasing the friendliness degree to consumers by way of saving costs and reducing journey time.

Conclusion

First, with the development of the urban leisure industry, most consumers preferred to focus on the travel experience of high price tourism consumption, so in the scenic construction, tourist unit should increase tourism projects in order to increase the visiting time; tourist unit should be perfect and add tourist facilities in order to experience them deeply, not just skim the surface.

Second, according to the experienced utility index of recreational tourism, it is urgent to perfect the traffic of the tourism spots. The traffic condition is an important consideration in choosing the tourism, so the government should keep traffic smooth and easy and adding some bus lines if necessary. Considering the tourism spots, some with good facilities should pick up their tourists to avoid the inconvenience of changing trains and buses (Chen, 2007).

Finally, many cities strived to develop tourist resources but the effect is not obvious; we know that the problem is that the newly developed scenic areas are not famous enough compared with the old scenic areas, and tourism resources have similar projects, so the attractions are not particularly obvious. In order to fully develop the economic benefits of the new scenic areas, the new and the old scenic areas could be united with each other, such as a ticket, which includes a number of scenic spots, making full use of the influence of the old scenic area to spur the development of new scenic area. It would make the content of tourists enriched, and also increase the experienced utility index of recreational tourism. Scenic surroundings should be equipped with restaurants and accommodations for the convenience of the tourist (Xu, & Hangzhou, 2004).

This article used time ratio for its empirical study, and the construction of the model has many assumptions, belonging to normative research. Certainly, many changes of conditions would change the experienced utility index of recreational tourism, for instance, the level of costs, and the core attraction of the leisure, etc. will affect the experienced utility of the tourists and these remain to be further discussed.

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Research and Analysis on the Rural Housing Land Transition Mechanism

– Based on the Case of Zhejiang Province

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***[Abstract]** This paper aims at researching and analyzing problems in the rural housing land transition mechanism from the perspective of rural residents' will. Through survey and interview, the research gathered information on how they view rural housing land transition, their preference of transition approaches, as well as their worries about transition. The outcomes show that most respondents are willing to circulate their housing. Replacement is the most popular choice in all the ways of rural housing land transition, as they believe it has the largest payback. This report also analyzes the factors that have an influence on residents' will of land transition. The government should help rural residents learn more about rural housing land transition. Also, related polices and laws should be perfected.*

***[Keyword]** rural housing land transition; residents' will; Zhejiang; polices*

Introduction

On the one hand, with the progress of urbanization and industrialization in China, urban land for construction use has extended constantly, which led to the conflicts between extensive land demand and limited land supply (Dong, 1996; Kung, 2000). On the other hand, there is a booming amount of migrants from rural areas in large cities. As a result, considerable lands are left unused in rural areas, while they would have been bringing benefits for rural residents. Hence, if rural land can be transacted in the land transition market, the intensive land supply and demand will be relieved. Also, the transaction will increase the income of rural residents. However, land transition faces many complex problems in current social, economic and political context of China. The great population of the country forces people to pay attention to land use in rural areas. There are two kinds of land in rural areas – rural housing land and agricultural land. In order to ensure food supply security, agricultural land cannot be transferred into construction land without rigid administrative approval. Hence, rural housing land is a better choice for rural land transition. At present, rural housing land transition in Zhejiang Province is implemented in two ways: pledge and replacement. However, related laws and regulations are incomplete, which may make rural residents vulnerable in the process of rural housing land transition. Hence, it is in an urgent need to research and analyze problems in rural housing land transition mechanism, further improving current understanding based on empirical studies.

Housing Land Transition Mechanism

Housing land is defined as land for buildings and planning land from the perspective of land attribute (Chen, 2007; Wang, 1998). According to Liu (2010), housing land can be defined as houses and related buildings built on collective lands that are allocated to the rural resident, from the perspective of land use. There is also another opinion that believes only the lands used to build houses for rural residents are housing land. From the perspective of land as property, the land is collective while the buildings are

owned by individuals, thus the houses are not commercial residential buildings. In this essay, housing land is defined as the land allocated to rural residents no matter how they are used.

Housing land transition refers to the behavior of rural residents to circulate the right of use of houses or related buildings on the allocated land to others, including transfer, rental, pledge, becoming a shareholder and replacement (Yu, 2009; Zhu, 2012). In fact, rural residents only have the right of use of the allocated land, not the ownership of the land. Hence, the land is not private and cannot be inherited (Zhao, 2008). However, the houses and related buildings on the land are private and can be circulated according to owners' will. In fact, when the house is transferred, the right of use of the land is transferred at the same time, which may lead to some behaviors of rural residents that are against laws and regulations. For instance, once children who have their own housing land inherit their parents' housing land, they would have two pieces of housing land, which will violate the law of 'one household, one housing land. Therefore, it is in a great need to maintain rural housing land transition on the basis of legal procedure.

All in all, there are three main approaches to implement rural housing land transition according to related policies in Zhejiang Province, namely rural house pledge, rural housing land replacement and other transitions. Rural house pledge is a unique way to implement rural housing land transition in Taizhou, Huzhou, Wenzhou, and Jiaxing, etc. of Zhejiang Province. This pledge can help rural residents to transfer their housing land and related buildings as property to capital, which is good for forming a market-oriented economy. At present, rural housing land replacement is another main approach to implementing rural housing land transition. Some relative successful mode in Jiaxing is as follows: first, rural residents turn citizens by turning rural housing land into commercial housing; second, rural residents replace their housing land with another piece of housing land in a resident intensive area, which will benefit industry intensive development of rural areas. Except for the two main approaches mentioned above, there are other approaches to implementing rural housing land transition as well. Rental is one of those approaches. Lessors obtain incomes from lessees by transferring the right of use of the housings for a period of time.

Rural housing land transition could never be stopped in the past although it is illegal (Wen, 2013). Hence, Zhejiang government carries out reforms aiming at the practice of rural housing land transition from the perspective of wills of rural residents (Zhu, 2012a; Zhu, 2012b).

Study Area and Methodology

Study areas of this paper are Shacheng County in Wenzhou City and Guali County in Hangzhou City. The field investigation was conducted in the form of questionnaire and interview from April 2014 to May 2014. There are twelve questions (including 10 single choices and 2 blank fillings) in the questionnaire. The main gathered information can be divided into three aspects: general rural household information, current situation of rural housing land transition, and rural residents' attitudes towards housing land transition. The research combines questionnaire and interview to obtain more information. The information from the interview can help in analyzing the data gained from the questionnaire and giving recommendations to policy makers.

Data and Results

247 of all the 280 distributed questionnaires have been recycled, in which there are 225 effective results. The effective rate is 80.4% (Table 1). The data gathered from the survey is shown in Table 1. The

respondents mainly consist of the middle-aged and elderly people. Relative low levels of education are one of the characteristics, which have a negative effect on rural housing land transition for the reason that the education level will limit residents' understanding of related law and policy. 78.2% of the respondents are not agricultural labors and 73.3% of respondents have an annual household income of 50,000 RMB to 150,000 RMB. Some extra information is obtained from interviews. A large part of non-agricultural labors are forced to change their occupations because their farming lands have been expropriated. In addition, almost every agricultural labor has more than 15 Ha lands for a household. Most of the residents who have less than 15 Ha for a household have a part-time non-agricultural job, as doing agricultural work cannot afford ordinary household expenses if their lands are less than 15 ha.

Table 1. Outcome of the Questionnaires

Items	Options	Times	Frequency
Gender	Male	196	87.1%
	Female	29	12.9%
Age	Under 35	35	15.6%
	35-55	165	73.3%
	Above 55	25	11.1%
Education	Primary school or under	67	29.8%
	Junior middle school	111	49.3%
	Junior high school or above	47	20.9%
Housing land size	Expropriated	178	79.1%
	15 ha or under	12	5.3%
	Above 15 ha	36	16.0%
Occupation	Agricultural labor	35	15.6%
	Non-agricultural labor	176	78.2%
	Part-time	14	6.2%
Household annual income	Under 50,000 RMB	24	10.7%
	50,000 RMB-150,000 RMB	165	73.3%
	Above 150,000 RMB	36	16.0%
Current use of housing land	Dwell	103	45.8%
	Idle	11	4.9%
	Rental or others	111	49.3%
Approval of housing land transition	Yes	218	96.9%
	No	7	3.1%
Expected transition approaches	Selling	58	25.8%
	Replacement	135	60.0%
	Pledge or others	32	14.2%
Worries about the transition	Protection of policy and law	105	46.7%
	Influence on future life	74	32.9%
	Others	46	20.4%

From the perspective of current use of housing land, almost half of the respondents rent out part of their housing, as there is a large migrant population in Zhejiang Province. The rent of commercial housing is expensive while rural housing is relative economical, which appeals to most migrants. Due to this great demand, rural residents tend to rent out their housing to increase income. Result of the survey shows 96.9% of the respondents is willing to circulate their housing land, including 25.8% of which want to trade their housing and 14.2% of which want to circulate housing through pledge or other approaches. The other 60% of respondents prefer a replacement of their housing, as the replacement is conducted by

the government, which will not only improve their living environment, but also raise the price of their housing. Also nearly half of all the respondents worries that they cannot protect their own lawful rights and interests in the process of rural housing land transition, as they do not understand related policies and laws enough. In addition, replacement may cause a series of problems in future life of some residents.

Discussion

Residents' will of rural housing land transition is influenced by multiple factors. This part will discuss related factors based on the survey from four aspects of age, education, occupation and household income. There is a tendency that older people have weaker preference to circulate their housing and stronger preference of replacement according to the survey (Table 2).

Table 2. Age Factor

Will	Under 35	35-55	Above 55
Age			
Approval	35	165	18
Disapproval	0	0	7
Age	Under 35	35-55	Above 55
Form			
Selling	17	41	0
Replacement	6	104	25
Pledge or other	12	20	0

Respondents who disagree with rural housing land transition are all older than 55 years old. These elderly prefer to hold their own housing because of their conservative minds. It seems that the older the people are, the harder it is to change their minds. However, whether or not there is a relationship between the two cannot be figured out, as the amount of samples is too small. Rural housing replacement is implemented by the government and has a stable payback, but the payback period is relative long. Hence, elderly would like to choose replacement, the more stable way, to circulate their housing land, while young people prefer a more risky way but with a potential higher payback, such as selling or pledge. Lower levels of education may lead to weaker wills to circulate housing and stronger preference of replacement according to the survey (Table 3).

Table 3. Education Factor

Will	Primary or under	Junior middle	Junior high or above
Education			
Approval	60	111	47
Disapproval	7	0	0
Form	Primary or under	Junior middle	Junior high or above
Education			
Selling	10	23	25
Replacement	56	77	2
Pledge or other	1	11	20

Rural residents with low education levels have less means to make a living. Hence, they face great employment pressures, which leads to their high dependence on their housing land. At the same time, they hardly understand how land transition will benefit them, so they tend to make no or little change. Replacement apparently is a good choice for these people. However, residents with high education levels prefer risky choices, as they believe that they can trust their own judgment on related policies and market trends to avoid risks and gain more through the transition. According to the survey, it seems that occupation has no obvious influence on rural residents' preference of housing land transition (Table 4).

Table 4. Occupation Factor

Will	Non-agricultural	Agricultural	Part-time
Occupation			
Approval	175	31	12
Disapproval	1	4	2
Occupation	Non-agricultural	Agricultural	Part-time
Form			
Selling	58	0	0
Replacement	96	25	14
Pledge or other	22	10	0

There only is a relative stronger relationship between non-agricultural labor and expected transition form of selling, pledge and others. What should be mentioned is that most of the respondents who do agricultural work have more than 15 Ha land. Hence, some agricultural labors choose selling and pledge to extent their production, while apparently non-agricultural labors want more capital for their investment in financial industry. Income and the will of rural housing land transition have a negative relationship according to the survey (Table 5).

Table 5. Household Factor

Income	Under 50,000	50,000-150,000	Above 150,000
Will			
Approval	24	164	30
Disapproval	0	1	6
Income	Under 50,000	50,000-150,000	Above 150,000
Form			
Selling	7	45	6
Replacement	0	105	30
Pledge or other	17	15	0

Residents who have a lower income show greater will on rural housing land transition, which may increase their income. From the perspective of transition approaches, residents who have a relative high income prefer replacement, as they want to obtain the identity of urban residents. However, low-income people want to transfer rural housing into part of their income.

Conclusion and Recommendations

According to the survey and interview, rural residents prefer housing replacement because they can replace their rural housing with urban housing, as well as identities of urban residents, which allow them to obtain access to better society security. In other words, the actual will on taking part in housing land transition is weak. Hence, improvement of the social security system plays an important role in promoting multiple rural housing land transition approaches. This report also reflects some problems. For instance, the levels of education largely limit the rural residents' understanding of housing land transition. The application and approval process of the transition is too complex, which also limits the residents' participation. As a result, publication of land transition related issues are necessary, which may help rural residents understand rural housing land transition better. In addition, there are many weaknesses of rural housing land transition mechanism as well. No detailed rules and regulations are given, which confuse rural residents who want to circulate their housing. Furthermore, the defect of related laws and policies make disputes of land transition difficult to settle. Consequently, it is important to perfect related laws and simplify the procedure. Introduction of market mechanism will also help the construction of rural housing land transition system.

Acknowledgments

I would like to acknowledge the financial support of the National Natural Science Foundation of China (41171151, 41371188), Human Social Science Foundation of the Chinese Ministry of Education (11YJC630254), and Zhejiang Province Philosophy & social sciences Foundation (12JCG19YB).

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An Investigating on Green Consumption Emotions Affecting Green Purchasing Behavior: An Empirical Research

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[Abstract] Green consumption emotion is an important factor of green purchasing behavior. Researching the mechanism between them and applying the result to the green products market is a very valuable research object. By using the path analysis structure equation model, we analyzed the behavior of Cuiyuan Street residents to buy White household appliances in the evaluation of green consumption emotion effect of green purchasing behavior, and then designed corresponding marketing strategies according to the analysis conclusion. Based on the social public green consumption emotions as the breakthrough point, this can help the government or the relevant enterprises to make effective marketing decisions and promote energy conservation and environmental protection of White household appliances marketing promotion efficiently and effectively.

[Keywords] green consumption emotions; green purchasing behavior; urban residents; white household appliances

Introduction

Nowadays, it's getting more and more common that consumers are requiring the responsibilities of society and the bottom line of environmental ethics (Fischer, 2005). At the same time, domestic residents pay much more attention on environmental issues, and more and more consuming behaviors are becoming green and eco-like, but it's still not enough to meet the request of green consumption. Many domestic residents suppose the protection of the environment is just the responsibility of government; it is none of their business. Furthermore, more than 70% of rural residents prohibit the practice of green products marketing (Liu Boya, 2009, p. 115).

So it's very quintessential to guide the residents' green consumption. Guiding green consumption means the government, sellers and other social organizations use the economy (Ning Xueping 2008, p. 2). As a result, we can achieve the harmony between green business and green consuming. So, we have to make it clear the quintessential factor of green purchasing.

Literature Review

Green Purchasing Behavior is a kind of behavior that consumers will not only consider the aim of purchasing but also the possibility of reducing the pollution on the environment when they come to realize the issues of environment; this is a sustainable and responsible consuming behavior (Chen Kai, 2013, p. 125). Always, Green Purchasing Behavior refers to the same thing compared to Pro-environmental Consumption or Purchases of Green Products. Some scholars also use Ecological Consumption or Green Consumption to replace Green Purchasing Behavior. We use Green Purchasing Behavior here and there is no difference compared to Green consumption behavior.

Kalyani Menon & Laurette Dub (2000) regard consumption emotion as a sort of emotional reaction after consumers obtain the value of products (Kalyani, 2000, p. 25). Green consumption emotion has a

great influence on consumers' purchasing behavior. American Psychologists David Weston and Auke Tellegen proposed a two-factor theory of consumption emotion model; it can be divided into positive emotion and negative emotion (Waston, 1985, p. 220). The current academic circles use Itzhak's basic emotional scale most often where consumption emotion can be divided into two categories: positive affection and negative affection.

Hypothesis Model

According to Chan (2000) and the path of the model analysis, ecological emotion is a significant positive influence on green purchase behavior (Chan, 2000, p. 340). Dan Yu (2008) argued that attitude could be further subdivided into two dimensions: perception and emotion. Some studies have explored awareness and emotional components in predicting the relative strength of the different behaviors; the results found that emotions can predict perception better (Wang, 2013, p. 79). Meneses (2010) took the emotional special research and the results show that the hydrophilic environment to consumer behavior, emotional factors have greater influence than the cognitive factors. Furthermore, positive emotion is more powerful than negative emotion (Meneses, 2010, p. 105). Xingdong Wang (2012) took five cities (Beijing, Guangzhou, Shanghai, Wuhan, and Chengdu) as the research object, and constructed a conceptual model to study the influence factors of China's low-carbon urban residents purchase. He believes that, in the personal factors, the influence of low carbon emotional impact is dominant on low carbon purchase intention (Wang, 2012, p. 53). Yinghao Li (2013) investigated people's buying behavior of the brand, which is often an irrational consumption process, as the role of emotion in the brand choice is very large.

According to the above research results, this paper studies the green consumption emotions, and we suppose these following hypotheses:

H₁: Green consumption emotions of the residents are related to their green purchasing behaviors;

H₂: The green consumption of positive emotion and negative emotions of green consumption is highly related;

H₃: The influence that positive green consumption emotion imposes is greater than negative green consumption emotions;

H₄: There is no difference between the influence degrees which positive green consumption emotion imposes on the four types of green purchasing behavior;

H₅: There is no difference between the influence degrees which negative green consumption emotion imposes on the four types of green purchasing behavior.

Design of the Research Questionnaire

In this study, the questionnaire contained the measurement of variables with each item; it is based on the existing literature, and combined with the aim of this study and need and design. The purpose of the questionnaire is through the statistical analysis of questionnaire data, a series of related hypotheses and model validation of this research, and conclusions are developed.

We developed a questionnaire using a seven point Likert scale, in the form of urban residents in different situations of white goods consumption emotions and buying behavior. Emotion among them, the consumption is divided into two categories, namely, positive affection and negative affection, and each

type of emotion and representative concrete emotion are used as the index, with a gradual step-by-step measuring of green consumption emotions of the residents.

Buying behavior criterion with Zhi-yi He (2004) developed for the social public green purchasing behavior of “consumer lifestyle questionnaire” as the foundation, green buying behavior can be divided into special purchase, premium, conversion, brand and boycott the worst purchase four categories. The four kinds of purchase behavior, respectively, according to different aspects of green consumption include: reveal the public attention of green consumption; replace the use of more environmentally friendly brand intention; reveal people’s attitudes towards green price; indicate the buying behavior of people. The worst here refers to the energy conservation and environmental protection that has done the most bad white goods.

Process of Investigation

Research activities were carried out in Hangzhou City, Zhejiang Province, and CuiYuan Street. Court Street is located in Xihu District high tech-culture and education center, and established in 1986; Hangzhou city is a very representative of the street. Research activities were mainly taken in Cui Yuan Xiao Qu and Wumart supermarkets, implementing face-to-face on-site surveys. In order to make the samples more in line with the actual city public, we used the stratified random sampling technique to ensure that the population levels account for a certain proportion. In the research process of the paper and 1000 questionnaires were issued, a total of 969 questionnaires were recovered, the recovery rate was 96.9%, among which 924 were valid questionnaires (invalid questionnaire included those casually filled out and not filled out completely).

Testing of Validity and Reliability

Research group uses the inherent Reliability (Internal Reliability) index to scale the Reliability test. The Questionnaire survey was put through SPSS 22.0 statistical software reliability analysis and the test results of alpha coefficient are 0.947. For the questionnaire survey, the alpha values above 0.70, which can be regarded as in accordance with standards of reliability. This questionnaire’s overall reliability exceeds 0.70, and shows that the use of the questionnaire has good consistency and stability.

Table 1. The Overall Reliability Test of the Survey Questionnaire

Cronbach's alpha	Items
0.947	28

Shown below for each factor dimension of the reliability test, according to the data listed in Table 2, all the alpha values of a single factor dimension are 0.8 above, so the reliability is good.

Table 2. A Single Factor Dimension of the Reliability Test

Factors	Positive emotion	Negative emotion	Buy in purpose	Pay more	Change brand	Resist to buy the worst
No.	6	6	4	4	4	4
Cronbach's alpha	0.920	0.892	0.873	0.892	0.870	0.818

In order to ensure the content validity of the questionnaire, the research group has conducted two preliminary researches and four-wheel group testing, and through the analysis of preliminary research results, we summed up everybody’s reasonable opinions. The questionnaire went through revision and

consummation many times, and we finally determined the content of the questionnaire. In general, the content of the survey questionnaire has a certain breadth, and a joint investigation target, so the content validity is more ideal.

Based on the structural validity of the questionnaire, this paper used the statistical software SPSS 22.0 and the factor analysis method for the internal validity (constructed gnoxis.xml.validity) analysis. All items of KMO value were greater than 0.8, all Bartlett's spherical inspection significance levels were 0.000, so we refused Bartlett's spherical test null hypothesis; we can assume that the survey questionnaire and the structure validity of each component is good.

Analysis and Result

We used special purchase, premium, conversion, and significant correlation between brand and boycott the worst purchase because these three questions concern the green purchasing behavior, and the correlation coefficient of moderate embodies the four types of behavior is related to the different aspects of green purchasing behavior; it has to do with Zhi-yi He (2004), so the conclusion is consistent.

Moreover, according to the effectiveness of the present study sample (N = 924), this paper adopts AMOS 22.0 software of maximum likelihood estimation method to build a hypothesis model for data analysis in this paper. At first, for the fit of the model of evaluation, the fit of the structural equation model of the key indicators are shown in Table 5.

Both positive affection and negative affection, and therefore, all 4 kinds of green purchasing behavior, and so the hypothesis H_1 was established. Figure 2 shows the results, and the standardization of positive emotion and negative consumption emotions correlation coefficient is 0.52, which shows that the more value the positive impact of urban residents, and the green product for not buying behavior caused by the negative impact of more disgust, namely hypothesis H_2 was established.

Due to the positive feelings for the standardization of green purchasing behavior path coefficients between 0.5 and 0.6, and negative emotion of green purchasing behavior standardized path coefficients in 0.3 the following, positive emotion is bigger than the influence of negative emotion; namely H_3 was established. In addition, we also learned by information above that the green consumption of positive emotion is different in the influence of the four types of green purchasing behavior; H_4 was established. Finally, the green consumption negative emotions of green purchasing behavior, and comparing the four paths can be found that the former is to resist the influence of the worst purchases, which may be brought about by the negative emotion psychological imbalance, subduing the consumers for the energy-intensive white goods and polluting the environment. But in general, green consumption emotions negative influence on four kinds of green purchasing behavior are basically similar; H_5 was established.

Conclusion and Recommendations

With the above analysis results, the green consumption emotions not only have a significant positive effect on green purchasing behavior, and according to different types of emotions, they are not the same as the degree of impact on buying behavior. But in terms of the four types of green purchasing behavior, and two dimension of green consumption, emotions influence them.

For white goods production enterprises, to better guide the consumer, and also to get better returns, enterprises should pay attention to the shape of their own green image on one hand. On the other hand, more attention should be paid to the product's image itself. Through the outdoor advertising, prize promotion events and marketing ways, the enterprise can cultivate consumers' green consumption

emotions, and especially, the formation of the identity of the green products can significantly enhance consumers' green consumption positive emotion. The government and environmental groups in the regulatory status of green products market are mainly liable to consumers for guidance and education. For this purpose, we can use all kinds of media that take many forms, such as education, knowledge contests, visit, and community counseling, etc. to the public for disseminating the knowledge of specific and targeted green products, we can change the concept of the public's materialism, encourage the public from just a mere pursuit of living quantity sublimation as the main pursuit of life quality, to enhance consumer interest and love of the ecological environment, making the green products have a stronger sense of identity, gradually forming the green consumption of positive emotion, making the green home appliance market gradually more mature.

Acknowledgements

The research work for this paper was supported by the National Science Foundation of China (Grant No. 71203192) and the Philosophy and Social Science Planning Projects in Zhejiang Province (Grant No. 13NDJC057YB).

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The Matthew Effect in Happiness: Happiness, Social Capital and Anomie in China

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[Abstract] This paper examine the Matthew Effect in happiness by which the happy get happier and the unhappy get unhappier with the accumulation of social capital. The result of the Sixth World Value Survey of Chinese sample showed that anomie is a moderator of social capital on happiness, and the effects of social capital on happiness are found to be positive under low anomie and negative under high anomie. Implications for the Matthew Effect in happiness are discussed.

[Keywords] happiness; social capital; anomie; Matthew Effect

Introduction

In emphasizing the misallocation of recognition for scientific work, Merton (1968) found “the Matthew effect” to be expressed in the principle of cumulative advantage where the “rich get richer”. The Matthew Effect initially refers to the adage written some two-thousand years ago in the Gospel of St. Matthew, and even two millennia later, this idiom is used by sociologists to qualitatively describe the dynamics of individual progress and the interplay between status and reward (Petersen, Jung, Yang, & Stanley, 2011). The Matthew Effect can also be used to describe phenomenon across different individuals, contexts, and institutions (e.g. Stanovich, 1986; Medoff, 2006). If true, this effect should be helpful to illustrate people’s happiness under different scenarios. In the economics of science the ‘Matthew effect’ hypothesis has received considerable attention for economic reward. However, for most people, happiness is the main, if not the only, ultimate objective of life (Ng, 1996).

The current research was to bring the Mathew Effect in to explain happiness in China. After three decades of economic reforms, China has become the second largest economy in terms of gross GDP. During China’s transition from socialism to capitalism, the happiness stagnated or even declined while they saw improvements in their material life. This happiness paradox is especially remarkable for the case of China (Easterlin, et al., 2012). As China is also home to more than 1.3 billion people, it is evidently important to study the happiness of the Chinese people in the course of understanding human happiness on earth.

The current research used data from the World Value Survey to examine our proposed Matthew Effect *in happiness*. We adopted the moderation analysis to test whether institutional scenarios (perceived anomie) moderates the relation between social capital and happiness. The theoretical contribution of this paper is as follows: First, we extend the literature on social capital by investigating how social capital is related to happiness, urging us to incorporate the institutional anomie into the theoretical framework for understanding the outcomes of social capital. Second, we apply the Matthew Effect of the happy in low anomie getting happier with their social capital accumulation, the unhappy getting unhappier when they develop social network in anomie, contributing to the happiness literature.

Theoretical Background and Hypothesis

The terms happiness, subjective well-being (SWB) and life satisfaction are used interchangeably in the literature (e.g. Diener, 1984; Diener, Suh, Lucas, and Smith, 1999; Easterlin, 2012; Kahneman & Deaton, 2010; Knight & Gunatilaka, 2011). Researchers have found that income growth does not necessarily predict simultaneous growth in happiness (Easterlin, et al., 2012). Apart from economic growth, social factors also play a significant role in determining happiness. When researchers shift their focus to social factors, they find that social capital (such as trust, social network and social interaction) is positively correlated with happiness (e.g. Rodríguez-Pose & von Berlepsch, 2014; Leung, et al., 2011; Bjørnskov, 2008; Ram, 2010).

Social capital is defined by its function like other forms of capital; social capital is productive, making possible the achievement of certain ends that in its absence would not be possible (Coleman, 1988). Social capital focuses on one's social connections, that is, who you know. The forms of social capital are diverse, including social networks, obligations and expectations, trust and reciprocity, information channels, norms and informal social control, and collective socialization, etc. (Coleman, 1988, 1994; Putnam, Leonardi & Nanetti, 1994). Invariably non-positive effects of social capital are found. There are more and more researches focusing on the dark side of social capital (e.g. Weil, et al., 2012; Belle, 1982; Mitchell & Lagory, 2002; Kunitz, 2004; Kushner & Sterk, 2005). These studies have shown that social capital does not actually relieve depression; however, social capital could even lead to more problems, such as affective conflicts, disappointment, health issues, mental distress, or even suicide.

Anomie refers to "a lack of consensus on norms judged to be legitimate" (Merton, 1938; Cao, 2004, 2007). Anomie theory (Durkheim, 1951, 1997; Merton, 1938, 1964) viewed morality as being of a social nature, thus existing externally to the individual and constraining individual behavior. Anomie, therefore, becomes any form of deregulation or lack of cohesion that society may suffer from. It is the culturally induced pressure to be successful that results in the ensuring anomie and raises the possibility that certain social groups engage in rule-breaking behavior (Cao, 2007). Previous studies also showed that negatively related to life satisfaction in the U. S. society (Keyes, 1998).

The Matthew Effect places individuals on different trajectories based on their social, economic, and psychological resources early in life. Individuals are first embedded in the social network and then the macro institutional environment. This "two-tiered embedment" suggests whether the "happiness-social capital paradox" raises depends on the general social structure. However, prior research focuses mostly on societies where general social norms are clearly defined and mostly stabilized, such as the European (e.g., Brockmann, 2010; Hooghe & Vanhoutte, 2011) and North American societies (e.g., Bartolini, et al., 2013; Bjørnskov, 2008). Yet very few researches have been done on developing countries like China. The happiness-social capital paradox that social capital decrease happiness is possible, because anomie is prevalent among those developing countries, which are characterized by rapid transformations. With the accumulation of social capital, the happy get happier and the unhappy get unhappier. Thus, there may be positive and negative trajectories of social capital on happiness. In the Chinese contexts, we make the following hypothesis based on above reasoning:

Hypothesis: Institutional scenarios moderate the relationship between social capital and happiness; that is to say, social capital decreases happiness under anomie and increases happiness under low anomie.

Method

The Sample

The present study employed data from the World Values Survey. Data from the Sixth Wave (2012) were used. The 2012 sample size for China was 2,300 respondents. Using a stratified random sampling frame, the sample was designed to be representative of the entire adult population ages 18 years and older. (For a further discussion of the survey, see its official website: <http://www.worldvaluessurvey.org/>.)

Measure

Happiness. The measure of happiness is used in the WVS data, that is, life satisfaction. It is based on the question: “All things considered, how satisfied are you with your life as a whole these days?” The participants answered the question using a 10-point scale ranging from 1 (dissatisfied) to 10 (satisfied).

Social Capital. The World Values Survey (WVS) provides fairly direct measures of social capital. We take the WVS item “How much do you trust people you meet for the first time” as the social capital measure. This new question refers to trust in strangers, more in line with the definition of social capital (Delhey, Newton, & Welzel, 2011). The responses range from 1 (trust completely) to 4 (Do not trust at all). After scoring reversely, a higher score indicates a higher level of social capital.

Anomie: Possible Moderator. Anomie is measured as an index of the individual’s acceptance of the legitimacy of four instrumental crime-related scenarios: (a) Claiming government benefits, which you are not entitled to; (b) Avoiding a fare on public transport; (c) Cheating on tax if you have the chance; and (d) Someone accepting a bribe in the course of their duties. The responses range from 1 (never justifiable) to 10 (always justifiable). The index of anomie is calculated as the sum of scores of the three items minus 3. It ranges from 1 to 37. A higher score indicates a higher level of anomie. The reliability alpha equals to 0.73. This index captures the core of Merton’s focus (1938, p. 675) and is labeled as anomie by previous studies (e.g. Cao, 2004).

Control Variables. Quantitative research has consistently demonstrated a theoretical relationship between socio-economic variables and happiness (e.g. Dolan, Peasgood & White, 2008, Diener, Suh, Lucas, & Smith, 1999). There are age, education, gender, income, employment, marriage, and having children. Thus, we control them in our statistical analysis.

To test the hypothesis, the ordinary least squares technique is used for the hierarchical multiple regression analysis. Missing data are not a serious problem with the World Value Survey. The missing data for these items range from 0 percent (Gender, Age, Employment, Education, Marriage, Children) to 20 percent (Anomie). They are excluded from the analyses.

Results

Descriptive Statistics

Table 1 presents the means, standard deviations, and intercorrelations of all study variables. Age, education and gender are not significantly correlated with happiness. At the average level of anomie, social capital is related with life satisfaction ($r=0.07$, $p<0.01$), with weak correlation. All variables are only moderately correlated, providing preliminary evidence that they are empirically distinct from each other.

Table 2. Means, Standard Deviations Correlations of Variables of Chinese Sample – 2012

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. LS	6.86	1.99	-									
2. Anomie	7.38	6.22	0.13**	-								
3. Age	43.92	14.95	-0.02	-0.06*	-							
4. Gender	0.49	0.50	-0.02	0.04	0.01	-						
5. Education	5.34	2.37	0.10**	0.01	-0.50**	0.08**	-					
6. Marriage	0.87	0.34	0.03	-0.05*	0.46**	-0.03	-0.30**	-				
7. Employment	0.98	0.15	0.11**	-0.03	0.26**	0.02	-0.22**	0.43**	-			
8. Social class	2.32	0.85	0.23**	-0.06*	-0.09**	0.00	0.27**	0.01	0.09**	-		
9. Income	4.42	1.85	0.22**	0.01	-0.10**	0.03	0.26**	0.02	0.10**	0.63**	-	
10. Children	1.45	1.06	0.01	-0.03	0.58**	-0.03	-0.41**	0.49**	0.07**	-0.05*	-0.07**	-
Social Capital	1.92	0.62	0.07**	0.00	0.05*	0.02	-0.07**	0.04	0.05*	-0.04	-0.05*	0.03

Note: LS for Life Satisfaction (0–10); Anomie (4 items, 1–37); Age (18–75); Gender (0-1); Education (1–9); Marriage (0-1); Employment (0-1); Social class (1-5); Income (1-10); Children (0-7); Social Capital (1–4).

** $p < 0.01$, * $p < 0.05$.

Hypothesis Test

We use hierarchical regression to test the potentially moderating role of perceived anomie, following the procedure suggested by Baron and Kenny (1986). In order to avoid multicollinearity problems, all independent variables are centered prior to their entry in regression equations. The significance of the interaction effect is assessed after controlling for all main effects. Following Aiken and West (1991), interaction terms (i.e. interactions between social capital and anomie) are computed on the basis of the standardized component variables. Control variable are entered in Model 1, followed by the main effects of social capital and anomie in Model 2 and Model 3. The interaction terms are in Model 4. We find no evidence of multicollinearity according to VIF and tolerance values.

The multiple regression results are shown in Table 2. As can be seen, the main effects of social capital on happiness (life satisfaction) are in the expected direction. When all variables are included in the model, social capital is positively associated with life satisfaction ($\beta = 0.08$, $p < 0.01$), although these associations are weak. Regarding the moderator, anomie is negatively associated with life satisfaction ($\beta = -0.13$, $p < 0.01$).

We also find the main effects of control variables on the two outcomes. Income, Education, Employment, and Social Class are associated with life satisfaction, while Marriage, Children, Age and Gender are not. The perceived level of anomie contributes to the variance explained in the social capital-happiness process. When interaction is entered in Model 4, there is a statistically significant increment in variance beyond the control variables and main effects ($R^2 = 0.003$, $p < 0.05$).

To better explore the moderating effects, we plotted the interaction of the regression line for high (1 SD above the mean) and low (1 SD below the mean) on the moderator variable (Aiken & West, 1991). Specifically, social capital is positively related to life satisfaction ($\beta = 0.15$, $p < 0.01$) when the level of anomie was perceived as low; social capital is negatively related to happiness ($\beta = -0.07$, *ns*) with a high level of anomie. Graphical representations of these interactions are shown in Figure 1, providing support for our hypothesis.

Table 2. The Hierarchical Multiple Regression

	Model 1	Model 2	Model 3	Model 4
Age	0.06	0.06	0.05	0.05
Gender	-0.01	-0.01	0.00	0.01
Education	0.09**	0.09**	0.09**	0.09**
Marriage	-0.01	-0.01	-0.01	-0.01
Employment	0.08**	0.07**	0.07**	0.07**
Social class	0.10**	0.11**	0.10**	0.10**
Income	0.14**	0.14**	0.14**	0.14**
Children	0.03	0.03	0.04	0.04
Social Capital		0.08**	0.08**	0.13**
Anomie			-0.13**	0.02
Social Capital × Anomie				-0.16*
R^2	0.072	0.077	0.092	0.094
ΔR^2	0.072**	0.005**	0.015**	0.003*
F	13.799**	13.151**	14.446**	13.533**

Note: Standardized regression coefficients are reported. ** $p < 0.01$, * $p < 0.05$.

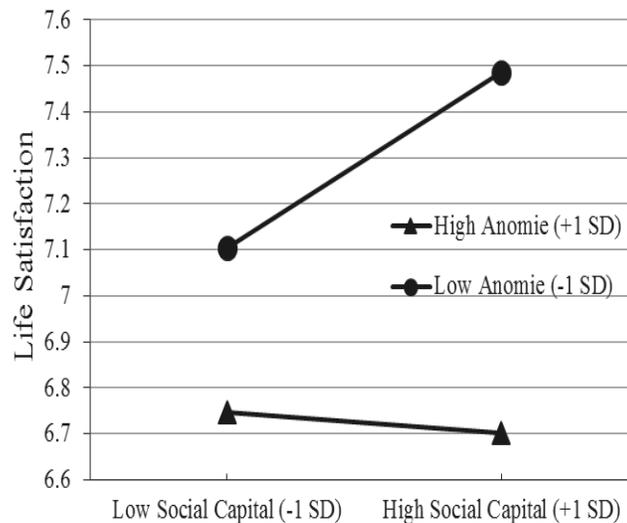


Figure 1. The Matthew Effect in Happiness (Life Satisfaction)

Discussion

This study provides a test of our finding that happiness-social capital is double-edged, finding a reasonably good support for the hypothesized model of the Matthew Effect. Under anomie, individuals with high social capital reported lower happiness, and the fact that the social capital of individuals under low anomie predicts better happiness. That is to say, the happy get happier, the unhappy get unhappier. We also identify anomie as a harmful moderator in the happiness-social capital process, which helps to explain the weak impact of social capital on happiness.

In past empirical studies, different effects of social capital on happiness have been found; for example, some researchers find that social capital is positively related to happiness (e. g. Rodríguez-Pose & von Berlepsch, 2014; Leung et al., 2011), yet certain studies fail to find support for this positive relationship (e. g., Kushner & Sterk, 2005; Weil, et al., 2012). Our paper investigates how anomie moderates the relationship between social capital and happiness. This addition to the previous effort is important because anomie focuses on the institutional contexts, in which people are embedded. Our results of the happiness-social capital paradox provide more understanding of the happiness-social capital

process. Finer-grained examinations of the moderation effects can offer more theoretical insights into the nature of social capital.

In China, anomie and crime has emerged as a major social problem since the 1980s, corresponding to the economic growth (Cao, 2007). This led to the happiness-social capital paradox in China. In line with these findings, we suggest that governments should pay attention to institutional anomie when seeking high happiness and should transform anomie back to normality. We also note that in enhancing happiness under normality, the government should also consider helping individuals build social capital as general trust constitute a critical element in the formation of happiness.

Acknowledgements

We wish to thank professor Yew-Kwang Ng in Nanyang Technological University for precious suggestions and Yi Xin for excellent research assistantship including translation.

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A Study on Financial Support for Undertaking Industrial Transfer in Central Region of China

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[Abstract] *The status of undertaking industrial transfer and financial development in the central region is not satisfactory, and some restrictive factors are analyzed in this paper. We found that there are some problems about finance in this district, such as small proportions of direct financing, financial innovations not being enough, and lagging financial services, etc. In view of this, some suggestions are put forward in the end: strengthening regional financial cooperation, increasing the proportion of direct financing, and innovatively designing financial products, etc.*

[Keywords] *Central region; industrial transfer; financial support*

Introduction

As a product of economic and social development in a certain stage, industrial transfer is an important way to optimize industrial structure in industrial receiver and giver, and it is affected by a variety of factors, like policy environment, technology and factor endowments. As the core of modern economy, the financial industry is the primary initiator of industrial transfer; the core guide, the major players and key supporters, which are an important factor in industrial transfer process that cannot be ignored. In 2004, Central Region Rise Strategy was put forward in our country, and in 2009, the financial crisis broke out, and coastal enterprises' relocation pressure doubled. The central region tried to use the two winds to achieve an economic "big leap", however, despite the government introducing a number of encouraging policies, the relocating performance was not good. Among these, industry gathering force and coastal local government protectionism can be viewed as important reasons, but the backward level of financial development is also an important one. Therefore, financial development has become one of the key objects of scholar research.

Since the first international industrial transfer occurred, the financial support for industrial transfer has become an important research object. At the qualitative analysis level, Jiang Manyuan (2008) took a case study of Guangxi and profoundly analyzed its problems about financial support for undertaking industrial transfer and made creative suggestions. Luo Shile (2008) and Zhong Jin (2011) both took an example of Hunan to study the ideas and measures about finance of how to support industrial transfer in the central region. Wu Chengsong (2009) carried out a research on the influence of finance development

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on industrial transfer with a case of Anhui, and he advised us to optimize regional financial ecology and improve credit management mechanism. People's Bank of China Chengzhou Branch (2011) investigated local financial support for undertaking industrial transfer, and put forward practical financial advice as the fieldwork identity. Chen Jichao (2012) used a simplified abstract economic model to analyze the mechanism of financial support for industrial transfer, and he suggested breaking the barriers to provide convenience for the flow of financial resources across regions and smoothing the finance function route. At the quantitative analysis level, Cao Xiao, and Wu Jun (2002) found that the financial development was really a reason for economic growth through Granger test. Lv Guangzheng (2010) used of error correction model and researched industrial upgrading financial support in Shandong Peninsula. He Yuebing (2011) analyzed financial support in Guangdong province for industrial transfer with the method of structural equation model.

As can be seen from the above literature analysis, the literature related to financial support for undertaking industrial transfer of the six provinces in central China is lacking. However, under the new historical conditions, the study is particularly important. Therefore, from the two major theoretical and practical backgrounds, this article collects a large number of industrial transfer and financial development data of six central provinces, and then dissects their status and problems.

Mechanisms of Financial Support and Industrial Transfer

The current research on mechanism of industrial transfer and finance support have not yet formed a mature theoretical system, and more have focused on the relationship between financial development and economic growth. Many economists believe that by promoting the conversion of savings to investment, finance increases the savings rate and the marginal productivity of capital and plays a promoting role in economic growth. Levine (1997) thought that with the development of economy, the more economic aggregate increases, the more frequent transactions will be, so financial institutions and financial markets become the selection result. Naturally, a simple financial system will evolve into complex financial system with per capita income and per capita wealth increasing. Chinese scholar Wang Yajun, and Gong Weiping (2009) made a Granger causality test, and they found in the case of a first-order lag, economic growth can stimulate financial development, while in the second-order lag, the financial development will lead to economic growth. Finance development means financial aggregates increase, the financial structure upgrades and financial efficiency improves. At the same time, it perfects the finance market's function of raising capital funds, optimizing the allocation of resources and providing information. As for industrial transfer, finance can offer help as follows: financial markets can gather funds to fill the funding gap of industrial transfer; they can guide the direction of industrial transfer to optimize resource allocation; they are able to disclose all kinds of information to reduce the risk of transfer; they can use various financial instruments to reduce and disperse risk of occupying large sums of money in the long-term in industrial transfer. Meanwhile, transferred businesses have requirements of convenient pattern balance and payment, the need of loan funds when the enterprise is in a growth and development period, and the need for employees of bank financing and allopatry remittance. All of these can promote local financial development and service efficiency.

Analysis of Financial Constraints on Undertaking Industrial Transfer in Central Region

The central region refers to Hubei, Hunan, Anhui, Henan, Shanxi, and Jiangxi. It is important receiver of eastern industry. By allocating materials, we find there are some problems about finance development in the region:

The Unbalance of the Financing Structure Leads to Narrow Financing Channels for Transferred Enterprises

Although the total amount of financing in the central six provinces increases yearly, the internal structure is unreasonable and direct financing accounts for a very small proportion. In developed countries, direct financing accounts for 70%, but in our county this number is less than 5% and the one of central region is not optimistic neither. By July 20th, 2013, there have been 2,463 listed companies in Shanghai and Shenzhen, but among them, just 363 are from the central provinces, accounting for only 14.7%. Due to the low economic opening degree and high financial industry threshold, the use of corporate bonds, trusts, and commercial bills, etc. are not widely used between enterprises in the central region. A high proportion of indirect financing is not only conducive to the dispersion of financial risks, but also leads to the realistic dilemma where financing channels are sluggish and financing is difficult, hindering the adjustment and upgrade of the industrial structure.

Lack of Financial Innovation Leading to Project Financing Difficulties

First, the existing credit evaluation system is not ideal. At present, domestic commercial banks are implementing unified credit evaluation systems and use enterprises' financial statement data and statistics over the past three years to evaluate their corporate credit ratings. Most of the transferred enterprises are in a pioneering period or growth stage, and their cash-flow, level of profitability, current assets proportion and solvency are not up to par. So even if the bank is financing main channel, the number of companies able to enjoy external financing is very limited. Second, loan mortgaged goods are penurious. When transferring from the coastal areas, enterprises most choose incremental transfer. The industrial park's land ownership and plant ownership of the receiving district are owned by the local government, and many machines are also from financial leasing. The loan mortgaged goods are narrow, and plenty of enterprises cannot apply for a mortgage. Third, financial product innovation isn't enough, and lacks pertinence. When SMEs arrive at the new industrial park, they still face the reality that banks regard single enterprises as risk identification objects but not the whole industrial chain; different types of businesses have different demands for technology, trade and production, but bank have not established a differentiated credit structure. Various reasons make it so SMEs cannot be satisfied with capital.

Financial Service is Out of Date, Bringing About a Slow Pace of Undertaking Industrial Transfer

The central financial services lag reflects in two aspects. On the one hand, the enterprises coming from developed areas have a higher demand for finance services, but most banks in the central region lack regional cooperation with the coastal regions on payment methods and ticket service. Therefore, there is a difference in payment methods in the parent company and its subsidiaries. It affects financial efficiency and increases the worry of transferred industry. On the other hand, central provinces establish a national or provincial industrial park, but the surrounding facilities are not complete. There are only ATMs around them, lacking business outlets, which is not conducive to the settlement payment. There are a lot of differences between the transferred enterprises and the local ones, but finance hasn't treated them differently.

Properties of the Transferred Industries Do Not Match with the National Credit Structure Optimization Direction

That production costs rising on the east coast brings some difficulty for enterprise survival, forcing these types of enterprises that transferred to the Midwest with low cost. And we must notice that most of the companies are labor-intensive and resource-intensive highly polluting enterprises. In order to improve performance, central governments increase the intensity of undertaking industrial transfer. They extensively promote investment and introduce capital, lowering the settled threshold. Because of this, many chemicals, nonferrous metals and other heavy polluting enterprises enter the industrial parks, increasing the environmental burden. However, China is in a special period when we build two-oriented society and adjust modes of economic development. Our government strictly controls loans to three high excess and overcapacity industry and ask to increase financial support for new strategic industry. There is a contradiction between direction of the credit funds supply and the actual situation of industry undertook in the central region, slowing the pace to undertake industrial transfer to some extent.

Suggestions

As the important receiver of industrial transfer, the central region should do something to improve receiving performance:

Strengthen Regional Financial Cooperation

Deepen communication and cooperation with neighboring cities, create a harmonious urban environment, and build regional financial cooperation mechanisms. At first, we should strengthen regional financial information collaboration, unify regional financial product design and applications, break through barriers where financial service fees and service programs are inconsistent in each area, and help financial instruments play the role of draining capital. We are opposed to macro plan financial policies to promote industrial gradient transfer. Establish mechanisms for personnel exchanges between regions, cultivate compound financial professionals with experienced practice, hold personnel exchange activities regularly, make event planning and review in real-time to understand the exchanged talent growth conditions, and adjust personnel exchange mechanisms timely. Second, establish specialized regional financial services institutions. From all aspects of institution division of labor, policy and specific initiatives, we can make a plan of regional financial development, and integrate existing financial resources with fairness, justness and an open distribution principle to expand the overall financial strength.

Increase the Proportion of Direct Financing

There is a great need for central regions to accelerate the establishment of new financial institutions, actively support SMEs listing and encourage enterprises to innovate direct financing ways. Allow them to increase financing in the way of issuing corporate bonds, short-term financing bills and medium-term notes. We should consummate the financial derivatives market, make it scale, standardization and rationalization, and protect the interests of participants in direct financing market, improving investors' enthusiasm. In addition, financial markets should break through exclusiveness of state-owned capital, allowing private capital into the financial sector, optimize the financial industry competitive landscape and promote capital flows to SMEs and environmental protection enterprises. Encourage private capital to build retail banks, non-bank financial institutions and quasi-financial institutions, make use of private-controlled banks on market efficiency, property arrangements, and innovation capacity and transaction costs, resolving certain departments or business financing embarrassment. At the same time,

we ought to perfect non-listed companies' private convertible bond market operation mechanism and increase operability of private equity.

Innovatively Design Financial Products

In the process of project transfer, the central regions need to set up financial institutions, financial services varieties and credit management system with clear goals. While developing the financial institutions, we must introduce foreign banks and joint-stock banks from the coast and guide all kinds of capital to set up financial service branches for transferred companies; for example, encourage government in industrial transfer undertaking district and allowing the district and excellent corporations to establish specialized industrial transfer investment and financing IMF and loan companies and cooperative banks, even park region banks. At the same time, we can set up opening financial mechanism specialized at supplying capital for infrastructure and matching project construction. Besides this, we should reform loan guarantee mechanism, encourage social capital to set up a security agency and give excellent social guarantee institutions subsidies and tax exemptions; in the light of the characteristics of the transferred enterprises, cultivate industrial chain gold customers and provide timely financial support for SMEs that service leading enterprises; allow enterprises to use a variety of flexible and effective guarantee modes, such as enterprise mutual insurance, order mortgage, accounts receivable mortgage, patent and merchandise inventory mortgages. There is a great need for us to reform intermediate business to meet the enterprises' requirement of financial contact with the two regions, and actively offer service about account information management and circulating fund position management.

Acknowledgment

This work has been supported by the Natural Science Foundation of China (Project No. 71002092), Zhejiang Provincial Natural Science Foundation Project of China (Project No. LQ13G020003), and Zhejiang Provincial Philosophy Social Science Planning Project of China (Project No. 14NDJC093YB and 13NDJC047YB).

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The Relationship Between Employee Compensation And Firm Value: An Empirical Study Of Non State-Owned Firms

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[Abstract] According to the agency theory, the agency problem between management and employees has always been neglected. However, does an employee contribute to the firm's value? The agency problem should be neglected? Why connect the compensation to firm value? To solve these, this paper has selected 427 non state-owned in 2012. The paper has found that the employee compensation has a significant positive relationship with the firm value, and managerial compensation has an inversed U relationship with the firm value.

[Keywords] employee compensation; firm value; management compensation; size

Introduction

As China has entered into new age of internet, the economic market is becoming more and more developed and perfect, and the human resource has become the key resource which cannot be replaceable and imitated for the country to keep competitive. For the non state-owned firms, human resources is the key resource that can realize the growth of the firm value. Most employees of the firm have to decide in their work: should I continue my work and also work hard, or shirk? To solve the shirking problem or other negative decisions, the firm has to implement more strict supervision, or give fringe financial or non-financial benefits to the employees. Practice has proven that more strict supervision will cost more than rewards (Nalbantian & Schotter, 1997). If the firm tries to change the situation, they have to reward the employee. If the employee has received rewards from their work, they will perform well and contribute to the growth of the firm value. This paper will study the relationship between employee compensation and firm value through the empirical analysis of non state-owned public firms.

Literature Review

Employee compensation has perfect incentive effects, and also for the management and directors. Nowadays, all of the employees will be encouraged by the firm and contribute to the firm's value. Jensen and Mecking (1976) had advanced the agency theory in 1976, which proposed that the management are always self-interested; if they hold only minority stakes, they will not behave at shareholder's interests to maximize shareholder's wealth. So from the view of agency theory, connecting the relationship between firm value and management will provide the important incentive mechanism for the firm and make the management's interest and shareholder's interest converge; Chung and Pruitt (1996), and Joyce (2001) found that TobinQ as the firm value indicator has a positive relation with CEO compensation. Heinfeldt (1995) used hierarchical regression analysis in his study and found that both the financial compensation and non-financial compensation for employees have positive influences on corporate financial performance. Rayton (2003) found that the high performance group has its performance elastic index at about 0.193, which implies that a doubling of firm value will eventually result in a 19.3% increase in the pay of the average employee. However, there is no significant pay-performance link in low performance firms.

Wei Gang (2000) found that top management compensation has no significance with firm performance, however, there are other studies which have opposite conclusions; Du Xingqiang and Wang Lihua (2007) found that the sensitivity of the top management pay to accounting-based performance linkage is higher than the pay to shareholder wealth index linkage; Chen Donghua (2010) used the state-owned non-listed firms as samples and found that employee compensation's upward elasticity has a more positive influence on the improvement of firm performance, and the employee compensation's downward rigidity has a more negative influence on the improvement of firm performance; Lu Xiaodong (2011) analyzed the listed-firm-based panel data empirically and proved that the employee compensation has a significant positive relationship with the firm growth. The empirical result of Chen Donghua (2011) found that top managers' succession can result in a significant increase of employee compensation, and the corporate political network of relationship between top managers and employees would destroy the creation of firm value; Guo Qinggen (2011) found that the employee income has a significant positive relationship with firm value.

Research Hypothesis

The practice of human resource management has manifested that employee training, sufficient compensation, rewards and organizational commitment can motivate employees to exploit their knowledge and skills, improve their job satisfaction and they also spend more time and energy to create firm value (Tsui 1997). Following previous theory and research, our formal hypothesis is set out below:

H1: Employee compensation has positive relationship with firm value.

Despite the fact that employee compensation can influence the firm value, the firm size also has effects on the firm value. Although the firm has a scale economics effect; the bigger the firm size, the more resources the firm can obtain, and the requirement of the level of corporate governance and organizational structure becomes higher, so the firm has to spend more expenditures to maintain the ordinary operation of the firm, which would destroy the improvement of the firm's value. Following previous theory and research, our formal hypothesis is set out below:

H2: The firm size has negative relationship with the firm value.

The corporate governance has to be considered when considering the pay-performance link. The independent director belongs to the outside mechanism of the firm. According to the agency theory, the independent director can effectively monitor the shareholder and the interests between the shareholders and the directors, so that the agency costs can be saved. Recent studies have also manifested that the proportion of independent directors has a relationship with the firm value. Following previous theory and research, our formal hypothesis is set out below:

H3: The proportion of independent directors has positive relationship with the firm value.

Another corporate governance index that has to be considered is the ownership concentration, which means that when the proportion of ownership held by first-holders and the proportion of holding ownership is higher, the influence of the chosen of directors is bigger. The ownership concentration is convenient to the controlling shareholders to consolidate their status and decide the growth direction of the firm and create more values. Recent studies have also proven that the ownership concentration has relationships with the firm value. Following previous theory and research, our formal hypothesis is set out below:

H4: The ownership concentration has positive relationships with the firm value.

The board of directors is set up to supervise the management. As the size of the board of directors becomes larger, more resources can be obtained and the monitoring of management is more strict. Following previous theory and research, our formal hypothesis is set out below:

H5: The board size has a positive relationship with the firm value.

Most of recent studies have proven that the management compensation has positive effects on the creation of the firm value, however, the excess high management compensation will magnify the compensation gap and hit employee morale and decrease job satisfaction, which would eventually complex the agency relationship between the management and employee and destroy the firm's value. These points are reflected in the following hypothesis:

H6: Management compensation has negative relationship with the firm value.

Data Selection

This paper selects data from non state-owned listed firms in 2012, including the manufacturing industry, transportation industry, and real estate and so on. The sample firms were selected from CSMAR and were screened by the following principles: the ST and *ST listed firms in 2012 that had negative profits for several periods were deleted; the firms that have incomplete data were deleted, and 427 sample firms were selected eventually.

Empirical Models

Independent Variables

The paper uses “wage” as the representation of employee compensation. The “exewage” is used to represent the management compensation. The “size” represents the firm size. And “firsthold” is the ownership concentration. The “proIndir” is the proportion of ownership held by the independent directors. The “dirsize” represents the board size.

Control Variables

ROA represents the return of total assets and LEV represents the liabilities to assets.

Dependent Variable

Tobin's Q represents the firm value

Model

The model specification is based on the reference of Guo Qinggen (2011). Tobin's $Q = \alpha_0 + \alpha_i (\text{wage}, \text{size}, \text{dirsize}, \text{Inexewage}, \text{proIndir}, \text{firsthold}, \text{ROA}, \text{LEV})^T + \delta_i (\text{exewage}^2, \text{proIndir}^2, \text{firsthold}^2)^T + \varepsilon_i$, α_i , δ_i is coefficient variation, α_0 indicates other influential variable and ε_i is a random perturbed variable. Considering about the non-linear relationship between the independent variables and dependent variables, the paper has added variables Y_i^2 , which represents executive compensation square, proportion of independent director square, ownership concentration square, and δ is the coefficient variation.

Empirical Analysis and Results

Descriptive Statistical Analysis

Table 1. Descriptive Statistics

	N	Min	Max	Median	Mean	Std. Dev.	Coeff. of Std. Dev.
Tobin's Q	427	.358	16.642	1.423	1.811	1.362	0.752
wage	427	.000	1.420	.088	.119	.117	0.983
Exewage	427	12.550	17.770	15.118	15.089	.779	0.052
proIndir	427	.290	.670	.333	.371	.055	0.148
firsthold	427	2.200	89.410	34.720	36.625	16.191	0.442
size	427	18.180	26.250	21.975	22.107	1.271	0.057
dirsize	427	5.000	15.000	9.000	9.101	1.952	0.214
LEV	427	.0249	2.133	.508	.502	.222	0.442
ROA	427	-.341	.514	.030	.039	.056	1.436

According to the descriptive statistical analysis, there are the following explanations about the descriptive statistics: (1) The result of coefficient of standard deviation shows that the employee compensation, Tobin's Q and ROA are moderately volatile, while the management compensation is placid, which means that the external executive compensation gap of non state-owned firms is not large to some extent; (2) The median and mean of the proportion of independent director, ownership concentration and board size have no significant differences, which explains that the differences of each variable in different firms is small, and the ownership concentration is moving around 40%, which shows that the ownership structure of non state-owned firms is in the stage of relative control; (3) The coefficient of standard deviation shows that non state-owned firms have small differences in the firm size.

Correlation Analysis

Table 2. Correlation Analysis

		Tobin's Q	Wage
Tobin's Q	Pearson correlation	1	.231**
	Sig. (2-tailed)		.000
	N	427	427
wage	Pearson correlation	.231**	1
	Sig. (2-tailed)	.000	
	N	427	427
Exewage	Pearson correlation	-.233**	-.047
	Sig. (2-tailed)	.000	.329
	N	427	427
proIndir	Pearson correlation	.013	-.057
	Sig. (2-tailed)	.793	.238
	N	427	427
firsthold	Pearson correlation	-.184**	-.139**
	Sig. (2-tailed)	.000	.004
	N	427	427
dirsize	Pearson correlation	-.117*	.072
	Sig. (2-tailed)	.016	.138
	N	427	427
size	Pearson correlation	-.502**	-.304**
	Sig. (2-tailed)	.000	.000
	N	427	427
LEV	Pearson correlation	-.218**	-.203**
	Sig. (2-tailed)	.000	.000
	N	427	427

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

This table shows the correlation analysis of these variables wage, exewage, proIndir, firsthold, dirsize, size, LEV and ROA. The relationship among these variables is given below.

Table 3 shows that employee compensation, ROA and firm value have significantly positive relationships; the correlation coefficient is 0.231 and 0.221, while the proportion of independent director and the firm value do not have a significantly positive relationship. And the management compensation, board size, ownership concentration, LEV and the firm value have a significant negative relationship.

Regression Analysis

Table 3. Coefficients

Variables	Unstandardized coefficients		Std. coefficients		
	<i>B</i>	<i>Std. error</i>	<i>Beta</i>	<i>t</i>	<i>Sig.</i>
constant	66.216	12.571		5.267	.000
wage	.970	.499	.083	1.946	.052
Exewage	-6.995	1.658	-4.002	-4.218	.000
Exewage square	.233	.055	4.035	4.265	.000
proIndir	-2.478	8.761	-.099	-.283	.777
ProIndir square	4.112	10.321	.139	.398	.691
dirsize	.012	.032	.017	.382	.703
firsthold	-.005	.015	-.065	-.362	.717
Firsthold square	4.428E-5	.000	.043	.244	.807
size	-.557	.064	-.520	-8.708	.000
LEV	.468	.297	.076	1.572	.117
ROA	6.451	1.079	.267	5.979	.000
R square	.348	Std. Estimated error		1.113765503	
Adjusted R square	.331	F		20.156	
Durbin-Watson	2.011	Sig.		.000a	

Dependent variable: Tobin's Q

According to the aggression analysis, we can see that the employee compensation has a significantly positive impact on firm value as the value of significance is 0.052, Hypothesis 1 is established. And the firm size has a significantly negative impact on the firm value. The relationship between the proportion of independent director, ownership concentration, board size and firm value is not significant, so Hypothesis 3, Hypothesis 4 and Hypothesis 5 are not established; the management compensation has a significantly negative relationship with the firm value, and as the value of significance for the management compensation square is 0.000, which is in the required significance level, so the management compensation also has significant U-shaped non-linear relationship and Hypothesis 6 is established.

Regression Equation

$$\text{Tobin's } Q = 66.216 + 0.970 \text{ wage} - 6.995 \text{ exewage} - 0.557 \text{ size} + 6.541 \text{ ROA} + 0.233 \text{ exewage}^2$$

Conclusion

This paper used 427 non state-owned firms in 2012 as the sample to probe the relationship between employee compensation and firm value. (1) It is concluded that employee compensation has a significant impact on firm value. This implies that 1% increase in employee compensation will bring 0.97% increase in the firm value and the conclusion is consistent with Guo Genqing's result in 2011. (2) The firm size has a significant negative impact on firm value. (3) The proportion of independent directors does not have a significant inversed U-shaped relationship with firm value. (4) The ownership concentration does not have a significant U-shaped relationship with the firm value, and this is consistent with the result of Yang Hongbo in 2008. (5) The board size does not have a significant positive relationship with the firm value. (6) Management compensation has a significant U-shaped relationship with the firm value.

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The Influence of the Business Model of Performance of Energy Conservation and Environmental Protection Enterprise – Based on the Theory of Value Creation

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[Abstract] Business models can be seen as the logic of enterprise value creation, mainly to solve the core issue is how to value creation. In this paper, based on the theory of value creation, we determined the business model analysis framework and built an index system of business model classification. Through the median, we analyzed different business models for performance impact, and found that different business models' impact on the performance of different ability levels is different; comprehensively, the 1, 5, and 6 types of business models are more competitive.

[Keywords] Business model; enterprise performance; theory of Value Creation; energy conservation; environmental protection (EC&EP) enterprise

Introduction

Since the mid-1990s, the business model gradually received extensive attention from the political area, business area and academia. Accenture interviewed 70 executives from 40 American companies about “the core logic of a company to create and capture value,” and all of the executives mentioned having a business model. Management guru Drucker (2002) said, “The competition between enterprises today, is not the right competition between products and services, but the competition between business models.” Management consulting experts Zhi Qiang Peng said, “Without a good business model, even if the superior product, technology, brand or assets also has no future.” The same products, and technology, based on a different business models bring different rewards.

At present, the research on the business model has focused on the business model definition, components, classification and innovation, etc. Although there have been many achievements, there are still many deficiencies. In this paper, through reading literature and related theory, we construct the analytical framework of this article. We analyzed the business model, and how it impacts enterprise performance from the angle of value creation. We help the enterprise design and innovate their business model in order to enhance their performance.

Review of the Literature

The Concept of Business Model

In the early 1950s, the business model has occasionally appeared in academic journals as a concept of reference. In 1960, the term “business model” as a topic of an article first appeared in scholarly journals. Numerous later generations did a lot of research on the business model, but there has not been a unified understanding. From the economic level, the business model is simply described as an enterprise's economic form. Its basic connotation is the logic of profit for the enterprise to obtain. Rappa (2000) said, “The fundamental goal of business model is to sustain itself, and is also the method of making profit.”

From the operating level, a business model is described as the enterprise's operating structure. The focus is that it makes it possible to value creation through the internal process and the basic structural design. From a strategic level, a business model is described as the overall investigation of different enterprise strategic directions, related to market claim, organizational behavior, growth opportunities, competitive advantage, and sustainability, etc. From the integration level, a business model is considered a description of how to use the business system of the enterprise. It is the integration of the economic model, operational structures and strategic direction.

From the research course of the business model, scholars have never agreed upon the definition of the business model, and have made every effort to describe business models from a higher level. The key is to solve the problem of which business model to use. With the deepening of the study, the definition of business model becomes gradually consistent.

The Classification of the Business Model

At home and abroad, the business model classification method can be summarized into two broad categories: One is building some kind of logical reasoning through a number of factors and standards; the other is by case analysis to identify some classic model. Timmers (1998), based on the value chain, put forward the business pattern classification method. He believed the business model should be roughly classified into three steps: the value chain decomposition, an interaction pattern prototype, and the value chain reconstruction. Tapscott et al (1999) proposed commercial pattern classification method based on the business network. Dubosson-Torbay et al (2002) presents the commercial pattern classification method based on multiple classification criteria. The above studies belong to the first classification method. Paul Bambury (2013), based on the path of the business model, formed the raised classification method. He separated the Internet business model into two types. Rappa (2000) put forward the classification system based on value proposition and value realization.

Business Model and Corporate Performance

Ufa and Tucci (2001) proposed that the business model is the whole construction to explain the enterprise's performance and competitive advantage. Amit and Zott (2001) inspected 59 e-commerce listed companies' value creation processes in Europe and the United States and found that electronic commerce occurred through the implementation of cross-border dealings with clients, suppliers and partners in the new structure or mechanism to create value. Peter Weill (2005) put 1000 of largest American listed companies as the research object, and divided their business models into 16 classes, based on the company's assets trading power, degree of shift and core assets. Using financial indicators such as Tobin Q, ROIC, to measure business performance, he carried on empirical research of business model and enterprise performance. Xiang Wang, Dong Li, and XiaoLing Zhang (2010) saw 55 listed companies in China's nonferrous metals industry as the research object, and from profitability, growth, operating efficiency and market value, he used ANOVA analysis of variance method, to study the different business models and how they affect the enterprise performance indicators.

The above studies show that business model is one of the important factors affecting enterprise performance, but on the whole, the empirical researches are still few and are about the influence of business model on enterprise performance. So it's worth to study business model and how it effects on company performance.

Analysis Framework

We integrated the above research review and related theory and in order to accurately describe business model we need to have a clear cognition of business model elements. In this paper, the main references come from Osterwalder (2011), Mark Johnson, and Wen Liang, et al. who divided the business model into four dimensions: value proposition, value creation, value delivery, and value realization. First of all, in order to meet customer requirements, and to achieve customer value, enterprises should have their own value proposition. Clear, unique and consistent value proposition is the key to the business model. When the value proposition is perfected, it carries on the value creation, and the most direct embodiment of value creation is customer value. However, in order to better realize their own value, they have to make full use of market value, to deliver the value to the customer, and then realize the value of the enterprise itself, which is then pointed to the end of the business model.

The business model can be classified into different types based on four dimensions, and six indicators. According to the research objects' location in the commercial pattern classification index system, we determine the specific classification. Through a space model it can be seen intuitively, see Figure 1.

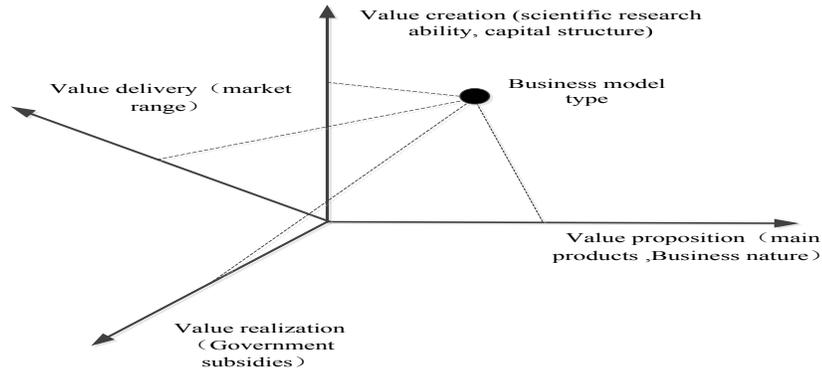


Figure 1. Business Model Classification

Data Sources and Variable Declaration

Sample Selection and Data Sources

This study selected listing companies in China of the *EC&EP* as the research object. The reason is: First, the *EC&EP* industry's contribution to the national economy is growing, and is becoming the sunrise industry, which improves the quality of economic operation, promoting economic growth, so there may be a deep influence between the business model and the enterprise performance. Then, we study *EC&EP* industry business model, and especially empirical research is few. Last, the *EC&EP* enterprise data have a high validity and authenticity. Studying the open text data (e.g., Annual report) is an important approach to the existing study.

To ensure the credibility of data and business pattern classification authority, this paper mainly through the iFinD, www.eastmoney.com & www.cninfo.com to access relevant information and data on the listed companies. The selected companies are listed on the Shanghai and Shenzhen A shares; we eliminated some enterprises that have uncompleted information or have abnormal data. Eventually, there were 98 enterprises that met the standards, and covered the four types of *EC&EP* industries: sewage

disposal, solid waste management, waste gas treatment and energy conservation and environment protection.

Variable Declaration

Business model. The business model is the independent variable, and belongs to the type variables. Following are the definitions of related indicators.

- a) Main Products: divided into diversified products and individualized products.
- b) Business Nature: divided into general state-owned business enterprises, private enterprises, central enterprises, and collective enterprises.
- c) Scientific Research Ability: divided into strong & weak.
- d) Capital Structures: divided into three parts – conservative, steadiness and state of risk.
- e) Market Range: divided into a local dominant, both at home and abroad, national distribution, and domestic leading.
- f) Government Subsidies: divided into huge and small.

Enterprise performance. Enterprise performances are the dependent variable of this study. In this paper, mainly from the three aspects of profitability, operation ability, and growth ability, we totally include eleven indexes of income rate of net assets, rate of return on total assets, net profit margin on sales, gross profit margin, inventory turnover ratio, turnover of fixed assets, turnover of total capital, EPSG, increase rate of business revenue, growth rate of operating cost, and net profit growth rate.

Analysis of Business Model Influence of Enterprise Performance

Classification of Business Model

According to the similarity of sample enterprises in the business model analysis framework, we used the software of SPSS system analysis for cluster analysis. The rationality of the results was measured by the center distance. The smaller the center distance, the center distance of distribution is more uniform, and, the clustering results are better. Clustering results at the center of the distance from the highest 2.790 to the lowest 0.870; the difference is 1.92. The crossing is small, and the distribution is more uniform, showing that the clustering result is reasonable. Specifics can be seen in Table 2.

Table 1. The Distance Between the Final Clustering Center

Cluster	1	2	3	4	5	6
1		2.193	1.772	2.655	1.999	.870
2	2.193		2.741	2.328	2.216	2.561
3	1.772	2.741		2.047	2.462	2.076
4	2.655	2.328	2.047		1.563	2.790
5	1.999	2.216	2.462	1.563		1.833
6	.870	2.561	2.076	2.790	1.833	

According to the k-means clustering method and related standards, the business model is divided into six classes. They are named as DASQBGND, RWGNX, SBBDD, SRWBD, GWGN, DASQBGNX, and numbered in the order of 1, 2, 3, 4, 5, and 6.

The Influence of Business Model on Enterprise Performance

To study the effect of the business model for enterprise performance, this paper used single factor variance analysis method. Because this article selected the 11 performance indicators, there may be overlapping information among various indicators. So we used factor analysis method to extract three typical indicators: profitability F1, growth ability F2, and operating ability F3. We see the business model as the independent variable, performance as the dependent variable, we conduct variance analysis, and the consequences can be seen in Table 2.

Table 2. The Analysis of Variance about Business Model Impact on Enterprise Performance

Performance indicator		Quadratic sum	Df	Mean square	F	Significance
F1	Inter-group	1328.581	5	265.716	2.518	.035
	Intragroup	9707.166	92	105.513		
	Amount	11035.747	97			
F2	Inter-group	3925.915	5	785.183	.698	.627
	Intragroup	103541.081	92	1125.447		
	Amount	107466.996	97			
F3	Inter-group	124.423	5	24.885	2.399	.043
	Intragroup	954.157	92	10.371		
	Amount	1078.580	97			

From the result, we can see business model has a significant impact on profitability and operation ability, but no significant influence on the growth ability. But to evaluate the business model needs through the enterprise performance, we need to reflect that different business models in ability level of enterprise performance are different, see the Figures 2, 3, and 4. From Figure 2, we can see that, Class 1, 3, 5, and 6 business models between the profitability are nearly equal, But Class 4 is under 2. From Figure 3, the 3 kinds of business models have the largest average in growth ability, Category 2 has the minimum and several other classes have a small difference. Also, from Figure 4, the Class 6 business model has a maximum mean in operating ability, and Class 1 and 5 were similar, and the Class 3 business model has a minimum mean in operating ability.

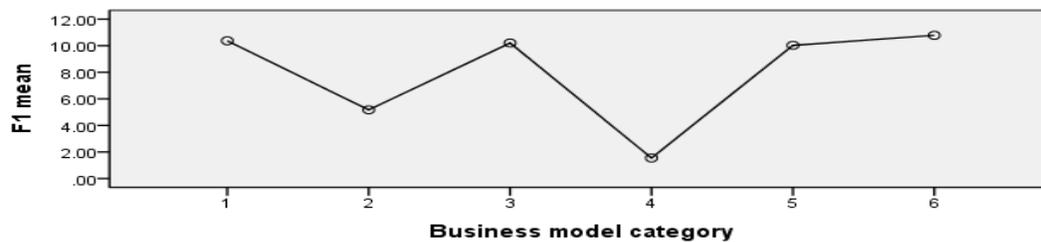


Figure 2. The Profitability Average between Different Business Models

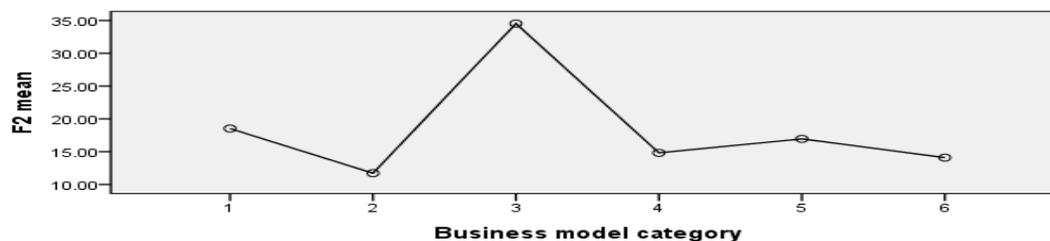


Figure 3. The Growth Ability Average between Different Business Models

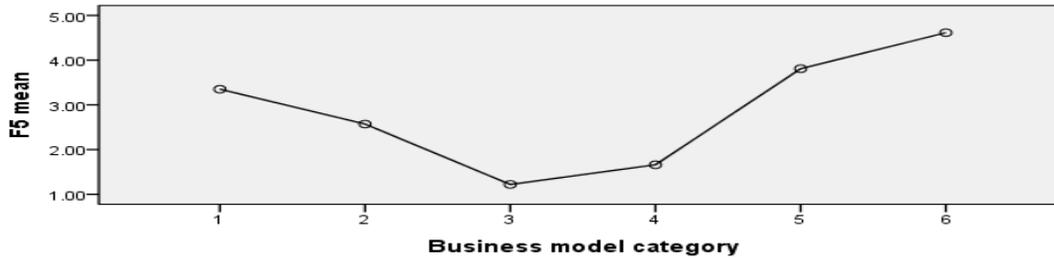


Figure 4. The Operating Ability Average between Different Business Models

Conclusion and Implication

Conclusion

- a) The business model of the EC&EP enterprise is diversified, but after clustering analysis, the business models are divided into 6 categories. The results indicate that the EC&EP enterprise business models have high similarity and lack innovation. Models 1, 5, and 6 have greater advantages than others.
- b) We used the business model category as the independent variable, enterprise performance as the dependent variable, and conducted ANOVA analysis. Results show that the business model is indeed a factor, which led to enterprise performance difference. The business model has different performances with the different enterprise performance abilities.

Implications of the EC&EP Enterprises

First, we should pay attention to the business model, business model is an important factor that should not be ignored in the process of enterprise development, and the design and innovation of business model can help enterprises break through the bottleneck.

The design and innovation of the business model mainly embarks from the business model elements, can be enhanced by changing one or several factors. The enterprise should continue to research, analysis, and learn good business models, and adjust their business model.

The EC&EP industry should vigorously advocate and encourage enterprises to carry out business model innovation, understand the business environment changes in a timely manner, summarize the industry development trends, analyze the industry competition pattern, and provide the reference for the EC&EP enterprise business model design and innovation.

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The Effect of Customer Value Demand, Community Integration on Brand Loyalty in Brand Communities, Illustrated by the Example of Motorists' Clubs

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[Abstract] By introducing the theory of customer value in brand community research, this study reveals the mechanisms of impacts of brand communities on brand loyalty. This study, choosing the members of a motorist club as the object, puts forward the research hypothesis and model, makes questionnaire survey and data investigation, and mainly uses the structural equation analysis method to test the research model. It concludes with the direct and indirect effects of customer value demand, community integration on brand loyalty and the intermediary role of brand community integration. The purpose of this study was to provide guidance for exploring the new realization way of brand loyalty.

[Keywords] brand community; customer value; brand loyalty; motorist club

Introduction

The center of the company's marketing activities has always been to cultivate, maintain and improve the brand loyalty of customers. Brand communities are produced under the background of "traditional marketing model" changed into a "relationship marketing model", which is the important practical platform of building brand and winning customer loyalty. Compared with great disadvantages of traditional marketing strategy, the brand community is a cutting-edge field under investigation in the world. As the connection with customers is getting tighter, the studies about it should be in-depth research and analysis, and will provide a lot of theoretical and realistic value. How to play the role of brand community, that is, to meet customers' demands, while at the same time realizing brand loyalty of community members, becomes the key to the study. In view of the above questions, the study also tested variables, consisting of customer value, community integration and brand loyalty, with the angle of the qualitative and quantitative analysis, and further clarified that the index system is reasonable and scientific.

Review of Literature

Brand Communities and Brand Loyalty

The concept of brand community was put forward in the Journal of Consumer Research in 2001 for the first time. Based on similar notions of brand users, Muniz and O'Guinn (2001) define a brand community as a specialized, non-geographically bound community, and they argue that a brand community is imagined and defined by three characteristics, including a consciousness of kind, the presence of shared rituals and traditions, and a sense of moral responsibility. Based on the relationships contained in the brand communities, brand community is developed from the traditional model of "customer-brand relationship" into the model of "brand community triad" (Muniz & O'Guinn, 2001), and then developed to "the customer-centric model of brand community" (McAlexander, Schouten, & Koenig, 2002), and it further developed into the multidimensional conceptual model of "time-space-the way of consumers

participation”. Through the above stages, the theory of brand community gradually has been enriched and expanded. Not only do the brand communities have the traditional community’s essential features of “consciousness of kind, presence of shared rituals and traditions and a sense of moral responsibility”, but they also contain a “community spirit” that is not contained in the traditional communities. Community members’ seeking for self-identification by brand and rebuilding the way they should want to live by community are the meaning of brand communities.

The primary precondition of researching brand loyalty is the feeling of community members’ integration. The concept of brand community integration was put forward by McAlexander, et al. (2003) for the first time. Brand community is a center in customers, which include many different entity relationship networks. Those networks will gradually constitute a single concept that is brand community integration (McAlexander, Kim, & Roberts, 2003). Essentially, brand community integration includes some significant processes such as integrating decentralized customers, combining customers with brands, and strengthening the customers’ identity about products, enterprise staffs and brands in the process of communicating between each other.

The Effect of Customer Value Demand on Brand Loyalty in Brand Communities

Customer satisfaction is one of the key determinants of promoting customer loyalty. Customer loyalty will be improved by raising the level of satisfaction, but after reaching a certain level, no matter how to improve the level of customer satisfaction, the level of customer loyalty will always remain unchanged. The fundamental reason for this result is that there is no grasp of basic factors driving loyalty, namely customer value (Grönroos, 2008). In addition to driving customer loyalty directly, customer value also drives loyalty through customer satisfaction indirectly. So, the key to winning customer loyalty is to deliver excellent customer value to people in need. Thus, the following hypothesis, indicating a positive relationship to brand loyalty, is proposed:

H1: In the process of implementing brand loyalty, customer value demand includes functional value, social value, psychological value, hedonic value and monetary value, and has a positive influence on brand loyalty.

The Effect of Customer Value Demand on Communities Integration in Brand Communities

Motivation is an exciting force, which promotes the behavior towards a goal. The demands of consumers generally include natural security, material insurance, material comfort, being accepted by people, and influencing personal growth, etc. And consumer motivational behavior derives from the basic functional, social, emotional, intellectual, or situational needs (Sheth, Newman & Gros, 1991). Internal demand motivation shows the behavior of curiosity of the individual, interest in the activities, joviality, feelings of competence, achievement, and self-actualization, etc. People, who are interested in the works or activities, will pay more attention to their ability to play in the activities instead of extrinsic rewards. Based on these findings, the following hypothesis is proposed:

H2: In the process of implementing brand loyalty, customer value demand, includes functional value, social value, psychological value, hedonic value and monetary value, has a positive influence on brand community integration.

The Effect of Community Integration on Brand Loyalty in Brand Communities

After joining the brand community, as members in this organization or group, customers will realize the community’s shared rituals, standards and traditions and try to consistent with them. Through those

celebration activities and communication, community members can more deeply perceive brand meaning and form a self-identity about the brand, so the symbolic boundary of a brand community has been continued. As Ajzen & Fishbein said, customers will generate loyalty to the brand, which is already mutual accepted. Brand community integration is a form of quantization and measure for community members' interactive relationship and characteristics, and therefore, is also very significant to improve cohesion. The existing studies confirm that brand community can better promote brand loyalty than individual satisfaction (Wang X. X., 2013). Therefore, the following hypothesis is proposed regarding the relationship between brand community integration and brand loyalty:

H3: In the process of implementing brand loyalty, brand community integration includes community identity and community participation, and has a positive influence on brand loyalty.

Based on the above discussion, the present study proposes a conceptual research model, as shown in Figure 1.

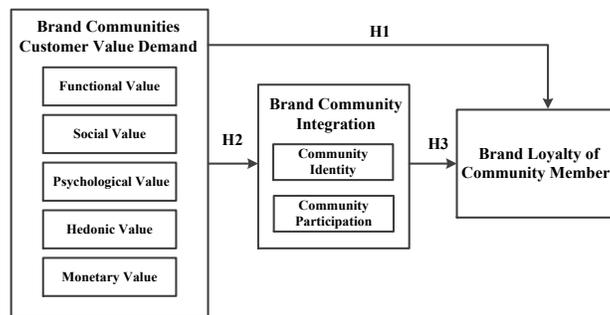


Figure 1. Initial Conceptual Model

Research Methodology and Design

Sample Selection and Data Collection

On the basis of the definition of brand community and research purposes, the sample for the present study consisted of members of motorists' clubs, fans of automobile brands or automotive forums, etc. The data were collected between March and May 2014. Participants were mainly recruited from four sources, such as panels of participants identified by an online research company, online automotive forums, QQ groups of motorists' clubs and automobile 4S shops. In order to ensure the reliability and validity of the questionnaire, this study also carries on a pre-test. From those investigation channels, 326 valid responses were received, with the valid response rate of 85.3%. Demographic characteristics are shown in Table 1.

Table 1. Characteristics of Demographic Variables (N= 326)

Demographic Characteristics		Freq.	%	Demographic Characteristics	Freq.	%		
Biological gender	Male	202	61.96%	Car purchase cost (RMB)	Less than 100,000	36	11.04%	
	Female	124	38.04%		100,000-150,000	136	41.72%	
Age	Less than 18years old	2	0.61%		150,000-200,000	104	31.90%	
	18-25	43	13.19%		200,000-300,000	29	8.90%	
	26-35	235	72.09%		More than 300,000	21	6.44%	
	36-45	37	11.35%		Auto level	A lever	197	60.43%
	46-55	7	2.15%			B lever	107	32.82%
	Over 56	2	0.61%	C lever		14	4.29%	
Occupation	Public institution employees	59	18.10%	D lever		8	2.45%	
	Enterprise staff's	236	72.39%	Years of use	Less than 1 year	36	11.04%	
	Entrepreneurs	19	5.83%		1-2 years	132	40.49%	
	Students	10	3.07%		2-3 years	106	32.52%	
	Retirees	2	0.61%		More than 3years	52	15.95%	

Survey Instrument

The survey includes four sections: basic situation investigation, customer value demand in brand communities, brand community integration, and community members' brand loyalty, and a total of 44 items which use the Likert 5-point scoring scheme to measure. According to the five dimensions of customer value demand (Sheth, Newman & Gross, 1991) and PERVAL system (Sweeney & Soutar, 2001), 16 items are used to measure variable of customer's value demand. Based on the researches of community integration definition, community identity, community spirit, social responsibility and community participation, 7 items are used to measure variable of community integration (McAlexander et al., 2002). This study references some perspectives of Zeithaml's scale (1996) to measure brand loyalty, which included 6 items.

Data Analysis and Results

Reliability Analysis and Validity Analysis

The reliability analysis method is a Cronbach's alpha coefficient method, and the alpha coefficient is greater than 0.6, generally considered an acceptable reliability limit (Hulland, 1999). Through reliability analysis, the standardization alpha coefficient of 0.9249 in total scale was greater than 0.9, which indicated that total scale's reliability is very high. And all of α coefficients lie between 0.6 and 0.7, which indicated that the subclass of reliability is also in an acceptable range.

It is generally divided into the content validity, surface validity and constructive validity. This study quoted related literature with good validity of the scale as far as possible and revised a survey on the basis of the survey pre-test to ensure the content validity and face validity of the survey. Construct validity was mainly measured through convergent validity and discriminatory validity. In terms of convergent validity, the test result of AVE and CR in Table 2, the value of AVE basically lies between 0.50 and 0.60, in line with the range of the critical value 0.5 recommended by Fornell, et al. In addition to the social value

factors, CR is basically in line with the critical value of 0.70 recommended by Nunnally and Bernstein. Therefore, the basic thought that each variable has a good convergent validity.

Table 2. Results of Convergent Validity Analysis of Variables

Latent variable	AVE	CR
Customer value demand – Functional value (GV)	0.60	0.75
Customer value demand – Social value (SV)	0.50	0.69
Customer value demand – Psychological value (XV)	0.51	0.74
Customer value demand – Hedonic value (LV)	0.50	0.83
Customer value demand – Monetary value (JV)	0.57	0.72
Community integration – Community identity (SR)	0.56	0.70
Community integration – Community participation (CS)	0.51	0.82
Brand loyalty (PZ)	0.50	0.84

For discriminatory validity, this study tests it by comparing the square root of AVE and the value of the correlation coefficient in each variable. Table 3 shows that each variable in this study complies with this standard and also has a good discriminatory validity.

Table 3. Correlation Coefficient of Variables

	GV	SV	XV	LV	JV	SR	CS	PZ
GV	0.78							
SV	0.274**	0.65						
XV	0.415**	0.577**	0.70					
LV	0.260**	0.501**	0.502**	0.70				
JV	0.358**	0.333**	0.323**	0.314**	0.76			
SR	0.296**	0.399**	0.401**	0.511**	0.381**	0.75		
CS	0.373**	0.500**	0.479**	0.663**	0.459**	0.563**	0.70	
PZ	0.448**	0.444**	0.566**	0.527**	0.509**	0.539**	0.677**	0.69

Structural Model and Hypothesis Testing

This study used AMOS 18.0 software to make a second-order structural equation model analysis. The summary of this causal model was illustrated in Table 5; all indices illustrated a satisfactory model fit ($\chi^2 = 159.620$, $df = 62$, NNFI = 0.871, CFI = 0.916, RMSEA = 0.079). The chi-square ratio (χ^2/df) was 2.575, which was acceptable. The evaluation index and hypothesis testing results are shown in Table 4, which include each path coefficient between the variables and significant values P. All hypotheses in main path are supported with the exception of part sub-dimensions hypothesis.

Table 4. Evaluation Index of Structure Model and Results of Hypothesis Testing

Hypothesis	Path	Standardized Coefficients	P	Result
H1	Brand loyalty<---Customer value demand	0.943	***	s.
H1a	Brand loyalty<---Functional value	-0.082	0.642	n.s.
H1b	Brand loyalty<---Social value	-0.498	0.127	n.s.
H1c	Brand loyalty<---Psychological value	0.658	0.042(*)	s.
H1d	Brand loyalty<---Hedonic value	-0.318	0.187	n.s.
H1e	Brand loyalty<---Monetary value	0.148	0.360	n.s.
H2	Community integration <---Customer value demand	0.882	0.039(*)	s.
H2a	Community integration <---Functional value	0.197	0.081	n.s.
H2b	Community integration <---Social value	0.288	0.152	n.s.
H2c	Community integration <---Psychological value	-0.24	0.233	n.s.
H2d	Community integration <---Hedonic value	0.575	***	s.
H2e	Community integration <---Monetary value	0.309	0.002(**)	s.
H3	Brand loyalty <---Community integration	0.454	0.048(*)	s.

Note: s. = significant; n.s. = non-significant.

The testing results of second-order structural equation model are shown in Figure 2, three hypotheses were supported: H1, which predicted a positive effect of customer value demand on brand loyalty; H2, which posited the positive effect on customer value demand for community integration; H3, which posited the positive effect of community integration on brand loyalty. Specifically, in the first-order structural model, three hypotheses were supported: H1c, which supported a positive effect of psychological value on brand loyalty, and H2d and H2e, which supported positive significant effects of hedonic value and monetary value of community integration. Due to the rejection of H1a, H1b, H1d, H1e, H2a, H2b and H2c, the effects of functional value, social value, hedonic value and monetary value of brand loyalty were not tested; the effects of functional value, social value and psychological value were not tested.

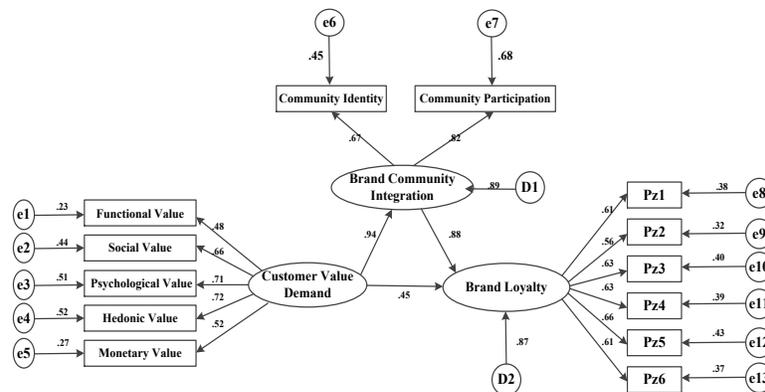


Figure 2. Structural model and correlation of variables

Conclusion and Managerial Implications

By mainly adopting some study methods, this research built the structural model and then conducted an empirical analysis for the motorists' club brand communities. The main conclusions are as follows: first, customer value demand has significant and positive effects on the feeling of community integration. Second, the feeling of community integration has significant and positive effects on brand loyalty in the

members of motorist club. Third, the feeling of community integration has significant and positive effects on brand loyalty in the members of the motorist club. The results indicated that the impact of community integration of brand loyalty is a new model of “integration - loyalty”, which would surpass the old model of “satisfaction - loyalty”.

On the basis of the research conclusion above, the study puts forward some suggestions for some enterprises and constructing brand communities. First, enterprises should pay more attention to the consumer’s changing in demand, which towards products, brands or services, consumers also should be given more rights. Second, enterprises should make efforts to provide more positive emotions to customers, and do well in the contact point management between front-line employees and customers. Third, it is necessary to try their best to promote the degree of customer integration and establish an emotional link between customers and brands to motivate consumers’ emotional experience of brands. The last, by meeting information and social needs of customers and building the scene, there are some paths for customers to obtain many types of transcendent consumer experience.

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An Empirical Research on the Influence of Management Social Capital on the Growth of Listed Companies: Based on the Mediating of Diversification Strategy

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***[Abstract]** From the perspective of social capital, we analyze the relevance between managing social capital and enterprise growth and provide a new research horizon. Using the data on China SME Board listed companies from 2009 to 2013, this paper found that management social capital plays a positive role in enterprise growth with different affection degree, and diversification strategy plays as intervening variable in the internal mechanism of management social capital to enterprise growth. It concludes the influence that management social capital affects on enterprise growth is direct and indirect.*

***[Keywords]** management social capital; diversification strategy; enterprise growth; small and medium-sized enterprises*

Introduction

Small and medium-sized enterprises (SMEs) are an important part in the development of the national economy and society, especially listed companies in the small and medium-sized board, which are representative of small and medium-sized enterprises. Therefore, how to evaluate the growth of small and medium-sized enterprises and explore the factors that will affect their growth becomes the core theme in the research on listed companies. But the academic research on the growth of SMEs has less literature to analyze their growth from the perspective of social capital. Executives rely on their own resources, in which established effective social networks have become increasingly common in the development of SMEs. Therefore, from the perspective of social capital to analyze its impact on the growth of SMEs is particularly important. This paper divided management social capital into three dimensions: network relationships, network status and social reputation, and we analyzed the effect of each dimension on enterprise growth separately. In addition, existing research shows that management social capital may influence the enterprise growth through diversification strategy. Furthermore, it brought in diversification strategy, and investigated the intermediary role of management social capital to the enterprise growth. This paper first explores the measurement methods and dimensions of SME executives' social capital and diversification strategy selection. Second, it examines the role of SME executives' social capital in the business growth process, and the influence of social capital on growth potential. Finally, it specifically analyzes the path of SME executives' social capital and enterprise growth, considering the factor of diversification strategy selection.

Management Social Capital and the Growth of Listed Companies

Enterprise growth is one of the ways in which to measure business performance and the effect of social capital on enterprise performance of executives is a hot issue of research at home and abroad. The existing literatures from different angles have done empirical and theoretical research.

From the research, they confirmed that the social capital of top managers has important influence on enterprise financial behavior and corporate performance. Dollinger (1985) took 82 private enterprises in Pennsylvania as the research sample, and found that entrepreneurs spent about 59% of their time and effort to build their social network's relationship and enterprise performance; good enterprises are keen to network construction. Aldrich, et al. (1987) carried on an empirical test through the investigation of 285 potential and actual entrepreneurs and found that the enterprises were founded in three years; diversity of social capital on profitability has a negative influence; after three years of the enterprise's founding, the diversity of social capital has a positive influence on profitability. Lulu Li (1995) took the enterprises of our country as the research objects, and she found that the entrepreneurs' friends' relationships are conducive to the growth of the enterprises. The close relationship among the entrepreneurs, supervisors and technicians are conducive to the enterprise's development, but the close relationship with the workers in the growth of the enterprise has a significant effect; with more social capital the entrepreneurs can get more resources, and ease financing constraints and promote the development of enterprises. The subsequent literature research on the entrepreneurial social capital further, and found that the entrepreneurs' social network relationship is an important factor to the success of an enterprise, and social capital has a positive impact on enterprise performance. Havens & Senneseth (2001) conducted a follow-up study for 1991-1995 years in 8 European countries and found that the majority of small and medium-sized enterprises are keen on the construction of the social capital network, but no empirical evidence suggests that social capital can have an impact on the enterprise's short-term benefits. Cooke & Clifton (2002) in the UK used SMEs as the research samples to study the relationship between social capital and enterprise performance, and found that social capital of the enterprise has higher performance than did the social capital of the enterprises. Park & Luo (2001) through a questionnaire survey with 128 enterprises in East China as the research samples, conducted empirical research and found that the executives of the social capital can bring a positive effect to the enterprise value.

Peng and Luo (2000) through a study on China 6a provinces of 400 home enterprises' social capital and enterprise performance of relationship for random sample research, and felt from a general view, that entrepreneurs and other entrepreneurs of joint relationships can significantly effect the enterprise's market share, but total assets proceeds rate of results not has statistics Shang of meaning; and entrepreneurs of political network relationship can significantly improve enterprise of market share and total assets proceeds rate, and has statistics Shang of meaning. From points sample view, the entrepreneurship network of relations with other enterprises and political networks on different property performance in different, namely, the political network of entrepreneurs with other entrepreneurs of this correlation effect on enterprise performance all the more important, entrepreneurs' knock-on effect on firm performance in the non-State-owned enterprises is more obvious. Barr (1998), based on family enterprise studies, conducted empirical research on social capital and the relationship of a firm's performance, discovered that innovative network has a positive effect on enterprise performance and solidarity network despite resource effect on business performance had no effect. Yanjie Bian and Haixiong Qiu's (2000) survey of 188 companies in Guangzhou statistics found that the greater amount of social capital of the entrepreneurs, the enterprise higher has per capita GDP, high social capital of entrepreneurs can increase the operating efficiency and ultimately improve corporate performance.

Guoqing Zou and Xiangfei Gao (2008), based on real estate listed company for research, found entrepreneurs' political contacts and enterprise performance are related; administrative level and enterprise profit are negative related; entrepreneurs of Union Pay relationship and enterprise performance

is significantly negative related; entrepreneurs and other entrepreneurs of joint relationship and enterprise performance are related; entrepreneurs degree and enterprise performance negative related; entrepreneurs with association backgrounds and enterprise performance do not have a significant relationship. Aijuan Chen (2010), a studied a sample of Zhejiang private enterprises, for the relationship between social capital and enterprise's performance, and found that executives in four dimensions of social capital (network of relationships, trust, common norms of social interaction, as well as a common language) has the growth capacity of enterprises and business efficiency has a significant positive impact.

Management Social Capital and Diversification Strategy

Enterprises' strategic choice is one of the core issues in strategic management research. However, for a long time, a large number of researches were based on decision makers who are completely rational assumption, ignoring the individual different characteristics and the heterogeneity of senior executives' influence on the enterprise strategic choice. Since Hambrick & Mason (1984) established the top echelon theory, researchers began to explore the executive's traits influence on the enterprise strategy choice beneficially. Some scholars investigated the relationship between the cognitive variables, such as entrepreneurs' demographic characteristics and diversification strategy. Then, with the development and refinement of the social capital theory in the strategic research management, scholars begin to pay close attention to the social capital, which reflecting the individual heterogeneity, influencing on strategic decisions, as well as some research is concerning about between executive social capital relationship and the strategy of diversifying.

Aqua (2007) started from the entrepreneurs' social capital, using Ghana enterprises as the research sample, and explored the relationships between the social capital, strategic choice and corporate performance. The study found that entrepreneur's social capital has a significant impact on enterprise performance through strategic choices; that is, the strategic choice of the enterprise plays a regulatory role between the entrepreneurs' social capital and corporate performance. Using data from 2004-2004 China's listed companies, Jingfei Wu (2008) carried out theoretical and empirical analysis between the political network of top managers and diversification strategy in the view of social capital. The study found that a political network of management has a positive influence on enterprise business and geographic diversification; enterprise scale has a negative regulatory role between the relationship; business area and ownership differences are influencing the corporate executives' political networks and corporate diversification strategy. Junhua Sun and Chuanming Cheng (2009) define entrepreneur social capital for two dimensions, the social network and mobilization ability, and analyze entrepreneurs' social capital's influence on a diversification strategy from three aspects: network embedded, knowledge and common resources. Their research indicated that the larger the entrepreneur's social network size, the greater the mobilization ability. Enterprises tend to diversification, and always non-related diversification, or diversify through mergers. Using data drawn from Chinese listed companies, Min Zhang and Jicheng Huang (2009) studied the relationship between social capital of senior executives and diversify strategy, and they found that the social network really has a significant influence on corporate diversification. In particular, the degree of diversification that includes social network relationship is significantly higher than others. In addition, from the perspective of risk, they also studied the relationship between social capital and diversification, and they found that the risk of diversification which including social network relationship is less than others.

Management Social Capital, Diversification Strategy and the Growth of Listed Companies

By reviewing the above literature, we found there is a more in-depth study in the existing social capital scholars on the relationship between executives and corporate performance (Dollinger, 1985; Lulu Li 1995; Peng, et al., 2000; Yanjie Bian & Haixiong Qiu, 2000; Guoqing Zou & Xiangfei Gao, 2008) than the path how management social capital impacts business performance. According to the resource-based theory, social capital executives have “resource effect” which means that social capital executives are able to bring the enterprise resource affect. Companies can configure the acquired resources and social capital through strategic choices, and ultimately have an impact on business performance. Therefore, the path how management social capital impacts business performance is much more profound.

There is less literature on the path how executives social capital impacts business performance. Acquah (2007) put social capital to entrepreneurs as a starting point to conduct research for companies in the Ghana sample to examine the relationship between social capital, strategic choice and firm performance and found that social capital entrepreneurs will have a significant impact on business performance through strategic choice which means that strategic choice plays a regulatory role in social capital among entrepreneurs and business performance. Min Zhang and Jicheng Huang (2009) studied social capital and diversified relationships of executives in China’s listed companies as samples and found that social networking for business diversification indeed had a significant impact. Specifically, the degree of diversification of social networking is significantly higher than non-social network affiliates. In addition, they also, from a risk point of view, studied the relationship between social capital and diversity, and found less risk can be brought of social networking business diversification strategy than non-social network affiliates.

Implications and Conclusion

This paper used small and medium-sized enterprises listed on the Shenzhen Stock Exchange from 2009 to 2013 as the research object. Through theoretical analysis on related hypothesis, we establish the regression model, and we see that the influence of enterprise senior management social capital to the growth of listed companies. In addition, diversification strategy selection plays an intermediary role. Specifically, in the following aspects:

1. Management social capital on the growth of listed companies has a positive role in driving forward.
2. Diversification strategy selection plays an important intermediary role in the management social capital to the growth of listed companies.
3. The path of the influence of management social capital for the growth of listed companies has direct effects and indirect effects.

We would like to summarize our paper by three aspects: First, the enterprise should pay attention to the accumulation of social capital in the economic transition period. Our country is in the process of the transition from the planned economy to a market economy, and the market degree needs to be improved; the market system is not perfect. In addition, because of the imperfections of the law, our country the enterprise development environment is uncertain, and enterprise risk also increases (Cull & Xu, 2004). Second, in the process of building social capital, the enterprise should pay attention to the relationship between the quality of ascension. Through the empirical results of this study, we found that the greater the network relationship of corporate executives, the more significant of its positive impact on corporate

growth; the higher executive network status, the more significant influence on enterprise growth. Finally, the enterprises should focus on social capital and the strategic choice for matching. The research shows that Chinese enterprises through facilitating social networking of its executives, financing can be obtained, as well as industry access and other advantages of resources; from the point of view of enterprise competitive advantage, the source of corporate competitive advantage is the strategic control and effective use of strategic resource.

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Study on Performance Evaluation of P2P Lending Business Model Innovation

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[Abstract] With the development of Internet financial services, Peer-to-Peer (P2P) lending has rapidly grown in recent years and garnered significant attention from the public. Based on the analysis of business model innovation factors, combined with the characteristics of P2P industry, we select eight indicators and then use the analytic hierarchy process (AHP) and fuzzy comprehensive evaluation method (FCE) to create a comprehensive evaluation model to evaluate the effect of innovation. This model can evaluate different P2P lending business models' innovation effects in the same period, as well as the same model at different stages, which helps to provide advice for business model innovation of P2P lending.

[Keywords] P2P lending platform; business model innovation; AHP; FCE

Introduction

The arrival of the era of big data has brought unprecedented opportunities and challenges for the existing enterprise. On the one hand, the new technology requires a new business model to adjust to; on the other, the development of new technologies could provide support for innovative business models. People not only focus on the security of transactions, but also on the convenience and efficiency of transactions. P2P lending is a new platform of financial transactions that bypasses conventional intermediaries by directly connecting borrowers and lenders. The P2P lending industry in China, as a whole, has more than 8000 platforms and has generated ¥60 billion in loans by the end of August 2014, with projections for robust future growth.

New in China, P2P lending ineluctably appears to have some problems such as the lack of regulation and an incomplete social credit system. But the self-employed persons and micro enterprises often face a shortage of capital in the process of their rapid development, and because of the lack of appropriate collateral, it is difficult for them to obtain loans from commercial banks, which produces a huge market demand for loan funds. Perhaps the most widely advertised benefit of P2P lending is that lenders can obtain a higher return on their investments, while those micro-enterprises and individuals can get loans at a lower rate without collateral. Moreover, P2P lending could provide a simple and quick loan service for investors and borrowers, which the traditional financial institutions cannot support. In a word, research on the P2P lending platform business model innovation has significant theoretical and practical importance. Theoretically, building an evaluation model of P2P lending business model innovation would enrich the theoretical system of business model innovation research. Practically, P2P lending platform helps to alleviate the financial needs of self-employed persons and micro-enterprises, as it breaks the geographical restrictions and saves the transaction cost as well as makes use of the excess capital.

Literature Review

Review on Business Model Innovation

Domestic and foreign scholars have different ideas on the concept of business model innovation. Tucker (2001) believed that real business model innovation comes from solving problems for customers in new

ways. Magretta (2002) argued that adjustment to value chain or elements in the value chain is business model innovation. However, domestic scholars have different views, Gao and Guan (2012) studied from the perspective of value chain, concluding that business model innovation is the innovation of value activities in the value chain. From three aspects of economics, management and entrepreneurship, Zeng (2006) explained that the business model innovation is to create customer demand, aiming at chasing Schumpeterian rents. Wang and Dong (2013) compared business model concepts from technological science, strategy and marketing perspective, believing that business model innovation is the constituent elements change of business model, which is used to achieve a breakthrough of systemic innovation in operations, sales, profit and more than one aspect.

Successful business model innovation will bring all aspects of harvest, but it has to pay certain price. Therefore, how to achieve evaluation business model innovation results has become an active research focus. From the perspective of profit to evaluate the performance of business model innovation, Hamel (2002) concluded that successful business model innovation should get more profits. Michael Morris, et al. (2005) argued that business model innovation evaluation methods needs to adapt to changing conditions, starting with the measures of innovative development, and in accordance with market and industry to determine the relative importance of innovation. Based on the balanced scorecard theory (BSC), Hao (2012) proposed a business model innovation evaluation index system combined with value chain theory and the core competence theory. Guo (2013) established the e-commerce enterprise evaluation system augmented with gray correlation evaluation method as an analytical tool.

Review on P2P Lending

Referring to the relevant literature, we find that study on P2P lending is mainly concentrated on the business model, risk control, the trust mechanism and lending behavior. P2P platform is divided into three main operating modes: unsecured mode, secured mode, and mortgage-secured mode (Smith, 2009). P2P lending risk has always been the key issues of concerns to investors, and Wang (2009) concluded three major risks of P2P financing platform: personal credit risk, platform technology risk, national regulatory and legal risks by the horizontal and vertical analysis of the P2P platform. For the credit problem, by empirical analysis of impact factor in borrowers bidding behavior based on trust perspective, the annual interest rate, loan period and the number of bids have a significant effect on the borrower's bidding behavior, however, the loan amount and borrower's bidding behavior relationship was not significant (Li, et al. 2014). The study of lending practices is mainly about factors that influence the rate of success of repaying the loan. Ravina & Pope, et al. (2008) found that race, gender, appearance, age and other demographic characteristics can affect the rate of success.

Through comprehensive study on the above literature, we can make a conclusion that business model innovation mainly relies on the constituent elements of innovation of the business model. We also consider the elements of business model innovation including products, services, processes, and profitable ways, etc. Previous researches on evaluation of business model innovation depend largely on the BSC theory. In addition, we can see that people are more concerned about the safety and liquidity of P2P lending, transparency of information, the risk-benefit ratio, and the study of the platform has not been involved in business model innovation. Combining with P2P industry characteristics on the basis of elements of business model innovation, this paper will construct an evaluation system to evaluate the effect of business model innovation for different platforms.

Principles and Methods of Evaluation

Analytic Hierarchy Process

AHP can decompose the object into a number of factors, and then based on their mutual relationships and affiliations, these factors are categorized by different levels, creating a multi-layered structural analysis model. The basic steps are as follows:

Establish hierarchical structures. By analyzing all the factors that influence the decision to classify the association and affiliations between these factors, a dominance relationship from top to bottom of the hierarchy is formed.

Construct comparative judgment matrix. On each level, the Delphi method is used to judge the relative importance of each factor to construct a judgment matrix. Main factors are $U_1, U_2, U_3, \dots, U_n$, and the corresponding weights are $A_1, A_2, A_3, \dots, A_n$. And sub-factors for $u_{i1}, u_{i2}, u_{i3}, \dots, u_{im}$, and the corresponding weights are $a_{i1}, a_{i2}, a_{i3}, \dots, a_{im}$. A_i is obtained by calculating the eigenvectors of judgment matrix, matrix element R_{ij} is the relative importance of scale U_i & U_j , and judgment matrix element reference to Saaty's 1-9 scale method.

Calculate the relative weight of each index. First calculate the maximum judgment matrix eigenvalues and eigenvectors, and then do eigenvectors normalization process, you will get the relative weight of each level of each factor weight. Specific steps are:

- a. Normalized judgment matrix R , get a new judgment matrix $\bar{R} : \bar{r}_{ij} = r_{ij} / \sum_{k=1}^n r_{ik} \ (i, j=1, 2, \dots, n)$.
- b. Sum of each row vector of matrix \bar{R} , get matrix $\bar{W} : \bar{w}_i = \sum_{j=1}^n \bar{a}_{ij} \ (i, j=1, 2, \dots, n)$.
- c. Normalized matrix $\bar{W} : w_i = \bar{w}_i / \sum_{j=1}^n \bar{w}_j \ (i, j=1, 2, \dots, n)$
- d. Get the maximum judgment matrix eigenvalue and eigenvector:

$$\lambda_{\max} = \sum_{i=1}^n \frac{(RW)_i}{nw_i}, \quad W = (w_1, w_2, \dots, w_n)^T$$

Consistency check. In order to ensure the use of AHP conclusion is reasonable, we need to examine the consistency of judgment matrix. Inspection criteria: $CR = \frac{CI}{RI} \leq 0.01, CI = \frac{\lambda_{\max} - n}{n-1}$.

Table 1. Consistency Index RI Value

n	2	3	4	5	6	7	8
RI	0	0.5189	0.8638	1.0959	1.2550	1.3390	1.3954

Fuzzy Comprehensive Evaluation Method

FCE is a comprehensive evaluation method based on the theory of fuzzy mathematics, which uses the theory of membership degree turn the qualitative evaluation into quantitative evaluation. The specific steps are as follows:

1. According to the hierarchy, determine the main factors set and sub-factors set.
 $U = \{U_1, U_2, \dots, U_n\}, U_i = \{u_{i1}, u_{i2}, \dots, u_{im}\}, i = 1, 2, \dots, n$
2. Determine the evaluation set $V = \{V_1, V_2, V_3, V_4, V_5\}$.
3. According to the AHP, get main factor weight set and sub-factors weight set.
 $A = (A_1, A_2, \dots, A_n), A_i = (a_{i1}, a_{i2}, \dots, a_{im}), i = 1, 2, \dots, n$
4. Fuzzy comprehensive evaluation levels:

- a. First level FCE. Get the first level FCE membership matrix: $R_i (i=1, 2, \dots, n)$,
 $r_{ijt} = k_{ijt} / k$, k is the number of experts involved in the evaluation, k_{ijt} is the number of experts at each grade of each indicator. Thus, the first level FCE results are obtained: $B_i = A_i \bullet R_i = (b_{i1}, b_{i2}, b_{i3}, b_{i4}, b_{i5})$.
- b. Second level FCE: $B=A \bullet R = (A_1, A_2, \dots, A_n) \bullet (B_1, B_2, \dots, B_n)^T = (b_1, b_2, \dots, b_5)$,
 Normalized matrix B , $\bar{b}_i = b_i / \sum_{i=1}^5 b_i$, $\bar{B} = (\bar{b}_1, \bar{b}_2, \dots, \bar{b}_5)$, so we can get fuzzy indicators composite score index $U^1 = \bar{B} \bullet V_i = (\bar{b}_1, \bar{b}_2, \bar{b}_3, \bar{b}_4, \bar{b}_5) \bullet (90, 80, 70, 60, 45)^T$.

Construction of Evaluation Model

Select Evaluation Indicators

According to business model innovation elements and P2P industry characteristics, the selected indicators and their meanings are explained below:

Brand indicator (U₁). Excellent team (u₁₁), long hours of operation (u₁₂), positive media coverage (u₁₃) will increase the brand value of the platform. The higher the score of this indicator, the better this business model innovation.

Transparency indicator (U₂). It includes borrower information disclosure (u₂₁) and trading information disclosure (u₂₂).

Liquidity indicator (U₃). It mainly refers to capital liquidity of platform. The faster the speed of withdrawal (u₃₁) and assignment of claims (u₃₂); the higher the index score, the better the platform business model innovation.

Sentiment indicator (U₄). Investors (u₄₁) and lenders (u₄₂)'s willingness to choose the platform indicates the high popularity of this platform.

The volume indicator (U₅). Calculating is based on the monthly volume of platform (Q_i) and maximum volume of sample platform(Q).

$U_5 = \text{Max} \left(0, \frac{L_n(Q_i) - L_n(1000000)}{\text{Max}(L_n(Q)) - L_n(1000000)} \times 100 \right)$ **Leverage indicator (U₆).** It includes financial leverage (a)

and regional leverage (b). Financial leverage refers to the platform registered capital and the sum of the risk reserve divided by cumulative principal and interest. Regional leverage refers to the platform's geographical location. The platform is located in the eastern region had 10 points, five points for the central region, and the western region for 0 points. $U_6 = \text{Min}(100, 100 - a + b)$.

Risk Return indicator (U₇). It refers to the relationship between risk and return. Theoretically, the higher the value, the more worth investing the platform. This indicator relates to the average risk yields(c), risk-free yields (d) and financial leverage(a). $U_7 = \frac{c-d}{a} \times 10000$.

Operating income indicator (U₈). The platform's revenue primarily comes from borrowing management fees, the values related to the time-weighted volume(e) and management fee rate(f). Taking the logarithm of income classified as percentage system as shown in Table 2.

Table 2. Income Indicators Corresponding Score

$L_n(e \cdot f)$	<14	14-15	15-16	16-17	>17
U ₈	45	60	70	80	90

Fuzzy Comprehensive Evaluation Model

Fuzzy Comprehensive Evaluation Model of P2P lending platform business model innovation is as follows:

- Factors set: $U=\{U_1,U_2,U_3,U_4,U_5,U_6,U_7,U_8\}$;
 $U_1=\{u_{11},u_{12},u_{13}\}$; $U_2=\{u_{21},u_{22}\}$; $U_3=\{u_{31},u_{32}\}$; $U_4=\{u_{41},u_{42}\}$.
- Evaluation set: $V=\{90,80,70,60,45\}$.
- Weight set: $A=\{A_1,A_2,A_3,A_4,A_5,A_6,A_7,A_8\}$;
 $A_1=\{a_{11},a_{12},a_{13}\}$, $A_2=\{a_{21},a_{22}\}$, $A_3=\{a_{31},a_{32}\}$, $A_4=\{a_{41},a_{42}\}$.
- Evaluation matrix and calculation

$$B_1 = A_1 * R_1 = \{a_{11}, a_{12}, a_{13}\} * \begin{Bmatrix} r_{111} & r_{112} & r_{113} & r_{114} & r_{115} \\ r_{121} & r_{122} & r_{123} & r_{124} & r_{125} \\ r_{131} & r_{132} & r_{133} & r_{134} & r_{135} \end{Bmatrix} = \{b_{11}, b_{12}, b_{13}, b_{14}, b_{15}\};$$

$$B=A * R = (a_1, a_2, a_3, a_4) * (B_1, B_2, B_3, B_4)^T = (b_1, b_2, b_3, b_4, b_5);$$

$$U^1 = \bar{B} * V = (\bar{b}_1, \bar{b}_2, \bar{b}_3, \bar{b}_4, \bar{b}_5) * (95, 85, 75, 60, 45)^T; U^2 = U_5 * A_5 + U_6 * A_6 + U_7 * A_7 + U_8 * A_8.$$

- Composite Score Index: $U = U^1 + U^2$.

Case Analysis

Renrendai is China's first batch of Internet-based P2P lending service platform. Since its establishment in May 2010, its service has covered more than 2000 regions in the country and served tens of thousands of customers. The example of Renrendai will be used to illustrate the evaluation model. Quantitative data comes from company's official website, and the qualitative indicators are derived from questionnaires to experts, investment managers and P2P senior investors.

Qualitative Indicators Index Calculation

Determine weights. According to survey results, we can obtain the largest judgment matrix eigenvalues and eigenvectors of main factor.

$\lambda_{\max} = 8.0588$, $CR = 0.006 \leq 0.01$, $W = \{0.4113, 0.5014, 0.2066, 0.4055, 0.1434, 0.2040, 0.2690, 0.2302\}$. After normalization, we can get the main factor weight set:

$$A = \{0.17, 0.21, 0.09, 0.17, 0.06, 0.09, 0.11, 0.1\}.$$

Similarly, the sub-factors weight sets are:

$$A_1 = \{0.32, 0.22, 0.46\}, A_2 = \{0.47, 0.53\}, A_3 = \{0.38, 0.62\}, A_4 = \{0.73, 0.27\}.$$

Qualitative indicators index.

Table 3. Evaluation of the Results

U	u	Results				
		90	80	70	60	45
U ₁ (17%)	u ₁₁ (32%)	0.6	0.3	0.1	0	0
	u ₁₂ (22%)	0.4	0.3	0.3	0	0
	u ₁₃ (46%)	0.3	0.4	0.2	0.1	0
U ₂ (21%)	u ₂₁ (47%)	0.5	0.3	0.2	0	0
	u ₂₂ (53%)	0.6	0.2	0.1	0.1	0
U ₃ (9%)	u ₃₁ (38%)	0.5	0.2	0.2	0.1	0
	u ₃₂ (62%)	0.4	0.3	0.2	0.1	0
U ₄ (17%)	u ₄₁ (73%)	0.6	0.2	0.1	0.1	0
	u ₄₂ (27%)	0.5	0.3	0.2	0	0

$$\begin{aligned}
B_1 &= A_1 * R_1 = \{0.418, 0.346, 0.19, 0.046, 0\}, B_2 = \{0.553, 0.247, 0.147, 0.053, 0\} \\
B_3 &= \{0.438, 0.262, 0.2, 0.1, 0\}, B_4 = \{0.573, 0.227, 0.127, 0.073, 0\} \\
B &= A * R = \{0.324, 0.134, 0.081, 0.028, 0\}, \bar{B} = \{0.36, 0.15, 0.09, 0.04, 0\} \\
U^1 &= \bar{B} * V_i = \{0.36, 0.15, 0.09, 0.04, 0\} * (90, 80, 70, 60, 45)^T = 53.1
\end{aligned}$$

Quantitative Indicators Index Calculation

The volume indicator. For example, in August 2014, the company's total volume is 3373480000 RMB, the biggest volume was 1280470700 RMB of sample platform.

$$U_5 = \text{Max} \left(0, \frac{L_n(337348000) - L_n(1000000)}{L_n(1280470700) - L_n(1000000)} \times 100 \right) = 81.36$$

Leverage indicator. In August 2014, the company's registered capital is 100000000 RMB, cumulative principal and interest is 3202721700 RMB, and risk reserve is 43328700 yuan. The companies registered in Beijing, regional leverage b is 10.

$$a = \frac{320272.17}{10000 \times 100\% + 4332.87} = 22.35, U_6 = \text{Min}(100, 100 - 22.35 + 10) = 87.65.$$

Risk Return indicator. In August 2014, the company's average risk yields is 12.06%, financial leverage is 22.35 and risk-free yields is 3%.

$$U_7 = \frac{12.06\% - 3\%}{22.35} \times 10000 = 40.54$$

Operating income indicator. In August 2014, the company's time-weighted volume is 9705560000 RMB and management fee rate is 0.3%. $L_n(e * f) = L_n(29116680) = 17.19, U_8 = 90.$

$$U^2 = U_5 * A_5 + U_6 * A_6 + U_7 * A_7 + U_8 * A_8 = 26.23.$$

$$U = U^1 + U^2 = 53.1 + 26.23 = 79.33.$$

Conclusion and Prospect

The paper takes advantage of the combination of AHP, FCE and questionnaire survey to establish the P2P lending business model innovation evaluation index system and evaluation model. They can compare the effect of innovation platforms from all angles and could analyze the differences between each indicator in order to provide recommendations for platform business model innovation. Specifically, it may be incomprehensive and speculative to select indicators to establish evaluation index system. And the analysis of the weights may be subjective. Further research is required to establish a more comprehensive and scientific evaluation system, and enrich the P2P platform business model innovation theory system, promoting the development of the P2P industry.

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Research on Innovation Factory Based on the Technology Roadmap

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[Abstract] We introduce the concept of an innovation factory on the basis of making the Technology Road map better serve the enterprise's innovation. It comes to the "innovation road map", which includes the meaning and the differences with the Technology Road Map. In the end, we try to solve the problem of enterprise innovation in the Innovation Road Map through an actual case.

[Keywords] technology road map; innovation factory; innovation road map

Introduction

In modern society, technology expands rapidly, and competition is becoming increasingly fierce, and enterprises want to obtain sustainable competitive power in the market, so innovation is the only way. Accelerating to establish a technology innovation system, which enterprises use as the backbone, the market as guidance, and we combine the research. Following the trend of the times and leading the trend of the times, making the most appropriate decision at the time, to roll out the most appropriate product or service is the most important goal of enterprise.

Since the 1970s, a novel way of innovation appeared in people's eyes – the technology road map. It solved the problem very well to a certain extent. It focuses on the market, product and technology, and also combines with the good and the two well, to overcome the technology foresight and forecasting quite well (Pieter, 1997).

In recent years, we often hear a word "innovation factory". A. Hargadon and R. I. Sutton (2005) gives a definition that refers to a structured enterprise to establish the innovation system entity, and the combination of enterprise resources, including the mission and values of non technical resources, helps the enterprise to make the choice of innovation strategy (Hargadon & Sutton, 2000).

Here, we discuss how to combine the two, considering the technical elements of the enterprise and the factors that are not technical systematically, raising innovation to enterprise strategic management and innovation management of height, to make the enterprise's overall innovation strategy.

Overview

Technology Road Map

The technology road map refers to the logical relationship, which uses simple graphics, tables, text and other forms to describe the change of techniques. It is a collection of a specific direction of collective intelligence. And it analyzes the product, technology or questions and puts forward a concrete direction of future development. With the progress of science and technology and the acceleration of the system, the country and the enterprise management are also changing; moreover, scientific research and production emphasizes practical application. As a new management tool, the technology road map can depict the relationship between products and technologies clearly, which makes enterprises, scientific research institutions, industry alliances and even countries, gain innovation and development opportunities.

especially with the characteristics of the current science and technology development stage, where the investment of technology research and development is huge. But if there is no complete technology road map as a guide in the process of industrial development, it may lead to the disconnection between prediction and actual demand.

The technology road map appeared early in the American car industry. In the late 70s and early 80s, Motorola and Corning Corporations adopted the technology road map management method for the task of product development. The technology road map is a strategic planning tool in management, which is indispensable, and it can use a concise form to express the future development of the enterprise.

It should also be pointed out that the TRM can be utilized as a management technique for supporting innovation, strategy and policy at the company, sector and national levels (Phaal, Farrukh, & Probert, 2004; Kappel, 2001). Zhang Zhengang, Lin Chunpei, Chen Zhiming and Yu Chuanpeng (2011) extended the technology roadmap and related development, and they discuss the defects of the technology road map, which cannot completely meet the requirements of enterprise innovation. On the basis of introducing the concept of innovation road map, they plan the elements of the enterprise's technical and non-technical factors, the organization and the individual, so that the enterprises is affected in the internal and external environment through technological innovation, organizational innovation and cultural innovation and other innovative collaborative interactions to play the comprehensive functions of the entire enterprise.

On this basis, combined with the technology road map, we can help the company forecast and select technology development direction, describe the technology commercialization in the product market in the way of business to find opportunities to avoid the threat and cope with an increasingly fierce competition environment.

Innovation Factory

A. Hargadon and R. I. Sutton had a detailed definition of “innovation factory”. The company follows a very structured approach to innovation, and emphasizes the unpredictability of innovation, but companies can establish innovation works to strengthen the ability to predict and improve innovation risk, citing Procter & Gamble's practical examples to illustrate the meaning of innovation works.

Because of the unpredictability of innovation, for a long time, innovation makes it impossible to accurately grasp. But in the face of such challenges, the enterprise should be in the best of their ability in order to identify the important innovation, and in a timely manner to improve and perfect it. It takes decades of investigation and study, and this is very difficult for the enterprise to do. There are many companies that fail to realize the transformation of the times, in a timely manner, or make the right reactions, and this finally leads to the bankruptcy of the enterprise.

A. Hargadon and R. I. Sutton call it an “innovation factory” in which enterprises can achieve this.. One case is Procter & Gamble, which considers the consumers as the center, and encourages innovation from each employee, and different innovative ideas will receive different levels of rewards, such as the \$100 million reward for a different idea. It is inspired by the enterprise to find the right way to innovate into the strategic plan, and drive the company and staff to actively participate in it. At this point, it has established a good spirit atmosphere of enterprise innovation.

The innovation factory places more emphasis on the enterprise's innovation ability, and this part includes the innovation of the enterprise development strategy, innovation of the enterprise's culture training and development system. Innovation is more than just products, it can also be a market,

organization, and technology, etc., through these various innovative collaborative interactive uses of integrated functions of the enterprise.

The Framework of Innovation Road Map

Technology Road Map and Innovation Point of the Factory

Although the TRM can help enterprises to predict the future development direction of technology, but still has many defects. The TRM map pays more attention to technology areas, but it can not reflect the enterprise's specific situations very well, nor rise to the enterprise's strategic perspective. Moreover, TRM is only limited to the specific product innovation and technology, and cannot reflect the entire contents of enterprise innovation, and technology products with the practical situation of enterprises. In practice, the definition of the TRM is often limited in the field of professional technology, and the innovation of the enterprise is not limited to technology.

Enterprise innovation is a complex system composed of several main body participation, many elements. From the perspective of the participants, enterprise innovation participants can be divided into two categories, organizations and individuals, and emphasizes that the organization and individuals should exert greater influence in the process of innovation in the future. From the perspective of elements, the enterprise's innovation should include technical enterprise innovation elements (product technology, and process, etc.) and non-technical factors (strategy, culture, market, system, organization, etc.).

From the perspective of system, the focus of the enterprise innovation system is the enterprise internal effective connection of information and knowledge innovation system. Its key element includes the spirit of the enterprise, research and development system, science education and technical training, innovation capital and the enterprise system, and to emphasize elements and nonlinear interactions between the mechanism (Zhang Zhen-gang, Lin Chunpei, and Yu Chuanpeng, 2011). To sum up, innovation works as a product of structural innovation, needs a multi-angle and can improve its shortcomings to include its advantages and discovery of the carrier, better able to realize the enterprise innovation.

So a combination of the above two theories can make the enterprise better predict the future development of their industry, and improve the success probability of enterprise innovation. So we need to extend the concept of TRM, plan to combine it with systematic thinking among them on the basis of the original enterprise strategy, and better combine the enterprise's features, to develop a suitable enterprise innovation strategy.

The Concept of "Innovation Road Map"

For this, TRM extends to the innovation road map, in order to better adapt to the enterprise innovation practice. A circuit diagram is based on system theory, enterprise innovation induction in this paper, the theory and strategic management theory, and combined with the present situation of the application of TRM in the field of innovation and existing limitations, through the analysis of the existing theory and method of inner link, to find the fusion point to existing related theoretical foundation and innovative tools, and put forward a more strategic, forward-looking and systemic innovation oriented framework - innovation road map (see Figure 1)

The Difference with TRM

Different information: TRM only contains the market, product and technology. While the innovation plan includes the organizational and ideological line. The organizational road map includes the innovation framework, innovation mechanism and innovation culture and the allocation of resources, and through the combination of this series, we formulate corresponding solutions. In the ideological line, we mainly divided them into the concept system and target system to guide the development direction of enterprise innovation.

Different Tool Application. The innovation road map in the original technology road map is in application to more comprehensive analysis tools. For example, we combine the need of PEST analysis, Potter five forces model, value chain, and network, etc., and the patent strategy management and innovation management into the innovation road map. The technology road map is more by Delphi method, scenario analysis to predict.

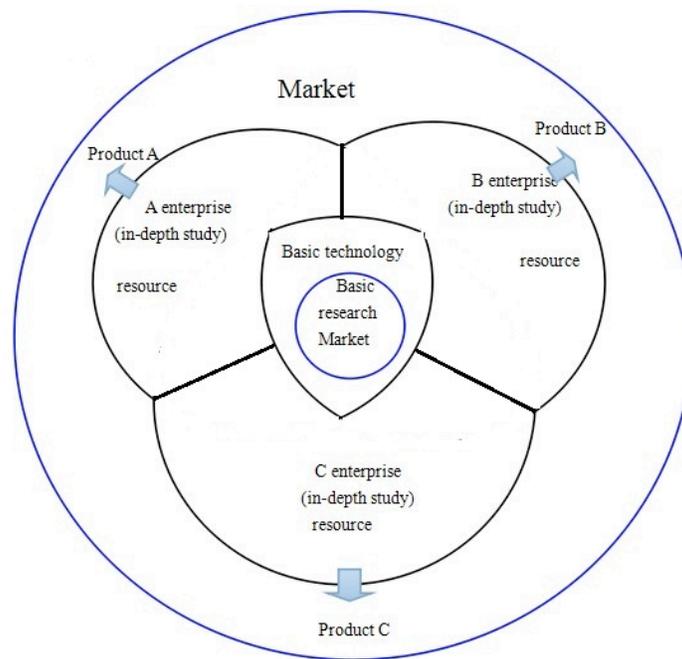


Figure 1. Innovation Road Map

We can see from the chart, the technology road map section had no significant change, but it was extended in the content, and joined the enterprise's own resources. It explains that innovation road map can learn from its rendering method based on drawing technology road map, including the preparation stage, determining the technical stage rendering TRM and finishing study to determine. In the early preparation, it needs to join the implementing effect of the innovation road map and changes in the external environment influence. In the determining technology stage, the original workshop is still an important tool to formulate the innovation road map, but in its content and nature have some parts of expansion. Quality function deployment method is still an important tool to achieve a variety of innovative elements. Then in the drawing process of the road map, we consider the correlation factors, and the enterprises will be presented together with the non-technological factors in the innovation road map.

Case Study

IBM's Innovation Network

In 2001, IBM made a decision on creating a sharing system of an open radical collaboration designed by mutual cooperation relations between companies, aimed to share resources and the talent to develop new technology, as well as achieve rapid and effective promotions of creative production and technology development.

Source Innovation Network

In a business where new fabrication plants and advanced research are frightfully expensive, collaboration is nearly a necessity. Only Intel and a handful of other giants can afford to go it largely alone. It is no wonder that business cooperation between the competitors becomes an important part of their strategy. The 21st century is the era of rapid development, so executives who are under the background of big data worry that their companies will be eliminated in next second all the time. As the saying goes, “unity is strength”, and competitors in the same industry gradually accept to share the only market, and they began to realize that cooperation between them may well be a good way to promote a rapid development of enterprises; in other words, it is the era of rapid changing that forces the rivals to unite against this high-speed development.

New Challenges Faced by Innovation Network

Inter-enterprise sharing of information makes it difficult for companies to maintain the differences and competition advantages. Researchers from different companies are bound to bring in their own patents, new ideas and creations; they will immediately become the object from which others are intent to seek benefits once they are publicly showed. Therefore, joining the radical collaboration will damage the competitiveness of enterprises in a certain extent.

Relationships in the innovation network can be tough to manage. IBM created an open joint-sharing platform, which allows inter-enterprise to muster their talents and resources to develop and research new technologies jointly, so the achievements developed are owed to all participants. In the meantime, the competitive relationship between the participants makes enterprises maintain privacy of their own core benefits.

So consider the competitive relationship within the network, it will be an excellent solution for the network that allows the participants to study the fundamentals to increase efficiency, but for the research and development relevant to strategic direction of enterprises it will be moved to their own control so they can continue their further development and discussion.

As a result, the enterprises will be able to maintain their differences and competitiveness among industry based on guaranteeing the rate of innovation.

Conclusion

China's science and technology is not advanced enough, and there is a certain gap between China and the developed countries. Yet, the unpredictability of innovation put enterprises in the choice of innovation, which needs to bear a huge risk, but some companies decrease investment for innovation to reduce risk. As innovation is representative of the vitality of enterprises, only companies that continue to break themselves, to innovate and improve will have their place in the market. Therefore, this article analyzed the meaning of the technology road map and the relevant development process in detail, as well as

analyzed the defects and suggestions for a perfect part to help companies systematically consider their own characteristics and develop innovation strategies under considering the combination of market demands, product requirements, and the case of the development of technology.

Acknowledgements

The authors are grateful for the financial support from Soft Science of Science and Technology Department of Zhejiang Province (No: 2013C35052)

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Discussion on the Humanistic Management of Chinese Universities Teaching

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[Abstract] It is not only conforming to the needs of the development of the times, but also an important mean to promote the harmonious development of universities that strengthening the “human touch” of teaching management, and applying the humanistic principles in teaching management. But nowadays, there are still some problems in the teaching management of Chinese universities. The main problems show in the following three aspects: lack of student-oriented teaching management ideas; lack of student-oriented teaching management implementation mechanisms; lack of person-oriented assessment mechanisms of the teaching management; Accordingly, we should take steps from the following three aspects mainly: strive to upgrade the sense of human-oriented management of Chinese universities teaching; strive to perfect the mechanism of human-oriented management of Chinese universities teaching; establish the evaluation system of human-oriented management of Chinese universities teaching gradually.

[Keywords] Chinese universities teaching; humanistic management

Introduction

After several decades of practical exploration, China has preliminarily formed a relatively standardized teaching management system. Although we have made some achievements, there are still some problems. The prominent problem is that the whole management process is only around the objective. That is to say, the teaching administrators just see things but not people. So it is difficult to arouse the enthusiasm of those teachers who work on the educational front, and then the improvement of teaching quality is weakened and limited eventually. Based on this, it is not only conforming to the needs of the development of the times, but also an important mean to promote the harmonious development of universities that strengthening the “human touch” of teaching management, and applying the humanistic principles in teaching management.

The Scientific Connotation of Humanistic Management of University Teaching

Throughout history, the development of the idea of humanistic management has experienced X Theory, Social Man Theory, Y Theory, Z Theory, and Complex Man Theory and so on. In the meantime, the idea of humanistic management has been continuously developing.

The Connotation of Humanistic Management

The management mode that takes the person as the core is the high-grade stage of the development of scientific management, and its intention is to depend on the person, respect the person, exploit the person, mold the person, develop the person and improve the person. It is the result of human creation and selection in their course of practice. The so-called humanistic management is different from the traditional management mode that takes the people as tools or means. On the basis of a profound understanding of the people’s role in social economic activities, it highlights the status of the people in the management, and reflects the management principles of human centralization. The core of humanistic

management is man centered. The idea of humanistic management is a new trend in the development of Chinese modern management thought.

The Connotation of Humanistic Management of Chinese Universities Teaching

The task of teaching management in universities is to cultivate compound talents with high quality in order to meet the needs of the times. From the perspective of competence-oriented education, teaching management in universities should not just make the students become the talents of the stereotyped “copy” type, but should pay attention to cultivate students’ creative thought and capacity. That is to say, Teachers should teach students in accordance with their diversified personalities and actual situations. And then, it requires university teaching management should be person-oriented, and pay attention to what the student needs (Gong Fayun, 2007). The connotation of humanistic management of university teaching is that all work should follow the rules of the human-centered management. That is to say, all work in the university should start from the people, and also end for the people. Specifically, on the one hand, Chinese universities teaching management should be learner-centered, and on the other hand, Chinese universities teaching management should be teacher-centered. These two aspects should be unified. Students are the main objects of teaching management. First of all, the humanistic management of universities teaching should respect and care for students, understand and feel the students’ inner needs as the starting point. That is to say, the universities teaching should consider the individual differences of the students fully, teach them in accordance with their aptitude, promote their full scale development. On the other hand, teachers are the object of teaching management; they are also the main implementers of the teaching work. Teaching management should respect, care and understand teachers. That is to say, teaching management should understand the teachers’ needs, help them to exclude many kinds of difficulties and many kinds of negative emotions, and strive to provide the conditions to enable them to work efficiently and to perform at their best (Liu Lilong, 2014).

The Main Problems Existing in the Teaching Management in Universities from the Perspective of Humanistic Management

From the perspective of humanistic management, there are still some problems in the teaching management of Chinese universities. These problems are mainly concentrated in the following aspects:

Lack of Student-Oriented Teaching Management Idea

For some parts of teachers in our Chinese universities, the sense of people-oriented teaching just stays on the slogan level, and does not run into their hearts in-depth. Some teachers do not regard themselves as the masters of the school. They only regard themselves as workers. They don’t take teaching as a noble undertaking to struggle and to pursue it at all. They think that teaching is only for survival and employment. Unfortunately, it is a pity that they do not think they are relying on the platforms to realize their own value, let alone a real love for education. So these teachers muddle along. They have no long-term plan, have little or even no enthusiasm for their teaching work, and their responsible hearts are not strong. They regard teaching as a task to deal with. They just only speak in classes, but do not communicate with the students, they do not consider the students’ actual needs, do not consider the students’ moods, and even don’t pay attention to whether the teaching effect is good or not. Such a style of lecturing often leads to the result that the input is larger than the output. And then, the corresponding teaching effect has predictable consequences.

Lack of Student-Oriented Teaching Management Implementation Mechanism

Whether or not the implementation mechanism is perfect is one of the key factors to whether or not the humanistic management of Chinese universities teaching can be implemented. But at present, our country's universities haven't established perfect teaching humanistic management mechanism. Due to the lack of the corresponding mechanism, students are still vulnerable groups. They do not really become the masters of school. They also don't really become the main body of the teaching. For example, students often have many misgivings when they want to reflect on the school teaching problems, because they think that they themselves have no position and they are also afraid of teachers' retaliation. The opinions of the students are often neglected, and the students' questions often cannot be replied timely. Because of the inflexible mechanism of the professional setting, students lack the right of professional choice; because the class selection mechanism is too rigid, the development of students' personalities are thwarted. The quality guarantee mechanism of classroom teaching is too simple, too much or even just blindly emphasizing the normalization and unification of classroom teaching, so the personality and creativity of the teachers and the students are restrained or damaged. Classroom teaching management system is dull. In many universities, there are still some teachers who often use the "jug-and-mug" teaching method, and students just listen and take notes passively. It lacks communications between teachers and students. Students' subjective position can't be respected and cherished better; In addition, the relative lag of Chinese universities teaching conditions makes the implementation of the universities humanistic teaching confront a lot of difficulties.

Lack of Person-Oriented Assessment Mechanism of the Teaching Management

Whether or not the assessment mechanism is perfect is the core link of whether or not the humanistic management of Chinese universities teaching can be implemented. At present, in Chinese universities, the corresponding assessment mechanism has not formed. This mainly is displayed in the following two aspects: on the one hand, there is no corresponding student-oriented assessment mechanism in the evaluation of teachers to the students, while on the other hand, there is no corresponding teacher-oriented assessment mechanism in the evaluation of teaching supervisors to the teachers. In the assessment to students, the most primary assessment basis is still the examination results. While these aspects, such as mental health status, morality, practical experience, and independent learning ability, which can reflect the students' initiative and subjectivity in teaching more are often neglected. In the assessment of teachers, there is still the "official standard" phenomenon (An Yimin, 2013). For example, some teaching supervisors take the superintendence more importantly than the guidance. In the supervision, they just regard teachers as managers. Some teaching supervisors stand to deliver demands. They just find fault in every teaching link of teachers. They often put themselves in the opposite of teachers and students. This kind of condition often leads to antagonism between supervisors and teachers. Because of this, the development of teachers and students and the teaching effect are all affected (Zhang Bingchen, 2012).

Promote the Teaching Reform of Chinese Universities in the Lead of Humanistic Management

We set up the view of "education of whole man" in the lead of the person-oriented management in order to promote the development of students, and teachers and the improvement of teaching is the basic trend of the current Chinese universities teaching reform.

Strive to Upgrade the Sense of Human-oriented Management of Chinese Universities Teaching

Thought is the precursor of action. Only by firmly establishing the teaching idea of humanistic management, the teaching practice of humanistic management can be implemented (Liu Jingfei, 2013). On the one hand, enhance the publicity of humanistic management through varieties of ways in order to make people especially teachers and students establish humanistic consciousness gradually. On the other hand, for the typical individuals and classes of humanistic management, set examples in order to strengthen the humanities atmosphere of humanistic management by example effect.

Strive to Perfect the Mechanism of Human-oriented Management of Chinese Universities Teaching

In order to carry out the people-oriented concept in teaching management, it needs gradual establishment and perfection of the teaching humanistic management mechanism in the level of management practice, consideration and protection of the actual needs and all-round development needs of students. This mainly needs the following several aspects, which must be done in the practice of teaching management: First, the teaching mode must meet the actual needs of the students. The student-oriented teaching mode should be diverse and conducive to the personality development. It should have a reasonable knowledge structure, and can satisfy the needs of students' quality and ability development; second, the teaching scheme must meet the actual needs of the students. The design of teaching scheme should embody the concept of student-oriented. The formulation of teaching scheme must meet the needs of the improvement of students' quality and ability. Third, the teaching content must meet the actual needs of the students. On the one hand, teachers should choose the excellent teaching materials; on the other hand, teachers should use teaching materials according to the actual situations of students flexibly. The standard of how to choose teaching materials and how to use teaching materials flexibly is whether the choices are in accord with the realistic needs of students; last, the teaching method should meet the actual needs of the students. Because the students are different, the teaching method can't be the same, should adopt diversified teaching methods.

Establish the Evaluation System of Human-oriented Management of Chinese Universities Teaching Gradually

The evaluation system of university teaching should be in accordance with the requirements of the humanistic management mode, and should be from the perspective of new ideas. This evaluation system must have two functions at the same time: one function is that it must be the lever used to measure the teachers' teaching quality, and the other function is that it must be the catalyst to promote teachers' growth and all-round development of students. Specifically, this goal needs to realize several transformations of evaluation system as follows: First, in the traditional evaluation system, whether or not the teaching is wonderful is one of the main evaluation standards. While now, whether or not the students can participate in the class actively should become one of the main evaluation standards instead; second, in the traditional evaluation system, whether or not there are simple questions and answers between teachers and students is one of the main evaluation standards. While now, whether or not the students can communicate each other and present themselves well in the class should become one of the main evaluation standards instead. Third, in the traditional evaluation system, the teachers' self-promotion is one of the main evaluation standards, while now the students' self-promotion should become one of the main evaluation standards instead. Last, in the traditional evaluation system, students' test scores are one of the main evaluation standards, while now the comprehensive quality of students, such as mental health

status, morality, practical experience, and independent learning ability, which can reflect the student-orientation and the student-initiative should become one of the main evaluation standards instead. In addition, the perfection and establishment of the evaluation system should be rules-based, so as to ensure that the operation of evaluation system is scientific and reasonable (Fan Hong, 2010).

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The Moderating Effect Of Different Family Patterns on The Relationship Between Working Pressure and Well-Being among Migrant Workers Of Anji¹

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[Abstract] This research studies the effect of work pressure on well-being for migrant workers. Additionally, different family patterns have different effects on individuals. Whether family patterns have a regulatory role in relationship between work pressure and researches of well-being, we hope to establish a rapid integration into the urban life for the migrant workers.

[Keywords] migrant workers; work pressure; family patterns; well-being

Introduction

As a special group of Chinese presence in this special period, migrant workers are a special group. The working pressure has gradually become the focus of enterprise and academic problems. In the study of family patterns of migrant workers, Li Qiang (1996) pointed out four types: single out, couple separation, couple separated with children, and the whole family out. Do different family patterns of migrant workers have different well-beings? Do family patterns play the role of regulation? These questions are worth to be explored. In this paper, we verify the composition dimensions of the well-being and on this basis, we explore the relationship of working pressure, family patterns and well-being through literature review, interviews, and questionnaires, combined with the characteristics of migrant workers and the existing achievements, which further expands the research category. It is very helpful to diagnose the problems of organization management, and value the effectiveness of human resource management (Qian & Huang, 2007).

Theoretical Background and Hypotheses

Research on work pressure began in the early nineteenth century. It matured at the end of nineteenth century. The French said work pressure is the unpleasant negative feeling from the work. Weiss (1976) thought that pressure had different classifications: job factors, organization roles, occupation development, organization structure, and organization relationships. Chinese scholar Xu Xiaodong (1999) divided the pressure source into: the inherent characteristics and work requirements, role conflict and role requirement, the burden of work, the aims and objects, organization help, participation in decision making and other organizational factors. In general, working pressure sources can be classified into three categories: the organization, job factors, and individual factors.

This paper studies the subjective well-being, focused on the overall well-being. Scholars at home and abroad studied the relationship between job pressure and well-being, and the results are consistent. Brief and Atieh (1987) pointed out that the excessive and frequent work tension caused by work pressure would bring a negative effect on well-being. Williams and Cooper (1998) found that rational behavior, seeking help, and help beliefs stress coping styles are effective, and the people who use these coping styles will

¹ This article is supported by the project of the National Social Science Fund (12BJY008) and the project of the National Natural Science Found (42371526).

have higher levels of well-being. Chen and Gu (2010) found the psychological pressure predicted the degree of satisfaction on the investigation of the Shenzhen Foxconn staff. There was a negative correlation between psychological stress and job satisfaction. Ye (2011) found that stress is one of the important factors affecting the well-being in the study work pressure of nurses. Therefore, this study proposes:

Hypothesis 1: Overall work pressure negatively related to employee well-being.

Hypothesis 1a: Organization pressure negatively related to employee well-being.

Hypothesis 1b: Work itself pressure negatively related to employee well-being.

Hypothesis 1c: Individual pressure negatively related to employee well-being.

Family Pattern as a Moderator

Scholars have professional classifications for family patterns of migrant workers. Luo (2006) pointed out four types: single out, couple separation, couple separated with children, and the whole family out. He thought that family patterns of migrant workers were primary in a model of separation and will be continued in the next few years.

Barrera and Ainlay (1983) thought that social support could be divided into six types including: Material and financial resources provide material and money; Behavior assistance shares the task and so on. Wellman and Wortley (1989) considered with good social support people will have higher subjective well-being. According to the theory of buffer model of social support, social support regulates negative effect of regulating other factors on mental and physical condition, thus improving the individual's physical and mental health level. Jinlai (2013) showed that social support on the relationship between job stress and job burnout have regulate effect. The family as an important source of social support, on individual well-being may also play a regulation role. Therefore, this study proposed:

Hypothesis 2: Family patterns play a regulatory role on the relationship between family the job stress and well-being.

Hypothesis 2a: The influence of work pressure on the well-being of couple separated bigger than couple separated with their children among migrant workers.

Hypothesis 2b: The influence of work pressure on the well-being of couple separated with their children bigger than the family out among migrant workers.

Hypothesis 2c: The influence of Work pressure on the well-being of couple separated bigger than the whole family out among migrant workers.

Method

Sample and Procedure

During the time December 2013 to April 2014, we collected data from 30 local enterprises in Anji in the province of Zhejiang. Our respondents are mainly married migrant workers. We distributed 10 questionnaires to each enterprise among the 30 local enterprises and distributed 100 in other places such as the train station in Migra. From a total of 400 subjects, we finally collected 362 questionnaires. 334 were valid questionnaires, with an effective recovery rate of 81%. 4 people were unmarried, 3 people divorced, 3 people remarried (we removed these people), and finally had 324 effective questionnaires. Of the 324 valid subjects, the whole family out was a total of 133 people, accounting for more than 41.2%; the couple separated category and family separation category surveyed, was quite similar. The couple

separated type was slightly higher than the family separated type; the numbers were 99 and 91, and accounted for 30.7% and 28%.

Measures

We authorized questionnaires according to the research framework, the reference of the domestic and foreign existing mature scale, and selected item scales through the interview results with design principle of the final questionnaire. The questionnaire consists of four parts: basic information, family modes, working pressure, and well-being. We have a two-scale form. All items were assessed on a 5-point Likert-type scale (ranging from 1=strongly disagree to 5=strongly agree). The basic information include gender, age, culture degree, health status, personality and marital status.

Work Pressure

We examined the work pressure questionnaire through KMO test and Bartlett test, and the results showed that the KMO test value is 0.802 larger than the ball test 0.7. Bartlett P value 0, met the requirements of factor analysis. By using the method of principal component, factor analysis yielded 3 factors that explained 63.129% of the variation, the internal consistency coefficient of the three factors (alpha coefficient) were respectively 0.771, 0.831, 0.795, more than 0.7, illustrating the inherent reliability. By judging the respondents family pattern, we mainly choose the third, the fourth and the fifth species of family pattern, namely, the couple separated type, family separation and the whole family out type.

Well-being

This paper combine the subjective and objective well-being survey which developed by Chen Huixiong. The scale has been through the validity test, and also has practical value for further application. The content of well-being questionnaire contain six dimensions, the individual status, family status, income, employment status, social status and ecological condition. Through the KMO test and Bartlett test of sphericity of the questionnaire of well-being, the results showed that the KMO test value is 0.838 larger than the 0.7 ball test, Bartlett P value 0, meet the requirements of factor analysis. By using the method of principal component analysis, factor analysis obtained 6 factors, explained 79.689% of the variation. Alpha coefficient of six factors of well-being were higher than 0.7, coefficient alpha and the whole scale is 0.888, higher than 0.7, which indicates that the scale of inherent reliability.

Results

First of all, use the correlation analysis to verify the hypothesis 1. Correlation analysis was performed on the six dimensions of work pressure and the three dimensions of well-being, as shown in Table 1.

Table 1. The Relationship Matrix between Job Stress and Well-Being

	Organization pressure	Work itself pressure	Individual pressure
Individual situation	-.155*	-.194**	-.163**
Family status	-.110	-.217**	-.155*
Economy status	-.100	-.063	.110
Occupation status	-.234**	-.288**	-.103
social status	-.231**	-.281**	-.027
ecological status	-.151*	-.244**	-.039

From the table, we can find that the impact of individual pressure on well-being is relatively small, and organization pressure and work pressure itself is the greater effect on well-being. We make the overall well-being as the dependent variable, each dimension of work pressure (organization pressure, work itself pressure and individual pressure) as the independent variable, and established the regression model to further study environmental pressure, work itself pressure and individual pressure on well-being.

In Table 2, we adjust the R square 0.55, and it shows that all independent variables can explain 55% of the dependent variable, which has a certain explanation ability. A single variable test results, significant test of the organization pressure on the environment and the work itself pressure values were less than 0.01. Therefore, the organizational environment pressure and work itself pressure associated with the dependent variable has a significant linear relationship, and the relationship is not significant. The specific point of view, coefficient of organization environment pressure and work itself pressure is -0.116 and -0.152, that both of the two are generally showed a significant negative correlation with well-being, the organization pressure is less than the work itself pressure, consistent with the front of the results of correlation analysis.

table 2 regression analysis of working pressure on well-being

model	Non standardized coefficient		standardized coefficient	t	Significant	
	Coefficient	Standard error				
1	Constant	4.109	.204	20.189	.000	
	organization pressure	-.116	.038	-.112	-.2.694	.008
	work itself pressure	-.152	.054	-.187	-2.799	.006
	individual pressure	-.051	.055	-.063	-.938	.349
Adjust the R party		0.55				
F (p)		27.235 (0.00)				

In summary, H1a and H1b have been fully verified, and H1c has been partially verified. Regulating the effect of different family patterns in the working pressure effect on well-being, when the control variables are categorical variables, and independent variables are the continuous variables. Wen Zhongling, and Hou Jietai (2005) pointed out that we should do grouped regression analysis. Because the family pattern is a categorical variable, and work pressure and well-being are the numerical variables. To verify the regulation effect of family pattern, you need to do grouped regression; well-being is the dependent variable, and the overall working pressure of the overall as independent variables for regression results. From the adjustment of R, we can see that the adjustment of Party R the couple

separated is the greatest, followed by the couple separated and the whole family out. This shows that in the couple separated of the sample, the working pressure can explain most of the well-being; in the family separated type of the sample, the working pressure can explain the relatively more well-being; while the whole family out type in the sample, the working pressure can explain the relatively minimal well-being.

In Table 3, we find in the couple separated sample, coefficient of work pressure is -0.360; in the couple separated with children sample, coefficient of work pressure is -0.234; in the whole family out type sample, the coefficient of working pressure is -0.151, which indicates that in the three family pattern, work stress has a significant negative impact on happiness, but the couple separated type, the negative influence of working pressure on happiness, followed by the couple separated type, the last for the whole family out.

table 3 Work pressure, family pattern on the analysis for the regression variables of well-being

family patterns		model		standardized coefficient	t	Sig	Adjust the R party	F (p)
		Non standardized coefficient	standard error					
couple separated	constant	4.549	.256		17.790	.000	0.65	15.338 (0.000)
	overall work pressure	-.360	.092	-.359	-3.916	.000		
couple separated form children	constant	3.330	.352		9.456	.000	0.45	3.871 (0.053)
	overall work pressure	-.234	.123	-.211	-1.898	.061		
the whole family out	constant	3.684	.214		17.176	.000	0.32	3.604 (0.061)
	overall work pressure	-.151	.077	-.229	-1.967	.053		

Discussion

In this paper, we analyze the relationship between work pressure, family pattern and well-being among the migrant workers through theoretical research and empirical research. We obtain some valuable results. The work itself is the biggest pressure. The negative influence of working pressure on well-being will reduce under the family pattern regulating effect. Through empirical analysis, we can obtain that the work

pressure effects on the well-being of couple separated are greater than the couple separated with their children among migrant workers. The work pressure effects on the well-being of the couple separated with their children is greater than the family out. The influence of work pressure on the well-being of couple separated is greater than the whole family out among migrant workers. From the perspective of the migrant workers which family pattern is the couple separated type, they have to deal by themselves in face of work pressure. Therefore, working pressure directly affects their well-being. For the pattern of migrant workers of family separated with children, they can get the help and support from the other partner in the face work pressure. For the pattern of the whole family out type in the face of pressure of work, they not only get concern from the other partner, but also can feel the warmth of family when children live with them. This is the buffering effect model of social support. Therefore, the relationship between family pattern on the job stress and well-being play a regulatory role.

Implications for Practice

According to the reality situation of migrant workers, we should take appropriate measures. Therefore, we put forward the following suggestions. Control the operating time legitimately and arrange post training reasonably. In order to reduce the migrant workers work pressure, the government and enterprises should provide on-the-job training. The internal enterprise can arrange new employees on-the-job training. Give migrant workers legal and reasonable wages, and improve the migrant workers legal consciousness. Help the migrant workers realize the marriage life. In order to improve the status of migrant workers separated from family, build low-cost housing for farmers around the industrial areas. Enterprises can provide dormitories for couples. Some enterprises could provide a conjugal room, so that migrant workers can live in turn.

Limitations and Directions for Future Research

We only selected 30 enterprises in Anji for this questionnaire due to the limited conditions, but the sample may not be representative enough. Using cross-sectional data, it lacks of continuity. The horizontal design, although it has been widely used, but this method was used to study the relationship between factors. The cross section of the data in this article lacks continuity, and the causal relationship is also difficult to determine. Therefore, in future longitudinal studies, we can use time series data to make the research on the causal relationship more targeted. Data of this study mostly came from the self-report questionnaires. It has common method bias. Although the measurements we made were anonymous, and reduced the goal of measuring surmise and other control measures, but due to the impact scenario, the perceptual preference and other factors, may be inconsistent with the actual questionnaire.

Acknowledgements

This article is supported by the project of the National Social Science Fund (12BJY008) and the project of the National Natural Science Found (42371526).

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Construction of Enterprise Talent Management System: Exploring the Role of Organizational Culture

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[Abstract] *This article explores a new prospect of talent management. Organizational culture has a highly important effect to manage the talents. The impact of organizational culture can permeate into every course of Talent Management (TM) including evaluation, development, deployment, retaining and succeeding. The process of talent management has to enhance the three following links: (1) hierarchical cycle process of strategy; (2) “4-P” dimension of TM evaluation; (3) integration of spiritual addiction and material satisfaction.*

[Keywords] *organizational culture; talent management*

Introduction

An increasing tendency in the area of personnel management is talent management (TM), which has been increasingly prevalent among HR practitioners and academic researchers. Concerns about talent management among HR professionals are popular on a global scale. Nevertheless, the research on this issue is still in its infancy with focuses on connotation definition, structure classification, influence factors, plan execution, multinational TM and so on. Recently, although a few initial studies were conducted in China, they were limited by small sample sizes and taken only from the multinational corporation. Furthermore, China's economy is in transition. Enterprises are eager to acquire talented personnel who can adapt to market requirements in the current phase of social transition. Thus, it is very necessary and significant to conduct a study on the field of TM within the Chinese context.

The influence of OC on TM is quite intriguing. Studies on TM show that a local culture impacts TM strategy of multinational company highly (Ariss, et al., 2014). Some researchers provide relevant visions. TM requires the identification, codification, retention and development of talented employees, but also the building of an organizational culture (OC) that supports their career prospects (Bartlett & Ghoshal, 1992a). Nevertheless, we do not know if OC has any effect on TM within an organization. The synthesis of leadership role and succession planning practices through managerial engagement requires a supporting organizational culture (Groves, 2007). Yet few studies on this basis explore the relationship between OC and TM, especially for Chinese enterprises.

Organizational Culture

OC has been too attractive and controversial since the 1980s, so that there is a lack of an agreement regarding a consistent demarcation of the term (Ashkanasy, et al., 2000; Linnenluecke & Griffiths, 2010). OC is a general and brilliant concept, which is in almost any kind of organization, such as government divisions, enterprises, public institutions and non-profit groups. Among a great diversity of descriptions, the demarcation of OC could be divided into four branches, including (1) collective behavioral rules, norms, beliefs and rituals for the whole organization (Trice & Beyer, 1984); (2) interaction model of staffs and groups with each other, with clients, and with stakeholders (Hill & Jones, 2001); (3) accepted,

shared and diffused assumptions of values, ideologies and beliefs; and (4) instructing of newcomers and strengthening itself (Archer, 1999). Later theorists conducted their researches along four primary lines: (1) to blossom and complete theoretical framework of OC; (2) to classify, assess, diagnose and adjust the culture of an organization; (3) to explore the relation with business performance and enterprise management; and (4) to enlarge to management research of multinational companies and culture constructing and transforming.

There are three academic approaches that are more refreshing. The first one is Schein's structural pattern of OC. He considers that OC is a paradigm of shared basic assumptions that a group learns as it solves its problems of internal integration and external adaptation, which has worked well enough to be considered valid and, thus, to be taught to new members as an appropriate way to perceive, feel and think in relation to those problems (Schein, 1992).

The second influential framework is Competing Values Framework (CVF), which is now the dominant model in the world for understanding and assessing OC. CVF was initially based on research to identify indicators of organizational effectiveness (Quinn & Rohrbaugh, 1983). Two-dimensional framework forms four quadrants, each standing for a distinct set of indicators of organizational effectiveness. In accordance with Cameron and Quinn's argument (2011), the vertical dimension includes flexibility, discretion-stability and control, which differentiates effectiveness criteria that emphasizes flexibility, discretion, and dynamism from criteria that emphasizes stability, order, and control. Horizontal dimension includes internal focus and integration-external focus and differentiation, which differentiates effectiveness criteria that emphasizes an internal orientation, integration, and unity from criteria that emphasizes an external orientation, differentiation, and rivalry.

The third framework is a set of other influential models. For instance, Deal and Kennedy's model (1982) proposed two dimensions (degree of risk and feedback speed) to form quadrants, which are tough guy (macho) culture, work hard (play hard) culture, process culture and bet-your-company culture. Denison's model (1990) is similar with Cameron and Quinn's model, which consisted of four quadrants (mission, adaptability, involvement and consistency) that is divided by two dimensions of internal focus-external focus and flexible-stable. Handy (1993) asserted that OC includes four types: task culture, power culture, role culture and person culture, which are classified by the dimensions of uniqueness/complexity of work process and rate of change.

Talent Management

The talent is not defined specifically or regarded as career potential, but seems close to the viewpoint of positive psychology. Disparate from the first, the second approach of TM focuses on the management of talent employees for succession planning. The talents are successors of senior and executive positions in an organization. It is future orientation of organizational development, distinctly, which is a long-term and static view (Cooke, et al., 2014). Both TM and HRM involve getting the right job at the right time and managing the supply, demand and flow of people through the organization; it involves a collection of typical HR activities such as recruitment, selection, training and appraisal (Iles, *et al.*, 2010a). High performance and high potential employees are picked out to form a "talent pool" and acquired special training and accelerated development design to prepare the promotion of senior and executive positions, and that consumes large amounts of resources. Based on these reasons, the loyalty and the retention are critical in TM. The third approach regards TM as the management of talent staffs. The talent is a minority

of staff who have been verified as having high potential and/or high performance (Iles, et al., 2010a; Iles, et al., 2010b).

Collings and Mellahi (2009) raised an emerging fourth stream. In their perspective, TM is a decision process. Identification of key positions is critical procedure before distinguishing talent. They expounded, “an organizational TM strategy as activities and processes involves the systematic identification of key positions which differentially contribute to the organization's sustainable competitive advantage, the development of a talent pool of high potential and high performing incumbents to fill these roles, and the development of a differentiated human resource architecture to facilitate filling these positions with competent incumbents and to ensure their continued commitment to the organization” (Collings & Mellahi, 2009).

Although Collings and Mellahi emphasize the part of key positions, past studies still highlight human factors, and do not adequately attach appropriate importance to the organization in the role of TM. From 1985 to 2008, the article count of “TM” in Business Source Premier database went from 17 to 989, and went from 0 to 361 in Emerald database (Iles, et al., 2010a). Among them, TM and TM related issues were studied, argued and explained applying five main theoretical constructions, which included person–organization fit theory, attraction-selection-attraction theory, social and human capital theory, people equality framework and psychological-contract theory (Ariss, et al., 2014; Nijs, et al., 2014). By means of the extraction and purifying of these studies, it is conducive to clarify the connotation and denotation, and to guide the practice of TM.

Kristof (1996) defined person–organization fit as “the compatibility between people and organizations”. High achievers look for job challenges, rewards and recognition, and fast-track promotions, while diversity management promises fulfilling work, encouragement and equal opportunities for everyone. Thus, it is logical for high achievers to accept employment with firms associated with diversity management (Ng & Burke, 2005). Attraction-selection-attraction theory as the second branch, maintains that one organization attracts and hires candidates who have similar characteristics with it. As a result, a flock of staff with similar features stay, and form or intensify a typical characteristic of the organization. Kim and her colleagues (2012) found that students’ characteristics at university considered work centrality, money orientation, risk aversion, and individualism in Vietnam. Meanwhile, work-centric, money-oriented, and collectivistic job-seekers were more attracted to Japanese companies. They demonstrate that it is necessary to make a deep comprehension of individual factors. Actually, attraction–selection–attrition theory suggests that individuals are attracted to and seek to work for organizations where they receive high levels of person-organization fit (Gregory, et al., 2010). The third framework is social and human capital theory, which is employed in social sciences to discuss analogous concepts with regard to social resources derived from individual development (human capital) and social interactions (social capital). In popular conceptions, the link between social and human capital is straightforward (Gamarnikow, 2003). On one side, the promotion odds for middle-and senior-management positions are raised via the increasing of human capital (e.g. experience and expertise) (Claussen, et al., 2014). On the other side, global talent pools and routines for managing global staffing flows are key organizational routines that can maximize the contribution of global mobility to many multinational enterprises (Ariss, et al., 2014). People equity framework, is the fourth as an integrative style to assess and manage human capital, which includes three elements driving overall workforce performance: alignment, capabilities and engagement (Schiemann, 2006).

Construction of Talent Management System based on Organization Culture

Hierarchical Cycle Process

Strategic TM as processes and activities that are included in integrated identification of key positions which differentially contribute to the organization's sustainable competitive advantage, the development of a talent pool of high potential and high performing incumbents to fill in these roles, and progress of a differentiated human resource architecture to facilitate filling these positions with competent incumbents and to ensure their continued commitment to the organization (Collings & Mellahi, 2009). Strategic TM plan is developed in line with business strategy, including four modules of evaluation, talent pool, deploy and retaining.

"4-P" Evaluation

In previous practices and studies, nine-box grid model (performance and potential matrix) was employed to synthesize assessment results of quality and performance of staffs for mapping the talent and make staff development plans. Nevertheless, it does not highlight or ignore the effects of position and professional ideal. The talents are those employees labeled both highly on the value and on the uniqueness in an organization (Lepak & Snell, 2002). Employees with the aureoles of high value and uniqueness on top of the head in the key positions are more likely regarded as the most pivotal talent of an organization (Nijs, et al., 2014), because those positions for which small increments in improvement in quality or quantity result in an above-average return on strategic measures are seen as pivotal (Boudreau & Ramstad, 2005). The value and the uniqueness depend on the specific positions they occupy (Becker & Huselid, 2006). Moreover, job experience has been perceived for many personnel managers as one of the better predictors of job performance. Also, prior job experiences affect perceptions and attitudes toward current employment (Boardman, et al., 2010).

Professional ideal relates to personal philosophy, value and world outlook and is embodied in work values, career expectations and career goals, which is career striving purpose or objectives set through imagination according to individual condition and social reality, and reflects the career realm of personal desire to pursue. Professional ideals may refer to the internal goods of an occupational practice that function as its telos (DeRuyter & Kole, 2010). Professional ideals are powerful and persistent sources of motivation that create passionate personal commitment, and can be only pursued by a person with whom one identifies, even if the optimum was never realized, for which ideals motivate to aspire (DeRuyter & Kole, 2010).

Spiritual Addiction and Material Satisfaction

We propose that three factors of material treatment, spiritual pleasure and professional ideal should be adopted together to retain the talent. In practical process of TM, the retaining is the most worrying course. Money, status and power may not fill the talent's desire to make them stable and durable in a company.

Pervading in TM Implementation

The OC has a highly important effect on managing the talents. TM provides a way to focus and simplify its tools and resources, while also sharpening its tools on key talent, which has started to embed a talent mindset in the culture of an organization, with a renewed emphasis on employee engagement (Ashton & Morton, 2005). TM not only requires the identification, codification, retention and development of talented employees, but also the establishment of an OC that supports the development of talented

employees (Bartlett & Ghoshal, 1992). The impact of OC can permeate into every course of TM including evaluation, development, deployment, retaining and succeeding.

Conclusion

In conclusion, TM is a systematic project. It has to be constructed on an explicit and stable foundation that is OC as the soul of large and medium-sized enterprises. There is no doubt that the starting point and foothold of TM construction is OC.

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Case Study of E-business of Virtual Literature Management

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[Abstract] *E-business not only gives a great opportunity to the company of Virtual Literature Management (VLM) to develop itself, but also gives VLM dilemmas. This paper starts to introduce the traditional print process used by VLM and its downside, and then analyzes the e-business solution from both impacts on technology, manual work and sales cycle, and benefits to companies and customers, including lowering sales and marketing costs, and reducing the processing time and eliminating errors. E-business solutions have great benefits for customers as well; for example, it helps customers to control their budgets and their own brands. Finally, the challenges to VLM are also discussed from both a competitor and users resistance perspective. Thus, it is urgent for VLM to manage the serious competition, provide answers to the training problem and ease the antipathy between customers and the company in the coming years.*

[Keywords] *e-business; Virtual Literature Management; print process*

Introduction

The company of Virtual Literature Management (VLM) originated from Graphic Reproductions, which was a traditional print shop established by Declan Malone in Ireland in 1967. Graphic Reproductions had a history of investing in the latest technologies; for example, the company bought the first automated scanner in Europe in 1976. In 1988 Graphic Reproductions developed a computerized coloring system for the American Comic Book market. Two years later, a separate trading company was established, named Graphic Color Works Ltd., which specifically serviced the comic book industry.

VLM was created in 1998 when Graphic Reproductions and Graphic Color Works Ltd. merged. It was headquartered in Dublin, with an additional location in Birmingham, England. VLM invested in Digital Print Technology, while at the same time maintaining its pre-print business.

With the boom of its business, the company realized the disadvantages of traditional printing process as being time-consuming and low margin. In addition, the downside of using in-house printers is an expensive cost. VLM recognized the need to develop a more streamlined method for its customers. However, the obvious question was, what could a small digital printing company, based in Dublin, offer UK companies that a local printer couldn't do? This paper starts to introduce the traditional print process used by VLM and its downside, and then analyzes their e-business solution from both impacts on technology, manual work and sales cycle, and benefits to companies and customers. Finally, the challenges to VLM are also discussed from both the competitor and users resistance perspective.

Problem Identification

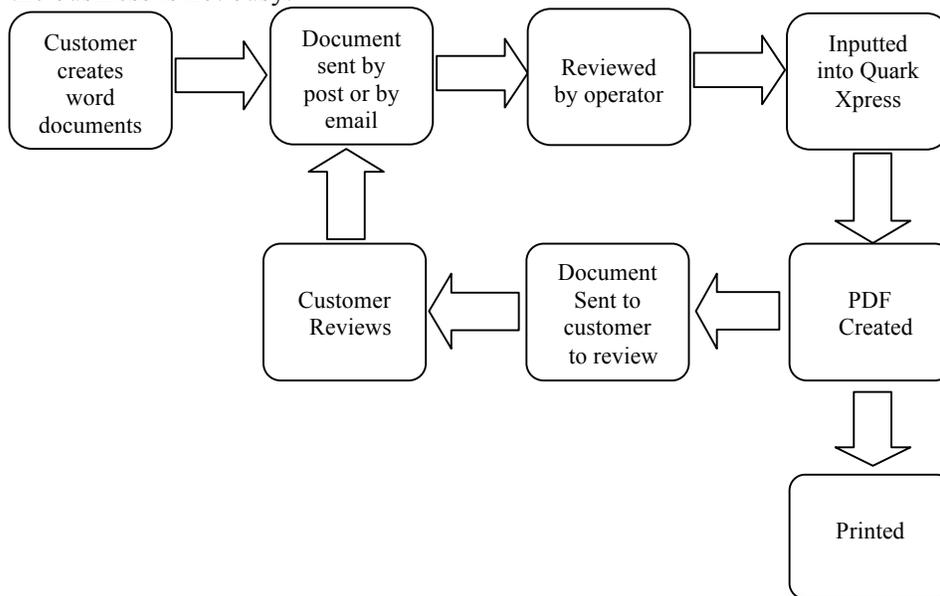
Limitations of Traditional Printing Process

The traditional print process is outlined as follows (see Figure 1):

- Images and texts are sent into VLM by email or post from customers
- Information is input into Quark Express Document (A standard design package used in the printing industry) by VLM operators

- Documents are created
- Documents are emailed back to the customers for approval
- Changes are made by customers through writing on the hardcopy or attaching a post-it note
- Revised documents are returned to VLM by customers
- Necessary changes are made by VLM operators
- The order is printed

From Figure 1, it can be concluded that the disadvantages of the traditional printing process is that it's time consuming and low margin. As the number of review iterations increase, the margin decreases. VLM has to spend more time and money on telecommunications. Secondly, the digital print business' niche is a short-run print job. Typically, customers only want 25 to 200 copies. Because of the small quantity, the profit made from each order is small. Finally, VLM operators are involved in the majority of the process. The operators play a key role in contact with the customers. Therefore, VLM has to employ more professional operators when the business is busy. In the other words, the overhead remains high when the business is not busy.



Traditional Printing Process

Source: http://www.enterprise-ireland.com/ebusiness/Case_studies/VLM/vlm_p2.htm

Limitations of In-house Printers

From the company's perspective, the downside of using in-house printers is the expensive cost. First, they tend to print heavy coverage and glossy type brochures that use a lot of toner. Second, the company has no control over who is using its in-house printers. The company may have 2,500 employees using 260 printers. Therefore, if somebody in a branch wants to print 100 invitations for a party, it would have no control over the cost. Finally, there is no real visibility of what each branch is spending.

VLM recognized the need to develop a more streamlined method for its customers. However, the obvious question was, what could a small digital printing company, based in Dublin, offer UK companies that a local printer couldn't do?

E-Business Solution

The goal of the project was to build strategic long-term partnerships with a number of large customers. Each customer would have his or her own secure web site. It would contain customized templates for their marketing material. The whole Integrated Online Printing System (see Figure 2) is managed automatically.

- Customer creates documents online by logging into VLM secure web site
- Customized templates are filled out
- The amount and delivery location of copies are input by customers
- Printed documents are delivered and customer is billed electronically

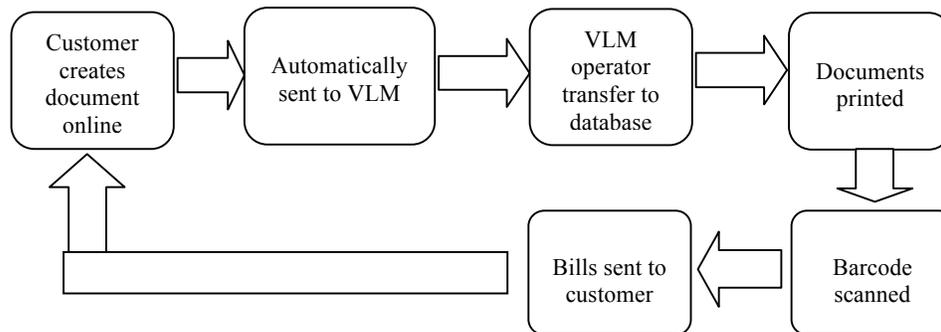


Figure 2. Integrated Online Printing System

Source: http://www.enterprise-ireland.com/ebusiness/Case_studies/VLM/vlm_p4.htm

Impacts of E-Business on VLM

‘E-business impacts on many areas of business and disciplines of business management studies’ (Tassabehji, 2003, p. 10). The initial impact of e-commerce has often been described as a paradigm shift in technology, infrastructure, and processes.

To begin with, it is understandable that the utilization of the e-business solution will have a direct impact on technology of VLM. The company not only has shifted from traditional printing skills to digital ones, but also has developed online skills to satisfy its business.

Secondly, less manual work is needed in the new system; thus, the infrastructure of human resources of VLM is touched by e-business, which has ‘a potent socio-economic chemical reacting with everything it touches’ (Kalakota & Robinson, 2001).

Finally, the biggest change in VLM’s process is the sales cycle. The sales staff is now spending more time in initial sales contact on the presentation of the e-business solution. However, the time spent in follow-up sales with customers has reduced.

Benefits of E-Business

Benefits to organization. First, it is good to lower sales and marketing costs. According to Currie (2000), sales and marketing cost is changed markedly with the move from traditional (manual) to electronic (virtual) methods and techniques. On the one hand, once a customer has adopted VLM as its digital print provider, there is a high degree of lock in, and in a number of cases, the customer has requested VLM to manage all of its print requirements. On the other hand, ‘customers can therefore access a web site and read all the information about new and existing products and service’ (Currie, 2000, p. 98). These two aspects help the company to reduce the sales and marketing costs.

Second, it helps to reduce the processing time. The new system can process over one thousand online jobs a day. Each operator can therefore get through 120 jobs an hour. With the traditional processing system, the operator could only get through 25 jobs a day, on average.

Finally, it is helpful to eliminate errors. Errors of VLM are eliminated by the new system. The customer is responsible for designing, editing, proofing and ordering online. No more human mistakes are encountered on the side of VLM.

Benefits to customers. On the one hand, it helps customers to control the budget. By accessing the VLM Integrated Online Printing System, customers can get information about what is spent in each branch and even on particular products. Customers will have control over the budget of each branch. For example, the company can assign a £500 budget limit per month per branch. On the other hand, it helps customers to control their own brand. Customers will have greater control over their brand identity, since all documents have a consistent look, feel and quality, and come from the same source. They will therefore have complete control over what the organization is printing.

Challenges To VLM

Challenges from Competitors

A tough competitor to VLM is Heidelberg, the world's largest print media solutions provider in Germany. Heidelberg entered the digital color printing market in fiscal 1999/2000 following VLM, and developed into four production sites in the USA, Mexico, United Kingdom and Germany. Its sales reached 763 million Euros in this sector in 2002. As McNaughton (2005) has indicated, e-business increases the competition and shrinks the time entering into market. Therefore, it can be possibly forecasted that with the VLM's growth in the digital printing industry, the competition will be serious in the coming years.

Challenges from New System

On the one hand, the new system underestimates user's acceptance and training time. Initially, VLM had signed up some customers who had never even used email. Such cases however involve technology experts traveling to the customer sites from Dublin quite often. They also underestimated the amount of training time. As Declan, who is the managing director of VLM, said 'you eventually get all the branches to come online but you don't proceed as quickly as you would have initially anticipated'.

On the other hand, the new system may encounter user resistance. Another problem was that each branch of the customer organization already had a relationship with a local individual printer. After the head office agreed to use VLM's system and informed all its branches, some branches were perceived as being 'forced' by the head office. As a result, there was a feeling of antipathy between some branches and VLM.

Conclusion

E-business not only gives a great opportunity for VLM to develop itself, but also puts VLM into dilemmas. Carrying out e-business may create huge benefits for the company, including lowering sales and marketing costs, reducing the processing time and eliminating errors. E-business solutions have great benefits for customers as well; for example, it helps customers to control the budget and their own brand. However, it may bring disaster to its business if it cannot deal with these two problems properly, including the challenges from both competitors and the new system. Thus, it is urgent for VLM to manage the serious competition, provide solutions to the training problem and ease the antipathy between customers and the company in the coming years.

Acknowledgements

This paper was sponsored by Key Research Base of Philosophy and Social Sciences of Zhejiang Province (Research Center of Communication and Cultural Industry) (No. 13JDCB02Z); Soft Science Project of Science and Technology Department of Zhejiang Province (No. 2013C35053); Ningbo Household Appliance Economy and Talent Development Research Bases; Program of “Xinmiao” Potential Talents in Zhejiang Province: “The Integration of Cultural Creative Industry and Household Appliance Manufacturing Industry – Case Study of Ningbo Household Appliance Manufacturing Industry”.

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