

**Business Model Transformation of Traditional  
Newspaper Industry to Omni Media**

**CAO Feng**

Thesis submitted as partial requirement for the conferral of the degree of

**Doctor of Management**

Supervisor:

Professor Nelson Antonio, Professor, ISCTE University Institute of Lisbon

Co-supervisor:

Professor Chen Hong, Professor, University of Electronic Science and Technology of China,  
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Full name CAO Feng

Course Doctor of Management

Student number \_\_\_\_\_

Email address \_\_\_\_\_

Personal email address 13381988@qq.com

Telephone number 13308198888

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Signed

 CAO FENG





## **Abstract**

The fast development of the information technologies, particularly, the mobile internet, has made a great shock in the traditional newspaper industry. The study of the transformation process of the traditional newspaper industry, for its survival is of great importance. This research tries to understand the mechanisms of change and action during the process of transition from the traditional industry to the omni media. We start by doing the literature review about concepts, such as: omni media, information resources, competitive advantage. We also researched literature related to business models and organizational resources.

In this research, we adopted the quantitative method. Based on the literature review we build a questionnaire. We sent the questionnaire to people that works in the industry. We intend to understand the process of transition from traditional industry to the omni media.

The innovation of the thesis consists in the fact that is one of the first studies about the problems that affect the traditional newspaper industry and how the transition from the traditional industry to the omni media was done in one of the biggest Chinese newspaper.

**Key Words:** Omni Media; Transition Strategies; Business Models; China

**JEL Classification:** M1



## **Resumo**

O rápido desenvolvimento das tecnologias de informação, em particular da internet móvel, provocou um grande choque da indústria tradicional dos jornais. O estudo do processo de transformação da indústria tradicional dos jornais com vista à sua sobrevivência é de capital importância. Com esta pesquisa tentamos compreender os mecanismos de mudança e ação durante o processo de transição da indústria tradicional para a mídia onipresente. Começamos por proceder á revisão de literatura sobre os seguintes temas; mídia onipresente, recursos de informação, vantagem competitiva. Investigamos também a literatura relacionada com modelos de negócio e recursos organizacionais.

Nesta pesquisa adotamos o método quantitativo. Com base na revisão de literatura construímos um questionário que enviamos a pessoas que trabalham na indústria para percebermos o processo de transição da indústria tradicional dos jornais para a mídia onipresente.

A inovação desta tese reside no fato de ser um dos primeiros estudos sobre os problemas que afetam a indústria tradicional dos jornais e o modo como a transição da indústria tradicional para a mídia onipresente foi efetuada num dos grandes jornais Chineses.

**Palavras-Chave:** Mídia onipresente, Estratégias de transição, Modelos de Negócio.

**Classificação JEL:** M1



## Acknowledgement

It has been 20 years ever since I joined West China City Daily in 1997. I have witnessed the whole process of the change of newspaper --- its prosperity, role in the Internet, platform of mobile media. It is a must for the Newspaper Enterprise (NE) to have omni media transition based on IT, nevertheless, the study of omni media business model is a whole new area. Will the NE continuously keep its fast pace after omni media transition? How to reorient the omni media business model? What about its mechanism? These questions have been lingered in my heart from time to time, and this makes me probe.

Thanks to School of Management and Economic of UESTC, my Alma Mater, with your generous acceptance of me as a doctorate student after I got my Master degree in 2012, I could never pursue my dream of being Ph.D. Sincerely thanks to Prof. Virginia Trigo and Prof Xiao Wen, without you, there will never be such a project - collaboration between UESTC and ISCTE – Lisbon University Institute (ISCTE-IUL), now it is the harvesting time, and that another miracle in the history of UESTC.

Sincere thanks to my supervisor, Professor Nelson Antonio, ISCTE-IUL. Whenever he is in Chengdu, Prof. Antonio is always sparing some time with me discussing my thesis in detail like structure, literature, extraction of argument, format of my thesis as well as translation, all in a precise way. Antonio is a professor with broad knowledge and meticulous scholarship. It is my great honor to be his student. Professor Antonio is very confident about the future development of newspaper, he believes that if we embrace the state-of-art technology, we will find our own way of developing newspaper. And this is a tremendous inspiration for me, a newspaper man.

Sincere thanks to my Chinese supervisor, Professor Chen Hong of UESTC, Vice President of Sichuan Provincial Marketing Association. Prof. Chen Hong was my supervisor for my thesis of Master degree, under his guidance, my thesis gained positive comment. It is also a great honor of me that he is also my Chinese supervisor to my doctorate thesis. Prof. Chen is very interested in the omni media transition of the newspaper, he has suggested unique viewpoint of the establishment of business model of omni media and research of mechanism operation, moreover, he even subscribed a *West China City Daily*, and

downloaded Cover. Prof. Chen Hong has a good sense of humor, wide range of knowledge, and his edification to the students makes me overwhelmed.

Special thanks to my family, my beautiful wife, parents-in-law, without them, I could not achieve what I am today. To let me focus on my research and study, they did everything to take care of the family, and even did not let me know when our daughter was ill, and this made me very guilty. It is them to encourage me to persist when I was depressed. Again, without their supports and understanding, I cannot be who I am today.

Thanks to my colleagues, Dr. Li Peng, Fang Ye, Editor-in-Chief, Zhao Xiao Meng, Vice Editor-in-Chief, Zhang Hua, Vice President, Li Hong Mei, Vice President, they all have practice in omni media transition of NE, creative theory research, all of these have given me great inspiration, and at the same time provided a lot authoritative and practical information for my research.

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## Chapter 1 Introduction

### 1.1 Practical Background

#### 1.1.1 Development of Traditional Newspaper

In 745, the first real newspaper was born in China. In 1582 (towards the end of Ming Dynasty) first private newspaper was published in Beijing. In 1609, *Avisa Relation Oder Zeitung* published weekly in Germany, which was the earliest newspaper published on a regular periodical basis. In 1615, *Frankfurt News*, regarded as the first modern newspaper globally, published weekly with all sorts of news.

In 1822, the first modern newspaper in China, *Abelha da China*, was published in Macao in Portuguese. In 1902, the first official newspaper born in China - *Beiyang Official Newspaper* with its headquarter in Tianjin, began its distribution all over China. During the Republic China era (1911-1949), the renowned statesmen, ideologist, and scholars Kang Youwei and Liang Qichao (Kang used to be Liang's teacher, both were leaders of Hundred-Day Political Reform, June 11 –Sept. 21, 1898) during Guangxu Emperor (1875-1908 in throne), established newspaper offices to report current affairs, criticized social events of the day and disseminated culture, and made great contribution to promote social development and progress.

After new China was established in 1949, the government invested and issued "Four Big Newspapers" --- *People's Daily*, *Workers Daily*, *Guang Ming Daily*, and *China Youth Daily*, plus over 250 newspapers in governments at different levels, which made the new China prosperous. At the end of 1970s, Evening Newspapers (published and issued after 2pm), and Industry Newspapers (established by different departments of different industries or different associations) became very popular, and made newspapers full of vigor after a long period of silence.

Since the mid-1990s, China has entered the "Era of Urban Newspapers", on January 1, 1995, *West China City Daily* - the first urban newspaper (subscribed by residents at free will, regional comprehensive daily newspaper mainly report on life of citizens) was established, it mainly reported political news, social news, sports news as well as provided large amount of daily information in Chengdu, Chongqing and cities around. It has been very popular with its

good brand and strong authority soon because of its investigation and reporting system with secret inquiries and supervision by public opinion. At end of the first year of its distribution, the circulation reached 100,000 copies, advertisement revenue exceeded 100 million Euro dollars, and this declared the beginning of the real market competition in newspaper industry in mainland China. For the second year, the circulation climbed to 300,000 copies and third year to 600, 000 copies and its advertisement revenue reached 560 million Euro dollars. By 2013, its circulation reached 1,200,000 copies, it was ranked at No. 44 globally and No. 5 in China against the data from the Global Newspaper Association. It is a comprehensive newspaper with the most circulation, influence and coverage in west China whose employees has reached more than 3,300.

After 1997, bunches of newspapers began to copy or imitate the operation model of *West China City Daily* including *Beijing News* (Beijing), *Hua Shang Daily* (Xi'an), *Urban Express* (Zhejiang Province), *Xinjiang Metropolis Daily*, *Southern Metropolis Daily* (Guangzhou), *Yanzhao Metropolis Daily* (Hebei Province), *Strait Metropolis Daily* (Fujian Province) , *Peninsula City News* (Shandong Province) and so on. From the data of China Newspaper Association, by 2015, there were more than 1,920 types of newspapers in China, which had the average period of print copies of 21.43 million and total printed copies to 45.9 billion. However, the urban newspapers stand at very important role which occupies 73.95% of the market share from all the newspapers and is ranked at No. 1 globally all time in 20 years. This kind of newspaper has become the mainstream of newspaper business in China with over 92% of self-subscription and 100% self-operating issue rate. The sudden occurrence of urban newspapers meant the beginning of market competition of newspaper business in China. At the same time, it also declared the end for the newspaper to get financial aid from the government which made the urban newspaper the main force in the newspaper market.

### **1.1.2 Newspaper Development Facing Turning Point**

The period of 2006 – 2016 was the fast-developing decade of media in China. During the 10-year development of network, information technology (IT) has played an indispensable part of people's life. From the data issued by China Internet Network Information Center (CNNIC), by December 2016, netizens population in China had already reached 731 million, equals the total population of Europe, the Internet penetration of China is over 53.2%, at the same time, more than 450 million using the mobile phones to log on the Internet, it is 95.1% among the netizens in China.

Newspaper was in its strongest state at the beginning during the period of 2015-2012, particularly the City News Newspaper group, the annual growth rate is more than 10%. From 2010 to 2012, the circulation and advertising revenue has been doubled compared to 10 years ago. It is called “golden time” for newspaper business (Cao Feng, 2013).

Under such circumstance, at very fast growing of the internet, the sales of newspapers and any other paper products declined. Particularly since 2012, smart mobile phones became a fashion in mainland China, most of the information that people constantly to get is from the internet through smart mobile phone. From the survey of China Central Television (CCTV), the market for newspaper is no longer in its peak time. From 2012 to 2015, the reading arrival rate of newspaper daily dropped by 9.7%, i.e. nearly 7,500,000 reader less. Among these data, greater loss happened inside City News newspapers - 12% drop overall. Readers of the newspapers became older, fewer and fewer younger generations would choose to read newspapers. Among them, people who were born in 1980s and 1990s have become less frequent newspaper readers. Instead, they use the Internet to read, browse and get information; the trend is that number of daily clicks has been increased 2.3 times within 6 years, reached 82% (Cao Feng, 2013). In fact, since 2009, circulation of newspaper business declined a great deal, from the research data of World Newspaper Business Association (WAN-IFRA) , by 2015, the circulation and advertisement revenue decreased by 15% to 19% globally.

From the data of US Newspaper Business Association, during the period of 2007 and 2012, the adverting revenue decreased by USD 32 billion, which was 55%. Against the audit report issued by US News Media every 6 months, from March 2012 to March 2013, daily circulation dropped less than 1%, compared to the plummet a few years ago, the situation is improved. However, the data includes digital newspaper as well, the hint information is that the circulation of the paper-newspapers has been declined greatly. In 2008, Christian Science Monitor (US) suspended its publication and used online service. In 2009, The Rocky Mountain News with a history of 150 years has been officially ceased its publication. Until 2013, there were altogether over 200 newspapers had been in suspension of publication, 13 of which ceased publication and used their websites.

In Europe, paper media has been in rough time as well. Rapid development of new media of IT based on the Internet has brought great hit to the newspaper, more and more younger generations have shifted to the Internet due to the fast speed of the Internet (Cao Feng, 2013). Last year, paper media experienced the largest tide of bankruptcy after World War II, three influential newspapers consecutively declared their bankruptcy, and it led to

thousands of unemployment. On 12 April 2013, *Deutscher-Depeschendienst Associated Press (DAPD)*, the second largest news agency in Germany officially ceased to operate. Also in December 2012, *Financial Times Deutschland*, the largest financial newspaper in Germany also made announcement that they have been in suspension of publication for a long time.

At present, there are 22 large-scale nationwide newspapers in UK, including 11 weekly newspapers (issued from Monday to Saturday) and 11 newspapers issued on Sunday only. The newspapers can also be divided into “broadsheet”, “high quality newspapers”, “mid-market newspapers”, “minor newspapers” and “popular newspapers” against the characters of the readers. The drop of circulation of these newspapers has been continued for several years, the percentage is around 5%-10% annually. In 2014, Alexandar Lebedev, Russian businessman bought 75.1% share of “London Evening” (heavy loss) with 1 pound.

Since 2010, paper media in France has been suffered a lot due to different reasons like higher price, plummet of sales and advertising as well as general loss. In May 2014, the average circulation of the famous French daily *Le Monde* in 2013 was only 303,000 copies. Natalie Nougayrède, Editor-in-Chief resigned on 14th, after 15 months in office. This means the dilemma of transition from paper to digital time. There were 7 out of 10 Editors-in-chief and vice Editors-in-chief, as well as 2 assistants to the editor-in-chief resigned in September. Paper media crises broke out seriously.

Japan, as the most developed newspaper business in the world, based on the information of Japanese Newspaper Association, daily circulation in Japan in 2001 was about 53,680,000 copies, by 2013, it dropped to 47,390,000 copies, in 13 years, it decreased at a rate of 1.13% annually. Among them, *Yomiuri Shimbun* which has the largest circulation in Japan dropped from 5,000,000 copies daily in 2010 to 3,000,000 in 2014 (Yin Liangfu, 2012).

The development of IT is growing faster and faster, especially in media industry, means of spreading has also been changed a great deal. Newspaper and radio were replaced by mobile phone. Modern young people get their information and communication via Internet. New media is beginning to taking a great part in people’s daily life, at the same time, it has taken preemptive opportunity for the publishing rights of information.

### **1.1.3 Choice of Newspaper Business: Omni Media Transition**

Hit from digital and network media, great changes have taken place for the general readers to get in touch with media, from motionless and passive in the past to active participation. The circulation of traditional newspaper has been declined greatly. In North

Caroline State University, Prof. Philip Mayer (2005) once published an article called *The Dyeing Paper Media: Rescue Reporters in Information Times*. His opinion is that by 2043, there will be no more paper media. In short, by October 2043, when finishing reading, last reader of paper newspaper will not purchase any more newspaper.

Along the tide of reform of the newspaper worldwide, newspaper offices also have three directions of development.

First, some newspapers including established brand big newspapers were going bankrupt one after another. On December 9, mainstream media and its related newspaper enterprises including *Chicago Tribune*, *Los Angeles Times*, and *Baltimore Sun* also declared that they had made applications to the local court for bankruptcy protection, and this also unveiled the big tide of newspaper bankruptcy in US. After this, several tycoons of newspapers made applications for bankruptcy protection in succession, hoping that they could get rebirth from bankruptcy protection through asset restructuring (Bai Qifeng, 2013). By the end of 2013, over 300 newspapers had ceased to operate. By December 2016, there were 100 newspaper in suspension of publication in China including *Beijing Times* (Beijing), *Morning News* (Shanghai) and many others.

Second, some newspapers stopped their printing, they shifted to Internet. These newspapers are still struggling to make a profit. In 2010, when Murdoch ambitiously invested a large amount of money of USD 1 billion to establish new media *THE DAY* based on IT of the Internet, it only existed for 2 years, and ceased to operate in early 2012, which cast a shadow over digital transition for newspaper business. On March 26, 1016, *Chicago Tribune* (US), *The Independent* (UK) shifted their business from paper edition to network edition. David Callaway, Editor-in-Chief of *US Today* (No. 1 in circulation in US) declared that within about 5 years the newspaper will shift totally from its printing business to Internet news media.

Third, more newspapers depending on their brand influence, abundant capital, excellent staff, are on their way of “Omni Media” (all kinds of media exist at the same time), they have obtained some preliminary results.

After long time of research, related departments of newspaper industry in China have proposed the concept of “Omni Media”. It is called “Cross Media” in Europe and US. The two forms have lots of similarities in operation. The concept of “Media Convergence” was first proposed by Prof. I Puer. In short, it means gradually many different patterns of manifestation of media will gradually converge together, and there will occur multifunction

phenomenon, while media convergence will be in appearance of putting traditional means of media like newspaper, TV together (Tang Ruomei, Tang Junbing, 2010). Media Research Center of US Press Association takes the concept of media convergence as “alliance of audio, interactive, printable, video, between digital media, strategic, cultural and operational”. To emphasize “media convergence” mainly means the cooperation and alliance between each media. The concept of “Omni Media” mainly uses the influence of traditional newspaper by using traditional newspaper, broadcasting, TV and all sorts of new forms of media (including network, cellphone, outdoor media), the newspaper can carry out a new form of spreading and industry operational model. “Omni” does not necessarily mean “big and everywhere”, instead it means “the convergence of multi-media”.

At present, “Omni Media” is the main form of the development of newspaper worldwide. In Europe and US, newspaper industry has already taken digital transition. They took some simple news with only words or pictures, updating them to different expressions like “words+audio”, “words+video” and “words+video+picture+audio+excelsheet+cartoon”, and this has created the multi-dimensional effect. While keeping the overall brand value and professional news value, they are also trying to do their best to realize their advantage promotion among the harsh competition.

The core symbol of transition in US newspaper was that *New York Times* declared that free reading from their website would stop since March 31, 2011, and they began to set pay walls, each IP user can only read 15 news for free monthly, payment must be made if further reading needs to be done. Under such circumstances, digitalization of big newspaper is faster than medium and small-sized newspapers. Because medium and small-sized newspapers depend on local small profit market segment, which means that they still have space to survive. The survival space is becoming smaller and smaller for the big newspapers, the faith of breakthrough from the dilemma becomes stronger and stronger. Under the leadership of several big newspapers, newspaper digitalization of US began to make profit in early 2012. From the data from American Broadcasting Corporation (ABC), from October 2011 to March 2012, during that half a year period, digital version of newspaper in all over US has been growing rapidly, and it made up 14.2% of the total circulation, while in the previous year the percentage was only 8.6. Among them, the digital subscribers of *New York Times* surpasses those of the published, the circulation of digital version increased by 73%. By 2014, mobile terminal downloads and network subscription had more revenue than that of traditional advertising, and made profit as well, this was a great achievement.

In UK, *Daily Mail*, *Times* and *Financial Times* and many other newspapers are not only beginning to carry out different media to make promotion for their newspapers, but launch omni media development like “newspaper + website + video” at the same time (Zhao Ru, Li Yonghong, 2013). Newspapers in Germany begin to carry out App clients to develop their business. The media in Germany charge people by providing supporting services. Investigation made by German Periodical Association indicates that to some extent, there has been a constant growth of the reading patterns on payment via network, mobile, iPad and E-books. At the same time, periodical reading is also growing fast. Among them, there are more and more clients using iPad and E-books (Deng Dirong, 2014). Relatively speaking, in Japan, newspaper industry is not only carrying out “Omni Media”, but also calling on “get benefit from culture”. At the same time, they are expanding their culture and sport by using relevant media industry, among which are art galleries, cities, high schools and professional contests of baseball and chess. These cultural activities are going to be the important impetus to promote Japanese cultural media. These activities not only activate the newspaper layout, but also bring popularity for the newspaper and circulation has been increased (Ruan Miaomiao, 2011).

Compared to the traditional development model, circulation model of E-newspapers has high competitive ability by using high effective means of communication and diversification. Consumers can get tailor-made information per their unique need, meaning it is not necessary for them to read those that they do not choose. Meanwhile, by different tailor-made contents and ways, circulation can provide different business designs for the development of newspaper industry, in this way, the newspaper can effectively lock the personal terminal of the consumers. Therefore, in the process of research of newspaper enterprise transition, what is the nature difference between traditional newspaper and omni media, and what differences have made newspaper industry with omni media can effectively carry out diversified business model and this will provide effective theoretical support to understand the transition and development methods of the traditional newspaper industry.

In China, West China City News began to arrange its omni media back in 2011--- establish West China City network. In 2012, it established West China Community Newspaper and West China Urban Reading, purchased Sichuan People’s Broadcasting Company (FM90.0) , created 1,500 outdoor cultural walls that belong to high-end communities, and launched (*West China City News*) official Weibo (twitter, same with Facebook), WeChat and Client terminal side based on the mobile Internet. In November, 2015,

West China City News cooperated with Alibaba. Alibaba made cash in to build brand new “Cover” based on APP in cell phones, whose main service is to enable the generation born in 1980s and 90s to read via their mobiles. Within a year, download from users reached 20,000,000, daily active rate reaches 2,000,000. On June 14, 2016, Type Class A qualification of mobile Internet news was successfully gained, and this made it the second such network nationwide (the first one is Pengpai News in Shanghai). Moreover, it has established 27 mobile new media matrices by taking Cover as its core including “Be a Chengdu Local”, “Tianhu Technology”.

In 2016, after omni media strategic transition, West China City News was in good shape again. Despite advertisement revenue decline by 27%, net increase of revenue of new media gained 300%, overall income and profit increased by over 11%. In view of the data from China’s General Administration of Press and Publication, Radio, Film and Television (SGAPPFT), its annual income was Euro 185 million, net profit Euro 59 million, ranked No. 1 nationwide.

As the first City News in mainland China, West China City News created an era for newspaper industry in mainland China, not only circulation but quantity of advertising publication, West China City News occupies over 70% of the market share in mainland China, therefore, it has got the worst hit from new media and new technology. And once again, it took lead for strategic transition, becoming a transmission platform combined with network, mobile media, broadcasting, network TV, outdoor media on basis of newspaper. And this can be a very important reference as well as guiding value for the newspaper industry nationwide.

## **1.2 Theoretical Background**

### **1.2.1 Digitalization Transition Model**

With constantly development in the newspaper industry, the convergence of media became diversified, which enabled newspaper to disperse on basis of network to broadcast in multiple terminals. Western scholars have paid close attention to the development of media convergence, it takes them a long time to discuss and research during the process of newspaper transition. In 1980s, Prof I Puer (US) made some research about media convergence. Among Japanese scholars, in his book Road for Newspaper Industry, Ma Qingfu once said that only when we entered 21st century, could we see the real road for the newspaper really. Therefore, for the development of the company, the most important means



is to optimize and “embellish” newspaper media. By 2016, many overseas scholars have done research on media convergence, and published their works. In addition, many scholars in US also made analysis to the form of media convergence and the way to realize it. For instance, the exploration of E-newspaper, they propose that E-newspaper can be realized in the application of electronic system. They even come up with the idea that of certain E-newspapers: to the senior, to the people who are on business trips and to the young. Moreover, they design the means of spreading on basis of omni media. Their research also proposed the basic evolution model of the new business model of omni media: technology has played a dominant role during the change of overall business model.

Opinion of Chinese researchers is that modern omni media gives impetus to the development of newspaper industry. However, it brings a lot of challenges at the same time. Therefore, during the development, methods need to be used to combine media with convergence and transition, so to achieve new forms of development of new media. Or by using brand strategy to develop to highlight the cultural characteristics of the company. Also, the impetus of IT will enable newspaper to change its model, to realize the recovery and prosper of newspaper industry (Lin gang, 2010). While other scholars believe that new media with the newly-developing technology can be combined with traditional technology, the essence is to make clients satisfied. By applying strategy of omni media, using technology to satisfy clients’ demand so that experience of the consumers can be improved (Du Xiaohong, 2012).

### **1.2.2 Omni Media Business Model Transition on Basis of IT**

Though traditional newspaper industry has multiple models of transition, under the circumstances of omni media, the core change lies in the application of the newly-developing technology which will bring more new choices for the development of the newspaper industry. By understanding IT will bring unique change to traditional newspaper industry will help understand how to design transitional business model to meet the standard of omni media.

#### **1.2.2.1 Renovation of Traditional Industry Brought by IT**

Along with the development of the basic industry revolution, human society has gone through the age of steam as well as the age of electricity, right now we are in the times of information technology (IT). The whole human society is making its change every day. No doubt as the unique general technology, IT has played a huge role to promote the society development and people’s life. Within several decades, the technology improvement and

productivity renovation have been far exceeded the past several thousand years. The invention and application of IT have effectively promoted the manufacturing of hardware and development of software, material production and service management, the combination of real and virtual economy, and these have become the strong impetus for the development of our economic society.

IT resources have general features of economic resources, i. e. effectiveness, scarcity and optional use of production element, therefore IT resources should belong to category of economic resources. Physical resources like IT resources and natural resources, HR and capital resources are the basis of the existence and the development of the human beings in the world (Wu, 1996). Under the current technical and economic condition, IT industry is the accelerator of the economic development, converter of the ways of development, and propeller of industrial upgrading (Jiang, 2008). Once IT industry has influence on the development of real economy, brand-new means of economic exchange is going to come into being, and this will make the whole process of social economic activities depend on IT, and at the same time new social economic activities will be brought. In other words, IT will become leading industry, replacing and integrating heavy chemical industry. As the material basis of network society and a whole new technical economy paradigm, IT industry has the characteristics as follows: 1) information has become the most important economic element; 2) relatively strong permeability and network features; 3) “remodeling” function to economy and society; 4) strong function of integration to related technology (Castells, 1996). Therefore, compared to the traditional technical products (including information service), IT products have brand-new form and characteristics. Meanwhile, IT will upgrade economy to its virtual form. Moreover, unique economic rules will dominate the rising and declination of information-based economy, for instance the external information rules and information monopoly (Yan, 2004).

The innovation brought by IT revolution changed the operational model of macro- and micro-economy at a great extent (Yan, 2004). Under such paradigm, the value of intelligent capital has been greatly reflected, and it is continuing to grow; production mode of human labor will be replaced by intelligent production mode, and the latter has become the mainstream of the human society. Production based on primary production will be replaced by the mode of production of combination of manufacturing and service. The combination of tertiary and manufacturing has brought new idea of development and enterprise organization model. Mode of production mainly based on material energy input will be partly replaced by

IT resources. Under such background, compared to traditional industry, unique value of IT has characteristics as follows: 1) relatively strong permeability and network features; 2) “remodeling” function to economy and society; 3) strong function of integration to related technology (Castells, 1996).

#### **1.2.2.2 Business Model Designs Theory Research**

The concept of business model occurred long time ago. Bellman & Clark and others (1957) were the first to propose the concept published in Operations Research. However, its rising began in the 1990s. As an important analytical unit, relevant concepts have been paid extensive attention from scholars and practitioners. In recent years, more attention has been paid to the concept of business model (Zott and Amit, 2008; Coye and Haselkom, 2009) whose core is to rebuild traditional business via Internet. Thanks to the rapid development of Internet, operation of virtual market (Magretta, 2002) and development of newly-developing economy (Ricart and Enright, 2004; Amit & Zott, 2007), IT and modern management method have become important elements for development and formation of business model (Wirts and Schilke, 2010; Gambardella and McGahan, 2010).

The focus of business model from tradition mainly based on the information network, analysis and focus on decision patterns as well as individual behaviors (Timmers, 1998), the focus on research was the research of concept model, industrial model research and case study research. The rising of business model research provides new aspects to solve and promote advantage of enterprise competition. In recent years, more and more researchers have discovered that business model is an important element for the formation of the advantage of enterprise competition (Rapp & Rapp, 2008; Lumpkin & Dess, 2004; Zott & Amit, 2007, 2008), whose focus is on the performance of the enterprise. Though business model has played a role in promoting to form the advantage of enterprise competition, how to use the available resources of the enterprise, especially for the traditional enterprises, how to use the available resources and relevant characteristic of the industry, with the help of the Internet, digitalized technology to remodel the business operation model, this will greatly help understand unique business model design according to the basic element of competitive advantage of different enterprises.

### **1.3 Research Significance**

Under the background of IT of social change, how traditional newspaper industry is

going to survive via efficient reform facing the strike of multimedia, this will have positive significance in understanding the development of traditional industry and remolding of competitive advantage. During this process, traditional research seldom pays attention to the development of omni media or IT media and the difference between the mechanisms of forming the basic competitive advantage of the traditional media, and it is because of the difference in the basic competitive advantage that leads to the unique design for the business model of multimedia. It will help understand how to cope with competitive advantage to design corresponding business model via understanding the difference between the mechanisms of competitive advantage of multimedia newspaper and traditional newspaper. Moreover, it will also help understand how traditional newspaper can make transition to multimedia newspaper via understanding how different competitive advantages will bring new business model, this has the direct influence of the development of transition of traditional industry to newly developing industry.

## **1.4 Research Content**

To understand how efficiently can traditional newspaper realize the development of transition on basis of omni media based on IT, this research is going to discuss the following questions:

- 1) What are the unique advantages of omni media based on information technology to be comparable with traditional newspaper industry?
- 2) What are different designs of business model for the traditional newspaper industry?
- 3) How does the unique advantage of omni media have influence on reengineering of the business model of newspaper industry?

## **1.5 Research Method**

The thesis will use relevant research results in recent years of media operation and competition of new media based on IT, forming basic framework for case study based on document research, and make analytic demonstration with the relevant framework research together with theoretical viewpoints and research methods.

Method of literature research: collect, identify, and review literature of global “omni media”, form the recognition of the new knowledge --- omni media via literature study. Via

reviewing available research, analyze the unique advantage of related industry based on IT compared to traditional industry and what reforms it will bring under the system of framework of the available research.

Interview: Have one to one interview by using opportunities like business trips, conference or even special visit; or hold forum to have conversation. Altogether, there are 11 paper media offices have been visited including Southern Metropolitan News (Guangzhou), Qilu Evening News (Shandong), Morning News (Shanghai), Beijing News (Beijing), Chutian City News (Hubei) and Hua Shang Daily (Shaanxi), discussions have been made on the changing mechanism of business model during the process of newspaper transition from traditional way to omni.

## **1.6 Main Innovations**

Analysis made for the mechanism of omni media transition of newspaper based on IT, analysis and comparison have been made before and after transition, general theory model has been constructed.

Propose creative theory of omni media transition, i.e. omni media integration does not mean traditional media melt away new media or new media gobble up the traditional media, instead, it means matrix integration. Integration is theory, mentality, content and technology, we do as to make adjustment and interactions, we pursue recreation and win-win.

Suggestion made that the development mechanism of omni media transition of the newspaper as well as the probe and research of its development trend of the business model after transition.

## **1.7 Technical Approach**

This research starts from theories of omni media, information resources and competitive advantage, so as to understand the core source of competitive advantage of multimedia newspaper based on IT over the traditional newspaper, understand how corresponding competitive advantages change the business model design of the traditional industry via analyzing the unique advantages of multimedia newspaper based on IT, which elements can be changed to realize the business model design based on the multimedia IT, and this will have guiding meaning for transitional mechanism of corresponding business model and

mechanism of competitive advantage of IT that will have influence on the development of future social economy especially during the process of transitional development from traditional industry to industry based on IT. To analyze these questions, this research is going to illustrate the current research, detailed information is in the following three aspects (Figure1-1).

Sub-research 1 uses the method of reviewing the theory of literature, related research means based on the rational conclusion acquire the core difference between traditional newspaper and multimedia newspaper based on IT in the process of competition. Understand how IT will give impetus to traditional newspaper in the aspect of renovation of competitive advantage on basis of information resources theory and resource view theory.

Sub-research 2 is based on sub-research 1, by constructing theory based on business model, analyze what business model designs exist in the structure of traditional business model to understand the core element of different business models, especially how business model design will get its evolution and development under the background of understanding the significant difference in multi-aspects between traditional newspaper and multimedia newspaper.

Sub-research 3 adopts the method of large sample survey, and does case study for the theoretical model of sub-research 2 to understand the transitional mechanism of business model design during the process of transition from traditional newspaper to the multimedia newspaper, providing necessary proof to the corresponding theoretical assumption.

Therefore, transitional mechanism of business model during the process of transition from traditional newspaper to the multimedia newspaper constructed by theories of information resources and competitive advantage, and form a practical proposal per corresponding theory model, thus establish a logic system of theory analysis with a background of unique transition.

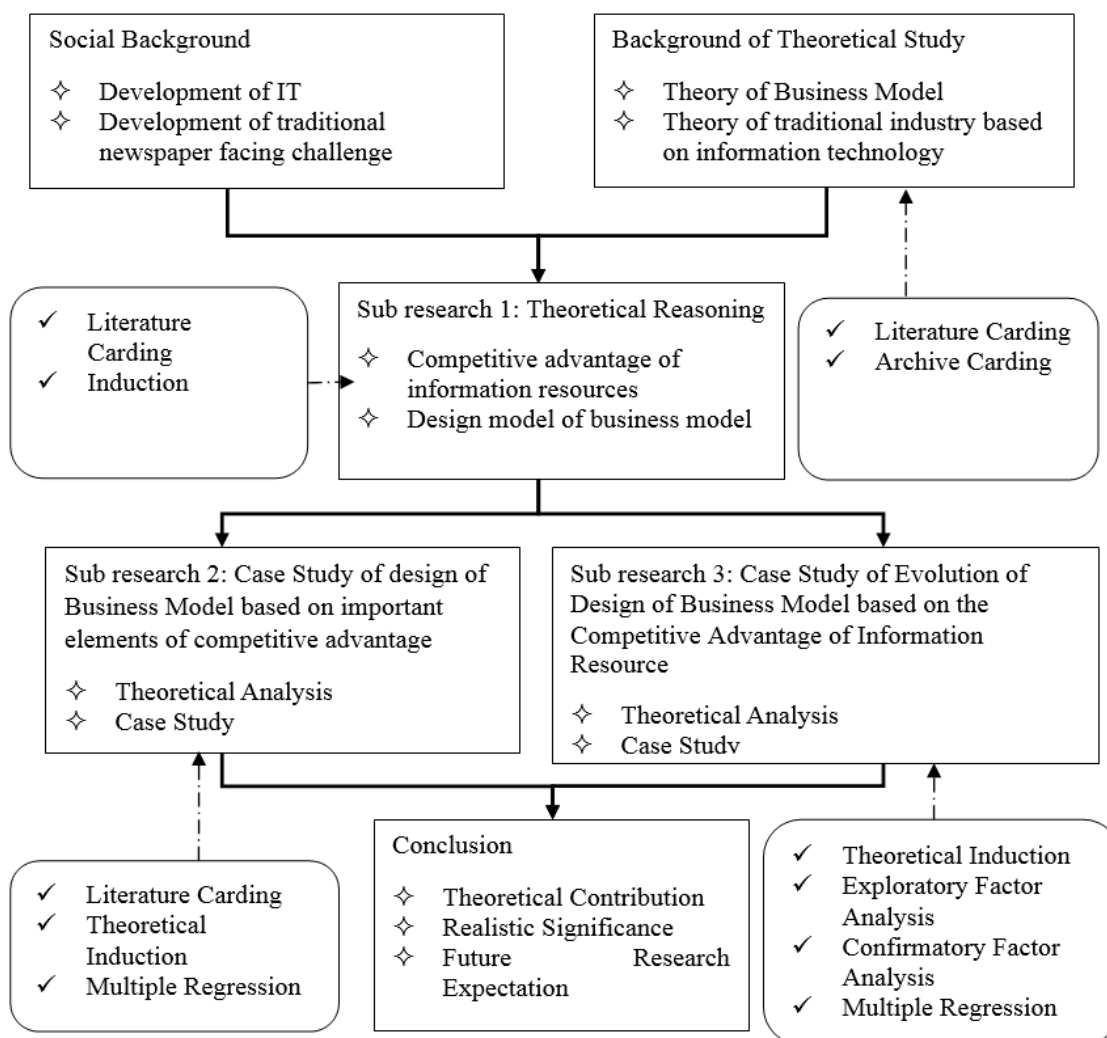


Figure 1-1 Research Technical Approach

Based on the logic arrangements of technical route described as above, the thesis is consisted of 5 chapters, detailed arrangements and main content are as follows (shown as Figure. 1-2)

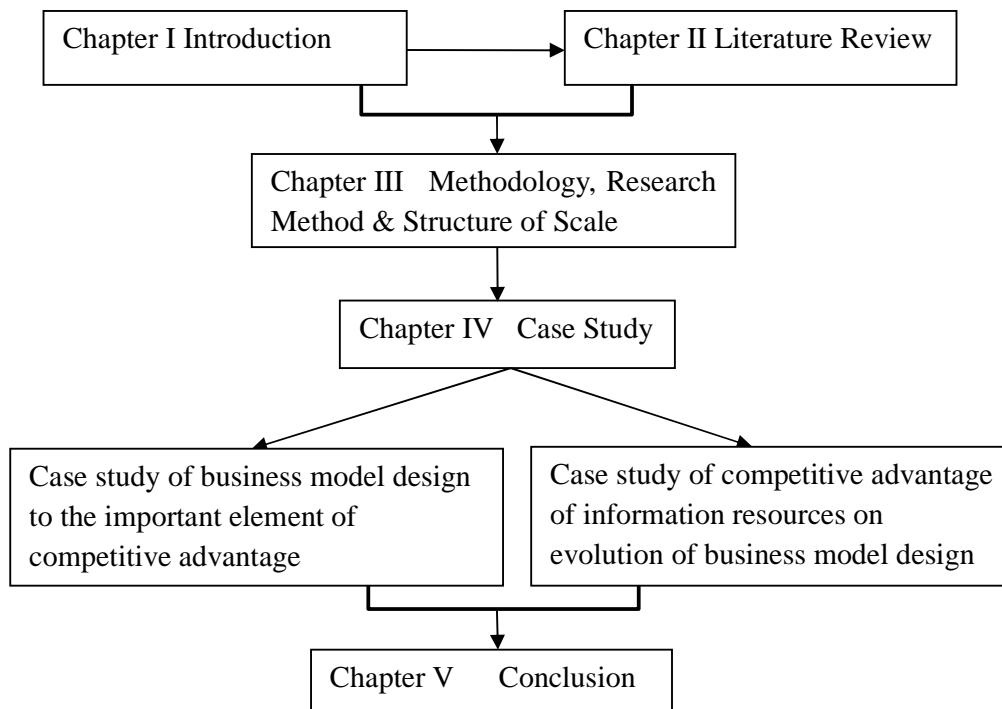


Figure 1-2 Overall Framework



## Chapter 2 Literature Review

### 2.1 Theory of Omni Media

In academic field, similar with “omni media”, for cross-media, their definition and operation nature are totally the same. Until now, “omni media” strategy that is based on Internet technology and mobile media has already become the worldwide trend for newspaper business, the core of omni media transition is digital and mobile transition. As a matter of fact, early in 2003, when the newspaper business was still in its prime time, some of the newspapers with foresight like New York Times and Yantai Daily already began the transition and practice of being digitalization and mobilization.

#### 2.1.1 Concept of Omni Media

Omni Media in narrow sense means that with the impetus of technology, the traditional Newspaper Enterprise (NE) realizes its path transition based on the Internet with diversity, multi-terminal and divergence. Prof. I. Puer was the first scholar who proposed the concept of Media Convergence (1980). He believes that the essence of media convergence is no matter where and when, the reader can use the Internet via any terminal to get information and service, this is the integration of multi-function of all kinds of medias. Andrew Nachison (2001, Director of Media Research Center of US News Association also emphasizes that “media convergence of omni media” refers to the cooperation and alliance among all kinds of media including printing, audio, video as well as interactive digital media. Road for Newspaper Industry (2003), Ma Qingfu made thorough analysis on how the newspaper industry would break the ice facing the challenge of new media and new technology, he thinks that only the industry embraces the new technology can it find a way out in the new era. Stephen Quinn (2005) focuses on the research of media convergence model. He thinks that the traditional newspaper and new media should learn from each other, the border between each other will become more and more vague along with the improvement of digital and network technology.

Media Economics by Yu Guoming (2009) thinks that omni media mainly refers to media like newspapers, magazines, broadcasting stations and television stations based on IT and

network technology, this has totally changed cost and state of time and space for the collection of languages, phenomenon and data, taking digital technology as its core, integrate different information to further strengthen the interactions and interconnections among different types of media.

Omni media in broad sense refers to the form of multi-media and combination of relevant elements. Among them, it contains integration of media function, means of transmission, structure of organization and ownership. In 2003, per organizational behavior and employees of the media, Prof. Gordon (Northwest University, US) induced five types of “omni media” as follows:

The ownership belongs to a large-scale of media group. There are different types of media including newspapers, broadcasting stations, television station, APP on client side of mobile news, but the faster it can share the inner branding and resources of the group, the higher degree of the omni media the newspaper enterprise (NE) will be, like Telecommunication Group in Ohio and Media Group in Florida.

Different media under certain circumstance can also realize news resources share (strategic convergence), for instance, the cooperation between newspapers and television stations as well as broadcasting corporations that belong to different media groups.

Moreover, there is a new product called outsourcing cooperation, like Orlando Sentinel whose news products are all sold to television stations after packaging.

Journalist of omni media is also called “super journalist”, he alone can collect information, edit pictures and video as well as have multi-media published, he makes convergence of news resources of multi-media in the angle of information collection.

Content convergence mainly refers to the employees of media institution use different kinds of skills like public interactive tools and means of multi-media to accomplish the report of the news.

What are the Characteristics of Omni Media? The matured digital technology is an important impetus of omni media. The fast development of new IT is the direct driving force for the media convergence. Therefore, “omni media” has distinctive features with high mobility and digitalization.

Collect information for once and spread it for multiple times. The improvement of technology makes it possible for everybody to be a journalist. The models content production and communication have been totally changed. The same information, after being edited, can

be issued in the Internet in a very fast speed, then through audio and video, get it published in the newspaper is the last step. This is what is called make “collect for once and spread it for multiple times” possible. Lin Gang (2010) points out that under the circumstances of “omni media”, multi-media is a vital factor for building a platform of development. The newspaper needs recovery and be prosperous by using new media. Du Xiaohong (2012) points out that “omni media” is actually collecting the same information in all different aspects including audio, video, pictures, words and get it published via multi-channel and multi-media.”

### **2.1.2 Research on Omni Media of City News Newspaper**

At present, by checking the Internet, there are 3 major studies on the development strategy on City News newspaper based on IT.

The first is a case study. Chai Jie (2010) adopts research method of combination of horizontal comparison and case study to carry out the study of Yantai Daily Media Group that began its new media business in 2003. Wang Xia (2001) made study on omni media strategy of Southern Metropolis Daily, analyzing the background and the development trend for omni media of newspaper enterprise (NE) as well as the current problem during the process of its transition to discuss how to make innovation in mechanism and how to explore a new path in the development model. Development regulation is expected to be found out via the unique development path to be an example for the other NE.

Huang Zhizong (2010) made research on omni media transition on NE in Guangzhou including Guangzhou Evening, Southern Metropolis Daily and Guangzhou Daily. As to the problem the three NEs are facing, together with other NE transition to omni media model, this requires development path for NE transition to omni media in mechanism reform, theory innovation, talent strategy and industrial chain.

In addition, other scholars have provided valuable results for strategic issue of NE transition based on the study of overall and multi-layers’ development of NE transition focused on City News newspaper under the background of digital era (Guo Quanzhong, 2013). Omni media transition based on IT is a worldwide trend which is connected to media revolution and technology and this has formed the overall background of omni media reform globally (Ren Mengshan, 2010). The websites established by the newspapers should focus on the video, provide more original content of both audio and video and carry out strategies of differentiation and branding (Wu Xue, 2011).

Another is the strategic study of NE transition under the background of omni media. In

recent years, there have been more and more analysis of omni media era and discoveries of surviving development strategy of the newspaper, the focus is mostly on how to develop under the circumstances of omni media, for instance, New Strategy of Development of NE in Era of Omni Media (Hao Shukai, 2010), Reflect of NE Development in Era of Omni Media (Fang Zhaodong, 2010), Surviving Development Strategy of Newspaper in Era of Omni Media (Zhang Dawei, 2010), How Traditional NE is to Act in Era of Omni Media (Su Kuoshan, 2011), Get in Connected with Era of Omni Media --- Reflect of Economic Development Strategy of NE (Nie Zhaoxia, 2012), other thesis analyze in the angle of convergence of newspapers and their websites, like Convergence of Newspaper and its Website --- New Challenge of Era of Omni Media (Zhang Feng, 2013), From Interactions between Website and Newspaper to Convergence of Both (Wu Wei, 2013).

Then is the study of omni media transition of newspaper group. Some scholars point out that the omni media transition of newspaper group in information era is also an important trend for the media development. The omni media transition of the newspaper group is a vital factor for the current media (Lin Gang, 2010). Matured media market must be one or several monopoly media markets, whose forms including single media group (like newspaper group, broadcasting group and mobile new media group), comprehensive media group (like newspaper, magazine, radio and television, news agencies and vertical convergence of relevant industry), mixed crossed media group (multi-media and relevant industry as well as combination of many other unrelated industry), the combination is diversified. While in the sense of development process, initially there were more single media groups, in mid-term more horizontal and vertical combined media groups, recently the trend has become mixed crossed development. Highly concentrated, large-scale and diversified operation represents the development trend of media development (Cao Feng, 2014).

### **2.1.3 Doubt of Omni Media Transition from some Scholars**

H. Iris Chyi and Ori Teneboim have raised their doubts for the direction of digital transition of newspaper. They believe that NE digital transition based on the hypothesis that paper media is dying is a pseudo-proposition, and the hypothesis has not been verified. “At present, it is possible that the technology and digitalization of the media is a bubble, the development of paper media will continue its way of the past, but not in the smart phone, Ipad and virtual reality.” (H. Iris Chyi, 2012)

Chyi & Tenenboim made research on readers (including newspaper and digital readers)

of 51 newspapers in the US (including America Today, Wall Street Journal and New York Times), and the result is astonishing. From 2007 to 2015, the digital readers of these newspapers did not increase significantly, on the contrary, after 2011, more than half of the digital readers of the newspapers shrank. “The circulation is going down, but in local market, the numbers of newspaper readers were more than digital ones. Large amount of money has been put into the establishment of digital products, website edition however did not bring handsome profit to media.” (H. Iris Chyi, 2015). “The number of newspaper readers are dropping, but they do not all shift to the E-version. The big gap between printing and E-version in attracting readers indicates the strategy of “digital priority “may not be necessarily in favor of the future of NE.” ( H. Iris Chyi and Ori Teneboim, 2015 )

#### **2.1.4 Summary**

With the shock of new media from Internet and cell phone, if the traditional newspaper cannot switch from passive to active, then it will be over. Therefore, the traditional operation method should be abandoned, integrated transmission and marketing of omni media should be carried out. This includes four changes as below: in theory, realize the transition from newspaper to omni media convergence; in means, use new media, new technology, new channel to realize the transition in production, operation and profit models; in branding, level of public opinion and comprehensive market competitiveness according to omni media convergence and integrated method; in omni media convergence, pattern of focusing on paper media should be shifted to the omni media and carry out the reinventing the production process of omni media.

With the rule of marketization, City News newspapers can establish omni media cluster to carry out the omni media transition. Omni media platform based on IT, guided by market should be established to develop mobile terminal. In marketing, in addition to reinventing process per law of new media issuing, the focus should be increasing stickiness of clients, and forging community life, service products including leisure, entertainment and business.

## **2.2 Newspaper Business Module Transition under the background of Information Technology**

The nature of omni media transition of NE is to carry out technical renovation and create new business process, operation pattern via information, Internet, communication and various

of video technologies to have a modern NE.

As for the reconstruction of the business model of traditional NE, the nature is to reconstruct the enterprise value (proposition of enterprise value, network created by value, maintenance and realization of value). Therefore, the core of business model transition of enterprise itself is to analyze how the enterprise can make profit under the background of informatization. Under such background, the core mechanism of business model of multi-media transition is to analyze the characteristics of the IT, and how IT, as a resource, brings technical transition and renovation. Analyze how IT has influence on reconstruction proposition of enterprise value, network created by value, maintenance and realization of value to reconstruct the business model. (Jin Xuetao, Yu Haixia, 2011).

### **2.2.1 IT as a Resource**

IT, as a resource, has its unique characteristic. During the early phase of the research, quite a few scholars introduced resource-based view to the research of IT to analyze how IT resource of the enterprise will give impetus to the construction of competitive advantage of the enterprise. Viewpoint of Cdata-Wade & Hulland (2004) is that the theory of resource-based view can make IT run better, and it has three patterns of manifestation as follows: 1) how to use different resources. In resourced-based view, the nature of the enterprise can be the recognition of IT of the enterprise so the competitive advantage of the enterprise in the market can be updated. The recognition of the character mainly reflects IT asset and the ability of IT. At the same time the exploration of the characteristic can support the theory to some extent. 2) Get the basic nature of IT and non-IT by using different nature of various resources to carry out reasonable comparison. 3) Analysis of the theory of resource-based view can use variables of the resources of the enterprise to get the connection between resources of the enterprise and the sustainable competitive advantage of the enterprise, and this will help get the effective framework of analysis during the research of the resources of IT. (Guo Rui, 2012; Chen Qi, 2010).

#### **2.2.1.1 Resource View of Enterprise (including NE)**

In the range of strategic management, usually the main point of analysis lies in where exactly does the competition of the enterprise come from, including how the enterprise sticks to its competitive advantage by using its own environment? (Barney, (1991); Teece, Pisano & Shuen (1997)). Early phase research of range of strategic management mainly focused on the analysis of products and external factors like market to analyze the acquisition of the strategic

competitive advantage of the enterprise itself (Barney, Wright & Ketchen Jr, 2001). From the 1980s, the research of competitive advantage of the enterprise is no longer the only business for its external factors. The internal basic form of the enterprise is also a main reason that brings the competitive advantage to the enterprise. In the management, resource view thinks that enterprise itself is an effective combination of resources and abilities, and at the same time the different kinds of resources that the enterprise possesses is the most important reason for the enterprise to be at the summit of the competition for a long time. There are two important questions in the analysis of resource-based view of the enterprise as follows: 1. What external resources of the enterprise can bring long-time competitive advantage. 2. Through what means can different kinds of resources support sustainable competitive advantage to the enterprise? (Rumelt & Lamb, 1984)

In 1950s, works of Penrose (1959) --- *The Growth of the Firm*, the resource-based view was put forward. In this work, she mentioned that the development of the enterprise usually consists of many kinds of rules, at the same time, if the development is diversified in this area, and this will enable the development of the enterprise to depend on the various resources of the enterprise, also needs to understand how to use the resources. After that, scholars who study of strategic management began to adopt the resource-based view as a professional terminology, and did detailed study of when and how the related concept came into being. Until the middle and later period of 1980s, the theory of resource view explains very well the foundation of competitive advantage of the enterprise. Facing this, Barney (1991) proposed such viewpoint by reviewing and borrowing the analytical framework of other scholars, not all the resources of the enterprise can be the important competitive advantage of the enterprise. The strategic resources are relatively independent, scattered in lots of places in the enterprise, but the difference is relatively stable. Based on this, Barney (1991) mentioned that during the development of the enterprise, the relationship between resources of the enterprise itself and sustainable competitive advantage is not conclusive, only when the resources of the enterprise have unique value and cannot be replaced, can the relevant resources bring sustainable competitive advantage for the enterprise. Normally speaking, great contribution from Barney (1991) is that he mentioned what resources can be the sustainable competitive advantage for the enterprise. Based on the acceptance of analytical framework of heterogeneous resources proposed by him, with the deepening research, later period of the related research mainly based on this analytical framework to analyze how heterogeneous resources can bring competitive advantage to the enterprise (Chen Qi, 2010).

Apart from the basic theory of Barney's (1991) heterogeneous resources, Margaret A. Peteraf (1993) made analysis on enterprise's resource by what means can bring competitiveness to the enterprise. Her research elucidates the underlying economics of the resource-based view of competitive advantage and integrates existing perspectives into a parsimonious model of resources and enterprise's performance. The essence of this model is that four conditions underlies sustained competitive advantage, all of which must be met. They are including superior resources (heterogeneity within an industry), ex post limits to competition, imperfect resource mobility, and ex ante limits to competition. Among them, the heterogeneous resource can bring Ricardian / monopoly rents to the enterprise. Enterprise rent can be lowered a lot when having advance limit of the competitor. Viscosity of resources can make the rent of the enterprise to be shared inside the enterprise continuously, and ex post facto restriction can keep the capital continue to act.

Based on the viewpoint of Barney (1991) and Peteraf (1993) about basic research on resource, the current study has applied the relevant theoretical analysis into various areas like the relationship between analyzing internal IT resources of the enterprise and performance of the enterprise. There are different ways to classify and measure the enterprise in many relevant researches, in nature, the case study of strategic management proposed by resource-view has been put in a new level. At the same time, resource view theory has got further developed and expanded into other areas of strategic management, like HR (Human Resources) management (Wright, Dunford & Snell, 2001), entrepreneur management, Alvarez & Busenitz (2001), marketing (Srivastava, Fahey & Christensen 2001), information management, (Cdata-Wade & Hulland 2004), economic finance (Lockett & Thompson 2001), international business (Peng 2001) .

#### **2.2.1.2 IT Resource**

In the earliest stage of IT resources, the earliest definition came from different recognitions and classifications in the enterprise based on the resource-view theory (Dong Chao, Huang Lihua & Xiang Baohua, 2001). Though resource management emerged into the IT industry during its later phase, a lot of related theories regarding IT occurred. Some scholars believe that usually the concept of IT will be used to analyze the performance of enterprise and influence on the development of the enterprise, however, no definition has been explained in detail. The occurrence and development of resource view enabled the scholars begin to define resources of the enterprise in broad sense. In their viewpoints, the resources of



the enterprise usually consist of various items that can be controlled by the enterprise, among which are ability, asset, information, organization process, knowledge and enterprise property (Barney, 1991). The role of IT mainly is that it can rebuild and manage the process of business management model of the enterprise, while at the same time it will bring better benefit to the enterprise together with some other resources of the enterprise (Clemons & Row, 1991). In addition, IT improves the overall operative efficiency to the enterprise as well as enable different kinds of resources to bring information capability of unique price to the enterprise (Bharadwaj, 2000). Based on this, while analyzing the concept of resource view of IT resource, deeper consideration and study should be carried out at the same time, that is the definition of the characteristics of the enterprise and related concept of IT resource based on the overall framework of operational management of the enterprise. In addition, study has been made on the characteristics of IT made by Barney and Bharadwaj (2000), conclusion at the end of the thesis points out that IT resource is the overall regulation of the important visible and invisible elements related to IT during the process of the enterprise operation (Dong Chao, Huang Lihua & Xiang Baohua, 2001).

### **2.2.2 Formation of IT Resources & Competitive Advantage of the Enterprise**

Previous exploration of strategic value of IT resource of the enterprise was mainly focused on the capabilities that could efficiently lower the operational cost of the enterprise and efficiently differentiate products or service from other companies (McFarlan & Ashenhurst, 1984). Nevertheless, the role played by means of IT can be different compared to the characteristics of the IT that brings core competence to the enterprise and the IT means to reduce investment cost or increase the profit of the enterprise based on this knowledge. (Chen ZhaoQian & Xu Jinfa, 2002; Matarst & Barney, 1995; Dong Chao, Huang Lihua & Xiang Baohua,2001). In the later period of 1980s, scholars shifted their research focus on how should IT, as an internal asset, create core competence for the enterprise, and the occurrence of resource-view theory gives different angles to related study to some extent, researchers have taken these means of IT as the starting point of exploration of unique resources of the enterprise (Bharadwaj, 2000; Mata,Fuerst & Barney, 1995; Ross,Beath & Goodhue, 1998; Chen Jin, Liang Liang & Wu Hang, 2013). When carrying out exploration of the unique resource of the enterprise by using means of IT, classification needs to be done in first place(Dong Chao, Huang Lihua & Xiang Baohua; Chen Zhaoqian & Xu Jinfa, 2002), therefore, related study mainly focuses on related classification of IT resource (Cdata-Wade

& Hulland, 2004; Chen Zhaoqian & Xu Jinfan, 2002; Chen Jin, Liang Liang & Wu Hang, 2013).

Mata, Fuerst & Barney (1995) analyzed the unique characteristics of IT resources based on basis of research of resource-view, they believe that four characteristics (special technology, means of IT possessed by the enterprise, and management capability of information technological type of the enterprise) should be fully considered when analyzing the role of sustainable competitive advantage of the enterprise brought by the IT resources. The exploration of Powell & Dent-Micallef (1997) reveals that pure IT cannot form core competence to the steady development of the enterprise in long-term, only when the related resources of the IT combines with the internal resources of the enterprise, as well as the complementation is efficient between internal resources of the enterprise and other types of resources, can the unique heterogeneous price of the IT resource be shown (Chen Jin, Liang Liang, & Wu Hang 2013). Therefore, relevant research is not to limit the means of IT resource inside certain departments; instead, these resources will be divided into three resources as complementary HR resources, complementary business resources and relevant technical resources. While Teo & Ranganathan (2003), in the analytical framework of Powell (1997) and Mata (1995), think that IT resources mainly consist of complementary corresponding resources of HR, business and technology, and made analysis on how corresponding resources can efficiently cooperate and play certain role to bring unique competitive advantage to the enterprise. In their opinion, IT resources of the enterprise mainly include software and hardware of IT as well as the usage of different unique types of IT resources. The means of IT mentioned here have resources with complementary characteristics including various kinds of IT resources that are used for exploration and make them relevant resources of performance including these resources which are allocated, planned, organized and managed by the enterprise, and enable them to support and accelerate the strategic development to the organization with high efficiency, but HR that are complimentary with IT.

Ross, Beath & Goodhue (1998) got the idea via related survey of the higher management that the managers in the IT enterprise are facing problems as follows during their process of management: 1) Whether they can provide better service for the development and strategic target of the enterprise via using products of IT and service; 2) Whether they can provide faster and more efficient solution for the enterprise by using IT resource; 3) How to use IT resource so as to give support to higher cost-effect management for the sustainable competitive advantage of the enterprise. The key of exploration is to depend upon the

capabilities of technology and professional staff of the enterprise. Therefore, IT resources are divided into three kinds as HR and relation resource of IT and infrastructure. The HR of IT resources mentioned here roughly include professional skills of the staff and their recognition of business link as well as the main guide of solution chosen when facing problems; Related facilities of IT mainly defines technology structure, data information and relevant requirement for the platform, as well as involved technical equipment, relevant data base type, relevant technical platform and requirement; relation resource of IT mainly deals with the surveys including the relationships between Technology Department and other departments, how much support will top management give to IT Department, relationships between enterprise and its customers. (Ross, Beath & Goodhue 1998) On the basis of the above, Ravichandran & Lertwongsatien (2005) proposed a measurement for these three resources of IT, and at the same time made a survey for 129 companies in US explained the occurrence and the effect of system of corporate performance. After detailed explanation of the survey on how IT resource constructed invisible resources for the long-term development of the enterprise by Powell & Dent-Micallef (1997), Bharadwaj (1994) thinks that the resources of the enterprise itself can be divided into construction of IT infrastructure, HR and technology resources promoted by means of IT. Among them, invisible resources driven by IT and concept of IT relation resource (Ross, Beath & Goodhue, 1998) got further integrated, updated and extended In this research, IT resources mainly include those can be controlled and used by the enterprise, including resources that can effectively drive customer-oriented, organization collaboration, and invisible knowledge.

Speaking of the division of IT resources, Chinese scholars have their unique way. Similar with the mainstream viewpoint of scholars like Mata, Fuerst & Barney (1995), Dong Chao, Huang Lihua & Xiang Baohua (2001) believe the detailed division of IT resources must combine the mechanism formation of competitive advantage of the enterprise with high efficiency. Based on the study of detailed division of these IT resources in order to construct related investment behavior, technical means owned by the enterprise, ability to manage and use via effective description of mechanism formation of competitive advantage of the enterprise; the related infrastructure construction of IT resources mentioned here mainly include how the enterprise will perform investment via using visible assets of IT with high efficiency, and unique technical resources as IT skills owned by the enterprise can create value for the enterprise, management skills of IT mainly refer to how the enterprise can efficiently use skills that can provide development, composition and improving business

capability to the enterprise itself; the means of IT here refers to the means of technology of the internal enterprise that can improve the quality of the products or service. Under the premise of exploration of Bharadwa (2000) and Broadbent, Weill & Neo (1999), Qi Xianfeng (2006) divides these IT resources into visible and invisible assets based on IT and related resource of HR in correspondence with IT; the visible assets of IT roughly refers to related assets of IT type, for instance computer equipment, communication equipment and related sharing platform and related database of the enterprise, the HR here mainly roughly refers means of IT that can deal with problems during the process of operation in an efficient way, and at the same time can use IT to control the development of related resource to HR type, as to the definition of invisible assets of these IT resources is very similar to the definition of corresponding research of Bharadwaj (2000). On such premise, Zhang Hao & Huang Lihua (2001) concluded that the division of these IT resources home and abroad, they believe that in addition to the resources of infrastructure construction, HR and invisible, cultural type of resources of IT resource should be added. Meanwhile, they think that the resources of infrastructure can provide a platform for the quick development of creative means of IT; the resources of HR and cultural types refer to the operation that can quicken the integration of the enterprise; the ability of complementary skills between these invisible assets of IT resources and other resources will make the enterprise influence and maximize the use of the existed resources inside the enterprise.

The exploration of the division of the resources mentioned above are on the premise of general research environment, the most important goal for the exploration is to explore and analyze how effectively roles were played respectively during the process of gaining different resources core competitiveness. Compared to the main analytical situation, other scholars study the resource classification of the enterprise by analyzing certain situation or the classification of IT resource on the theme of research. Karimi, Somers & Bhattacharjee (2007) proposed that through knowledge view, social network theory and traditional resource view, IT resources of enterprise itself can be divided into related resources of knowledge type of IT, relationship type and facilities via using the capability of Yonyou system. Basic related resources as means of IT mainly shown as those related to the application and development of IT itself and common risks between IT and other departments as well as internal connection; the means of IT here as its basis refers to special attention has been paid to the related assets of the internal enterprise, hardware resources, areas related tools computer equipment and related data base of the enterprise are also involved. Ray, Muhanna & Barney (2005) divided

resources into the following: Relevant resources of technical and investment type, technical resources of general IT technology, resources of sharing knowledge and structural resources of IT by using these resources and the exploration of performance of service link; in their research they proposed that the general resources refers to hardware equipment and relevant technology that can be purchased by outsourcing, while structural resource of IT type mainly shown as software structure of infrastructure, such as applicable platform of IT resource, sharing data, corresponding communication network and core data process; share knowledge mainly share different types of information between different departments including IT and clients, among them, skills of IT roughly includes necessary development and design among staffs and application for different technology for development and maintenance.

Bharadwaj (2000) officially said that IT resource is the basic invisible resource, exploration of Jeffers, Muhanna & Nault (2008) began to work on division work of internal relationship between resources of IT and non-IT, they mentioned that the resources of IT type can be divided into resources with dominant and recessive features, among them, IT resource with dominant feature mainly refers to infrastructure of different kinds of IT resources, basic application and analytical platform inside the enterprise; Recessive resources mainly refer to knowledge and recognition that can efficiently promote the application of IT platform and internal system of IT resource; non-IT resources mainly refer to cultural exchange inside the enterprise and practice and actual recognition of the enterprise itself. During the analysis of performance of service link, Jeffers (2008) found out that IT resource can simultaneously play a certain role to form different kinds of non-IT resources, like it can not only provide effective promotion effect on these non-IT resources, but also restrain these non-IT resources to some extent. At the same time, it can play an important role of forming sharing technology and exchanging culture in an open way.

Starting from flexibility of IT, Fink & Neumann (2009) believed that the exploration of IT resources and competitiveness of enterprise itself can divide IT resources of the enterprise into production technology resources based on IT technology, HR of IT type and routing resources of IT type; Among them, technology resources of IT type mainly includes related IT type technology during business process and application. The routing resources of IT type mainly refers to the supporting service resources of operational process of the enterprise itself, while HR of IT mainly refers to IT staff and technology and knowledge mastered by the staff of the enterprise itself.

Before 1980s, due to the non-wide spread of the means of IT in the enterprise, there were

doubts on whether the application can make profit for the enterprise (Dearden, 1972). When it came to the end of 1970s, some scholars pointed out the application of IT resource will bring more beneficial results to the enterprise and give impetus to the enterprise to adjust the operation of the information system. Until 1980s, enterprises began to use information system in large scale and gained some results, examples are as follows: computer ticketing system developed by American Airlines, ATM system of Citibank, tracking system of FedEx. These applications of technology make the academic world began to do new study for strategic value of IT.

The emphasis of exploration of the value of means of IT was focused on the analysis of how IT resources had actual effect on the long-term stable development to the enterprise. These explorations mainly believe that resources of IT type can directly bring unique competitive advantage to the enterprise. McFarlan, Jordan & Wurmfeld (1984) found out that IT can provide new opportunity and resource information to the enterprise effectively by using comparative analysis of the examples of information system of the these companies, for instance, the application of IT can improve switching cost of clients effectively, help enterprises to establish entry for barriers and how to deal with different ways of competition in different fields. Also after proposing related models competitiveness of the enterprise and value chain, Porter & Millar (1985) did exploration and analysis on how the chain value and role of core competitiveness of the enterprise worked. On the perspective of building value chain model of the enterprise, they think that the application of means of IT can not only change the mechanism formation of actual value of the enterprise, but improve the actual connection between each production unit and value unit as well as actual connection between enterprises, and mainly starting from the related model of the enterprise itself, they came up with their idea that the core competitiveness brought by the IT resources of the enterprise itself may highly efficiently improve the ability to deal with all kinds of threats and opportunities during development, and while IT brings the reduction of the cost of the enterprise and this made it possible for the enterprise to change its real position in its field effectively. Moreover, Clemons divided the application of IT in details into external and internal applications, and made further analysis on what development opportunity the application of IT itself can bring to the enterprise on the aspect of expansion of value chain, and they believe that the utilization of IT resource in the process of enterprise price can reduce the actual cost (for instance, the application of the means of IT can reduce related activities between clients and related suppliers, this is for reducing the actual cost for the

enterprise, and at the same time improve the efficiency of all kinds of production activities)

### **2.2.3 Summary**

In the research of current IT resources, IT as a resource, can provide unique competitive advantage. And this advantage has different forms of expressions due to different enterprises, compared to traditional enterprise, this advantage mainly expresses itself in the following aspects: first of all, as an IT, it provides unique database of information resources, the appearance of this database provide necessary resources basis to knowledge and analysis of the enterprise itself, therefore the occurrence of IT resources provides certain knowledge to the actual need of independent management users to some extent. Moreover, as a kind of real time propagation technology, IT resources can transmit information needed by the enterprise in a more rapid way of information transmission. The appearance of this brand-new means of transmission provide necessary cornerstone to lower information access barriers. Last but not at least, the application of IT provides necessary resources flexibility to the service of the enterprise itself, due to the application of IT, this technology reintegrates and engage the internal process of the enterprise, this engagement and integration provide new supporting point for the business expansion of the enterprise, facing the strikes, the enterprise can expand new business and explore the growth of the new industries in a more effectively way.

Therefore, after introducing resources view theory of the field of strategic management into the field of IT, this research provides scholars with new aspects of research in the field of IT, makes scholars in IT industry engage exploration per the idea. We believe that the IT resources mentioned here is the important elements related to all means of IT that can be controlled and applied effectively during the actual operation of the enterprise. As a kind of resources, IT resources has the characteristics of value, scarcity, irreplaceability and inimitability, compared to the traditional industry, the feature mainly reflects the unique flexibility of IT, transmission speed and tailor-made per the unique requirements made by the customers. Based on these features, IT provides necessary foundation to the transition of traditional enterprise as well as forming complicated assets and ability chain to realize the sustainable competitive advantage of the enterprise.

## **2.3 Business Model**

In the analytical framework of Zott & Amit (2008) in Ghaziani & Ventresca (2005), they

made review on relevant theories of theme of business model, and provide a more extensive and multi-element perspective view of the already existed business model review, at the same time try to explore the origin of this concept and examine the concept of business model via aspects of multi-disciplinary and subject content. While Yuan Lei (2007a; 2007b), made comment on the theory research of business model in the aspects of concept nature of business model, system composition, assessment methods, and transformation process. This thesis will give a more targeted review by combining the research question of this thesis based on their viewpoint, it will mainly be in the fields of theory foundation and connotation of business model concept, business model design, influence of IT on business model.

### **2.3.1 Definition of Business Model**

Business model is a kind of management structure that analyze commodity exchange between enterprise and clients, partner and supplier, that is analyze how enterprise choose to get connection with important elements or market of products (Zott & Amit,2007).The nature of management structure of commodity exchange should be an interdependent and complex management system (Miller & Shamsie, 1996), the management methods of commodity exchange have played a very important role in related complex system like design, understanding and managing products, organization and industry, and it can provide better starting point of measurement of developing business model design, at the same time, the aspect of management structure also considers the overall framework as well as design elements(Miles & Snow, 2007). Business model can describe the connotation of business transaction via its own design theme. The theme of design can not only capture way of commodity exchange between core enterprise and stakeholders from outside, but describe basic forms of business model of the enterprise, so to make the expression and measurement of the concept of business model more operational (Zott & Amit, 2008). The nature of business model design is a basic content of commodity exchange, structure and corresponding management methods (Zott & Amit, 2007), while make connection with each important element of business model and layout and purpose is to make innovation and improvement for the operation of the enterprise itself (Miller & Shamsie, 1996).

Though the objects and angles of the study are different, in the research of business model, there is still a gap in common recognition of the connotation (Chesbrough, 2010). However, there are common sense in a lot of key issues, for instance, take business model as a brand-new type of analytical unit, think that the concept of business model emphasizes how



enterprise operates via using system and overall method; meanwhile, business model can not only explain the access and procedure of value gaining, but can help enterprise create value (Zott & Amit, 2008).

In the current research, business model is defined through three different angles, i.e. from the angle of value system, this mainly emphasize what kind of business the enterprise does, and in what kind of business method the enterprise will gain profit; from the angle of strategic development, which mainly emphasize the design arrangement of the operation, whose purpose mainly focuses on the corresponding revenue of the enterprise; from the angle of operation model, mainly emphasizes how to run series of economic activities so as to realize the benefit of the enterprise (Yao Miming,2013). Nevertheless, no matter in what angle we take to do the research of business model, we will always emphasize the display of value of the business model itself (Morris & Schindehutte,2005), and realize the value of the enterprise via defining corresponding commercial behavior (Chesbrough & Rosenbloom, 2002; Magretta, 2002). Under such condition, every business model describes how a business system, behind the procedure of actual commodity exchange, creates corresponding logic of business value (Petrovic & Kittl,2001).

Aspect of display of value: Business model mainly reflect the structure connected with the related production activities like value proposition, value creation and value capture of the enterprise itself, it can be service system of product, service and information flow, it can also be different participants and their roles as well as the source of the interests of the participants (Timmers, 1998). Each business model is no longer the description of its social system; instead, corresponding commodity system is to describe how the business system, behind the actual process, creates the logic of value (Petrovic & Kittl, 2001). While the enterprise make a profit via using positioning in the value chain (Rappa, 2004), make integration of four core elements (clients, profit formula, value proposition, key resources and programming) to realize the creation of value (Johnson & Christensen,2008). The value mainly refers to marketing, creation, and the delivery of these values as well as profitable and sustainable revenue stream created by relationship capital (Osterwalder & Pigneur, 2011).

Aspect of strategic development: This aspect mainly analyze how enterprise can operate (Magretta,2002), analyze why complicated commercial activities can effectively promote the structure and the connection between important elements of structures, as well as how enterprise have corresponding reaction of the real world (Applegate & Collura, 2000). Under the view the strategic development, the research found out that in order to create a stable

profit and income sources, enterprise will create, sell and construct relationship capital by establishing one or multiple market segments with the network partners (Dubosson -Torbay & Osterwalder,2002) so that the alliance, consumers and suppliers of the enterprise can recognize information flow, production flow, currency flow as well as the relationships of the main participants and their roles.

Aspect of operation model: The idea of business model is a fundamental innovation; it can bring new customer value to the enterprise and change the rules of the industry at the same time. Business idea of the enterprise has direct connection with business model, business model is the application of business operation of different business idea. It mainly includes related factors like actual strategy and structure of the enterprise; it also consists of understanding how the enterprise makes decision to create sustainable competitive advantage as to fit the corresponding market. (Morris & Schindehutte, 2005). Meanwhile, the aspect of the operating style can also take the characteristics of the technology as potential business form input, turn it to corresponding economic output by using clients and corresponding markets (Chesbrough & Rosenbloom, 2002).

Due to the difference between the definition and emphasis of the study, this makes different scholars have different definitions for the form of business model, however, no matter from what aspect, they all emphasize on how the enterprises use business model to change the value creation model and realize corresponding profit making. Through commodity exchange with clients is the main method to achieve realized gain and capture value for the enterprise, therefore this thesis mainly adopts the definition of business model from Amit & Zott (2008), the business model here refers to that the enterprise catches the opportunities for business development, builds real value to meet the development objectives, structure and management methods of commodity exchange.

### **2.3.2 Designs & Types of Business Model**

Business model mainly refers to related elements and structure that help realize the creation of value system of enterprise via adjustment and combination, the matching relationship between elements mainly correspond to the operation system of logic relationship with mutual adaptation that is formed after long-term development, that is the change of one of the components will trigger corresponding adjustment and development of other elements. As for the elements of business model, core research viewpoints mainly include: Viscio & Pastemack (1996) believe that business model is mainly composed of core viewpoint, service

item, operation unit, management model and system connection; Hamel (2000), on the other hand, thinks that business model at least contains four components and corresponding sub-units, altogether is a relatively integral business model system. The four components are as: 1. Core Strategy (including Business Mission ; Product/Market Scope; Basis for Definition); 2. Strategic Resources (including Core Competence; Strategic Resources; Core Processes); 3. Customer Interface (including Fulfillment and Support; Information and Insight ; Relationship Dynamics; Pricing Structure); 4. Value Network (including Suppliers; Partners and Coalitions). Among these four elements, due to different interactions, three different connections can be created including configuration connected with core strategy and strategic resources; customer benefits connected with core strategy and client interface; and enterprise boundaries connected with strategic resources and value network, all the key points are how the enterprise will gain profit. While Mahadevan's (2000) opinion is that a complete business model should at least include four elements: core strategy, clients interface, strategic resources and value network of the enterprise; after Chesbrough & Rosenblbom (2001) concluded on the definition of business model, they divided elements of business model into six functional models as target market, value proposition, internal value chain structure, cost and profit, value network, competitive strategy. After Afoah & Tucci(2001)did corresponding study of Internet industry, he extracted an element with common, profit relying, basic element for successful business model from all kinds of business models, and made induction of the elements as follows: client value, range, ability, source of revenue, realization, pricing, related activity and sustainability of the enterprise; Frank van Delft (2008) holds the idea that business model is the structure of core strategy, value network, client caring and resources strategy, whose process of value creation depends on the success and the ability of sustainable development to a great extent.

Different from structural elements, scholars summed up different kinds of business models. Trimmers (1998) divided Internet business model into E-shop, E-shopping mall, E-procurement, third-party market, E-auction, provider for fundamental value chain service, and cooperation platform from the view of separation and reconfiguration of value chain (Pic. below). On basis of Michael Porter's value chain model, Paul Trimmer (2003) proposed the integration of value chain, it also considers the degree of business model innovation and the ability of functional integration, taking value chain as a dimension and degree of innovation as another, this is the comment of novelty service of the enterprise, it is the focus of competition that can be regarded as the reflect of the "external relation" of the enterprise, and

this can combine value chain from both internally and externally.

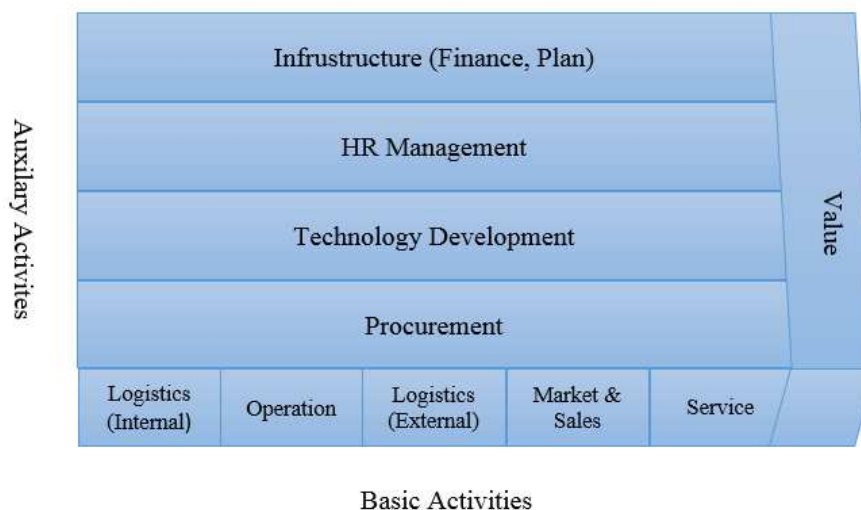


Figure 2-1 Basic Value Chain Model of Michael Porter

Lam & Harrison-Walker (2003), came up with the idea of creating value goal by asking what value a business system takes as its drive and starting point of its strategic consideration, and at the same time recognized six major business models as websites for network businessmen and gateways, differentiated virtual products, network for brokers, purchase support and retail, interactive network, Internet sales promotion and image building. Bigliardi (2005) analyzed the business model of Italian biotechnology enterprises by using clustering analysis, and proposed that different types of enterprises can be divided by business model of the enterprise including tertiary enterprise, minor research enterprise, traditional integrated enterprise, and industrialized integrated enterprise.

While Amit & Zott (2007) did systematic case study for 59 E-business enterprises in Europe and US by reviewing current strategy basic theory like network theory, they claimed that based on the corresponded case study, there should be at least four kinds of value creation business models including efficiency type, interdependent type, locked type and novelty type. Under the framework theory system of the above four types of value creation, analytical framework of current mainstream business model theory has come into being, at the same time, it provides necessary theoretical basis for the core concept of “business model design”. In current research system, the study proposed that as an independent analytical unit, business model is to describe the structure and content of commodity exchange, the management system design of the enterprise itself by analyzing the relevant theory of the source of value

creation and enterprise strategy. Among this, the main content of commodity exchange refers to the information and products used for commodity exchange, and possibly also refers to those resources and capabilities that are needed for the commodity exchange; the structure of commodity exchange mainly refers to the members that participate during the process of commodity exchange and the methods of the commodity exchange between the participants; and commodity exchange management mainly refers to the basic method of controlling flow of information, resources and products operated by the members.

As several important forms of business model design, efficiency and novel types of business model refer to a general design mechanism that puts related elements all together (Miller, 1996), when facing the challenge of improving efficiency and creativity, the very option for the enterprise to realize value creation, profit taking, and advantage consolidation is to alter the efficiency of the enterprise and develop new products that can meet current demand. Therefore, the description of business model in this study mainly draws lessons from the division of Zott & Amit (2007), based on this, the study will also divide business model into efficiency and novelty types.

The efficiency type of business model refers to the process for the enterprise to increase the efficiency of commodity exchange by improving related business model of operation; the focus of the enterprise is to improve the workflow design of the enterprise, whose core idea is to increase the speed and the ability to expand as well as reliability and achievability of commodity exchange as well as by improving design to lower the cost of commodity among enterprises (Zott & Amit, 2007) and information asymmetry inside the enterprise. The cost of commodity exchange not only includes direct cost of the enterprise itself, but cost of indirect commodity exchange to achieve commodity exchange for the enterprise, cost of risk of commodity exchange and cost of judgement and comparison of the information (Zhu & Kraemer, 2003). Efficiency type of business model mainly emphasizes how the business activities got restricted and optimized inside the system, including how to promote different types of demand in order to have effective adjustment, improve the efficiency of commodity exchange of the enterprise itself, urge the accomplishment of related commodity exchange, strengthen the scale of commodity exchange treatment, propel information, service and products to realize transparent flow and usage in the system of commodity exchange, realize information sharing among participant and lower the information asymmetry as well as the possibility of error occurring during the process of commodity exchange, lower the cost of communication and penalty for the enterprise and among participants of commodity

exchange.

Comparatively speaking, novelty type of business model gives more emphasis on adopting new method to do business commodity exchange, establish new pattern for commodity exchange by providing new combinations like products, service and information to offer new value expansion service for different kinds of clients. For instance, provide new business and serving methods, link new objects for commodity exchange, construct new methods and mechanism for commodity exchange, provide new technology usage model, and seek new breakthrough of the corporate philosophy.

### **2.3.3 IT & Innovation of Business Model**

With the advent of information era, various kinds of means of technology based on IT resources would hit the traditional economic forms. These means of technology alter and construct a market competition with more economic, fast-growing, and flexible in operation, meanwhile this can create great many brand-new development opportunities. With the birth of “new business pattern”, enterprises can fit the alteration of economic environment via the application of multiple business models. Like in the study of Amit & Zott (2007), by the research of various kinds of E-business enterprise, they pointed out that the business model innovation of the enterprise mainly refers to create new business value via changing related framework of business transactions, actual content and management development of business forms of the enterprise itself, and at the same time make use of corresponding change to help find necessary business opportunity for the enterprise; also they proposed that business models of enterprises itself can be divided into efficiency, interdependency, locked and novelty based on dividing the formation origin of enterprise value via using research method of multiple case studies.

Though IT has provided new and necessary resources for the construction of business model for the enterprise, how enterprises construct those business models that suits the characteristics based on the resources itself and relevant features of IT is still a challenge for the current research. While the popularity of the Internet has provided not only necessary technology prerequisite for the enterprises to adopt different kinds of business models based on IT, but necessary technology basis for opening a broader market compared to the previous one. For instance, after Auer & Follack (2002) brought forward seven sub-modules of E-business design, they made detailed analysis for how enterprises can make effective improvement for the business model in E-business environment. They suggested that

E-commerce design model can be divided into three phases by the application of entrepreneur mentoring theory; the first phase is understanding, which is to help enterprise to understand what business model looks like and how it is built up by adopting analytical framework of business form; next is to help entrepreneurs make known how the Internet itself have influence on business model: mainly on how the Internet is going to change the current and traditional business model, and different hit to the current various sub-module; improvement is the third phase: mainly refers to how the enterprises are going to perfect its value chain and make further analysis to the improved results while facing constant changing environment. Lee (2003) and many others believe that detailed analysis should be done regarding the design part for E-commerce after the analytical structure based on commodity exchange. They suggested that successful E-commerce form should be established, the actual operation of the enterprise needs the actual steps of the following five levels: the first is to redefine competitive advantage of the enterprise, make introspection to the business and financial models of the enterprise itself, renovate per customer's demand as well as make effective and systematic restructure for both the enterprises and E-commerce.

#### **2.3.4 Summary**

Although detailed analysis has been made for the structure and elements of business model in the current study, there is still a gap in the design cycle and design mechanical basis of business model. To be specific, first of all, the current study has made detailed analysis for the concept of business model design and elements of design, meanwhile, some research also emphasizes on the important influence on enterprise performance from business model design, however, to most enterprises, they are facing a unique problem, that is how to carry out suitable business model design based on resource advantage of the enterprise itself and the unique advantage of IT, this makes us hard to understand how the enterprise will proceed business model design effectively. For instance, based on the current resources of the enterprise, how to make adjustment of elements of corresponding business model so as to give impetus to rebuild the business model for the enterprise is a very important process of workflow design, it will provide necessary theory reference for the transition of the traditional enterprises by analyzing the workflow design; moreover, how the enterprise is going to transit its business model design based on the combination of the current business model design approach and features of IT, during this process, whether enterprise should pay more attention to resource characteristics or technical features of IT, and what features in which aspects

should be paid attention to enable the enterprise to have better development of competitive advantage, there is still no good answer for it in the current study. Therefore, by analyzing the design of the process and the process of change, we can analyze the mechanism formation and changing process of business model design of the enterprise. Based on the basic analysis of competitive advantage of traditional newspaper industry, how to use the origin of these advantages to redesign business model under the background of informatization, understand the process of transition of the enterprise and reexploring mechanism of traditional dominant resources via this kind of analysis.

## **2.4 Model Design and Basic Conclusion**

### **2.4.1 Basic Factors of Competitive Advantage**

Resource view believes that why an enterprise can compete with other enterprises and keep its foundation of competitive advantage, an important factor is that it has its own unique resources. Based on the analytical framework of enterprise resources done by predecessors, Barney (1991) pointed out that not all the enterprise resources can bring necessary competitive advantage to the enterprise; and then he suggested that only when enterprise possesses resources that have features of scarcity, value, irreplaceable, hard to imitate, will the enterprise have the advantage of having sustainable competitiveness. This unique division method was accepted by the scholars at that time. Nevertheless, with the deepening of the research, researchers found out that as to different enterprises, how to realize value, scarcity, hard to imitate and irreplaceable for the relevant resources has become an important proposition.

Under the research background of this study, different scholars did analysis from different aspects, for instance, analysis of formation of core value based on the ability, current research suggests three types of formation logic of abilities, i.e. resources view, high speed competition, ecological systematic (Barney, 1991; Stacey 1995; Lengnick-hall & Wolff,1999), and these three kinds of theoretical systems have significant theoretical starting points and different points of logic application of establishing competitive advantage as well as different uniqueness of resources. The proposal of the three kinds of viewpoints not only considers that the enterprise can gain competitive advantage by nurturing these three kinds of abilities, but supposes during the long-time competition of the enterprise, difference between resource access of competition and self- recognition system will make the enterprise establish these



three different kinds of abilities gradually (Lengnick-hall & Wolff,1999; Nag & Gioia, 2012). The core logic difference of the three kinds of abilities is that, as to resources view theory, the establishment of competitive advantage needs the superior resources to control the access of external heterogeneous resources to obtain the external competitive capability that is hard to imitate and achieve sustainable competitive advantage (Barney,1991; Wernerfelt,1984); the core view of high speed competition theory aims at achieving the exploitation of niche market in high speed and the establishment of long-term competition via the ability of high speed self-transition, as transition of sensitivity is the core of high speed competition, and allocation method of capability (Collis,1991; Esienhardt,1989; D'aveni & Ravenscraf,1994); Ecological systematic competition emphasizes more on the integration, health of competition system and cost advantage of the system itself, enterprise is not an independent individual that competes in the manufacturing system, instead it will have competition with the external competitors via overall ecological system model. In their opinion, manufacturing competition is the competition between systems (Stacey,1995; Boeker & Wiltbank,2005).

Different from the uniqueness of resources itself, Fink & Neumann (2009) viewed the forming of competitive advantage of the enterprise from the aspects of organization flow design and internal structural design of the organization, Fink & Neumann (2009) think that all resources including technical resources, HR, and process resources in the internal enterprise; and the use of technical resources involve application of multi-business, treatment scheme, the knowledge of the staff presented by HR, breadth and depth of the technology, treatment scheme entitles the extensive flexibility of the process during the development of the enterprise. Only when the process, technology and HR of the internal organization can make quick adjustment based on market demand, can the enterprise form the necessary competitive advantage.

Based on the aspects of resources and process design of the enterprise itself, Kotha (1995) holds the view that the resources owned by the enterprise and the flexible degree of the internal process of the enterprise are not the determinant for the competitive advantage of the enterprise itself, they are the necessary but not sufficient condition forming the competitive advantage of the enterprise, therefore, only when corresponding resources and process can satisfy the market demand effectively, can the enterprise last its long-term competitive advantage. Under such background, he suggests that the competitive advantage of the enterprise should be based on meeting the satisfaction of client's demand effectively, under

such condition, he thinks that the competitive advantage of the enterprise should be based on meeting the satisfaction of client's demand per tailor-made products. For instance, he holds the view that the competitive advantage of the enterprise depends largely on whether the enterprise can effectively 1) make independent design per clients' demands; 2) provide individual pushing for clients; 3) provide individual products combination for clients; 4) provide individual consuming methods for the clients and so forth. Based on this theory, he suggests degree of customization model per clients' demands.

Based on the resources and process basis of the competitive advantage as well as clients' demand model, this study suggests the core basis of competitive advantage formation is that the enterprise has speed advantage ---the ability of high-speed innovation and service, while in design of process and enterprise structure, the enterprise can effectively form necessary development flexibility, which is flexible advantage; last but not least, the enterprise should not only meet the requirement of the clients, but satisfy unique demand of the consumers effectively, that is degree of customization.

#### **2.4.2 Competitive Advantages and its Elements to Construct the Theoretical Model Under Business Model Design**

Amit & Zott (2008) suggest four kinds of business models of value creation by E-commercial enterprises --- Efficiency, Complementary, Lock-in and Novelty. As the important form of business model design, novelty and efficiency is the general design mechanism to connect elements of business model effectively (Miller, 1996). For instance, under the background highly developed IT, the development and propagation of technology are much faster than before, the appearance and promotion of innovative products can change efficiency, implement profit, create value, realize advantage consolidation of the enterprise effectively, based on this, during the study of business model, this thesis makes research and analysis on efficiency and novelty by drawing lessons from dimension reference division from Zott & Amit (2007).

Here, efficiency type propels business model, provides link to improve exchange rate, focuses on design, lowers the exchange cost of the enterprise (Zott & Amit, 2007), enhances information symmetry, improves achievability, reliability and extensibility of commodity exchange, as well as hoists speed of exchange (Demons & Row, 1992). The commodity exchange here contains not only the direct cost but indirect cost of commodity exchange, like judgment and comparison of information, risk of commodity risks (Zhu & Kraemer, 2003).

While the nature of novelty type of business model emphasizes on carrying out commodity exchange and offering brand-new value expansion for the customers by providing new combinations of products, service and information as well as adopting new methods, for instance, brand-new service methods, business, brand-new technology model, brand-new objects for exchange, create new methods of commodity exchange and new mechanism or form new methods for commodity exchange. This link contains multilayer innovation including products, distribution, manufacturing, service, market and marketing (Schumpeter,1934). The application of novelty type of business model is mainly for attracting partners and this can create stable relationships, have cooperation, improve quality, depth and incentive methods of cooperation of commodity exchange and have the above optimized from time to time. The combination of new technology, new products and new service, promote brand image, strengthen quality of the products, improve customer experience, solve brand-new problems for the customers effectively, bring perceived and practical value for the customers, improve the ability of charging at a premium for the enterprise, customer's willing to pay, realize commodity exchange, improve multilayer innovation in service and products.

#### **2.4.2.1 Advantage in Speed & Design of Business Model**

Speed mainly refers to the ability to promote information products of the enterprise itself effectively during the process of information transfer and product development, the study suggests that this can be described as the following: 1) speed of information transfer, 2) updating speed of information, 3) feedback speed of information, 4) launch speed of new products, 5) propagation velocity of new products, 6) propagation cycle of the new product. In such condition, if the speed advantage of the enterprise is more obvious in the market, the operation efficiency of the enterprise in the market is higher, and the advantage of efficiency is more obvious than other enterprises.

As information business, at a large extent, propagation velocity can decide the freshness of the information, usually the newer the information is the more readers will be attracted, and under such condition, if the enterprise of information transfer can use its own resources advantage, send the information resources to the demand side in a fast speed, in this case, the faster enterprise will usually be on the winning side. Therefore, the faster the propagation speed is, the more obvious efficiency advantage the enterprise will have. Moreover, information a kind of consumer goods, different customers have different tastes. If the enterprise can shorten information feedback mechanism from the clients effectively, then effective feedback of future information content in an even shorter period could be achieve to

satisfy the demand of the customers. Last but not at least, as the developer of IT products, if the enterprise can make adjustment of the information effectively as soon as possible, make the information transferable, then the production cycle of the products will have more advantage, and the development of this advantage will eventually be presented as the manufacturing efficiency of the products of the enterprise. Based on this, conclusions of the study are as below:

Hypothesis 1: No matter a traditional enterprise (same as the traditional NE) or modern enterprise based on IT, enterprise with more obvious speed advantage, it is more possible for the enterprise to adopt efficiency type of business model.

Hypothesis 2: No matter a traditional enterprise or modern enterprise based on IT, speed advantage does not have significant influence on novelty type of business model

#### **2.4.2.2 Flexible Advantage & Design of Business Model**

Flexibility mainly refers to the high elasticity in allocating organization structure and resources, mainly displays 1) business unit has relatively high independence, 2) can adapt the need of splitting business unit, 3) ability of restructuring business unit, 4) will not have influence on subsidiary business if the core business changed, 5) can reuse current and obsolete resources effectively.

General speaking, the higher flexibility advantage the enterprise has, the more effectively it will adapt the change of the environment, inside the highly competitive industry, on the one hand, the high competition means constant appearance of the new products, it also can mean constant change of new demand on the other hand. Facing the continuous change, the larger extent can the enterprise change the fixed manufacturing unit, the faster can it respond to the change of the market effectively. Therefore, the more flexibility advantage the enterprises have, the core is that they can have rational response to the external environment, like reset business flow and split business unit for the enterprise to adjust the manufacturing ability of products. If an enterprise can keep the development of previous business unit during the procedure of carrying out new business, then the enterprise has strong ability for adjustment, which is to say under the situation of keeping the current competitive market, it can develop products which will meet the development change of the future market.

On the other hand, in the circumstance of relatively steady external environment, an enterprise with high flexibility can also promote internal competition of the market by using its design of flexible organization structure to develop new products to realize the

establishment of competitive advantage in the market. In such circumstances, even if the market is relatively stable, to effectively take advantage of flexible organization structure, the enterprise is more likely to promote the dynamic degree by manufacturing creative products, and the promotion of this dynamic degree can effectively promote the establishment of the competitive advantage of the enterprise in the market. Based on this, conclusions of the study are as below:

Hypothesis 3: No matter a traditional enterprise or modern enterprise (omni media NE) based on IT, flexibility advantage does not have significant influence on efficiency type of business model.

Hypothesis 4: No matter a traditional enterprise or modern enterprise based on IT, flexibility advantage has positive influence on novelty type of business model.

#### **2.4.2.3 Advantage of Tailor-made & Design of Business Model**

Tailor-made mainly refers to the enterprise can make individual tailor-made product per customer's requirement, compared to speed advantage which can transfer information for enterprise effectively, the degree of tailor-made does not have an obvious requirement for speed, the advantage of this is that it can provide customers or consumers individual products that meet their tastes when information is redundant (Lampel & Mintzberg, 1996). Meanwhile, compared to the flexibility advantage, the enterprise needs corresponding flexible organization background as basis to some extent, this is mainly because that the degree of change from the requirement of the customers is minor, but to different customers, the development of requirement of the products will be coming along with the appearance and change of other products, and at the same time, imitation between enterprises will lower the ability to provide unique information of the enterprise. Under such background, tailor-made advantage is a kind of ability which is different from speed and flexibility advantage. This study mainly describes the ability of tailor-made of the enterprise in the following aspects: 1) design independently per customer's demand, 2) individual push, 3) individual products combination, 4) observation individual consuming method, 5) exploration of the same preference group, 6) adjustment ability of the same preference group, 7) screening ability of the same preference group, 8) attractive ability of the same preference group.

If an enterprise can explore individual preference during the process of information production effectively, it can realize the development of new products effectively, and provide unique information products to the corresponding consumers. Enterprise can realize the

lock-in the customer group with unique preference by developing this kind of unique information product. Moreover, if the enterprise has the capability of attracting and screening unique group, it can also use resources of the enterprise effectively and develop unique information products. Therefore, under such background, more attention will be paid to the development of new products, because the ability to find unique demand cannot be copied by other enterprises for most of the cases, the stability and development of the market can be maintained by the development and push of the new products. Therefore, based on this, the conclusions of the study are as below:

Hypothesis 5: No matter a traditional enterprise or modern enterprise based on IT, tailor-made advantage does not have significant influence on efficient type of business model.

Hypothesis 6: No matter a traditional enterprise or modern enterprise based on IT, tailor-made advantage has positive influence on novelty type of business model.

#### **2.4.3 Influence of change of elements of competitive advantage on the construction of theoretical model of evolution of business model design**

To traditional enterprises with different types of business models, the traditional type of business model, to some extent, will decide its business model design under the background of new technology due to the resource advantage of the enterprise as well as the switching cost. General speaking, enterprise with efficiency type of business model has evolved the ability of spreading channel information of the enterprise in its long-term development, while enterprise with novelty type of business model has focused more on niche market and unique clients' requirements, under such circumstances, the unique resources will make the enterprise think more how to reengineer advantage effectively by using the current resources (Shani & Chalasani, 2013). i.e. the enterprise has a certain degree of basic dependence, and this degree of dependence will form certain organizational inertia which will lead the enterprise to continue using the previous model and resources for the production in the future development. Conclusions of the study are as below:

Hypothesis 7: If traditional enterprise makes transition to the background of IT by adopting efficiency type of business model, more likely it will adopt efficiency type of business model.

Hypothesis 8: If traditional enterprise makes transition to the background of IT by adopting novelty type of business model, more likely it will adopt novelty type of business

model.

However, the inertia of the organization might get hit from the change of IT, i.e. the influence of change of advantage difference of element. The advantage difference of element here mainly refers to the change of origin of the competitive advantage of the element (of the enterprise itself) after the transition under the background of IT. Compared to the structure of competitive advantage of traditional industry, mainly rely on physical resources and power base, under the background of IT, because IT itself can lower the reliance on the current physical infrastructure for enterprise by a large margin, and this will lead the change of the origin of competitive advantage of enterprise itself. For instance, for those traditional enterprises rely on their channel advantage to compete, the occurrence of IT make the channel advantage not as obvious as before, all the enterprises can send individual and real-time information to customer information terminal, therefore, the development of IT has change the formation base of current competitive advantage of the enterprise, and overturn the origin of the previous competitive advantage to some extent, and the change of this base will eventually decide the option of business model of the enterprise.

As a matter of fact, the application of IT makes it possible for sharing information within a snap, the information system of the enterprise can make it get large amount of information regarding market and commodity exchange to make it possible to send self-information to the market within seconds (Zott & Amit, 2008) . In addition, the application of IT has greatly lowered the capacity variance in gaining information among competitors, therefore degree of information asymmetry among competitors has been lowered (Zott & Amit, 2007) . And degree of lowering information asymmetry enables enterprise and its competitors to have a clearer idea of the products and demand information of the counterpart, and then can reduce loss from inventory respectively, and there is a possibility to realize the aggregation of demand of commodity exchange and promotion of degree of tailor-made, this will reduce the advantage base of the previous enterprises that used to have advantages of speed and tailor-made. Moreover, the application of IT can realize informatization of process and knowledge management. Implement the development of the combination of information products realized by individual team previously through the design of independent unit of information in process design, this operation means to reduce the internal process will greatly increase the friction brought by the recognition difference among different manufacturers, and the manufacturing flexibility of the enterprise will be improved. At the same time, the process of shortening and the improvement of flexibility will also improve the operational efficiency

for the enterprise itself.

Under such background, the study will further analyze the change of the gap between each element during the formation of competitive advantage of the enterprise itself and corresponding enterprises under the background of informatization to understand how the corresponding change of the gap will have influence on the change of the business model of the enterprise.

#### **2.4.3.1 Speed difference and business model option**

Speed difference mainly refers to compared to competitors, the change that the enterprise itself has made in the advantage and disadvantage in speed under the background of the manufacturing of information products and means of transmission of the traditional enterprise makes transition to the manufacturing of information products and means of transmission based on IT. General speaking, the application of IT can greatly increase the speed of product information acquisition and expansion to a large extent. This will reduce the speed advantage of information transmission of those enterprises based on channel advantage at a large extent. And this change of speed advantage will directly lead to the decision of the business model design option for the enterprise (Eisenhardt, 1989).

First, as to different enterprises, if compared to competitors, speed competitive advantage of the enterprise under IT background has realized its alteration, and this competitive advantage improves the speed advantage for the enterprise at a large extent, so the enterprise will make more innovation on promoting efficiency type of business model. This is because no matter efficiency or novelty type of enterprise, due to the increase of speed advantage, the enterprise can further development its own competitive advantage. To be specific, as for the efficiency type enterprise, the enterprise can make further resource integration for its previous efficiency type of resources with the current IT resources to realize faster competition. However, with the development of efficiency type ability in the product market, the enterprise will also need better products to satisfy its own development in different levels of the market, in such condition, the enterprise will put corresponding resources into the development of new products to meet the demand of market expanding. Therefore, there is a strong possibility for the enterprise to put resources into the improvement of the ability for market expanding to makeup corresponding weakness of its own.

However, to novelty type enterprise, as the occurrence of speed advantage, the enterprise will make up the weakness of the high-speed push for the creative products, through this



makeup for the weakness, the comprehensive competitive ability of the enterprise will be improved. Nevertheless, if the speed advantage of the enterprise turns up negative improvement, then there is also a possibility for the enterprise to put resources into efficiency type of business model, because as the speed advantage difference further its way to negative improvement, it means the gap of competitive ability of the competitors will become wider, and the expansion of the gap will have impact to the formation of the weakness in the market, and this will make the enterprise powerless to exert predominance its advantage in the ability of production innovation effectively due to trapping in the impasse of the weakness. Therefore, based on this, conclusion of the study is as below:

Hypothesis 9: If traditional enterprise makes transition to the background of IT, there is more possibility for the enterprise to adopt efficiency type than the novelty type of business model with the elevation of speed difference.

#### **2.4.3.2 Flexibility difference and business model innovation**

Flexibility gap mainly refers to compared to competitors, under the background of the manufacturing of information products and means of transmission of the traditional enterprise makes transition to the manufacturing of information products and means of transmission based on IT, the enterprise itself has already made alteration in flexibility of organization and resources setting. The usage of IT makes the enterprise have change in nature in process design and process and setting of product manufacturing, and this change has greatly increased the method and speed of product manufacturing of the enterprise itself (Upton, 1994; Sanchez & Mahoney, 1996). Meanwhile, the development of IT can also make modulation to different manufacturing process effectively, this development of modulation will reduce the flexibility differences among enterprises. However, as to different enterprises, there is a possibility that the flexibility gap will further expand if they can use technical advantage of their own and the change advantage brought by IT.

The change of flexibility gap will decide the business model design of the enterprise during its process of transition from traditional model to innovative business model based on IT (Upton, 1994; Sanchez & Mahoney, 1996). To be specific, to those that are original efficiency type, with the comparison of flexibility gap and improvement of the competitors, the enterprise will be able to find out that it can make up the shortfall of the product innovation by the ability for flexibility design, and the enterprise will be more willing to develop new business model based on the flexible resources advantage, and the development of the business model will effectively promote the development of the competitive advantage

of the enterprise. As for those enterprises only rely on spread new information and new products in a fast speed, as their flexibility has been improved, independently develop new products that fit the market and fast changing demands will greatly reduce the shortfall of the manufacturing (Upton, 1994; Sanchez & Mahoney, 1996). However, with the reengineering of business model in IT, if the enterprise finds its flexibility gap is gradually growing compared to other ones, then it will find out that the negative impact will be further growing, and eventually it will be the shortfall of the enterprise, therefore, there is a strong possibility for the enterprise to put corresponding resources to restructure of flexible organization.

As for those enterprises that are originally excelled in novelty type of business model, with the increase of flexibility of the enterprise itself, the development of the enterprise will improve the ability to adapt the market and promote capability to the market. As to these enterprises, new competitive advantages will be formed on basis of more of its own formation of advantage. Under the circumstances of constant change of market requirement and its instability, enterprise will establish its own competitive advantage in the market by using its flexibility advantage to promote the development of new product. However, with the development of enterprise in novelty type of product marketing, the enterprise itself will also need better promotion efficiency to support its need for the development of the new products, under such condition, the abilities market promotion and feedback will most likely to become the shortfall for the development of the enterprise, therefore, to makeup, there is a possibility for the enterprise to put resources into the promotion of market efficiency. Based on this, conclusion of the study is as below:

Hypothesis 10: If traditional enterprise makes transition to the background of IT, there is more possibility for the enterprise to adopt novelty type than the efficiency type of business model with the elevation of flexibility difference.

#### **2.4.3.3 Tailor-made gape and business model innovation**

Tailor-made gap mainly refers to compared to competitors, under the background of the manufacturing of information products and means of transmission of the traditional enterprise makes transition to the manufacturing of information products and means of transmission based on IT, degree of satisfactory ability of the enterprise itself to provide unique products per client's demand (Waller, Dabholkar, & Gentry, 2000; Pine, 1993). The usage of IT makes different degrees of change in attracting customers and analyzing customer demand way for the enterprise. General speaking, enterprise with better knowledge of tailor-made can usually discover the needs of the customers more professional under the background of

informatization, this mainly originated from the IT itself can let the requirements of the customer screened by more shopping, browsing and records of commodity exchange. At the same time, this type of screening can also have real-time feedback effectively via network IT. As for different enterprises, the original gap of tailor-made ability might be shrinking if the advantages of technical advantage of the enterprise itself and change brought by IT can be combined.

The change of tailor-made will decide the business model design of the enterprise during the process of its transition from traditional model to the emerging business model based on IT (Waller, Dabholkar, & Gentry, 2000; Pine, 1993). To be specific, to those enterprises that are originally efficiency type, with the improvement of tailor-made ability, the enterprise will be able to find out it can make up the shortfall of the product innovation by the ability of tailor-made design, and the enterprise will be more willing to develop new business model based on the tailor-made resources advantage, and the development of the business model will effectively promote the development of the competitive advantage of the enterprise. As for those enterprises only rely on spread new information and new products in a fast speed, as their tailor-made ability has been improved, independently develop new products that fit the market and fast changing demands will greatly reduce the shortfall of the manufacturing. However, with the gap the tailor-made ability is growing between the enterprise itself and other enterprises that have competitive advantage in tailor-made, that is it finds out the disadvantage of tailor-made is going worse, under such circumstances, the enterprise is willing to add more resources into nurturing the ability of tailor-made to reduce the shortfall brought by lack of tailor-made ability.

Comparatively speaking, as for those enterprises that are originally excelled in novelty type of business model, with the increase of flexibility of the enterprise itself, the development of the enterprise will improve the ability to adapt the market and promote capability to the market. As to these enterprises, new competitive advantages will be formed on basis of more of its own formation of advantage. Esp. under the circumstances of constant change of market requirement and its instability, enterprise will establish its own competitive advantage in the market by using its flexibility advantage to promote the development of new product. However, with the development of enterprise in novelty type of product marketing, the enterprise itself will also need better promotion efficiency to support its need for the development of the new products, under such condition, the abilities market promotion and feedback will most likely to become the shortfall for the development of the enterprise,

therefore, to makeup, there is a possibility for the enterprise to put resources into the promotion of market efficiency. Based on this, conclusion the study is as below:

Hypothesis 11: With the improvement of tailor-made, the possibility for the traditional enterprises to adopt novelty type is higher than to adopt efficiency type of business model if the enterprise has made transition from the traditional to IT.

	Traditional Enterprise (Traditional NE)/Modern Enterprise (Ubiquitous Media NE)		
	Speed Advantage	Flexibility Advantage	Tailor-made Advantage
Efficiency Type of Business Model	Positive Influence	No Significant Influence	No Significant Influence
Novelty Type of Business Model	No Significant Influence	Positive Influence	Positive Influence

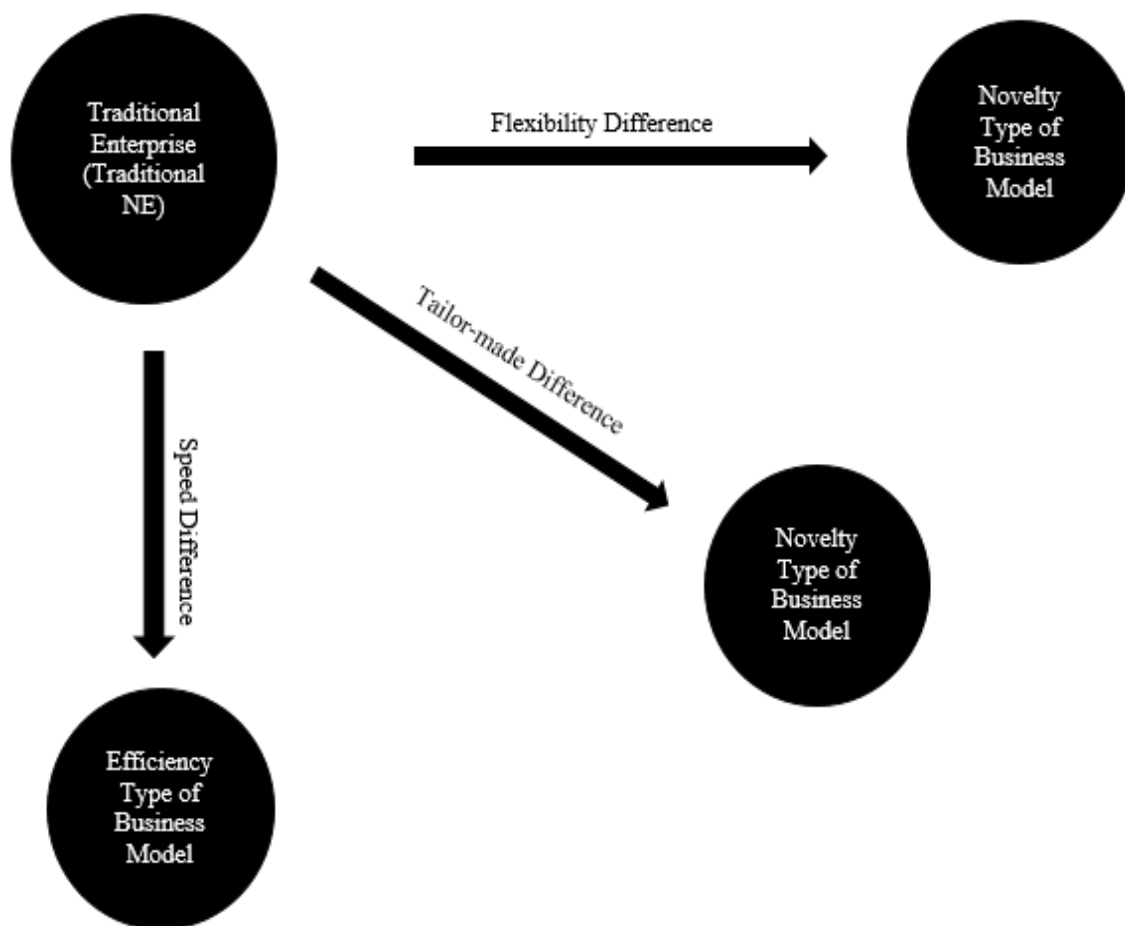


Figure 2-2 Summary of Hypothesis

## Chapter 3 Methodology

Key researches of this chapter are measurements of variables, designs of the scales, data collection before and after transition of the omni media, and detailed description of the procedure of the above, at the same time, confirmatory factor and exploratory factor will be analyzed to measure convergent validity, content validity, and discriminant validity applied in this research per the relevant data.

### 3.1 Research Method

The object of this study is different kinds of NE with omni media transition. As to the selection of the object of this study, one important reason is that current NE with omni media is facing multi-aspects of transition and pressure. Understand what factors lead these NEs to adopt certain kind of business model, at the same time analyze the influence of relevant business model on the survival and development of this kind of NE under the circumstance of transition will be in favor of the survival of the relevant NE under the background of transition. After that, the thesis will mainly illustrate variable measure, analytical method, scale construction, data collection and many others.

There are 120 samples which are randomly selected among over 2,000 newspapers nationwide, hand-out of questionnaire was during September 2015 to March, 2016 (See Table 3-1), 100 copies were sent either by email or EMS, 52 were reclaimed, recovery reached to 52%. The author took the opportunity of business trip in January handing out 60 copies of questionnaire, and got 40 back, recovery reached to 66.67%. Altogether there were 92 copies for this research. The participants include three major newspaper with fast transition in Guangzhou like *Yangcheng Evening News*, *Nanfang Daily* and *Southern Metropolis Daily*, *Jiefang Daily* and *Shanghai Morning Post* in Shanghai, *Beijing News* in Beijing, *Urban Express* and *Qianjiang Evening News* in Zhejiang, *Chinese Business Gazette* in Shanxi, *Xijiang Metropolis Daily*, *Shenyang Evening News*, *Peninsula City News* in Qingdao, *Chutian Metropolis Daily* in Hubei, *Qilu Evening News* in Shandong, *Yanzhao Metropolis Daily* in Hebei, *Dahe Daily* in Henan, *Trait Metropolis Daily* in Fujian, *Ta Kung Pao* and *Wenwei Po* in Hong Kong.

Table 3-1 Omni Media Transition Questionnaire

Omni Media Transition Questionnaire						
People			Area		Profit	
Age	< 40	22	Beijing	5	> Euro 15m	5
	40-50	61	Shanghai	3		
	>50	9	Guangzhou	3	Euro 6-15m	16
Education Background	Bachelor	57	Hong Kong	2		
	Master	27	Zhejiang	5	Euro 1-6m	36
	Ph.D.	8	Sichuan	12		
Position	Vice GM	45	Shandong	5	<1m	27
	GM	26	Henan	3		
	Director of the Board	11	Hebei	2	Deficit	8
			Shaanxi	2		
			Others	50		

The difference between design of traditional NE business model and design of omni media NE business model and the source of difference will be measured via carrying out current maturity scale, as well as analyzing how these factors will have influence on the mechanism of change of relevant business model by using econometric analysis model to understand how to achieve mechanism of change of business model during the process of transition from traditional NE to omni media NE.

### 3.1.1 Scale Development & Design

In the design of overall research questionnaire, this study has adopted multiple-items measurement methods to measure different constructs (Churchill, 1979).

This research has made scale structure for relevant concept mainly based on the definition of relevant concepts and relevant measurement methods of relevant concepts. Due to the main

adoption of maturity scale is foreign, it is not certain that it is still valid in domestic environment, therefore, the application of exploratory factor analysis is adopted to analyze convergent validity of scale theory, after putting convergence of basic theory into practice, the research further carries out confirmatory factor analysis to analyze discrimination validity and convergent validity of the relevant scale.

The design of this questionnaire has been accomplished via using tie break Likert scale. The questionnaire mainly adopts subjective evaluation of the participants, which has some influence on the objectivity and accuracy of relevant subjective mensuration, which will lead difference in results. Based on this, in the following, this thesis will adopt the following methods to prevent problems above from occurring.

Special item has been added to avoid participants with no experience, only those with experience will occur in the samples.

To avoid the unwillingness to finish the questionnaire due to privacy, it is clearly addressed at the beginning that the content is for academic research ONLY, besides, all the information will not be for business purpose. During the process of research, network channel has been adopted for hand-out to make sure the individual will be able to get the questionnaire, and reduce questions concerning privacy. The research mainly gives hand-outs to acquaintances to make sure that the scale is the most effective and have prompt access as well as improve recovery of questionnaire and lower deviation of scale.

To avoid excessive theoretical properties for the research as well as not being able to combine with practitioners effectively, during the process, not only discussions were held with participants and maturity scale, but relevant wording has been revised.

### **3.1.2 Variable Measurement**

This research has mainly borrowed and adopted matured construct and scale in variable measurement. Due to the involvement of the adoption of relevant business models before and after transition of the enterprise, during the process of the analysis of the research, the change of business model of the enterprise before and after transition has been put into consideration, therefore, in the design for efficiency and novelty dimensions, the research mainly makes design in the following aspects due to the relevant change before and after transition.

#### **3.1.2.1 Efficiency Dimension**

Based on the definition of business model itself of previous research, the definition of

efficiency type of business model of NE is mainly defined in the following aspects. Investigation before the transition of omni media, during the development of traditional media industry and after the transition to omni media, during the development of new media industry based on IT, the process of product (publishing, advertising and activity income) exchange can lower the cost of the partner effectively (for instance, lost due to inventory and communication, cost of product exchange process, price increase due to market and sales), moreover, the clients think that it is relatively easy for NE to carry out commodity exchange which has a feature of expandability (for instance, small and large scales of commodity exchange can be carried out simultaneously),

ensure transparent commodity exchange to implement optimum decision making for both parties of cooperation: all kinds of information of service and products can be verified effectively, information is the link of commodity exchange which can reduce the asymmetry of information, both parties can have access of relevant information of service, product and partners and carry out commodity exchange as soon as possible. All in all, the core of improving production efficiency of NE for the efficiency type of business model of NE is to change asymmetry of information, reduce asymmetry to lower the cost of corresponding production model.

### **3.1.2.2 Novelty Dimension**

In the structure of novelty dimension, the structure of scale is also mainly based on the current matured ARAT, in the current scale, the research mainly investigates newspaper before transition to omni media, during the development of traditional media industry and after transition to omni media, whether the process of commodity exchange is based on the new resources or described from the aspect of providing new products to current partners. For instance, relevant construct of scale includes items as follows: realize commodity exchange between both parties by using different methods from other competitors, get more new inventions, have the ability to get in touch with different kinds of partners and products effectively, apply brand-new method to enhance cooperation during the process of commodity exchange, promote degree of collaboration in a brand-new way, as well as carry out the combination among products, information and service.

### **3.1.2.3 Speed Difference**

At the same time, NE has its own advantage compared to other similar enterprises; research indicates that the source of advantage of the enterprise is originated from the



response speed, flexibility and degree of tailor-made. Based on this, combined with the research of Eisenhardt (1989), this thesis points out that in multimedia business compared to other similar enterprises, enterprise has advantage in the following aspects including transferring speed of information, information updating speed, information feedback speed, new product launching speed, new product spreading speed of new product, propagation cycle of new product via analyzing before and after transition to omni media to describe the speed advantage of the enterprise.

#### **3.1.2.4 Flexibility Difference**

Flexibility mainly refers to whether NE can react rapidly or not when facing external shock. Based on this, the research points out that modification can be done based on the scale measurement proposed by Worren, Moore & Cardona (2002), and suggests the following items including: 1) relatively high degree of independence in business unit, 2) ability of adapting the need of splitting business unit, 3) ability of restructuring business units, 4) subsidiary business will remain even if the core business has been changed, 5) reutilization of current and obsolete resources in an effective way. While speaking of the different forming mechanisms of the competitive advantage existed during the process of transition of NE, scale can be induced before and after transition to omni media, in the relevant multimedia business, NE has advantage in the following aspects compared to another similar NE.

#### **3.1.2.5 Tailor-Made Difference**

Tailor-made mainly refers to what extent the products of NE can respond to the individual requirement from the external environment, based on Kotha's (1995) definition, the research will mainly describe tailor-made in the following dimensions:

1) design independently per customer's demand, 2) individual push, 3) individual products combination, 4) observation of individual consuming method, 5) exploration of the same preference group, 6) adjustment ability of the same preference group, 7) screening ability of the same preference group, 8) attractive ability of the same preference group. While speaking of the difference in forming mechanisms of competitive advantage existed during the process of transition of NE, the research at the same time induces scale before and after transition to omni media, NE, in relevant multimedia business, has advantage in the following aspects compared to other similar enterprises.

#### **3.1.2.6 Controlled Variable**

Take nature and year of establishment of NE as controlled variable are mainly because

the unique difference of NE itself (Gray & Phillips, 1994; Price & Mueller, 1981; Mobley et al., 1979). There are big differences among different kinds of NE and different years of establishment of NE, there is a big difference whether different kinds of business models exist and the origin of competitive advantage, on one hand, as to different kinds of NE, big different exists in their resources advantage basis including political relationship, social resources relationship. While speaking of NE with different years of establishment, opportunity resources acquisition will lead the forming competitive advantage that has uniqueness during long-term development of NE. Therefore, the research takes nature and year of establishment of NE as one of the important controlled variable for the forming of business model of NE.

Sales income indicates the size of the competitive advantage and overall scale of NE, general speaking, the bigger NE is, the more obvious scope of NE shows. Enterprise with more obvious advantage of scope, the efficiency of overall resources acquisition of NE will have more advantages, however, it will lower its pace for adjustment when facing new environment. Therefore, the research takes sales income as controlled variable for a future business model.

As to the general NE, whether it is listed or proportion of new economy like E-commerce might have great influence on NE. For instance, listed NE might face more requirements of external supervision; therefore, more manufacturing practices may be in accordance with the current production criteria. While for NE that adopts E-commerce, the application of C-commerce can effectively enhance external satisfaction, for instance, real-time response of tailor-made.

In addition, NE might also have external influence, for instance, when external competition is relatively harsh, NE might need effective real-time response, therefore real-time response enterprise structure needs to be established effectively (Suarez & Lanzolla, 2007). Based on this, the study suggests that external environment dynamism is also an important index of the business model of NE. The dynamism external environment of NE can be described as the following relevant indexes including our preference for the customer, unpredictable market demand, unpredictable market behavior of the competitors, meaning that rapid change is needed for the service and products of the industry, marketing methods need adjusting from time to time, as well as keeping up with the change of the competitors and market demand in practice.

### 3.1.3 Data Collection

When handing out the questionnaire, to improve reliability of the data, the handouts of the questionnaire was given away mainly to NE that have direct or indirect connection with the researcher including subsidiary enterprise of the related NE.

The main period of the handout of the questionnaire was from September 2015 to March 2016, altogether there were 92 copies collected, the research to made the relevant factor analysis by using questionnaire, then purification for the related scale to do the confirmatory factor analysis and regression analysis. The study also analyzed the difference of relevant data of factor analysis and confirmatory factor analysis (See Table 3-2).

In the distribution of the relevant samples, the proportion of usage of E-commerce, most of NE are below 30%, about 82% of NEs are lower than 30% (among them 40% lower than 10%). While speaking of revenue of NE, enterprises with more than 4 million take a large proportion, among them, NEs with 4 to 40 million about 33.7%, NEs with more than 40m around 33.1%. Regarding the nature of the newspaper, 95.66% are state-owned, only two are private and shareholding. From all the samples collected, male occupies 66.2%, female 24.8%.

Table 3-2 Description of Characteristics of Samples

	Nature of Samples	Classification of Samples	Numbers of Sample	Percentage
Analytical Sample of Exploratory Factor (n=92)	Ratio of E-Business	<10%	38	41.3%
		10%-30%	38	41.3%
		30%-50%	14	15.2%
		>50%	2	2.2%
	Revenue of NE	<130 <Euro 1.3m	10	10.9%
		130~400 Euro 1.3-4m	22	23.9%
		400~4000 Euro 4-40m	31	33.7%
		>4000 Euro 40m	29	33.1%
	Gender	Male	60	65.2%
		Female	32	34.8%
Nature of NE	State-owned	88	95.66%	
	Private	2	2.17%	
	Shareholding System	2	2.17%	

PS: Data missing(partially) in the questionnaire

### **3.1.4 Analytic Method**

During the process, the research did exploratory factor analysis and confirmatory factor analysis to analyze validity of the relevant factor; furthermore, relevant reliability analysis was done for the factor of validity analysis. Application of Spss software was used for reliability and factor analysis, Lisrel for confirmatory factor analysis.

#### **3.1.4.1 Exploratory Factor Analysis**

Exploratory factor analysis value is mainly used for exploration of construct theory structure; check whether the set of the factor structure is rational, i. e. the validity of scale content conception which was mainly proposed by revising and inducing the matured scale during the process of developing scale.

Therefore, factor analysis will be carried out to analyze whether relevant factors dimension is coherent, i. e. with better content validity. Per self-setting, during the process of exploratory factor analysis, factor was extracted by using main component analysis model, the axis was rotated by maximum variance rotation, and the general requirement of factor loading of each item should be higher than 0.5 to get relatively higher consistency of convergence. (Zhao Tiantian, 2011).

#### **3.1.4.2 Confirmatory Factor Analysis**

The confirmatory factor analysis can describe the convergent validity and difference of relevant scales. The model differentiation and convergence validity can be measured by measuring the overall structural stability of the model (Anderson & Gerbing, 1988; Gerbing & Anderson, 1988). During the process of confirmatory factor analysis, relevant item loading should be above 0.7 (or nearly equals to 0.7), if the figure is remarkable and meets the requirement, it means that the corresponding construct measure has relatively high convergent validity. During the process of confirmatory factor analysis, the research mainly adopts Lisrel software.

#### **3.1.4.3 Hierarchical Regression**

The research uses SPSS to make analysis of moderating effect (Cohen, Cohen, West & Aiken, 2003). To reduce the impact brought by multi-collinearity, method of standard correlated variable could be applied. During the analysis, observation and analysis should be done to R<sup>2</sup>, to learn whether the model is rational or not. To analyze degree of fit optimization, observation and analysis for the change of F value of the model are required.

## **3.2 Exploratory Factor Analysis**

The modification of this research was made based on the environment feature, matured scale and research background of the research, based on this, analysis and confirmation were done to the face and content validity by exploratory factor model. In relevant research, brand-new measure model was added, for instance, efficiency type of business model is developed based on the current scale. Speaking of the 92 returned copies, due to the limitation of the data itself, the research will use the questionnaire to make exploratory factor analysis, and further confirmatory factor analysis will be done after purification of the data. In controlled samples, the general requirement of the amount of variable should be kept between 5 to 10 times. Based on this, the research has already met the basic requirement. KMO value should be above 0.5 during the process of the analysis. Statistic value of Bartlett is significantly different from 0 (Harman, 1960) .

### **3.2.1 Efficiency Dimension before Transition**

The analysis of relevant scale items of 8 efficiency dimensions' innovation of loaded business model was made by exploratory analysis (See Table 3-3). Per the requirement, the lowest featured root should be above 1, and the lowest factor loading should be above 0.5, 8 corresponding sub-items should be converged under one construct. Per the measured content of relevant items proposed by the research theory, the research believes that the structure of efficiency type of business model of the enterprise is very well exemplified via improving information symmetry to lower the cost and improve efficiency of commodity exchange, therefore, further reliability analysis of relevant index system should be made based on the result of relevant convergent result. During the process of exploratory analysis, relevant analysis indicates that if the above 8 items get converged under one factor, then the explanatory variance is 73.002%, the realization of the explanatory variance must be higher than 50%. At the same time, factor loading is above 0.5, and this has already met the basic requirement of the lowest theory of convergent validity, under such circumstance, it meets the requirement of doing empirical analysis via using relevant scale. Therefore, the 8 items should have very good validity to reflect measurement of construct of efficiency type of business model innovation.

Table 3-3 Analytic Result of Exploratory Factor Analysis of Efficiency Type of Business Model before Transition (N=92)

Items	Statistical result of description of variable		Factor loading
	Mean Value	Standard Deviation	
Lower cost of partner effectively cooperation (e.g. loss due to inventory and communication, process cost of commodity exchange, price increase due to the market and sales, etc.)	3.57	1.377	0.543
Clients agree relatively easy for enterprise to do commodity exchange	3.72	1.337	0.557
Commodity exchange with feature of expandability (e.g. commodity exchange of small-and-large scale to be carried out simultaneously)	3.87	1.424	0.698
Better to corresponding decisions for partners	3.87	1.344	0.791
Commodity exchange relatively transparent - information of service and products can be verified effectively	4.09	1.388	0.811
Information link when commodity exchange to realize information sharing, reduce information asymmetry, both parties can have knowledge of corresponding information	3.99	1.363	0.826
Large amount of information of service, product and other partners	3.93	1.413	0.825
Commodity exchange rapidly	3.96	1.429	0.789

PS: When KMO value reaches 0.900, Bartlett is 710.366, the statistic value is significantly different from 0 ( $p < 0.000$ ), the explanatory variance of accumulation of one factor from exploratory factor analysis is 73.002%.

Moreover, the research made analysis for scale of efficiency type of business model innovation via reliability analysis model (See Table 3-4), the overall construct reliability index of all items are above 0.6, in addition, after deletion of relevant item of corresponding variables, reliability index of corresponding construct is less than the reliability index of the single construct of the combination of 8 items, and at the same time, the overall reliability index of the overall variable reached 0.946. Therefore, the construct item of efficiency type of business model innovation has a very high degree of convergence.

Therefore, the reliability and validity of the scale of efficiency type of business model

created in this research are relatively high.

Table 3-4 Reliability Value of Efficiency Type of Business Model before Transition (N=92)

Variable Items	Item- total correlation coefficient	Reliability of relevant construct after item deletion	Kerr Baha reliability
Lower cost of partner cooperation (e.g, loss due to inventory and communication, cost of commodity exchange process, price increase due to market and sales, etc.)	.672	.948	.946
Commodity exchange with feature of expandability (e.g, commodity exchange of small-and-large scale to be carried out simultaneously)	.783	.940	
Clients agree relatively easy for enterprise to do commodity exchange	.683	.947	
Better to corresponding decisions for partners	.852	.936	
Commodity exchange relatively transparent: information of service and products to be verified effectively	.859	.935	
Large amount of information of service, product and other partners	.870	.934	
Information link with commodity exchange to realize information sharing, reduce information asymmetry, both parties can have knowledge of corresponding information	.870	.935	
Commodity exchange rapidly	.845	.936	

### 3.2.2 Novelty Dimension before Transition

The analysis of relevant scale item of 6 business models that are novelty type was made by exploratory factor analysis during the process of the research (See Table 3-5). Per the requirement, the lowest featured root should be above 1, and the lowest factor loading must be above 0.5, 6 corresponding sub-items should be converged under one construct. Per the measured content of relevant items proposed by the research theory, the research believes that the structure of novelty type of business model of the enterprise is very well exemplified via whether increasing new cooperation partners and new resources during the enterprise cooperation, therefore, further reliability analysis of relevant index system should be made based on the result of reliability result. During the process of exploratory factor analysis, relevant analysis indicates that the explanatory variance of the above 8 items converged under one factor is 88.721%, and this eventually meets the requirement of the explanatory variance

needs be above 50%. In addition, factor loading needs be above 0.5, and this has already met the basic requirement of the lowest theory of convergent validity, under such circumstance, it meets the requirement of doing empirical analysis via using relevant scale. Therefore, the 6 items should have good validity to reflect measurement of construct of novelty type of business model innovation.

Table 3-5 Analytic Result of Exploratory Factor Analysis of Novelty Type of Business Model before Transition (N=92)

Items	Statistical Result of Description of Variable		Factor Loading
	Mean Value	Standard Deviation	
Commodity exchange between both parties that is different from other competitors	3.84	1.528	0.819
More new inventions	3.83	1.411	0.839
Ability in touch with different kinds of partners and products effectively	3.95	1.5	0.882
New method to incentive partners during commodity exchange	3.92	1.584	0.882
Possibility in attracting new partner in	4	1.475	0.893
New method to the combination among products, information and service	3.97	1.493	0.888

PS; When KMO value reaches 0.893, Bartlett is 734.379, the statistic value is significantly different from 0 ( $p < 0.000$ ), the explanatory variance of accumulation of one factor from exploratory factor analysis is 88.721%.

Moreover, the research made analysis for scale reliability of novelty type of business model innovation (See Table 3-6), the overall construct reliability index of all items is above 0.6, in addition, after deletion of relevant item of corresponding variable, reliability index of relevant construct is less than the reliability index of the single construct of the combination of 6 items, at the same time, the overall reliability index of the overall variable reached 0.969. Therefore, the construct item of novelty type of business model innovation before transition have a very high degree of convergence.

Therefore, reliability and validity of the scale of novelty type of business model before transition created in this research are relatively high.



Table 3-6 Reliability Value of Novelty Type of Business Model before Transition (N=92)

Variable Items	Item- total correlation coefficient	Reliability of relevant construct after item deletion	Kerr Baha reliability
Commodity exchange between both parties that is different from other competitors	.864	.967	.969
More new inventions	.880	.965	
Ability in touch with different partners and products effectively	.911	.962	
New method to incentive partners during commodity exchange	.911	.962	
Possibility to attract new cooperation partners	.919	.961	
New method to combination among products, information and service.	.915	.961	

### 3.2.3 Efficiency Dimension after Transition

The analysis of relevant scale items of 8 efficient dimensions' innovation of loaded business model was made by exploratory analysis (See Table 3-7). Per the requirement, the lowest featured root should be above 1, and the lowest factor loading should be above 0.5, 8 corresponding sub-items should be converged under one construct. Per the measured content of relevant items proposed by the research theory, the research believes that the structure of efficiency type of business model of the enterprise after transition can be very well exemplified via improving information symmetry to lower the cost and improve commodity exchange efficiency, therefore, further reliability analysis of relevant index system should be made based on the result of convergent result. During the process of exploratory factor analysis, relevant analysis indicates that the explanatory variance of the above 8 items converged under one factor is 79.117%, and eventually meets the requirement of the explanatory variance needs to be above 50%. At the same time, factor loading needs to be above 0.5, and this has already met the basic requirement of the lowest theory of convergent validity, under such circumstance, it meets the requirement of doing empirical analysis via using relevant scale. Therefore, the 8 items should have good validity to reflect measurement

of construct of efficiency type of business model innovation.

Table 3-7 Analytic Result of Exploratory Factor Analysis of Efficiency Type of Business Model after Transition (N=92)

Items	Statistical result of description of variable		Factor loading
	Mean Value	Standard Deviation	
Lower cost of partner cooperation (e.g. loss due to inventory and communication, cost of commodity exchange process, price increase due to market and sales, etc.)	4.43	1.499	0.699
Clients agree relatively easier for enterprise to commodity exchange	4.58	1.416	0.789
Commodity exchange with feature of expandability (e.g. commodity exchange of small-and-large scale to be carried out simultaneously)	4.68	1.406	0.765
Better to corresponding decisions for partners	4.76	1.425	0.796
Commodity exchange relatively transparent - information of service and products to be verified effectively	4.72	1.543	0.807
Information link with commodity exchange to realize information sharing, reduce information asymmetry, both parties can have knowledge of corresponding information	4.75	1.411	0.796
Information knowing about service, product and partner	4.84	1.401	0.858
Commodity exchange rapidly	4.73	1.491	0.82

PS: When KMO value reaches 0.894, Bartlett is 843.796, the statistic value is significantly different from 0 ( $p < 0.000$ ), the explanatory variance of accumulation of one factor from exploratory factor analysis is 79.117%.

Moreover, the research will make further analysis for scale of efficiency type of business model innovation via reliability analysis of necessity (See Table 3-8), the overall construct reliability index of all items is above 0.6, at the same time, after deletion of relevant item of corresponding variable, reliability index of corresponding construct is 0.962. Therefore, the construct item of efficiency type of business model innovation has a relatively higher degree of convergence among other items.

Therefore, reliability and validity of the scale of efficiency type of business model created in this research are relatively high.

Table 3-8 Reliability Value of Efficiency Type of Business Model after Transition (N=92)

Variable Items	Item-total correlation coefficient	Reliability of relevant construct after item deletion	Kerr Baha reliability
Lower cost of partner cooperation (e.g. loss due to inventory and communication, cost of commodity exchange process, price increase due to market and sales, etc.)	.787	.961	.962
Clients agree relatively easy for enterprise to commodity exchange	.854	.957	
Commodity exchange with feature of expandability (e.g. commodity exchange of small-and-large scale to be carried out simultaneously)	.836	.958	
Better to corresponding decisions for partners	.858	.956	
Commodity exchange relatively transparent - information of service and products to be verified effectively	.862	.956	
Information relevant to both sides at product exchange to be shared, but not asymmetry	.856	.956	
Know information of service, product and partners	.900	.954	
Carry out commodity exchange rapidly	.873	.955	

### 3.2.4 Novelty Dimension after Transition

The analysis of relevant scale item of 6 business models that are novelty type was made by exploratory factor analysis during the process of the research (See Table 3-9). Per the requirement, the lowest featured root should be above 1, and the lowest factor loading must be above 0.5, 6 items can be effectively converged under one construct. Per the measured content of relevant items proposed by the research theory, the research believes that the structure of novelty type of business model of the enterprise after transition is very well exemplified via whether increasing new cooperation partners and new resources during the enterprise cooperation, therefore, further reliability analysis of relevant index system should be made based on the result of reliability result. During the process of exploratory factor analysis, corresponding analysis indicates that the explanatory variance of the above 6 items converged under one factor is 76.705%, which meets the requirement of the explanatory

variance should be above 50%. At the same time, factor loading should be above 0.5, and this has already met the basic requirement of the lowest theory of convergent validity, under this circumstance, it meets the requirement of doing empirical analysis via using relevant scale. Therefore, the 6 items should have very good validity to reflect measurement of construct of novelty type of business model innovation.

Table 3-9 Analytic Result of Exploratory Factor Analysis of Novelty Type of Business Model after Transition (N=92)

Items	Statistical result of description of variable		Factor loading
	Mean Value	Standard Deviation	
Commodity exchange between both parties that is different from other competitors	5.34	1.082	0.635
More new inventions	5.34	1.092	0.802
Ability in touch with different partners and products effectively	5.43	1.062	0.787
New method to incentive partners during commodity exchange	5.43	1.17	0.763
Possibilities to attract new partners	5.5	1.104	0.831
New method to combination among products, information and service	5.49	1.181	0.784

PS: When KMO value reaches 0.894, Bartlett is 93.668, the statistic value is significantly different from 0 ( $p < 0.000$ ), the explanatory variance of accumulation of one factor from exploratory factor analysis is 76.705%.

Moreover, the research made reliability analysis for scale of novelty type of business model innovation (See Table 3-10), the overall construct reliability index of all items is above 0.6, at the same time, after deletion of relevant item of corresponding variable, reliability index of corresponding construct is less than the reliability index of the single construct of the combination of 6 items, and meanwhile, the variable Kerr Baha  $\alpha$  index is about to reach 0.939. Therefore, the novelty type of business model innovation after transition that represents each item among the construct has a relatively high degree of convergence.

In summary, reliability and validity of the scale of novelty type of business model innovation in this research are both relatively high.

Table 3-10 Reliability Value of Novelty Type of Business Model after Transition (N=92)

Variable Items	Item -total correlation coefficient	Reliability of relevant construct after item deletion	Kerr Baha reliability
Commodity exchange between both parties that is different from other competitors	.718	.939	.939
More new inventions	.842	.924	
Ability in touch with different partners and products effective	.831	.926	
New method to incentive partners during commodity exchange	.815	.928	
Possibility to attract new partners	.866	.921	
New method to combination among products, information and service	.830	.926	

### 3.2.5 Speed Advantage before Transition

The research made exploratory factor analysis for the 6 relevant scale items that constructed speed competitive advantage before transition (See Table 3-11). Per the requirement, the lowest featured root needs to be above 1, and the lowest factor loading must be above 0.5, 6 corresponding sub- items were converged under one construct. Per the measured content of relevant items proposed by the research theory, the research believes that the structure of the construct of speed competitive advantage before transition of the enterprise is very well exemplified via analyzing the source of speed advantage before transition includes information acquisition and speed of developing products, therefore, further reliability analysis of relevant index system was made based on the result of relevant convergent result.

During the process of exploratory factor analysis, relevant analysis indicates that the explanatory variance of the above 6 items converged under one factor is 89.166%, which meets the requirement of the explanatory variance should be higher than 50%. At the same time, factor loading needs to be above 0.5, and this has already met the basic requirement of the lowest theory of convergent validity, under such circumstance; it meets the requirement of doing empirical analysis via using relevant scale. Therefore, the 6 items should have very good validity to reflect measurement of construct of speed advantage.

Table 3-11 Analytic Result of Exploratory Factor Analysis of Speed Advantage before Transition (N=92)

Items	Statistical result of description of variable		Factor loading
	Mean value	Standard deviation	
Information transmission speed	4.98	1.569	0.896
Information updating speed	4.97	1.515	0.869
Information feedback speed	4.91	1.457	0.895
New product launch speed	4.89	1.586	0.905
New product transmission speed	5.04	1.69	0.929
Short lifespan of new product	5.09	1.675	0.856

PS: When KMO value reaches 0.891, Bartlett is 819.198, the statistic value is significantly different from 0 ( $p < 0.000$ ), the explanatory variance of accumulation of one factor from exploratory factor analysis is 89.166%.

Moreover, this research made reliability analysis scale after transition based on the speed competitive advantage (See Table 3-12), the overall construct reliability index of all items are above 0.6, at the same time, after deletion of relevant item of corresponding variable, reliability index of corresponding construct is less than the reliability index of the single construct of the combination of 6 items, and meanwhile, the overall reliability index of the overall variable reaches 0.975. Therefore, each item among the construct of speed competitive advantage before transition has a relatively high degree of convergence.

In summary, reliability and validity of the scale of the construct of speed competitive advantage before transition that are enveloped in this research are relatively high.

Table 3-12 Reliability Value of Speed Advantage Formation Dimension before Transition (N=92)

Variable Items	Item-total correlation coefficient	Reliability of relevant construct after item deletion	Kerr Baha reliability
Information transmission speed	.921	.970	.975
Information updating speed	.903	.972	
Information feedback speed	.921	.970	
New product launch speed	.929	.969	
New product transmission speed	.947	.967	
Short lifespan of new product	.894	.973	

### 3.2.6 Flexibility Advantage before Transition

The research made exploratory factor analysis for the 8 relevant scale items that constructed flexibility competitive advantage before transition (See Table 3-13). Per the requirement, the lowest featured root needs to be above 1, and the lowest factor loading must

be above 0.5, 8 corresponding sub- items were converged under one construct.

Per the measured content of relevant items proposed by the research theory, the research believes that to describe the source of flexibility competitive advantage, analysis of the convergence of relevant consumers can be nicely done during manufacturing, therefore, further reliability analysis of relevant index system was made based on the result of relevant convergent result. During the process of exploratory factor analysis, relevant analysis indicates that the explanatory variance of the above 8 items converged under one factor is 87.967%, and this meets the requirement of the explanatory variance needs to be above 50%. At the same time, factor loading must be above 0.5, and this has already met the basic requirement of the lowest theory of convergent validity, under such circumstance, it meets the requirement of doing empirical analysis via using relevant scale. Therefore, the 8 items should have very good validity to reflect measurement of construct of flexibility competitive advantage.

Table 3-13 Analytic Result of Exploratory Factor Analysis of Flexibility Advantage before Transition (N=92)

Items	Statistical result of description of variable		Factor loading
	Mean value	Standard deviation	
Design independently per customer's demand	4.84	1.514	0.775
Individual push	4.91	1.587	0.866
Individual products combination	5	1.631	0.893
Observation of individual consuming method	4.97	1.634	0.878
Exploration of the same preference group	5.18	1.69	0.924
Adjustment ability of the same preference group	5.15	1.664	0.902
Screening ability of the same preference group	5.2	1.666	0.892
Attractive ability of the same preference group	5.23	1.684	0.906

PS: When KMO value reaches 0.932, Bartlett is 1232, the statistic is significantly different from 0 ( $p < 0.000$ ), the explanatory variance of accumulation of one factor from exploratory factor analysis is 87.967%.

Moreover, Then, the research made reliability analysis scale before transition based on the flexibility competitive advantage (See Table 3-14), the overall construct reliability index of all items are over 0.6, at the same time, after deletion of relevant item of corresponding variable, reliability index of corresponding construct is less than the reliability index of the single construct of the combination of 8 items, and meanwhile, the overall reliability index of

the overall variable reaches 0.980. Therefore, each item among the construct of flexibility competitive advantage before transition has a relatively high degree of convergence.

In summary, reliability and validity of the scale of the construct of flexibility competitive advantage before transition developed in this research are relatively high.

Table 3-14 Reliability Value of Flexibility Advantage Formation Dimension before Transition (N=92)

Variable Items	Item-total correlation coefficient	Reliability of relevant construct after item deletion	Kerr Baha reliability
Design independently per customer's demand	.846	.981	.980
Individual push	.908	.978	
Individual products combination	.927	.977	
Observation of individual consuming method	.917	.978	
Exploration of the same preference group	.949	.976	
Adjustment ability of the same preference group	.934	.977	
Screening ability of the same preference group	.928	.977	
Attractive ability of the same preference group	.937	.977	

### 3.2.5 Tailor-made Advantage before Transition

The research made exploratory factor analysis for the 5 relevant scale items that constructed tailor-made competitive advantage before transition (See Table 3-15). Per the requirement, the lowest featured root needs to be above 1, and the lowest factor loading must be above 0.5, 5 corresponding sub- items were converged under one construct.

According to the measured content of relevant items proposed by the research theory, the research believes that the structure of the construct of competitive advantage before transition that is exemplified via analyzing the source of tailor-made advantage before transition including whether enterprise can effectively provide relevant unique tailor-made information according to the unique requirement of individual information, further reliability analysis of relevant index system should be made based on the result of relevant convergent result. During the process of exploratory factor analysis, relevant analysis indicates that the explanatory variance of the above 5 items converged under one factor is 85.863%, and this meets the requirement of the explanatory variance should be above 50%. At the same time, all



factor loading is above 0.5, and this has already met the basic requirement of the lowest theory of convergent validity, under such circumstance, it meets the requirement of doing empirical analysis via using relevant scale. Therefore, the 5 items should have very good validity to reflect measurement of construct of tailor-made advantage.

Table 3-15 Analytic Result of Exploratory Factor Analysis of Tailor-Made Advantage before Transition (N=92)

Items	Statistical result of description of variable		Factor loading
	Mean value	Standard deviation	
Relatively high individuality of business unit	5.14	1.472	0.785
Capability of adapting the need of splitting business unit	4.96	1.511	0.925
Capability of restructuring business unit	5.02	1.519	0.863
Subsidiary business remains even if the core business has been changed	5.02	1.576	0.862
Effectively reuse of current and obsolete resources	5.1	1.512	0.858

PS; When KMO value reaches 0.885, Bartlett is 523.947, the statistic is significantly different from 0( $p < 0.000$ ), the explanatory variance of accumulation of one factor from exploratory factor analysis is 85.863%.

Moreover, the research made reliability analysis scale before transition based on the tailor-made competitive advantage (See Table 3-16), the overall construct reliability index of all items are above 0.6, at the same time, after deletion of relevant item of corresponding variable, reliability index of corresponding construct is less than the reliability index of the single construct of the combination of 5 items, and meanwhile, the overall reliability index of the overall variable reaches 0.959. Therefore, each item among the construct of tailor-made competitive advantage before transition has a relatively high degree of convergence.

In summary, reliability and validity of the scale of the construct of tailor-made competitive advantage before transition developed in this research are relatively high.

Table 3-16 Reliability Value of Tailor-Made Advantage Formation Dimension before Transition(N=92)

Variable Items	Item- total correlation coefficient	Reliability of relevant construct after item deletion	Kerr Baha reliability
Relatively high individuality of business unit	.825	.958	.959
Capability of adapting the need of splitting business unit	.937	.940	
Capability of restructuring business unit	.887	.948	
Subsidiary business remains even if core business has been changed	.886	.948	
Effectively reuse current and obsolete resources	.884	.949	

### 3.2.8 Speed Advantage after Transition

The research made exploratory factor analysis for the 6 relevant scale items that constructed speed competitive advantage after transition (See Table 3-17). Per the requirement, the lowest featured root needs to be above 1, and the lowest factor loading must be above 0.5, 6 corresponding sub-items were converged under one construct. Per the measured content of relevant items proposed by the research theory, the research believes that the structure of the construct of speed competitive advantage after transition of the enterprise is very well exemplified via analyzing the source of speed advantage after transition including information acquisition and the speed of developing the products, further reliability analysis of relevant index system was made based on the result of relevant convergent result. During the process of exploratory factor analysis, relevant analysis indicates that the explanatory variance of the above 6 items converged under one factor is 84.407%, and this meets the requirement of the explanatory variance needs to be above 50%. At the same time, all factor loading is above 0.5, and this has already met the basic requirement of the lowest theory of convergent validity, under such circumstance, it meets the requirement of doing empirical analysis via using relevant scale. Therefore, 6 items have very good validity to reflect measurement of construct of speed advantage after transition.

Table 3-17 Reliability Value of Speed Advantage Formation Dimension after Transition (N=92)

Items	Statistical result of description of variable		Factor loading
	Mean value	Standard deviation	
Information transmission speed	5.79	1.172	0.792
Information updating speed	5.72	1.103	0.867
Information feedback speed	5.67	1.159	0.843
New product launch speed	5.79	1.144	0.863
New product transmission speed	5.91	1.201	0.854
Short lifespan of new product	5.9	1.187	0.846

PS: When KMO value reaches 0.892, Bartlett is 656.210, the statistic value is significantly different from 0 ( $p < 0.000$ ), the explanatory variance of accumulation of one factor from exploratory factor analysis is 84.407%.

Moreover, the research made reliability analysis scale based on the speed competitive advantage after transition (See Table 3-18), the overall construct reliability index of all items is above 0.6, at the same time, after deletion of relevant item of corresponding variable, reliability index of corresponding construct is less than the reliability index of the single construct of the combination of 6 items, and meanwhile, the overall reliability index of the overall variable reaches 0.963. Therefore, each item among the construct of speed competitive advantage after transition have a relatively high degree of convergence.

In summary, reliability and validity of the scale of the construct of speed competitive advantage after transition developed in this research are relatively high.

Table 3-18 Reliability Value of Speed Advantage Formation Dimension after Transition (N=92)

Variable Items	Item-total correlation coefficient	Reliability of relevant construct after item deletion	Kerr Baha reliability
Information transmission speed	.841	.960	.963
Information updating speed	.899	.954	
Information feedback speed	.879	.956	
New product launch speed	.895	.954	
New product transmission speed	.890	.955	
Short lifespan of new product	.883	.955	

### 3.2.9 Flexibility Advantage after Transition

The research made exploratory factor analysis for the 8 relevant scale items that constructed flexibility competitive advantage after transition (See Table 3-19). Per the requirement, the lowest featured root needs to be above 1, and the lowest factor loading must

be above 0.5, 8 corresponding sub-items were converged under one construct. Per the measured content of relevant items proposed by the research theory, the research believes that to describe the source of flexibility competitive advantage after transition via analyzing the aggregation of relevant consumers during manufacturing, therefore further reliability analysis of relevant index system was made based on the result of relevant convergent result. During the process of exploratory factor analysis, relevant analysis indicates that the explanatory variance of the above 8 items converged under one factor is 79.727%, and this meets the requirement of the explanatory variance should be above 50%. At the same time, all the factor loading is above 0.5, and this has already met the basic requirement of the lowest theory of convergent validity, under such circumstance, it meets the requirement of doing empirical analysis via using relevant scale. Therefore, the 8 items very have good validity to reflect measurement of construct of flexibility competitive advantage after transition.

Table 3-19 Analytic Result of Exploratory Factor Analysis of Flexibility Advantage after Transition (N=92)

Items	Statistical result of description of variable		Factor loading
	Mean value	Standard deviation	
Design independently per customer's demand	5.61	1.109	0.844
Individual push	5.61	1.157	0.897
Individual products combination	5.62	1.203	0.874
Observation of individual consuming method	5.74	1.203	0.915
Exploration of the same preference group	5.82	1.157	0.903
Adjustment ability of the same preference group	5.78	1.137	0.919
Screening ability of the same preference group	5.75	1.173	0.91
Attractive ability of the same preference group	5.66	1.151	0.878

PS; When KMO value reaches 0.905, Bartlett is 881.750, the statistic value is significantly different from 0 ( $p < 0.000$ ), the explanatory variance of accumulation of one factor from exploratory factor analysis is 79.727%.

Moreover, the research made reliability analysis scale after transition based on the flexibility competitive advantage (See Table 3-20), the overall construct reliability index of all items is above 0.6, at the same time, after deletion of relevant item of corresponding variable, reliability index of corresponding construct is less than the reliability index of the single

construct of the combination of 8 items, and meanwhile, the overall reliability index of the overall variable reaches 0.964. Therefore, each item among the construct of flexibility competitive advantage after transition has a relatively high degree of convergence.

In summary, reliability and validity of the scale of the construct of flexibility competitive advantage after transition developed in this research are relatively high.

Table 3-20 Reliability Value of Flexibility Advantage Formation Dimension after Transition (N=92)

Variable Items	Item- total correlation coefficient	Reliability of relevant construct after item deletion	Kerr Baha reliability
Design independently per customer's demand	.799	.962	.964
Individual push	.866	.958	
Individual products combination	.836	.960	
Observation of individual consuming method	.887	.957	
Exploration of the same preference group	.870	.958	
Adjustment ability of the same preference group	.890	.957	
Screening ability of the same preference group	.878	.957	
Attractive ability of the same preference group	.838	.960	

### 3.2.10 Tailor-made Advantage after Transition

The research made exploratory factor analysis for the 5 relevant scale items that constructed tailor-made competitive advantage after transition (See Table 3-21). Per the requirement, the lowest featured root needs to be above 1, and the lowest factor loading must be above 0.5, 5 corresponding sub-items were converged under one construct. According to the measured content of relevant items proposed by the research theory, the research believes that the structure of the construct of competitive advantage after transition that is exemplified via analyzing the source of tailor-made advantage after transition including whether enterprise can effectively provide relevant unique tailor-made information according to the unique requirement of individual information, further reliability analysis of relevant index system was made based on the result of relevant convergent result. During the process of exploratory factor analysis, relevant analysis indicates that the explanatory variance of the above 5 items converged under one factor is 85.863%, and this meets the requirement of the explanatory

variance should be above 50%. At the same time, all factor loading is above 0.5, and this has already met the basic requirement of the lowest theory of convergent validity, under such circumstance, it meets the requirement of doing empirical analysis via using relevant scale. Therefore, the 5 items have very good validity to reflect measurement of construct of tailor-made advantage after transition.

Table 3-21 Analytic Result of Exploratory Factor Analysis of Tailor-Made Advantage after Transition (N=92)

Items	Statistical result of description of variable		Factor loading
	Mean value	Standard deviation	
Relatively high individuality of business unit	5.49	1.2	0.866
Capability of adapting the need of splitting business unit	5.61	1.119	0.925
Capability of reconstructing business	5.58	1.102	0.816
Subsidiary business remains even if core business has been changed	5.71	1.236	0.904
Effectively reuse current and obsolete resources	5.7	1.035	0.859

PS; When KMO value reaches 0.828, Bartlett is 365.169, the statistic value is significantly different from 0 ( $p < 0.000$ ), the explanatory variance of accumulation of one factor from exploratory factor analysis is 76.512%.

Moreover, the research made reliability analysis scale after transition based on the tailor-made competitive advantage (See Table 3-22), the overall construct reliability index of all items is above 0.6, at the same time, after deletion of relevant item of corresponding variable, reliability index of corresponding construct is below the reliability index of the single construct of the combination of 5 items, and meanwhile, the overall reliability index of the overall variable reaches 0.922. Therefore, each item among the construct of tailor-made competitive advantage after transition has a relatively high degree of convergence.

In summary, the reliability and validity of the scale of the construct of tailor-made competitive advantage after transition developed in this research are relatively high.

Table 3-22 Reliability Value of Tailor-Made Advantage Scale Formation Dimension after Transition (N=92)

Variable Items	Item-total correlation coefficient	Reliability of relevant construct after item deletion	Kerr Baha reliability
Relatively high individuality of business unit	.786	.907	.922
Capability of adapting the need of splitting business unit	.875	.889	
Capability of restructuring business unit	.722	.919	
Subsidiary business remains even if core business has been changed	.840	.896	
Effectively reuse of current and obsolete resources	.778	.909	

### 3.2.11 Environment Dynamism

The research made exploratory factor analysis for the 5 relevant scale items that constructed environment dynamism (See Table 3-23). Per the requirement, the lowest featured root needs to be above 1, and the lowest factor loading must be above 0.5, 5 corresponding sub-items were converged under one construct. During the process of exploratory factor analysis, corresponding analysis indicates that the explanatory variance of the above 5 items converged under one factor is 73.265%, and meets the requirement of the explanatory variance should be above 50%. At the same time, all the factor loading is above 0.5, and this has already met the basic requirement of the lowest theory of convergent validity, under such circumstance, it meets the requirement of doing empirical analysis via using relevant scale. Therefore, the 5 items should have very good validity to reflect measurement of construct of environment dynamism.

Table 3-23 Analytic Result of Exploratory Factor Analysis of Environment Dynamism (N=92)

Items	Statistical result of description of variable		Factor loading
	Mean value	Standard deviation	
Product or service easily to be updated or upgraded at our industry	5.29	1.434	0.842
Difficult to predict market behavior of the competitors	5.2	1.454	0.877
Difficult to predict market demand and customer's preference	5.3	1.428	0.888
Fast innovation of the product or craft in our industry	5.38	1.451	0.88
Sales promotion adjustment timely to keep up with the market demand and the action change of the competitor	5.73	1.232	0.789

PS; When KMO value reaches 0.807, Bartlett is 322.423, the statistic is significantly different from 0 ( $p < 0.000$ ), the explanatory variance of accumulation of one factor from exploratory factor analysis is 73.265%.

Moreover, the research made reliability analysis scale on the environment dynamism (See Table 3-24), the overall construct reliability index of all items is above 0.6, at the same time, after deletion of relevant item of corresponding variable, reliability index of corresponding construct is below the reliability index of the single construct of the combination of 5 items, and meanwhile, the overall reliability index of the overall variable reaches 0.909. Therefore, each item among the construct of environment dynamism has a relatively high degree of convergence.

In summary, the reliability and validity of the scale of the construct of environment dynamism developed in this research are relatively high.



Table 3-24 Reliability Value of Environment Dynamism Scale Dimension (N=92)

Variable Items	Item-total correlation coefficient	Reliability of relevant construct after item deletion	Kerr Baha reliability
Product or service easily updated or upgraded at our industry	.752	.892	.909
Difficult to predict market behavior of the competitor	.798	.882	
Difficult to predict market demand and customer's preference	.813	.879	
Fast innovation of the product or craft at our industry	.804	.881	
Sales promotion adjustment timely to keep up with the market demand and the action change of the competitor	.682	.906	

### 3.3 Confirmatory Factor Analysis

The scale constructed in the research after the exploratory factor analysis, the research made further confirmatory factor analysis based on all the samples. Whether the relevant dimension of the scale construct set by the research itself and basic theory dimension of the construct set initially by the research are consistent are exemplified by the confirmatory factor analysis.

#### 3.3.1 Efficiency & Novelty Types of Bus

The research made relevant confirmatory factor analysis for the two basic dimensions of scale of business model for newspaper (See Table 3-25), the result of the research indicates that the 8 relevant sub-items of efficiency type of business model innovation before transition can effectively converge under one-dimensional division, and all the index of relevant items is above 0.6 and reaches the requirement of relatively high degree of significance at 0.000. Further research investigated values of CFI and NNFI of the model respectively, relevant values are over 0.9, but RMSEA value is relatively high. Because all the indexes can be converged in a uniformed model at the level of corresponding significance, and this means the 8 sub- dimensions of efficiency type of business model innovation under corresponding

one-dimensional division is rational. Values of CFI and NNFI from the research are 0.94 and 0.92 respectively, and  $\chi^2/df$  is 4.59, indicating that the convergent validity of all items of scale of efficiency type of business model innovation are relatively high, sufficiently prove that the research scale is in accordance with theory requirement.

The analysis of the novelty type of business model innovation of the research indicates that the overall division of the novelty type of business model innovation is relatively rational under the condition of corresponding dimensional division, the research finds out that all the indexes are above 0.8 and have a significant performance in the level of significance at 0.00 via observing corresponding convergent model of scale. At the same time, the research discovered that values of CFI and NNFI of the relevant analytical model are 0.95 and 0.92 respectively,  $\chi^2/df$  is 6.145, meeting the requirement that it needs to be below 10, and this explains each measure dimension of efficiency type of business model innovation has good convergent validity, and meanwhile, effective separation and convergence can be done among each sub-dimension.

Table 3-25 Confirmatory Factor Analysis of Creative Scale of Efficiency &amp; Novelty Types of Business Model before Transition

Variable Items	Full model estimation coefficient	T -value	P
Lower cost of partner cooperation (e.g. loss due to inventory and communication, cost of commodity exchange process, price increase due to market and sales, etc.)	0.66	6.97	0.000
Clients agree relatively easy for enterprise to commodity exchange	0.67	7.12	0.000
Commodity exchange with feature of expandability (e.g. commodity exchange of small-and-large scale to be carried out simultaneously)	0.78	8.85	0.000
Better to corresponding decisions for partners	0.84	9.91	0.000
Commodity exchange relatively transparent - information of service and products to be verified effectively	0.90	11.11	0.000
Information link with commodity exchange to realize information sharing, reduce information asymmetry, both parties can have knowledge of corresponding information	0.92	11.50	0.000
Understanding service, product and partner information	0.93	11.55	0.000
Commodity exchange rapidly	0.89	10.84	0.000
$\chi^2$	91.87	CFI	0.94
Df	20	NNFI	0.92
$\chi^2/df$	4.592	RMSEA	0.199
Commodity exchange between both parties that is different from other competitors	0.87	10.38	0.000
More new inventions	0.88	10.64	0.000
Ability in touch with different partners and products effectively	0.93	11.64	0.000
New method to incentive partners during commodity exchange	0.93	11.73	0.000
Possibilities to attract new partners	0.95	12.16	0.000
New method to combination among products, information and service	0.94	11.99	0.000
$\chi^2$	55.31	CFI	0.95
Df	9	NNFI	0.92
$\chi^2/df$	6.145	RMSEA	0.238

PS: Lisrel software is mainly used for data analysis and Stata for relevant coefficient. Parameter under each scale is the index for the confirmatory factor analysis of the relevant model.

### 3.3.2 Efficiency & Novelty Types of Business Model Innovation after Transition

The research made relevant confirmatory factor analysis for the two basic dimensions of scale of business model innovation after transition of the newspaper, i.e. efficiency and novelty types of business model innovation (See Table 3-26), the result of the research has some similarity of the result of the relevant business model innovation before transition, the result of the research indicates that the efficiency type of business model innovation after transition can be effectively converged into one dimension under one-dimensional division, and all the index of relevant items is above 0.6 and this reaches the requirement of relatively high degree of significance at 0.000. Further research also investigated values of CFI and NNFI of the model respectively, relevant values are over 0.9, and they are 0.94 and 0.92 respectively, but RMSEA value is relatively high, therefore the research focused on the investigation of  $\chi^2/df$ , whose value reaches 5.56, and this meets the requirement of the maximum value should be lower than 10. Therefore, all the indexes can be converged in a uniformed model at the level of corresponding significance, and this means the 8 sub-dimensions of efficiency type of business model innovation under corresponding one-dimensional division is rational, indicating that the convergent validity of all items of scale of efficiency type of business model innovation after transition are relatively high, sufficiently prove that the research scale is in accordance with theory requirement.

Similarly, the analysis of novelty type of business innovation after transition of the research indicates that the overall division of the novelty type of business model innovation is relatively rational under the condition of relevant dimensional division, the research finds out that all the indexes are over 0.74 and have a significant performance in the level of significance at 0.00 via observing corresponding convergent model of scale. At the same time, the research discovered that values of CFI and NNFI of the relevant analytical model are 0.94 and 0.90 respectively; however, value of RMSEA reaches 0.206, therefore, the research focused on the investigation of  $\chi^2/df$ , whose value reaches 4.85, which meets the requirement of the maximum value cannot be above 10, and this explains each measure dimension of novelty type of business model innovation has good convergent validity, and at the same time, effective separation and convergence can be done among each sub-dimension.

Table 3-26 Confirmatory Factor Analysis of Creative Scale of Efficiency &amp; Novelty Types of Business Model after Transition

Variable Items	Full model estimation coefficient	T -Value	P
Lower cost of partner cooperation (e.g. loss due to inventory and communication, cost of commodity exchange process, price increase due to market and sales, etc.)	0.79	9.03	0.000
Clients agree relatively easy for enterprise to commodity exchange	0.75	10.13	0.000
Commodity exchange with feature of expandability (e.g. commodity exchange of small-and-large scale to be carried out simultaneously)	0.84	9.90	0.000
Better to corresponding decisions for partners	0.88	10.56	0.000
Commodity exchange relatively transparent - information of service and products to be verified effectively	0.89	10.90	0.000
Information link with commodity exchange to realize information sharing, reduce information asymmetry, both parties can have knowledge of corresponding information	0.89	10.83	0.000
Information knowing about service, product, and cooperation	0.92	11.54	0.000
Commodity exchange rapidly	0.90	11.07	0.000
$\chi^2$	110.91	CFI	0.93
Df	20	NNFI	0.91
$\chi^2/df$	5.56	RMSEA	0.224
Commodity exchange between both parties that is different from other competitors	0.74	8.07	0.000
More new inventions	0.87	10.35	0.000
Abilities in touch with different partners and products effectively	0.86	10.13	0.000
New method to incentive partners during commodity exchange	0.84	9.77	0.000
Possibilities to attract new partners	0.91	11.16	0.000
New method to combination among product, information and service	0.87	10.45	0.000
$\chi^2$	43.65	CFI	0.94
Df	9	NNFI	0.90
$\chi^2/df$	4.85	RMSEA	0.206

PS: Lisrel software is mainly used for data analysis and Stata for relevant coefficient. Parameter under each scale is the index for the confirmatory factor analysis of the relevant model.

### **3.3.3 Confirmatory Factor Analysis of Formation of Competitive Advantage before Transition**

The research made analysis for each dimension of the forming source of competitive advantage before transition of the newspaper; the research finds that the forming dimension of competitive advantage including speed, flexibility and tailor-made can all effectively be converged (See Table 3-27). Detailed analysis indicates that each dimension of the relevant competitive advantage can be converted into its own dimension very well, this means that each dimension has a convergent validity. For instance, the analysis of speed indicates that each sub- dimension of speed competitive advantage can be effectively converged into one dimension under one-dimensional division, and all the index of relevant items is above 0.9 and this reaches the requirement of relatively high degree of significance at 0.000. Further research also investigated values of CFI and NNFI of the model respectively, all the relevant values are above 0.9, and they are 0.96 and 0.93 respectively, but RMSEA value is relatively high, therefore the research made further investigation of  $\chi^2/df$ , whose value reaches 5.56, this meets the requirement of the maximum value cannot be above 10. Therefore, all the indexes can be converged in a uniformed model at the level of corresponding significance, and this means the 6 sub-dimensions of speed competitive advantage under relevant one-dimensional division is rational. This indicates that the development of scale of speed competitive advantage before transition not only has good convergent validity but is rational; sufficiently proves that the research scale is in accordance with theory requirement.

The research made analysis to flexibility which is another dimension of source of competitive advantage, the study finds that under the condition of relevant sub-dimension division, all dimensions of the overall model can be converged effectively to the corresponding dimension, based on this, the division of corresponding dimension of relevant variable is relatively rational, the research finds out that all the index is over 0.83 and has a significant performance in the level of significance at 0.00 via observing corresponding convergent model of scale. At the same time, the research discovered that values of CFI and NNFI of the relevant analytical model are 0.94 and 0.91 respectively; but RMSEA value reaches 0.304, therefore the research made further investigation of  $\chi^2/df$ , whose value reaches 9.4436, this meets the lowest requirement of the value must be below 10, and this explains the structure of flexible scale of competitive advantage has good convergent validity, and meanwhile, effective separation and convergence can be done among each sub dimension.

The research made further analysis to tailor-made which is another dimension of source

of competitive advantage, the study find that under the condition of relevant sub-dimension division, all dimensions of the overall model can be converged effectively to the corresponding dimension, based on this, the division of corresponding dimension of relevant variable is relatively rational, the research finds out that all the index is over 0.85 and has a significant performance in the level of significance at 0.00 via observing corresponding convergent model of scale. At the same time, the research discovered that values of CFI and NNFI of the relevant analytical model are 0.98 and 0.96 respectively; but RMSEA value reaches 3.426, this meets the lowest requirement of the value must be below 10, and this explains the structure of tailor-made scale of competitive advantage has good convergent validity, and meanwhile, effective separation and convergence can be done among each sub-dimension.

Table 3-27 Confirmatory Factor Analysis of Competitive Advantage Origin Scale before Transition

Variable Items	Full model estimation coefficient	T - Value	P
Information transmission speed	0.93	11.77	0.000
Information updating speed	0.90	11.11	0.000
Information feedback speed	0.94	12.03	0.000
New product launch speed	0.95	12.17	0.000
New product transmission speed	0.97	12.58	0.000
Short lifespan of new product	0.90	11.12	0.000
$\chi^2$	43.77	CFI	0.96
Df	9	NNFI	0.93
$\chi^2/df$	5.56	RMSEA	0.206
Design independently per customer's demand	0.83	9.71	0.000
Individual push	0.89	10.89	0.000
Individual products combination	0.92	11.46	0.000
Observation of individual consuming method	0.91	11.35	0.000
Exploration of the same preference group	0.96	12.48	0.000
Adjustment ability of the same preference group	0.96	12.53	0.000
Screening ability of the same preference group	0.96	12.41	0.000
Attractive ability of the same preference group	0.97	12.58	0.000
$\chi^2$	188.72	CFI	0.94
Df	20	NNFI	0.91
$\chi^2/df$	9.436	RMSEA	0.304
Relatively high individuality of business unit	0.85	10.09	0.000
Capability of adapting the need of splitting business unit	0.97	12.56	0.000
Capability of restructuring business unit	0.92	11.56	0.000
Subsidiary business remains even if core business has been changed	0.90	11.02	0.000
Effectively reuse of current and obsolete resources	0.89	10.94	0.000
$\chi^2$	17.13	CFI	0.98
Df	5	NNFI	0.96
$\chi^2/df$	3.426	RMSEA	0.163

PS: Lisrel software is mainly used for data analysis and Stata for relevant coefficient. Parameter under each scale is the index for the confirmatory factor analysis of the relevant model.



### **3.3.4 Confirmatory Factor Analysis of Formation of Competitive Advantage after Transition**

The research made analysis for each dimension of formation source of competitive advantage after transition of the enterprise, the research finds that the formation dimension of competitive advantage including speed, flexibility and tailor-made can all effectively convergent (See Table 3-28). Detailed analysis indicates that each dimension of the relevant competitive advantage can be converted into its own dimension very well, this means that each dimension has a convergent validity. For instance, the analysis of speed after transition indicates that each sub- dimension of speed dimension of competitive advantage can be effectively converged into one dimension under one-dimensional division, and all the index of relevant items is above 0.86 and reach the requirement of relatively high degree of significance at 0.000. Further research also investigated value of CFI and NNFI of the model respectively, relevant values are over 0.9, and they are 0.965 and 0.91 respectively, but RMSEA value is relatively high, therefore the research made further investigation of  $\chi^2/df$ , whose value reaches 6.244, this meets the requirement of the maximum value cannot be below 10. Therefore, all the index can be converged in a uniformed model at the level of corresponding significance, and this means the 6 sub-dimensions of speed competitive advantage under corresponding one-dimensional division is rational and this indicates that the development of scale of speed competitive advantage after transition not only has good convergent validity but is rational, sufficiently proves that the research scale is in accordance with theory requirement.

The research made analysis to flexibility which is another dimension of origin of competitive advantage after transition, the study finds that under the condition of relevant sub-dimension division, all dimensions of the overall model can be converged effectively to the corresponding dimension, based on this, the division of corresponding dimension of relevant variable is relatively rational, the research finds out that all the index is over 0.80 and has a significant performance in the level of significance at 0.00 via observing corresponding convergent model of scale. At the same time, the research discovered that values of CFI and NNFI of the relevant analytical model are 0.92 and 0.89 respectively; but RMSEA value reaches 0.304, therefore the research made further investigation of  $\chi^2/df$ , whose value reaches 8.075, this meets the lowest requirement of the value must be below 10, and this explains the structure of flexible scale of competitive advantage has good convergent validity, and at the same time, effective separation and convergence can be done among each

sub-dimension.

The research made further analysis to tailor-made which is another dimension of source of competitive advantage after transition, the research finds that under the condition of relevant sub-dimension division, all dimensions of the overall model can be converged effectively to the relevant dimension, based on this, the division of corresponding dimension of relevant variable is relatively rational, the research finds out that all the indexes are over 0.75 and have a significant performance in the level of significance at 0.00 via observing corresponding convergent model of scale. At the same time, the research discovered that values of CFI and NNFI of the relevant analytical model are 0.93 and 0.87 respectively; but RMSEA value reaches 0.260, therefore the research made further investigation of  $\chi^2/df$ , whose value reaches 7.172, this meets the requirement of the maximum value must be below 10, and this explains the structure of tailor-made scale of competitive advantage after transition has good convergent validity, and meanwhile, effective separation and convergence can be done among each sub-dimension.

Table 3-28 Confirmatory Factor Analysis of Competitive Advantage Origin Scale after Transition

Variable Items	Full model estimation coefficient	T - Value	P
Information transmission speed	0.86	10.22	0.000
Information updated speed	0.91	11.30	0.000
Information feedback speed	0.91	11.17	0.000
New product launch speed	0.92	11.48	0.000
New product transmission speed	0.91	11.22	0.000
Short lifespan of new product	0.90	11.12	0.000
$\chi^2$	56.20	CFI	0.95
Df	9	NNFI	0.91
$\chi^2/df$	6.244	RMSEA	0.240
Design independently per customer's demand	0.80	9.22	0.000
Individual push,	0.86	10.25	0.000
Individual products combination	0.84	9.83	0.000
Observation of individual consuming method	0.89	10.94	0.000
Exploration of the same preference group	0.90	11.07	0.000
Adjustment ability of the same preference group	0.92	11.53	0.000
Screening ability of the same preference group	0.91	11.25	0.000
Attractive ability of the same preference group	0.87	10.49	0.000
$\chi^2$	161.52	CFI	0.92
Df	20	NNFI	0.89
$\chi^2/df$	8.075	RMSEA	0.279
Relatively high individuality of business unit	0.87	10.29	0.000
Capability of adapting the need of splitting business unit	0.94	11.67	0.000
Capability of restructuring business unit	0.75	8.19	0.000
Subsidiary business remains even if core business has been changed	0.85	9.88	0.000
Effectively reuse current and obsolete resources	0.79	8.95	0.000
$\chi^2$	35.86	CFI	0.93
Df	5	NNFI	0.87
$\chi^2/df$	7.172	RMSEA	0.260

PS: Lisrel software is mainly used for data analysis and Stata for relevant coefficient. Parameter under each scale is the index for the confirmatory factor analysis of the relevant model.

### 3.3.5 Confirmatory Factor Analysis of Scale of Environment Dynamism

Research analysis was made for all dimensional convergent level of scale of environment dynamism, the study finds out that each dimension of competitive advantage can be converged effectively, and reaches relatively high convergent validity (See Table 3-29). Detailed analysis indicates that the index of relevant items is above 0.86 and this reaches the requirement of relatively high degree of significance at 0.000. Further research also investigated value of CFI and NNFI of the model respectively, relevant values are over 0.8, and they are 0.91 and 0.83 respectively, but RMSEA value is relatively high, therefore the research focused on the investigation of  $\chi^2/df$ , whose value reaches 7.898, this meets the requirement of the maximum value cannot be above 10. Therefore, all the analyses of scale of environment can be converged in a uniformed model at the level of corresponding significance, and this means the 5 sub-dimensions of environment dynamism under corresponding one-dimensional division is rational and this indicates that the development of scale of environment dynamism not only has good convergent validity but is rational, and this explains the research scale is in accordance with theory requirement.

Table 3-29 Confirmatory Factor Analysis of Environment Dynamism Scale

Variable Items	Full model estimation coefficient	T Value	P
Rapid change on updating or upgrading for service and products at industry	0.76	8.36	0.000
Difficult to predict market behavior of competitor	0.88	10.46	0.000
Difficult to predict customer's preference & market demand	0.89	10.67	0.000
Fast speed in innovation of the product or craft	0.81	9.20	0.000
Sales promotion adjustment timely to keep up with the market demand and the competitor	0.71	7.63	0.000
$\chi^2$	39.49	CFI	0.91
Df	5	NNFI	0.83
$\chi^2/df$	7.898	RMSEA	0.275

PS: Lisrel software is mainly used for data analysis and Stata for relevant coefficient. Parameter under each scale is the index for the confirmatory factor analysis of the relevant model.





## **Chapter 4 Empirical Analysis**

The relevant research of this chapter mainly uses SPSS16.0 (statistical software) for analysis, including the descriptive statistical result of variables, relevant analysis and hierarchical regression analysis to study the theoretical model for the research.

### **4.1 Empirical Research on Competitive Advantage Elements to Business**

#### **Model Design**

##### **4.1.1 Descriptive Statistical Result of Variables**

While analyzing relevant variables via regression analysis model, descriptive statistical analysis and relevant analysis of all variables are needed to be carried out to reduce the impact of collinearity. Table 4-2 provides the relevant coefficient matrix for all variables, at the same time variables with standard deviation and mean value are given. As learned from the relevant coefficient matrix of Table 4-2, dependent variables and independent variables have significant relevant coefficients, which to a certain extent, can prove that dependent variables and independent variables have some relationship between each other. To reduce the impact of multicollinearity of relevant variables, the research will separate the relevant independent variables to carry out the regression analysis.

##### **4.1.2 Mechanism Analysis of Source of Competitive Advantage of NE and Role of Selection of Efficiency Type of Business Model**

In the following, the research will analyze the influence of construction on efficiency type of business model to the forming of source of competitive advantage of the enterprise like speed, flexibility and tailor-made via regression analysis, here the analysis of the forming source of the competitive advantage mainly includes speed, flexibility and tailor-made before and after transition. The so-called the forming source of competitive advantage before

transition like speed, flexibility and tailor-made mainly refers to the competitive advantage of response speed, response flexibility and degree of all-over tailor-made compared to its peers under the background of the enterprise that has not yet been in the process of omni media, However, speed, flexibility and the degree of tailor-made after transition mainly refers to its competitive advantage after omni media transition in speed, flexibility and degree of tailor-made compared to its peers. Based on this, six relevant models are to be used to verify the relevant hypothesis of this research. Table 4-3 shows the result that in these six models, dependent variables are the efficiency type of business model, and independent variables are speed, flexibility and degree of tailor-made before and after transition. In Table 4-3, the research has put relevant controlled variable related to the enterprise like State owned type, income level, listed situation, degree of E-commodity exchange and year of establishment.

#### **4.1.2.1 Speed & Efficiency Type of Business Model**

##### **4.1.2.1.1 Speed before Transition & Efficiency Type of Business Model**

M2 in Table 4-3 mainly provides the analytical results of speed advantage before transition and the selection of efficiency type of business model. Model 2 indicates that the coefficient is not significant (regression coefficient in M2 is 0.193 ( $p>0.1$ )) in the efficiency type of business model and speed advantage before transition. The insignificance independent regression coefficient indicates that speed advantage before transition of the enterprise does not have a significant influence on the selection of efficiency type of business model. This means that before transition, the forming source of competitive advantage in speed is not going to have a remarkable influence on the selection tendency of efficiency type of business model of the enterprise. Therefore, Hypothesis 1 - traditional enterprise with speed advantage in competition will be likely to adopt efficiency type of business model is not verified.

##### **4.1.2.1.2 Speed Advantage after Transition & Efficiency Type of Business Model**

M6 in Table 4-3 mainly provides the analytical results of speed advantage after transition and selection of efficiency type of business model. Model 6 indicates that the coefficient is significant (regression coefficient in M6 is 0.261 ( $p<0.01$ )) in the efficiency type of business model and speed advantage after transition. Independent regression coefficient is significantly different from 0, indicating that speed advantage after transition of the enterprise has a



significant influence on the selection of efficiency type of business model to a certain extent. This means that after transition, enterprise with more competitive advantage in speed will also promote its selection tendency of forming of efficiency type of business model to some extent. Therefore, Hypothesis 1 - enterprise with speed advantage in competition will be likely to adopt efficiency type of business model after transition is therefore verified.

#### **4.1.2.2 Flexibility & Efficiency Type of Business Model**

##### **4.1.2.2.1 Flexibility before Transition & Efficiency Type of Business Model**

M3 in Table 4-3 mainly provides the analytical results of flexibility advantage before transition and the selection of efficiency type of business model. Model 3 indicates that the coefficient is 0 (regression coefficient in M3 is 0.357 ( $p < 0.01$ )) in the efficiency type of business model and flexibility advantage before transition. Under the circumstance that the independent regression coefficient is significant, indicating that the flexibility advantage before transition of the enterprise has a significant influence on the selection of efficiency type of business model. This means that before transition, if the enterprise itself is more competitive compared to its peers in terms of flexibility advantage, meaning that the enterprise will be more likely to adopt the efficiency type of business model. Therefore, Hypothesis 3 - traditional enterprise under the circumstance of having flexibility advantage in competition will not be likely to adopt efficiency type of business model is not verified.

##### **4.1.2.2. Flexibility after Transition & Efficiency Type of Business Model**

M7 in Table 4-3 mainly provides the analytical results of flexibility advantage after transition and the selection of efficiency type of business model. In Model 7, the coefficient of the regression result of flexibility advantage after transition to efficiency type of business model is significant (regression coefficient in M7 is 0.164 ( $p < 0.05$ )). Independent regression coefficient is significantly different from 0, indicating that the competitive advantage based on flexibility after transition of the enterprise will have a significant influence on the selection of efficiency type of business model. This means after transition, along with the promotion of competitive flexibility of the enterprise, it will also improve its selection tendency of efficiency type of business model. Therefore, Hypothesis 3 - if the enterprise has competitive advantage in flexibility, then the possibility of not adopting efficiency type of business model

is not verified.

#### **4.1.2.3 Tailor-made & Efficiency Type of Business Model**

##### **4.1.2.3.1 Tailor-made before Transition and Efficiency Type of Business Model**

M4 in Table 2 mainly provides the analytical results of the tailor-made advantage and selection of efficiency type of business model. Model 2 indicates that the coefficient is not significant (regression coefficient of M5 in 0.335 ( $p < 0.01$ )) in the efficiency type of business model and tailor-made advantage before transition. Independent regression coefficient is significantly different from 0, indicating that tailor-made advantage before transition has a significant influence on the selection of efficiency type of business model. This means that before transition, the forming source of tailor-made advantage is going to have a significant influence on the selection tendency of efficiency type of business of the enterprise. Therefore, Hypothesis 5 - traditional enterprise under the circumstance of having tailor-made advantage in competition will be likely to adopt efficiency type of business model is not verified.

##### **4.1.2.3.2 Tailor-made after Transition & Efficiency Type of Business Model**

M8 in Table 4-3 mainly provides the analytical results of tailor-made advantage after transition and selection of efficiency type of business model. In Model 8, the coefficient of the regression result of tailor-made advantage to efficiency type of business model is significant (regression coefficient in M8 is 0.210 ( $p < 0.05$ )). Independent regression coefficient is significantly different from 0, indicating that the competitive advantage in tailor-made after transition of the enterprise will have a significant influence on selection of efficiency type of business model.

This means that, after transition, enterprise with competitive advantage in tailor-made will also promote their selection tendency of forming of efficiency type of business model. Therefore, Hypothesis 5 - if degree of tailor-made capability will not promote its selection of efficiency type of business model is not verified.

#### **4.1.3 Mechanism Analysis of Source of Competitive Advantage of NE and Role of Selection of Novelty Type of Business Model**

The research will further analyze the influence of construction of novelty type of

business model to the forming source of competitive advantages of the enterprise like speed, flexibility and tailor-made via regression analysis, here the analysis of forming source of the competitive advantages mainly including speed, flexibility and tailor-made before and after transition. Based on this, six relevant models are to be used to verify the relevant hypothesis of this research. Table 4-4 shows the result that in these six models, dependent variables are mainly to the novelty type of business model, while independent variables speed, flexibility and degree of tailor-made before and after transition. In Table 4-3, the research has put relevant controlled variable related to the enterprise like State owned, income level, listed situation, degree of E-commodity exchange and year of establishment.

#### **4.1.3.1 Novelty Type of Business Model before & after Transition**

##### **4.1.3.1.1 Speed before Transition and Novelty Type of Business Model**

M10 in Table 4-3 mainly provides the analytical results of speed advantage before transition and selection of novelty type of business model. In Model 10, the coefficient of the regression result of speed advantage before transition to novelty type of business model is significant (regression coefficient in M10 is 0.271 ( $p < 0.05$ )), indicating that the relevant coefficient is significantly from 0, meaning that speed advantage before transition will also have influence on novelty type of business model. This means that, before transition, based on the improvement of the forming of the speed competitive advantage, enterprise will have a great influence on its selection tendency of novelty type of business model. Therefore, Hypothesis 2 - traditional enterprise with competitive advantage in speed will not be likely to adopt the novelty type of business model is not verified.

##### **4.1.3.1.2 Speed after Transition and Novelty Type of Business Model**

M14 in Table 4-3 mainly provides analytical results of speed after transition and novelty type of business model. In Model 14, the coefficient of the regression result of speed advantage after transition to novelty type of business model is significant (regression coefficient in M14 is 0.261 ( $p < 0.01$ )). Independent regression coefficient is significantly different from 0, indicating that competitive advantage in speed after transition will have a significant influence on the selection of novelty type of business model. This means that, after transition, enterprise with competitive advantages in speed will also promote their selection

tendency of forming novelty type of business model. Therefore, Hypothesis 2 - competitive advantage in speed after transition will not be likely to adopt novelty type of business model is verified.

#### **4.1.3.2 Flexibility and Novelty Type of Business Model**

##### **4.1.3.2.1 Flexibility before Transition and Novelty Type of Business Model**

M11 in Table 4-3 mainly provides analytical results of flexibility before transition and novelty type of business model. In Model 11, the coefficient of the regression result of flexibility advantage before transition to novelty type of business model is significant from 0 (regression coefficient in M11 is 0.511 ( $p < 0.01$ )). Under the circumstance of independent regression coefficient significant, indicating that competitive advantage in flexibility before transition will have a significant influence on selection of novelty type of business model. This means that, before transition, if, comparatively speaking, competitive advantage in flexibility is higher than its peers, enterprise will be more likely to improve its selection tendency of adopting novelty type of business model. Therefore, Hypothesis 4 - under the circumstance of having competitive advantages in flexibility, the enterprise will be likely to adopt novelty type of business model is verified.

##### **4.1.3.2.2 Flexibility after Transition & Novelty Type of Business Model**

M15 in Table 4-3 mainly provides analytical results of flexibility after transition and novelty type of business model. In Model 15, the coefficient of the regression result of flexibility advantage after transition to novelty type of business model is significant (regression coefficient in M11 is 0.493 ( $p < 0.001$ )). Independent regression coefficient is significantly different from 0, indicating that competitive advantage in flexibility will have some influence on the selection of novelty type of business model. This means that, after transition, along with the improvement of competitive advantages in flexibility, enterprise will be more likely to improve its selection tendency of adopting novelty type of business model. Therefore, Hypothesis 4 - under the circumstance of having competitive advantages in flexibility, enterprise will be likely to adopt novelty type of business model is verified.

#### **4.1.3.3 Tailor-made & Novelty Type of Business Model**

#### **4.1.3.3.1 Tailor-made before Transition & Novelty Type of Business Model**

M12 in Table 4-3 mainly provides analytical results of tailor-made advantage before transition and selection of novelty type of business model. In Model 12, the coefficient of the regression result of flexibility advantage before transition to novelty type of business model is significant (regression coefficient in M12 is 0.386 ( $p < 0.05$ )). Coefficient of relevant variable is significantly different from 0, indicating that competitive advantage in tailor-made before transition has a significant influence on the selection of novelty type of business model. This means that, before transition, based on the source of competitive advantages in tailor-made, enterprise will be more likely to improve its selection tendency of adopting novelty type of business model. Therefore, Hypothesis 6 - traditional enterprise with competitive advantage in tailor-made, to some extent, will be likely to adopt novelty type of business model is verified.

#### **4.1.3.3.2 Tailor-made after Transition and Novelty Type of Business Model**

M16 in Table 4-3 mainly provides analytical results of tailor-made after transition and selection of novelty type of business model. In Model 16, the coefficient of the regression result of flexibility advantage after transition to novelty type of business model is significant (regression coefficient in M11 is 0.460 ( $p < 0.05$ )). Independent regression coefficient is significantly different from 0, indicating that competitive advantage in tailor-made after transition will have a significant influence on the selection of novelty type of business model. This means that, after transition, enterprise with competitive advantage in tailor-made will be more likely to improve its selection tendency of adopting novelty type of business model. Therefore, Hypothesis 6 - competitive advantage in tailor-made after transition will have more positive influence on selection of novelty type of business model is verified.

#### **4.1.4 Discussion**

##### **4.1.4.1 Sources of Competitive Advantages & Selection of Efficiency Type of Business Model**

This research points out that different types of sources of competitive advantages have very similar effects on the selection of business models. In fact, the result of the research shows that before transition, competitive advantage of speed of the enterprise can effectively

promote the selection of the novelty type of business model. Different from the initial hypothesis, this research believes that the competitive advantage of speed only has direct influence on the efficiency type of business model. However, the result shows that the competitive advantage of speed does not have a significant influence on the selection of the efficiency type of business model. On the contrary, the results find out that the existence of flexibility and tailor-made advantages of the enterprise make it select the efficiency type of business model with higher probability. At the same time, the research also indicates that the existence of flexibility and tailor-made advantages, no matter before or after transition, can effectively support the selection of the efficiency type of business model of the enterprise. This research believes that the key reason for this result lies in the existence of flexibility advantage and high degree of tailor-made that enable the enterprise to be more flexible during the process of innovation of business models under the background of informatization and omni media, and have the current resources integrated into the already existed business model, for instance, enterprise with high degree of flexibility can effectively promote the capability of one-to-one service as well as provide unique products according to the clients' demand. Therefore, it is also possible for the enterprise with high degree of flexibility and tailor-made to achieve efficiency type of business model. Meanwhile, as the basic source of competitive advantages, if an enterprise can effectively establish capacity factors in the three aspects above, it will enable the enterprise to achieve the possibility of shifting among multiple business models effectively. In nature, this provides an essential competitive base for forming all types of business models.

#### **4.1.4.2 Sources of Competitive Advantages and Selection of Novelty Type of Business Model**

Speaking of different sources of different competitive advantages, the research finds out that no matter before or after transition, different sources of competitive advantages can have direct influence on the forming of novelty type of business model. For instance, before transition, response speed, flexibility and tailor-made, all play important roles in forming the competitive advantages of novelty type of business model of the enterprise. This indicates that the response speed, flexibility and tailor-made are mostly served as fundamental elements for

various types of business models. Only when an enterprise can achieve its advantages in response speed, flexibility and tailor-made, can it have more options of business models. As a matter of fact, the research finds out that the forming of various competitive advantages has its own unique function in its own field though, the forming of these advantages can effectively make up the shortfalls of other individuals or beneficiaries which will enable to provide necessary foundation for bringing new demands to broaden the influence to the enterprise. Under such circumstance, it will be possible for the enterprise to achieve various types of business models.

Based on this, this research believes that compared to establishing a set of unique business model to achieve development effectively, it might not be realistic under the environment of modern competition in nature, however, if the enterprise can effectively realize individual breakthrough in certain field like the ability in response speed, flexibility or tailor-made, then it will promote its flexibility in selecting different types of business models under different circumstances. Therefore, under the current background, the enterprise will be more likely to adopt mixture of certain business models instead of single.

The research, of course, finds out that to an enterprise, the higher degree of the source of its competitive advantages is like speed, flexibility and tailor-made, it is more likely to adopt the novelty type of business model. For instance, in the relevant regression coefficients, no matter before or after transition, the research finds out that the regression coefficients of different elements of competitive advantages are all higher than the design of efficiency type of business model. After transition, particularly speed, flexibility and tailor-made have promoted effects on the forming of novelty type of business model, indicating that compared to the design of efficiency type of business model, in nature, the forming sources of different competitive advantages have more effects on promoting novelty type of business model.

Table 4-1 Summary of validation results of hypothesis on the influence on the elements of competitive advantages on selection of business models

No. of Hypothesis	Content of Hypothesis	Verification
<b>Hypothesis 1</b>	No matter a traditional NE or omni media NE, the more significance of its advantage in speed is, the more likely will the enterprise adopt efficiency type of business model.	<b>Partially verified</b>
<b>Hypothesis 2</b>	No matter a traditional NE or omni media NE, advantages in speed do not have significant influence on novelty type of business model.	<b>Not verified</b>
<b>Hypothesis 3</b>	No matter a traditional NE or omni media NE, advantages in flexibility do not have significant influence on efficiency type of business model.	<b>Not verified</b>
<b>Hypothesis 4</b>	No matter a traditional NE or omni media NE, advantages in flexibility have positive influence on novelty type of business model.	<b>Verified</b>
<b>Hypothesis 5</b>	No matter a traditional NE or omni media NE, advantages in tailor-made do not have a significant influence on efficiency type of business model.	<b>Not verified</b>
<b>Hypothesis 6</b>	No matter a traditional NE or omni media NE, advantages in tailor-made have positive influence on novelty type of business model.	<b>Verified</b>

#### 4.1.5 Summary

In this research, it is found out that no matter before or after transition, different element structures of competitive advantages have direct and significant effect on the selection of the business model of NE. For instance, flexibility and degree of tailor-made have direct influence on both efficiency and novelty types of business model. And speed has more direct influence on the construct of novelty type of business model. There are some differences between the relevant research result and initial hypothesis, indicating that the fundamental elements of competitive advantages have fundamental value of the selection of business model of the enterprise itself. Only when NE establishes high enough competitive advantage in certain aspect, can the selection of flexibility of different types of business models during the process of design of business models be greatly improved.



Overall, the more obvious of the different elements of competitive advantages are, the more demands for the forming the novelty type of business model will be than the efficiency type of business model. However, such tendency is not absolute, to the NE with these competitive advantages, under the background of having such competitive advantages, during the process of design of the business model, the possibility of integrating efficiency type of business model also gets promoted. Under such circumstance, the fundamental elements of competitive advantages have more fundamental value to the forming of the business model of NE itself.

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Table 4-2 Matrix of Correlation Coefficient of Correlated Variables

	Mean	Std	State Owned	Income	Listed	E-Commodity Exchange	Years of Establishment	Efficiency	Novelty	Efficiency Transition	Novelty Transition	Speed	Flexibility	Tailor-made	Speed Transition	Flexibility Transition
State Owned	1.66	.998														
Income	2.86	.990	-.182													
Listed	.14	.350	.012	.185												
Exchange of E-Commodity	1.78	.782	.116	-.069	.234*											
Year of Establishment	18.6806	14.72262	.279*	-.042	-.114	.037										
Efficiency	3.8736	1.18012	-.097	.117	.180	-.207*	-.161									
Novelty	3.9167	1.39564	-.015	.036	.155	-.062	-.204	.785**								
Efficiency Transition	4.6861	1.28809	-.125	.223*	.017	-.393**	-.171	.579**	.428**							
Novel	5.4221	.97635	-.093	-.046	.054	.023	-.196	.352**	.303**	.255*						
Speed	4.9801	1.49395	.084	-.271**	.040	.183	.182	.117	.241*	-.112	.226*					
Flexibility	5.0598	1.53300	.100	-.239*	.038	.307**	.214	.209*	.393**	-.195	.248*	.792**				
Tailor-made	5.0478	1.40654	.162	-.183	.044	.197	.047	.246*	.373**	-.100	.426**	.727**	.800**			
Speed Transition	5.7989	1.06634	.106	-.010	.033	.088	.105	.102	.067	.197	.433**	.476**	.301**	.542**		
Flexibility Transition	5.6984	1.03695	.008	-.061	.035	.108	.014	.186	.198	.104	.526**	.520**	.396**	.543**	.785**	
Tailor-made Transition	5.6152	.99592	-.008	-.087	-.057	.066	.008	.207*	.171	.169	.511**	.544**	.374**	.529**	.744**	.883**

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

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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Table 4-3 Source of Competitive Advantage of Enterprise & Standard Regression Model Chosen by Business Model (Efficiency Type)

Variables	Business Model (Efficiency Type)							
	N=92(non-balanced samples will be deleted automatically)							
	M1	M2	M3	M4	M5	M6	M7	M8
	Before Transition				After Transition			
Controlled Variables								
Type of Enterprise	.003	.009	-.004	-.035	-.022	-.046	-.024	-.018
Scale of Enterprise	-.018	.047	.083	.054	.159	.160	.173	.182
Listed	.269*	.243 <sup>+</sup>	.233 <sup>+</sup>	.242*	.056	.031	.047	.055
Degree of Electronic	-.213 <sup>+</sup>	-.229 <sup>+</sup>	-.295**	-.258*	-.346**	-.349**	-.367**	-.360**
Year of Establishment	-.124	-.161	-.195 <sup>+</sup>	-.128	-.139	-.163	-.141	-.141
Core theoretical construct								
Speed		.193						
Flexibility			.357**					
Tailor-Made				.335**				
Speed Transition						.261**		
Flexibility Transition							.164*	

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Tailor-Made Transition								.210*
R <sup>2</sup>	0.107	0.138	0.209	0.209	0.177	0.243	0.203	0.220
D-R2	0.107	0.031	0.102	0.101	0.177	0.066	0.026	0.043
A-R <sup>2</sup>	0.040	0.059	0.136	0.135	0.114	0.173	0.129	0.148
F	1.586	2.357	8.383	8.319	2.836	5.667	2.121	3.599
Df	(5,66)	(1,65)	(1,65)	(1,65)	(5,66)	(1,65)	(1,65)	(1,65)
P(F)	0.176	0.130	0.005	0.000	0.022	0.020	0.150	0.169

PS: Analysis adopted Spss16.0 + p < 0.15, \* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01

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Table4-4 Source of Competitive Advantage of Enterprise & Standard Regression Model Chosen by Business Model (Novelty Type)

Variables	Business Model (Novelty Type)							
	N=92(non-balanced samples will be deleted automatically)							
	M9	M10	M11	M12	M13	M14	M15	M16
	Before Transition				After Transition			
Controlled Variable								
Type of Enterprise	.076	.084	.065	.031	-.124	-.161	-.131	-.116
Scale of Enterprise	-.031	.061	.114	.053	-.095	-.094	-.054	-.044
Listed	.209 <sup>+</sup>	.173	.157	.178	.068	.030	.039	.065
Degree of Electronic	-.048	-.070	-.165	-.100	.001	-.003	-.061	-.030
Year of Establishment	-.201*	-.252*	-.303**	-.205 <sup>+</sup>	-.157	-.193 <sup>+</sup>	-.162	-.161
Core theoretical construct								
Speed		.271*						
Flexibility			.511***					
Tailor-made				.386**				
Speed Transition						.394***		
Flexibility Transition							.493***	

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Tailor-made Transition								.460***
R <sup>2</sup>	0.084	0.146	0.293	0.219	0.061	0.212	0.296	0.269
D-R2	0.084	0.061	0.209	0.135	0.061	0.151	0.235	0.208
A-R <sup>2</sup>	0.015	0.067	0.228	0.147	-0.01	0.139	0.231	0.201
F	1.215	4.664	19.191	11.238	0.855	5.667	21.720	18.485
Df	(5,66)	(1,65)	(1,65)	(1,65)	(5,66)	(1,65)	(1,65)	(1,65)
P(F)	0.312	0.034	0.000	0.001	0.516	0.001	0.000	0.000

PS: Analysis adopted Spss16.0, + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001 Speed transition means the advantage of speed after transition, same as flexibility transition and tailor-made transition, meaning the advantage of related elements after transition

## **4.2 Empirical Study on the Evolution for Competitive Advantage Elements to Business Model Design**

The following will analyze in detail how the change in competitive advantage elements will influence the change of business model design of NE.

### **4.2.1 Mechanism of Action of the Change in Competitive Advantage Elements & Efficiency Type of Business Model**

In the following, the research is going to analyze the influence on the selection of competitive advantages of the enterprise itself brought by the change of the source of forming of competitive advantages of the enterprise via regression analysis. Here the fundamental element of the forming of the competitive advantages mainly refers to the change of fundamental elements of speed, flexibility and tailor-made. The performance of speed difference in this research describes the change of speed advantage for NE before and after transition compared to other newspapers in the industry. The speed difference mentioned here refers to the difference in speed advantage before and after transition. While flexibility difference refers to the change of flexibility advantage for NE before and after transition compared to other newspapers in the industry. The flexibility difference mentioned here refers to the difference in flexibility advantage before and after transition. Tailor-made difference refers to the change of tailor-made advantage for NE before and after transition compared to other newspapers in the industry. The tailor-made difference mentioned here refers to the difference in tailor-made advantages before and after transition.

Based on this, the research will verify the hypothesis of the relevant models by using regression analysis. Table 4-5 and 4-6 show the overall results of the analysis. In these tables, dependent variable in Table 4-5 and 4-6 are efficiency type of business model after transition and novelty type of business model after transition respectively. Relevant control variables include state owned type, income level, listed situation,

degree of E-commodity exchange and year of establishment.

#### **4.2.1.1 Business Model before Transition & Selection of Efficiency Type of Business Model after Transition**

##### **4.2.1.1.1 Business Model before Transition & Selection of Efficiency Type of Business Model after Transition**

M2 in Table 4-5 provides the analytical results for the efficiency type of business model before transition and the selection of the same model after transition. In Model 2, the coefficient of the regression results of the efficiency type of business model before and after transition is significant (regression coefficient in M2 is 0.518 ( $p < 0.001$ )), indicating that if the enterprise adopts efficiency type of business model before transition, then, it is highly likely that it will adopt the same business model after transition. M7 in Table 4-5 provides analytical results of novelty type of business model before transition and efficiency type of business model after transition. In Model 7, the coefficient of the regression result of the novelty type of business model before transition to the efficiency type of business model after transition is significant (regression coefficient in M7 is 0.318 ( $p < 0.001$ )), indicating that if the enterprise adopts novelty type of business model before transition, then, it is also likely that it will adopt efficiency type of business model after transition. However, compared to the adoption of efficiency type of business model during its initial phase, enterprise that adopted novelty type of business model initially, the probability to change the design of business model is much lower. Meanwhile, regarding the enterprise with efficiency type of business model, in Model 17, the coefficient of the regression result of efficiency type of business model before transition to novelty type of business model is significant (regression coefficient in M17 is 0.406 ( $p < 0.001$ )), lower than regression coefficient in M2 (0.518 ( $p < 0.001$ )). Relevant regression coefficient is lower than the possibility of adopting efficiency type of business model after transition. Therefore, the research thinks that if the enterprise adopts efficiency type of business model before transition, it will still adopt efficiency type of business model substantially. Based on this, the research thinks that Hypothesis 7 is verified.



#### **4.2.1.1.2 Influence of Difference in Speed Advantage on Efficiency Type of Business Model after Transition**

M3 and M8 in Table 4-5 mainly provide analytical results that control the change of speed advantage after transition after the selection of business model before transition and the selection of efficiency type of business model. In Model 3, the coefficient of the regression result of speed advantage after transition to efficiency type of business model is significant (regression coefficient in M3 is  $0.257(p < 0.01)$ ). Due to independent regression coefficient is significantly different from 0, and M8 provides similar result, in Model 8, the coefficient of the regression result of speed advantage after transition to efficiency type of business model is also significant (regression coefficient in M8 is  $0.351(p < 0.01)$ ), indicating that if the competitive advantage in speed has improved significantly after transition, then the possibility for the enterprise to promote the development of type of business model will be increased greatly.

#### **4.2.1.1.3 Influence of Difference in Flexibility Advantage on Efficiency Type of Business Model after Transition**

M4 and M9 in Table 4-5 mainly provide analytical results that control the change of flexibility advantage after transition after the selection of business model before transition and the selection of efficiency type of business model. In Model 4, the coefficient of the regression result of flexibility advantage after transition to efficiency type of business model is significant (regression coefficient in M4 is  $0.244(p < 0.01)$ ). Due to independent regression coefficient is significantly different from 0, and M9 provides similar result, in Model 8, the coefficient of the regression result of flexibility advantage after transition to efficiency type of business model is significant (regression coefficient in M9 is  $0.300(p < 0.01)$ ), indicating that if the competitive advantage in flexibility has improved significantly after transition, then the enterprise will effectively promote the development of business models that are relevant to efficiency type.

#### **4.2.1.1.4 Influence of Difference in Speed Advantage on Tailor-made Type of**

### **Business Model after Transition**

M5 and M10 in Table 4-5 mainly provide analytical results that control the change of tailor-made advantage after transition after the selection of business model before transition and the selection of efficiency type of business model. In Model 5, the coefficient of the regression result of tailor-made advantage after transition to efficiency type of business model is significant (regression coefficient in M5 is 0.286 ( $p < 0.01$ )). Due to independent regression coefficient is significantly different from 0, and M10 provides similar result, in Model 10, the coefficient of the regression result of flexibility advantage after transition to efficiency type of business model is significant (regression coefficient in M10 is 0.360 ( $p < 0.01$ )), indicating that if the competitive advantage in tailor-made has improved significantly after transition, then the enterprise will effectively promote the development of business models that are relevant to efficiency type.

#### **4.2.1.2 Business model before transition & selection of novelty type of business model after transition**

##### **4.2.1.2.1 Business Model before Transition & Selection of Novelty Type of Business Model after Transition**

M12 in Table 4-6 provides the analytical result for the novelty type of business model before transition and the selection of the same model after transition. In Model 12, the coefficient of the regression result of the novelty type of business model before transition to the novelty type of business model after transition is significant (regression coefficient in M12 is 0.518 ( $p < 0.001$ )), indicating that if the enterprise adopts novelty type of business model before transition, then, it is highly likely that it will adopt the same business model after transition. M17 in Table 4-6 provides analytical results of efficiency type of business model before transition and novelty type of business model after transition. In Model 17, the coefficient of the regression result of the efficiency type of business model before transition to the novelty type of business model after transition is significant (regression coefficient in M17 is 0.318 ( $p < 0.001$ )), indicating that if the enterprise adopts efficiency type of business model

before transition, then, it is highly likely that it will adopt the construction of novelty type of business model after transition. However, compared to the adoption of efficiency type of business model initially for the enterprise, to the enterprise that adopted novelty type of business model, it is not likely that the enterprise will continue to invest for its original business model. The reason might be there is little room for further improvement for the enterprise since the degree of novelty is comparatively higher. At the same time, for the enterprise adopted novelty type of business model initially, the possibility for the enterprise to adopt efficiency type of business model after transition will be improved. For instance, in Model 7, the coefficient of the regression result of novelty type of business model before transition to efficiency type of business model is significant (regression coefficient in M7 is 0.381 ( $p < 0.001$ ), higher than regression coefficient in M12 0.288 ( $p < 0.01$ ), indicating that the hypothesis of the enterprises that adopted novelty type of business model, after transition, more will adopt efficiency type of business model is not verified. Therefore, Hypothesis 8 is not verified.

#### **4.2.1.1.2 Influence of competitive advantage in speed on novelty type of business model after transition**

M13 and M18 in Table 4-6 mainly provide analytical results that control the change of speed advantage after transition after the selection of business model before transition and the selection of novelty type of business model. In Model 13, the coefficient of the regression result of speed advantage after transition to novelty type of business model is significant (regression coefficient in M13 is 0.249 ( $p < 0.01$ )). Due to independent regression coefficient is significantly different from 0, and M18 provides similar result, in Model 18, the coefficient of the regression result of speed advantage after transition to efficiency type of business model is also significant (regression coefficient in M18 is 0.242 ( $p < 0.01$ )), indicating that if the competitive advantage in speed has improved significantly after transition, then the possibility for the enterprise to promote the development of novelty type of business model will be increased greatly.

The influence of efficiency type of business model brought by the change of difference in speed in Comparison Table 4-5, the research finds out that the change of the difference in speed will not give impetus to the enterprise to have the tendency of selecting efficiency type of business model. Therefore, hypothesis 9 cannot be verified.

#### **4.2.1.1.3 Influence of competitive advantage in flexibility on novelty type of business model after transition**

M14 and M19 in Table 4-6 mainly provide analytical results that control the change of flexibility advantage after transition after the selection of business model before transition and the selection of novelty type of business model. In Model 14, the coefficient of the regression result of flexibility advantage after transition to efficiency type of business model is significant (regression coefficient in M14 is 0.265 ( $p < 0.01$ )). Due to independent regression coefficient is significantly different from 0, and M9 provides similar result, in Model 19, the coefficient of the regression result of flexibility advantage after transition to novelty type of business model is also significant (regression coefficient in M19 is 0.300 ( $p < 0.01$ )), indicating that if the competitive advantage in flexibility has improved significantly after transition, then the enterprise will effectively promote the development of business models that are relevant to novelty type.

The influence of efficiency type of business model brought by the change of difference in flexibility in Comparison Table 4-5, the research finds out that the change of the difference in flexibility will not give impetus to the enterprise to have the tendency of selecting novelty type of business model. Therefore, Hypothesis 10 cannot be verified.

#### **4.2.1.1.4 Influence of competitive advantage in flexibility on novelty type of business model after transition**

M15 and M20 in Table 4-6 mainly provide analytical results that control the change of tailor-made advantage after transition after the selection of business model before transition and the selection of novelty type of business model. In Model 15, the

coefficient of the regression result of tailor-made advantage after transition to novelty type of business model is significant (regression coefficient in M15 is 0.024 ( $p > 0.1$ )). Due to independent regression coefficient is significantly different from 0, and M20 provides similar result, in Model 19, the coefficient of the regression result of flexibility advantage after transition to novelty type of business model is also significant (regression coefficient in M20 is 0.003 ( $p > 0.1$ )), indicating that if the competitive advantage in tailor-made has improved significantly after transition, then the enterprise will effectively promote the development of business models that are relevant to tailor-made type.

The influence of efficiency type of business model brought by the change of difference in tailor-made in Comparison Table 4-5, the research finds out that the change of the difference in tailor-made will give impetus to the enterprise to have the tendency of selecting efficiency type of business model move effectively, which is exactly opposite to the existed research, therefore, Hypothesis 11 gets reversely verified.

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Table 4-5 Change in the Source of Enterprise Competitive Advantage & Standard Regression Model Chosen by Efficiency Type of Business Model

Variables	Efficiency type of business model after transition									
	N=92 (non-balanced samples will be deleted automatically)									
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
Controlled variables										
Type of enterprise	-.022	-.023	-.052	-.021	.019	-.080	-.075	-.114	-.058	-.035
Scale of enterprise	.159	.168 <sup>+</sup>	.071	.113	.125	.219 <sup>+</sup>	.191	.099	.132	.175
Listed	.056	-.083	-.071	-.081	-.075	.100	-.006	.016	-.013	.015
Degree of Electronic	-.346**	-.235**	-.209	-.191**	-.194**	-.359**	-.333**	-.298**	-.281**	-.292**
Year of Establishment	-.139	-.075	-.037	-.021	-.065	-.139	-.049	-.132	-.058	-.129
Core theoretical construct										
Efficiency type before transition		.518***	0.541***	.565***	.581***					
Novelty type before transition							.381***	.439***	.465***	.490***
Difference in speed			0.257**					.351**		
Difference in flexibility				0.244**					0.300**	
Difference in tailor-made					.286**					.360**
R <sup>2</sup>	0.177	0.417	0.471	0.467	0.489	0.172	0.305	0.401	0.380	0.408
D-R2	0.177	0.240	0.295	0.290	0.312	0.172	0.133	0.229	0.208	0.236

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A-R <sup>2</sup>	0.114	0.363	0.414	0.409	0.433	0.109	0.241	0.335	0.312	0.343
F	2.836	26.752	17.833	17.440	19.569	2.745	12.440	12.217	10.730	12.741
Df	(5,66)	(1,65)	(2,64)	(2,64)	(2,64)	(5,66)	(1,65)	(2,64)	(2,64)	(2,64)
P(F)	0.022	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.000

PS: Analysis adopted Spss16.0 + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

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Table 4-6 Change in the Source of Enterprise Competitive Advantage & Standard Regression Model Chosen by Novelty Type of Business Model

Variables	Novelty type of business model after transition										
	N=92 (non-balanced samples will be deleted automatically)										
	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	
Controlled variables											
Type of enterprise	-.124	-.146	-.178	-.150	-.143	-.189	-.168	-.195	-.154	-.164	
Scale of enterprise	-.095	-.086	-.179	-.144	-.090	-.032	-.049	-.110	-.093	-.050	
Listed	.068	.008	.013	.006	.008	.116	-.010	.013	-.008	-.008	
Degree of Electronic	.001	.015	.039	.057	.018	-.013	.078	.102	.123	.082	
Year of establishment	-.157	-.100	-.053	-.029	-.098	-.146	-.091	-.156	-.109	-.099	
Core theoretical construct											
Novelty Type before transform		.288**	0.348**	.377**	.297**						
Efficiency type before transition							.406**	.417**	.443***	.412**	
Difference in speed			0.249*					.242*			
Difference in flexibility				.265**					.238**		



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Difference in tailor-made					.024					.003	
R <sup>2</sup>	0.061	0.137	0.185	0.191	0.137	0.053	0.200	0.247	0.250	0.201	
D-R <sup>2</sup>	0.061	0.076	0.124	0.130	0.076	0.053	0.148	0.165	0.198	0.148	
A-R <sup>2</sup>	-0.010	0.057	0.096	0.103	0.043	-0.019	0.127	0.194	0.168	0.114	
F	0.855	5.721	4.889	5.152	2.836	0.734	8.267	8.267	8.442	5.947	
Df	(5,66)	(1,65)	(2,64)	(2,64)	(2,64)	(5,66)	(1,65)	(2,64)	(2,64)	(2,64)	
P(F)	0.516	0.020	0.011	0.008	0.066	0.601	0.001	0.001	0.001	0.004	

PS: Analysis adopted Spss16.0 + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

## **4.2.2 Discussion**

### **4.2.2.1 Business Model before Transition & Selection of Business Model**

This research believes that for NE that uses different type of business models, it is more likely that it will still adopt its original type of business model in the future. For instance, for NE that initially adopted efficiency type of business model, during the research, it not only indicates that it will have direct influence on the future efficiency type of business model, but direct influence on the future design of novelty type of business model. Under such condition, the research makes comparison of influence of efficiency type of business model before transition on efficiency and novelty types of business model in the future, the result shows that the efficiency type of business model will be more likely to select the design for efficiency type of business model. However, in comparison, if design of novelty type of business model adopted before transition, then after transition, there will not be much difference between efficiency and novelty types of business model. The research suggests that the main reason for this is that enterprise adopts efficiency type of business model has relatively higher qualification in operation which can be easily transferred to the business model after transition, for instance, after the application of IT, it will enable the newspaper industry to get further improved in the operation in efficiency. Therefore, for the NE with high efficiency, it will expand itself in novelty type, but its advantage will allow it to further optimize in efficiency type of business model. While to those NEs that adopt the novelty type of business, under the background of transition to informatization, the resources, information and partners that the NE can acquire will be improved greatly, however, if output expected, the enterprise must better allocate the relevant new resources, under the circumstances of the transition to IT-based media for the NE, if it can integrate new resources of new media in IT, brand-new competitive advantage will be gained. Based on this, for traditional NE that adopts novelty type of business model, under the background of transition to new media based on IT, the ability of adopting either efficiency or novelty type of business model has been improved.

### **4.2.2.2 Change of Source of Competitive Advantage & Selection of Business Model after Transition**

To NE with different sources of competitive advantages, under the background of transition to multimedia, the change for the elements of competitive advantages will have great influence on the selection of the business model for NE. As shown in the research, under the circumstances that the speed advantage of NE itself has been improved greatly, its selection of both efficiency and novelty type of business model will be greatly improved, while under the circumstances that the flexibility advantage of NE itself has been improved greatly, under the background of new media transition based on IT, the selection of adopting both efficiency and novelty type of business model for NE will also be improved significantly, indicating regardless of the change in either speed or flexibility advantage, under the circumstance of transition of new media based on IT, the ability and probabilities of adopting both efficiency and novelty type of business model have been improved, thanks to the unique advantage of new media based on IT. Therefore, the ability for the NE to adopt either efficiency and novelty type of business have been greatly improved transition of NE based on new media of IT under the background of transition to new media based on IT. The empirical results show that with the improvement of speed and flexibility advantages of NE, there is no significant difference between the probability of adopting efficiency and novelty types of business model for the new media based on IT after transition. However, with the improvement of tailor-made difference, under the circumstance of transition to new media based on IT, NE will not overuse the novelty type of business model, but efficiency type of business model more often. It is rational to some extent, along with the improvement of the ability of tailor-made, the priority for NE is how to make high-valued tailor-made products come into being with small quantity demand. Under such circumstance, the competition between NE and its peers will be improved effectively via integrating current resources. Comparatively speaking, if advantages in speed and flexibility of NE get improved, the speed of commodity exchange, methods of accessing new resources, new partners as well as new cooperation and collaboration will be improved significantly, under such circumstance, NE will make substantial investment to both efficiency and novelty types of business model.

Table 4-7 Summary of the Hypothesis Test results of Competitive Advantage Elements on Business Model Selection

Hypothesis No.	Content of Hypothesis	Verification
<b>Hypothesis 7</b>	If traditional NE adopts efficiency type of business model, under the background of transition to IT, omni media NE will be more likely to adopt the same business model.	<b>Verified</b>
<b>Hypothesis 8</b>	If traditional NE adopts novelty type of business model, under the background of transition to IT, omni media NE will be more likely to adopt the same business model.	<b>Not verified</b>
<b>Hypothesis 9</b>	With the improvement of speed difference, if traditional NE adopts efficiency type of business model, under the background of transition to IT, omni media NE will be more likely to adopt novelty type of business model.	<b>Not verified</b>
<b>Hypothesis 10</b>	With the improvement of flexibility difference, if traditional NE adopts novelty type of business model, under the background of transition to IT, omni media NE will be more likely to adopt efficiency type of business model.	<b>Not verified</b>
<b>Hypothesis 11</b>	With the improvement of flexibility difference, if traditional NE adopts novelty type of business model, under the background of transition to IT, omni media NE will be more likely to adopt efficiency type of business model.	<b>Verified reversely</b>

### 4.2.3 Summary

It is found in this research that the change of different elements of competitive advantage no matter before or after transition can have direct and significant influence on the selection of business model of NE. For instance, the change of ability differences in speed and flexibility both have direct influence on efficiency and novelty types of business model, while the improvement of the ability of tailor-made has a direct and significant influence on

efficiency type of business model. In general, the research finds out the more obvious of competitive advantages of various elements, the more improvement of demanding efficiency type of business model of NE will be. However, this kind of tendency is not absolute; for instance, NE with high degree of tailor-made, under the circumstance of transition to new media based on IT, new NE with competitive advantage will enhance itself to adopt efficiency type of business model more often.

At the same time, the research also indicates that for NE that own different types of business model, under the circumstance of transition to new media, it will remain its business model at a large extent. For instance, NE with efficiency type of business model under the circumstance of transition to new media based on IT, will be more inclined to adopt the same type of business model; while NE with novelty type of business model under the circumstance of transition to new media based on IT, will also adopt efficiency type of business model to a certain degree while keeping application of novelty type of business model. Advantages in speed, flexibility and tailor-made are with fundamental value in construction of business model during commercial development.



## Chapter 5 Conclusion

In this chapter, we will summarize the main research conclusions and important contributions, analyze the main innovation of the study, outline enlightenments in practice and theory by writing of this thesis, and finally discuss the shortfalls and limitations as well as look forward to the future.

### 5.1 Main Conclusions

This study uses the formation of competitive advantage of the NE to analyze the change of selection of business model of NE during its transition. The study points out that no matter what type of NE it might be, the core element resources of the competitive advantage formed during the process of the development of the enterprise including respond speed in the market, respond flexibility to the market, and degree of tailor-made per unique requirements from the customers based on the basic research of formation source of the competitive advantage of modern NE. Per different competitive advantages in certain field of the enterprise itself, it will make special design of business model on the corresponded basis. That is, based on the speed and flexibility advantage as well as degree of the tailor-made of the enterprise, the enterprise will be more likely to choose the design of efficiency type and novelty type for its new business model. Research indicates that the relevant basic elements of competitive advantage have played an active role in the formation of the business model of the enterprise. While the change of the relevant basic competitive advantages, also promote the adjustment of the business model of the enterprise.

1) Omni media transition is a must trend for the NE.

The omni transition of the newspaper is an integrated product of media, a product of IT development, media digitalized evolution is the logic starting point of omni transition.

2) Competitive advantage element of the NE serves as an important basis of forming different business models.

Different from the previous studies, this study suggests that the NE needs to choose its

own business model instead of the network structure of the NE, this is because relatively unique advantage exists in the relevant competitive advantage of the NE itself. Based on the relevant basic advantage, it enables the enterprise to combine relevant element resources effectively to construct business model that can further give full play to the relevant element with monopoly advantage. Based on this, relevant analysis has been made for the change of the business model design during the process of transition from traditional media to new media based on IT, the result of the research shows that speed, flexibility and tailor-made will have unique influence to different business models. However, difference does exist in its mechanism. For instance, enterprise with relatively obvious competitive advantage in speed, flexibility and tailor-made will be more likely to adopt novelty type of business model, especially new media based on IT, this element has more influence on the selection of business model of the enterprise. Comparatively speaking, the novelty type of business model, enterprise with strong competitive elements will have less influence on the selection of efficiency type of business model.

3) Change in basic elements of competitive advantages will bring the evolution of business model

The study believes that after transition (NE) to informatization, the relevant elements of the competitive advantage will change, and the change is an important basis that leads the enterprise to reform its business model. That is, the study believes that change of the elements of competitive advantage includes difference in speed change, flexibility change and degree in tailor-made. To be specific, the study has found out that after transition to multimedia, great improvement has been made in speed as competitive advantage; the enterprise will put more efforts on both efficiency and novelty types of business model. While under the circumstances that great improvement has been made in flexibility, the enterprise will also put more efforts on both efficiency and novelty types of business model. However, if under the circumstance that tailor-made has been greatly improved, more efforts will be made to the improvement of efficiency type of business model. This indicates that to some extent, change in different types of competitive advantage elements will have influence on the selection and change of the business model, and this influence, at a great extent, will decide the ability and resources that



the enterprise is going to have in the future.

Meanwhile, the study shows that to different enterprises, the selection of the business model is comprehensive, especially when the enterprise has some unique advantage in certain field, it will promote the construction of the mixed business model, i.e. not only the commodity exchange system needs to be in high efficiency and speed, but new products, new network should be launched from time to time. As a matter of fact, under the background of IT, the competition of this model has become more and more obvious.

#### 4) Formation of business model has its specific path dependence

The study also finds out that the formation of the business model of the NE will be determined by the business model adopted in its earlier stage. This, at a large extent, will depend upon the resources that the enterprise owns, general speaking, as to the newspaper that has competitive advantage in traditional field will bring relevant elements to the social system with information and multimedia. This study also indicates that to those enterprises that adopted efficiency type of business model during their early stage, it is more likely for them to adopt the same business model during the transition in the future. While as to the enterprise with novelty type of business model, under the background of transition to multimedia, the newspaper will enhance its adoption of design of efficiency type of business model. This study believes that under the circumstance of multimedia, the newspaper can gain more new resources and new information, the newspaper is facing the challenge of how to effectively reintegrate the resources and information to create its unique advantage. Therefore, the study thinks that during the process of transition, the design of business model before transition will play an active role in the design of the business model in the future.

## 5.2 Main Contributions

Innovations of the thesis are as below:

1) Research on the mechanism of omni transition of newspaper business model to construct general theory model for the first time.

After analyzing the mechanism of omni media transition of newspaper based on IT,

analysis and comparison have been made before and after transition, general theory model has been constructed. It suggested creative theory of omni media transition, i.e. omni integration does not mean traditional media melt away new media or new media gobble up the traditional media, instead, it means matrix integration. Integration is theory, mentality, content and technology, we do as to make adjustment and interactions, we pursue recreation and win-win. At the same time, we propose the development mechanism of omni media transition of the newspaper as well as the probe and research of its development trend of the business model after transition.

2) Take relevant elements of competitive advantages as important basis for the structure of business model

Research points out that during the process of the development of the newspaper, the construct of the business model is not originated from the position of the commercial network that the newspaper is in, but largely based on the unique resources that has been constructed during the its process of development. i.e. based on competitive advantages with high speed, flexibility advantage with quick respond, and individual service ability with high degree of tailor-made. Based on different types of basic abilities, omni NE will conduct different types of designs of business model to improve relevant element value with high efficiency and the ability to improve overall configuration.

3) Angle tie between design of business models and the changing process of elements of competitive advantages

The study indicates that during the design process of business model of the NE, the change of elements of different types of competitive advantage will change the design of the business model. Essentially speaking, the design of competitive advantage of NE is comprehensive, with constant adjustment carried out based on certain elements of competitive advantage. General speaking, the change of advantage in speed, flexibility and tailor-made can all lead to the adjustment of efficiency and novelty types of business model in NE, but in practice, the NE will make more adjustments in efficiency.

### **5.3 Practical Implication**

1) Omni media transition based on IT is a great attempt, customers, partners, competitors and stakeholders are all together to create a new value network system, NE needs to reorient itself in this new value chain, and its business model will also be reconstructed. At the same time, the models of profit, channel, marketing, branding of the omni media also need readjustment.

2) The design of business models in supporting the NE itself needs to be based on the competitive advantages owned by itself. That's to say, during the process of the development of NE, first, enterprises should expand their abilities in terms of speed, flexibility or tailor-made; meanwhile, based on the formation sources of their own competitive advantages, NE should further use its own competitive advantage to build relevant business models that are suitable for continuous expansion, and this will enable the enterprises to have long-term sustainable competitive advantages during their future development.

3) Moreover, there is a certain law between the formation of elements of competitive advantages of NE and the evolution of business models. During the development of NE, business models need to be designed from the aspect of corresponding commercial advantage of resources. During the process of development, competitive advantages of NE may be constantly changing, therefore, along with the changes of basic elements of corresponding competitive advantages, NE should also constantly adjust the corresponding business models.

## **5.4 Study of Limitations and Prospects**

### **1) Limitations and Prospects**

Despite certain value exists in practice and theory, this study has shortfalls in the following aspects which needs further enhancement.

First, the shortfall during the research of this thesis is that the samples are simple, for instance, during the process of the study, the questionnaire was done only by the acquaintances, meaning there might be errors in sample collecting. Nevertheless, based on the limitation of the study, the objects of the study are mainly media enterprises, and at the same time multimedia transition experience is required for the relevant media enterprises,

therefore, the selection of the samples becomes narrow at some extent. And this requires quantity; channels for the hand-out as well as improvement of diversity of questionnaire can be further developed in the future. Meanwhile, the volume of questionnaire distribution is expected to be more, due to the restriction of hand-out channels and objects, samples are relatively small in total, hopefully the current resources will be better used to get more resources for the questionnaire to better analyze the practical problems in the future time.

Moreover, under the current background of economic development, enterprise itself in most cases adopt mixed type of design of business model, compared to the enterprise under traditional (non-multimedia) environment, there are more integration and overlapping in the application of efficiency, new clients' development, acquisition of new resources done by the enterprises. Under such circumstances, relevant variables developed by this study based on the traditional theory will be somewhat limited in the current manufacturing situation. Especially under the current background, there may be considerable overlapping between the formation of efficiency and novelty types of business models.

Under such circumstances, how to effectively promote the development of scales of business models which have a high degree of differentiation and can measure the unique operation models of the enterprise will have of higher practical guidance value for understanding the development of the enterprises in the future.

Last but not at least, during the analytical process of the study, research variables were mainly obtained by way of subjective ratings. In such case, a high correlation will be formed between the relevant variables, and this can lead to a higher possibility of multicollinearity. In the future study, it is hoped that objective data analysis methods will be introduced to examine the design of business models of the enterprises to reduce errors caused by subjective ratings.

The research of business model transition of omni media is a long and hard process, because until now, the practice of omni media transition of global newspapers based on IT cannot be described as matured. For instance, payment to online version of New York Times whose revenue is more than its advertisement. West China City Daily yields benefit from sailing its copyright as well as launch Live via APP of mobile news. Zhejiang Daily gets its benefit by going into cultural and sports industry like mobile game, whose avenue increases a

lot while the revenue of advertisement and issue drop greatly. Though partial victory, it has brought hope to the newspaper in its future development.

Therefore, transition development of omni media is the only way for the traditional NE to get reborn. As a long-term important carrier for human beings to acquire information, newspaper, no matter from which angle --- internal strength, external condition, personnel quality, branding influence, it has is unique advantage in omni media transition. However, the success of the transition depends on whether the traditional NE will shift its advantage to path, further enhance its advantage to realize the omni media transition taking newspaper resources as a core. As a matter of fact, the development of IT, update of mobile new technology is providing a golden opportunity for the newspaper to break the ice and realize renaissance. Because the core of media --- credibility resources are firmly in the hand of the newspaper. Just like *The Americans and Their News* (Leonard Junior Dooney, Robert G Kaiser 2012) mentioned, “if there is no newspaper, news world will be more like an elegant caravan without engine. “



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## Annexes

### Appendix 1: Questionnaire and Its Result for Semi-Structural Interview

This interview is about the study about transformation for newspapers from traditional media industry to omni media, and the analysis of its commercial model mechanism after its transformation. The interviewees include the relevant media executive, operations and business staff particularly in newspaper industry. Thanks for your answering below questions.

From September 2015 to March 2016, I carried out face-to-face interviews to the heads of 25 newspapers and experts and scholars on “Omni Media Transformation” in succession by taking the opportunities of business trips and meetings. Excerpts of some opinions are as follows:

#### **Question 1: What do you think of the “Omni Media Transformation” of newspapers?**

**Hu Huaifu, deputy secretary general of China Newspaper Association:** Newspapers have already stepped into the new age of “full-domain, full-time and Omni Media”, and integrated development has become an inevitable choice and new development mission of transformational development. System and mechanism are the internal power and source for newspapers to achieve their sustainable and rapid development. If the system and mechanism were flexible and advanced, newspapers would be full of vitality and energy; if the system and mechanism were backward and rigid, the development process of newspapers would be full of barriers.

**Shi Feng, president of Xinjiang Metropolitan Daily:** “Omni Media Integration” is a multiple concept, meaning the convergence of contents, the convergence of different platforms, or the convergence of all techniques centering around products.

**Peng Lan, professor of School of Journalism of RenMin University of China:** Omni Media convergence refers to the convergence process of human wisdom and machine capacity. The power of machines is mainly embodied through big-data technology, including data collection and data analysis. Although machines have considerably promoted the

efficiency of news collection, machines cannot replace media personnel at any time, while media personnel proficient in applying machines are more irreplaceable. Media convergence is not a fixed goal, but a process. Everything would be possible.

**Prof. Zhang Liwei, head of News Communication Research Institute of Academy of Social Sciences of Sichuan Province:** If newspapers and networks did not cooperate with each other, both would lose in the game. Cooperation in the absence of competition would make loss already a fact. We should choose to whom to sell different reorganized databases and to whom not to sell them, sell the contents in a retail way, and rebuild the game rules of newspapers and networks, so that cooperation and competition can exist together. We can achieve integrated development only through the advantage complementation between new and old media.

**Zhang Zhi'an, dean of School of Communication and Design of Sun Yat-Sen University:** With regarding to the convergence transformation of city dailies, we should change the traditional concept of “focus on content”. Our measurement of whether they are valuable is no longer limited to news or information, but involves idea, service and users. Where are users? Both the fans and local readers of mobile customer terminals play a major part.

**Wang Wenjian, chief editor of Yangtze Evening Post:** In the age of the intensive development of new media, the past glory of the traditional press has gone far away from us. Today, we are all in a brand-new state. We must learn how to adapt to and actively respond to the new normal state. For this purpose, we must fully integrate resources, carry out omni media convergence desirably, and exchange the development of chemical reaction for the leapfrog of transformation.

## **Question 2: What are the approaches to Omni Media transformation of newspapers?**

**Zhu Xuedong, assistant of president of Beijing News:** With regarding to the integrated development of media in the age of e-commerce and the age of big data, it is very difficult for traditional media to integrate themselves. The only breakthrough lies in innovation, because the thinking and consuming habits and expression means in the age of e-commerce and the age of big data are completely different. The rapid development of technology has already

opened a lot of space of imagination for media. How to jump out of the familiar approaches, in my opinion, is the breakthrough that must be made for media under the new normal state.

**Huang Ping, vice-president of Chongqing Daily Press Group:** Information is a rigid demand. Once the people's demand exists, media as content providers would not vanish. Traditional media and emerging media are not irreconcilable opposite sides; they must choose the road of integrated development. In terms of the approaches of integrated development, we should: 1) break technical barriers; 2) reorganize the internal organization structure; 3) rebuild the operation system.

**Liu Zuyuan, president and chief editor of Chongqing Times Office:** Three stages have been gone through for traditional media to embrace the Internet. Stage 1 was focused on "how to observe the Internet", namely: observing the Internet from the perspective of traditional media; Stage 2 was focused on "how to think with the help of the Internet". At this stage, almost all traditional media had the experience of omni media. Stage 3 is the stage of convergence that we are now exploring. Media are required to know how to integrate existing resources and the Internet, forming a greater advantage.

**Qi Huaiwen, chief editor of The Daily News:** City dailies never lack innovative genes. In the past, news was counted by day. Now, it was counted by second. As traditional media, city dailies must study the features of dissemination of new media, and actively achieve integrated development with new media by using new technology and concepts.

**Shang Lin, chief editor of South China Metropolitan Post:** In the past 20 years, city dailies have started press economy as the mainstream of press. Nowadays, the press is adapting to the new normal state at a new stage. Subject to the influence of the Internet, along with the press reform, the means of dissemination, the profit mode and the organization structure have also been changing accordingly. New media and convergence are the development approaches that the press is now exploring. Although the exploration has been going on for several years, the press is still at the initial stage of transformation. Even European and American press does not have a very mature mode.

**Du Shaoling, chief editor of Kunming Evening News:** Media convergence is an inevitable trend. We need to solve three major problems at present: 1) The problem of

continuous hematopoiesis; 2) Identifying the subject of integration; 3) Selecting a suitable object of integration. Mature media need to treat the integrated development of media in a self-centered way. We are required to maintain a strong zeal, remain calm, adopt resolute strategies and carefully-chosen tactics, and maintain self-confidence and courage.

**Question 3: How to carry out the omni media transformation of newspapers?**

**Cao Feng, general manager of West China City Daily:** The omni media transformation layout and creation of West China City Daily began in 2011. So far, the cluster of West China media has already come into being, centering around West China City Daily, and including four paper media: Tianfu Morning Paper, West China Metropolitan Reader and West China Community Paper. In 2015, Cover Media, a mobile Internet platform with national Class-1 news qualification, was created in cooperation with Alibaba. In addition, there is a new media matrix of 27 units, including West China Metropolitan Network, the microblog, WeChat and news customer terminals of West China City Daily, Chengdu Style and Tianfu Technology. Plus, West China Community Outdoor Media, Logistics Company, Advertising Company, Investment Company, etc., a powerful omni media platform has come into being.

**Zhang Ruhai, executive deputy chief editor of Chutian City Newspaper:** Excellent information is released via new media immediately. In the process of transformation to digital media, Chutian City Newspaper uses new technology and new media, promotes the timeliness and closeness of major reports, typical reports, emergency reports and other reports, and seizes the consensus positions of new media. In addition, by analyzing reader databases, Chutian City Newspaper launches its products per reader demands.

**Cao Ke, president of Southern City System:** The connotation of e-commerce is “using the Internet techniques for marketing and transactions”. Media should be an important link on the value chain of e-commerce. With the help of the e-commerce cooperation with Alibaba, West China City Daily has selected and matched 10 e-commerce bases in Sichuan Province, which is a very significant new exploration. In the past, a core product manufactured by the entire Southern City System is Southern Urban Daily. In the future, we hope that the entire omni media content production of Southern City can meet the production demand of Mobile Internet. The network-undertaking function of the paper should exceed that of the present



Urban Daily, forming a higher-level and richer form of omni media products.

**Wang Zihe, president of Dahe Newspaper Office:** In the process of exploring the integrated development of media, we put forward the development philosophy of “mutual convergence and fan”, namely, during the integrated development of media, we should break the internal and external mechanism barriers and share resources per the “people-oriented” principle, and from the perspective of users. In terms of mutual integration, we have opened the dissemination media, system and mechanism inside the newspaper office. In terms of mutual fan, we have set up a self-media platform for a dialogue with users on an equal footing, to meet user demand and achieve co-prosperity and win-win situation with readers, users and customers.

**Lan Hai, chief editor and general manager of Qi Lu Evening News:** The newspaper-network integrated development mentioned by insiders in the contemporary times refers to a channel and method of press transformation. The most important thing for press is returning to the user age and the reader age. Newspapers can also use e-commerce to serve readers and create more value.

**Chen Lei, chief editor of Baidu News:** In December 2013, Baidu launched Baidu Baijia, covering more than 300 authors in the field of scientific and technological Internet, half of whom originated from professional reporters and editors of traditional media. So far, Baidu Baijia has issued profit of RMB 11 million to authors. The success or failure of media convergence lies in the ratio between input and output. If a type of convergence attempt cannot bring a healthy profit, this would mean its failure. Media convergence has brought both challenges and opportunities to traditional media.

**Li Gao, chief editor of Qianjiang Evening News:** Media convergence does not refer to the independence and non-crossing between newspapers and networks. It should be a solid communication institution including newspapers, PC and mobile equipment, aiming at creating a service platform, building a new profit model of news, creating a solid capital platform based on newspapers and encompassing websites and mobile platforms; and opening the capital channel.

**Chen Jun, chief editor of Tibet Business News:** With their own brand influence, media

intensively participate in regional economy and enjoy natural advantage in creating e-commerce platforms. This year, Tibet Business News also conforms to the times, seeks for transformation, endeavors to set up an e-commerce platform that suits local characteristics, and spreads the specialties and natural resources of Tibet to other parts of China. This e-commerce platform will be a key project of Tibet Business News next year, aiming at diversified operation incomes.

**Guan Hong, president of Chongqing Daily Newspaper Office and Chongqing Press Association:** The first thing for the integrated development of Chongqing Daily Press Group is to accelerate the construction of the communication platform, which is a foundation for the integrated development of media. The next thing is to accelerate the website construction based on the construction of media array, to enrich the communication forms of traditional media through these newspaper networks. Integrated development cannot do without technical guidance and support. Therefore, in our opinion, the construction of technical platform and the convergence of multi-media technology are the crucial factors for the integrated development of media. The group is building a center of news media communication and a platform of technical support. The 24-hour communication and the coordinated release of omni media must be supported by a technical platform. Therefore, we must set up it despite any difficulty. The reinforcement of strength, the sustainable development and the reinforcement of hematopoietic function are very important standards for measuring the success of integrated development to a certain extent. In the case of integrated development, we cannot abandon our main business, especially our main operating business. Second, we should extend our industrial chain. For example, we can connect release with e-commerce, and we should not only print newspapers, but also expand commercial printing. The innovative mechanism is the guarantee of integrated development. We should reinforce the convergence of content resources and reduce internal homogeneous competition. In terms of news, our group enforces omni media assessment of collection and edition, and all reporters release news via microblog, WeChat and website.

**Chen Pengyu, chief editor of Guizhou City Daily:** How to convert influence into productivity? How to directly convert influence into economic efficiency? To achieve

convergence and leapfrog, we must cross the boundary and cross the new boundary with new sectors, new fields and new areas. For example, a lot of media operate real estate, hotel, etc. We will also carry out relevant convergence with the help of the advantageous sectors and industries of Guizhou Province, e.g. tea, alcoholic drinks and tourism. By promoting media influence, such sectors can produce added value to the entire marketing and increase added profit through integration.

**Wang Liandi, deputy general manager of China New Publication Media Group:**

The newspaper-network interaction and the newspaper-network linkage mentioned by you are yet to be reinforced, in my opinion. Along with the development of Internet and mobile terminals, the news reading means of people have changed thoroughly. Paper media can keep up with the market only based on full convergence with new media. Some leading domestic city media have already been exploring “central kitchens”, considering newspaper-network interaction as the whole, and providing news products of different tastes per the demands of different audience. There are relevant cases in foreign countries. Some media groups sold the same news release 7 times in terms of different emphases, intensively tapping its benefit.

**Du Shaoling, chief editor of Kunming Evening News:** A medium cannot take the place of another. We have set up Kunming New Media Operation Center, and we attach importance to resource innovation and encourage personal creation in the sectors of microblog and WeChat. How to realize sustainable profit? The accumulation of users is a very tough process. Although the user base is large, the drain of users is also large. After users are accumulated to a certain quantity, we should consider how to turn them into economic resources and yield sustainable profit. In terms of the media history, nothing new can completely take the place of another type of media. The same goes for newspapers and advertising. To achieve sincerity in operation service, every traditional medium has its space for existence. To return to the essence of news in information delivery, every news medium has its value of existence and integration. Therefore, we will try to join “media convergence”, and we will not lose our confidence in newspapers.

**Li Huimin, vice-president of School of News and Communication of Lanzhou University:** We should use Internet thoughts to meet the demand of different audience. The

all-round emergence of Internet new media and the rapid popularization of mobile terminals impact the survival of traditional media. The question of media convergence was proposed several years ago, and some Western countries are now in the phase of transformation. There are both successful experience and failure lessons. However, no good model has yet been established. At present, the structure, demand interest and reading means of the audience are changing. Therefore, city media have begun to ponder over the change of the production mode of media and the change of content generation. In the opinion of some media, digital media should be a type of crowd-funding production, and the author team should adapt to their richness and pertinence. In the past, a newspaper was issued in hundreds of thousands of copies. Today, the number of audience may reach tens of millions. Some readers are fond of extensive reading, while some are fond of intensive reading. Readers have different reading interests. Therefore, the authors should try to meet the demand of different audience per “Internet thoughts”.

## Appendix 2: Survey Instrument

Dear Madam / Sir,

This questionnaire is about the study of business model selection for newspaper commercial enterprises which analyzes the current understanding towards the business development of newspaper enterprises. It will take you around 30 minutes to complete this questionnaire. It would be much appreciated if you would consistently answer all questions as follows.

- The name of your company (organization, entity): \_\_\_\_\_
- The name of your department: \_\_\_\_\_

**Part I: Basic information (please fill your information in corresponding blanks or mark the corresponding “[number]” with a mark of “√” )**

1	Gender : [1] male; [2] female
2	Age : [1] 20; [2]21-25; [3]26-30; [4]31-35
3	Type of your company: [1] SOE(state-owned enterprise) [2] POC(private-owned company) [3] Foreign-funded enterprise [4] Others

4	The company (organization, entity) was founded in _____
5	The staff number of your company (organization, entity): _____
6	The average revenue (in RMB) of your company (organization, entity) in recent 2 years: [1] < 5 million                      [2] 5 million – 30 million [3] 30 million – 300 million        [4] > 300 million
7	Is it a listed company? [1] yes [2] no
8	The location of your company (organization, entity):
9	The percentage of E-business in total revenue of your company (organization, entity): [1] <10%    [2] 10%-30%    [3]30%-50%    [4] >50%

**Part II: Please mark the corresponding “[number]” with a mark of “√” by relevance.**

<b>Scoring Range:</b> <b>1: we do not have such item or totally disagree.</b> <b>4: we uphold a neutral view.</b> <b>7: we absolutely agree with it or we have everything in place.</b>		<b>Relevance:</b> <b>1(Low)-----7(high)</b>						
<b>Before the transition of all-media, in the transaction process of traditional media industry:</b>								
Efficiency	Does the transaction reduce the cost of partners? (Include the cost of inventory, communication, transaction process and sale, etc.)	1	2	3	4	5	6	7
	Whether the costumers regard it as a convenient process?	1	2	3	4	5	6	7
	Does the transaction have expandability (For instance, the process of transactions can be conducted on both large and small scale simultaneously.)?	1	2	3	4	5	6	7
	Does the transaction help partners to make wise decisions?	1	2	3	4	5	6	7
	Is the transaction process transparent enough (in which the information, the service and the use and delivery of products can be verified)?	1	2	3	4	5	6	7
	Does the company have enough information to share with its partners to reduce information asymmetry?	1	2	3	4	5	6	7
	Does your company have enough information of the products, the services and other partners?	1	2	3	4	5	6	7
	Does your company have the abilities to conduct a fast transaction?	1	2	3	4	5	6	7
<b>Before the transition of all-media, in the transaction process of traditional media industry:</b>								
Innovation	Does your company conduct transactions in an innovative way?	1	2	3	4	5	6	7
	Does your company make inventions in this business model?	1	2	3	4	5	6	7
	Does your company have various partners and products?	1	2	3	4	5	6	7

	Does your company incent your partners through innovative way in transactions?	1	2	3	4	5	6	7
	Does innovation bring about new partners?	1	2	3	4	5	6	7
	Have your company already accomplished the integration of products, information and services?	1	2	3	4	5	6	7

**Part III: Please mark the corresponding “[number]” with a mark of “√” by relevance.**

<b>Scoring Range:</b>								
<b>1: we do not have such item or totally disagree.</b>		<b>Relevance:</b>						
<b>4: we uphold a neutral view.</b>		<b>1(Low)-----7(high)</b>						
<b>7: we absolutely agree with it or we have everything in place.</b>								
<b>After the transition of all-media, in the transaction process of traditional media industry:</b>								
Efficiency	Does the transaction reduce the cost of partners? (Include the cost of inventory, communication, transaction process, and sale, etc.)	1	2	3	4	5	6	7
	Whether the costumers regard it as a convenient process?	1	2	3	4	5	6	7
	Does the transaction have expandability (For instance, the process of transactions can be conducted on both large and small scale simultaneously.)?	1	2	3	4	5	6	7
	Does the transaction help partners to make wise decisions?	1	2	3	4	5	6	7
	Is the transaction process transparent (in which the information, the service and the use and delivery of products can be verified)?	1	2	3	4	5	6	7
	Does the company have enough information to share with its partners to reduce information asymmetry?	1	2	3	4	5	6	7
	Does your company have enough information of the products, the services and other partners?	1	2	3	4	5	6	7
	Does your company have the abilities to conduct a fast transaction?	1	2	3	4	5	6	7
<b>After the transition of all-media, in the transaction process of traditional media industry:</b>								
Innovation	Does your company conduct transactions in an innovative way?	1	2	3	4	5	6	7
	Does your company make inventions in this business model?	1	2	3	4	5	6	7
	Does your company have various partners and products?	1	2	3	4	5	6	7
	Does your company incent your partners through innovative way in transactions?	1	2	3	4	5	6	7
	Does innovation bring about new partners?	1	2	3	4	5	6	7
	Have your company already accomplished the integration of	1	2	3	4	5	6	7

	products, information and services?								
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**Part IV: Please mark the corresponding “[number]” with a mark of “√” by relevance.**

<b>Scoring Range:</b> <b>1: we do not have such item or totally disagree.</b> <b>4: we uphold a neutral view.</b> <b>7: we absolutely agree with it or we have everything in place.</b>		<b>Relevance:</b> <b>1(Low)-----7(high)</b>								
<b>Before the transition of all-media, compared with other company, the advantages of your company lie in:</b>										
Speed	The transmission speed of information	1	2	3	4	5	6	7		
	The update speed of information	1	2	3	4	5	6	7		
	The feedback speed of information	1	2	3	4	5	6	7		
	The length of update period of new products	1	2	3	4	5	6	7		
	The transmission speed of new products	1	2	3	4	5	6	7		
	The life circle of your companies’ products is short.	1	2	3	4	5	6	7		
<b>Before the transition of all-media, compared with other company, the advantages of your company lie in:</b>										
Flexibility	The unique design per costumers’ demand	1	2	3	4	5	6	7		
	The personal information push	1	2	3	4	5	6	7		
	The combination of personal products	1	2	3	4	5	6	7		
	The observation on patterns of personal consumption	1	2	3	4	5	6	7		
	The ability to discover those groups with same preference	1	2	3	4	5	6	7		
	The ability to integrate those groups with same preference	1	2	3	4	5	6	7		
	The ability to screen those groups with same preference	1	2	3	4	5	6	7		
	The ability to attract those groups with same preference	1	2	3	4	5	6	7		
<b>Before the transition of all-media, compared with other companies, the advantages of your company lie in:</b>										
Customization	The independence of different units in business	1	2	3	4	5	6	7		
	The ability to split units per business demand	1	2	3	4	5	6	7		
	The ability to integrate units per business demand	1	2	3	4	5	6	7		
	The ability to continue subsidiary business on the condition that the core business has changed	1	2	3	4	5	6	7		
	The ability to re-use the resources in hand which are already out of date	1	2	3	4	5	6	7		

**Part V: Please mark the corresponding “[number]” with a mark of “√” by relevance.**

<b>Scoring Range:</b> <b>1: we do not have such item or totally disagree.</b> <b>4: we uphold a neutral view.</b> <b>7: we absolutely agree with it or we have everything in place.</b>		<b>Relevance:</b> <b>1(Low)-----7(high)</b>						
<b>After the transition of all-media, compared with other company, the advantages of your company lie in:</b>								
Speed	The transmission speed of information	1	2	3	4	5	6	7
	The update speed of information	1	2	3	4	5	6	7
	The feedback speed of information	1	2	3	4	5	6	7
	The length of update period of new products	1	2	3	4	5	6	7
	The transmission speed of new products	1	2	3	4	5	6	7
	The life circle of your companies' products is short.	1	2	3	4	5	6	7
<b>After the transition of all-media, compared with other company, the advantages of your company lie in:</b>								
Flexibility	The unique design per costumers' demand	1	2	3	4	5	6	7
	The personal information push	1	2	3	4	5	6	7
	The combination of personal products	1	2	3	4	5	6	7
	The observation on patterns of personal consumption	1	2	3	4	5	6	7
	The discovery of groups with same preference	1	2	3	4	5	6	7
	The ability to integrate those groups with same preference	1	2	3	4	5	6	7
	The ability to screen those groups with same preference	1	2	3	4	5	6	7
	The ability to attract those groups with same preference	1	2	3	4	5	6	7
<b>After the transition of all-media, compared with other companies, the advantages of your company lie in:</b>								
Customization	The independence of different units in business	1	2	3	4	5	6	7
	The ability to split units per business demand	1	2	3	4	5	6	7
	The ability to integrate units per business demand	1	2	3	4	5	6	7
	The ability to continue subsidiary business on the condition that the core business has changed	1	2	3	4	5	6	7
	The ability to re-use the resources in hand which are already out of date	1	2	3	4	5	6	7

**Part VI: Please mark the corresponding “[number]” with a mark of “√” by relevance.**



Please answer following questions per your company's performance in recent 2 years.		Relevance: 1(Low)-----7(high)						
Company's performance	Compared with related companies, the condition of average growth of your company in recent 2 years.	1	2	3	4	5	6	7
	Compared with related companies, the competitiveness of your company's products in market.	1	2	3	4	5	6	7
	Compared with related companies, the completion of your company's profit target.	1	2	3	4	5	6	7
	Compared with related companies, the profit rate level (before tax) of your company.	1	2	3	4	5	6	7

**Part VII: Please answer following questions with a mark of “√” by relevance per your company's performance in recent 2 years.**

Please answer following questions per your company's external environment.		Relevance: 1(Low)-----7(high)						
Environment's dynamics	Our products are easily to update.	1	2	3	4	5	6	7
	It is hard for us to predict our competitors' move in market.	1	2	3	4	5	6	7
	It is hard for us to forecast the market demand and the preference of our customers.	1	2	3	4	5	6	7
	The update period of our products or process is short.	1	2	3	4	5	6	7
	Our marketing & sales practice always keeps the pace with the market and the move of our competitors.	1	2	3	4	5	6	7

END OF SURVEY -THANK YOU FOR YOUR COOPRATION

Please tick whether you wish to receive a summary of the findings:

1: YES

2: NO

Please indicate the email address to be sent to if you wish to receive a summary of the findings: