ISCTE Business School
Instituto Universitário de Lisboa

Business Model Design Based on Value Chain: The Case of Chengdu SYIMC

FU Meihua

Thesis submitted as partial requirement for the conferral of

Doctor of Management

Supervisor:
Professor Maria Concei ção Santos, Assistant Professor, ISCTE University Institute of Lisbon

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Professor CHEN Xu, Professor, University of Electronic Science and Technology of China, School of Management and Economics

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Declaration

I declare that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university and that to the best of my knowledge it does not contain any material previously published or written by another person except where due reference is made in the text.

Signed Date June 03, 2013.

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Abstract

People’s demand for medical services has risen as the economy keeps developing, though the difficulty of getting medical services still widely exists in China. On the other hand, as China develops its economic strength and international standing, it is becoming necessary for the country to develop as an emerging destination for medical tourism. However, the expenses for construction and operation will no doubt impose serious pressure, especially when solely borne by hospitals and governments. With regard to the aforementioned issue, the Chinese government has made major policy decisions on deepening medical and healthcare system reform. Among them, lowering the threshold for investment for nongovernmental capital in hospitals is a significant policy decision. Chengdu Jiakang Investment and Development Co., Ltd. is attempting to initialize the construction project of Shangyi International Medical Center(SYIMC) in Chengdu by taking the opportunity of allowing social capital to flow into medical and healthcare industry. Nonetheless, the design of business model of the medical center becomes a central issue that enterprises give attention to. Through reference review, analysis on current status, design of business model and other approaches, this thesis works on how to provide a robust business model design for the Chengdu SYIMC.

Firstly, by reviewing and analyzing relevant references concerning business models and value chains, this thesis believes that what the business model reflects is the logic of value creation of the enterprise, hence the consideration for a business model design for the medical center project should be based on the value chains. According to the above concept, this thesis creates a business model design structure based on value chains, and divides the structure into three sections: resource relations, operations and income realization. After that, this thesis adopts the basic steps of business model design to analyze the internal and external environment of SYIMC. Finally, according to results of the above analysis, this thesis provides a design proposal for the business model of SYIMC.

The thesis proposes a business model with separated “Constructor, Manager and User” based on analysis of value chain of SYIMC. The constructor, manager and user should respectively contribute their capital, intelligence and technical strength, according to each one’s advantage. Specially, specialized hospitals are the users . Real estate investors could

provide good equipment and hardware for small specialized hospitals by developing medical real estate; building medical property; and purchasing or leasing high-end medical equipment, so as to effectively solve the problems confronted by the small hospitals. Specialized hospitals could lower their cost and risk by settling in the medical center as well. In addition, with the introduction of a professional medical management organization to manage all the introduced specialized hospitals, in the meantime, the professional medical management organization should obey medical center management; the medical center can thus maintain a uniform brand image of the medical city and a normative management system for customers.

The above business model, putting forward by this thesis, enriches the case library of business model research and business model design based on value chain, and provides guidance to business model design of related enterprises, demonstrating certain academic novelty and practical value.

Keywords: business model; value chain; medical service

JEL Codes: D46 (Value Theory) I11 (Healthcare market analysis) L89 (The industry research: service)

Resumo

A procura de serviços médicos tem vindo a crescer no mercado Chinês, embora ainda se constate dificuldade em encontrar uma oferta adequada à tendência de um consumidor mais exigente e abrangente internacionalmente que procura, também, conciliar o turismo e o cuidado com a saúde. As institui ções politico-governamentais têm vindo a estimular a reforma e o desenvolvimento das infraestruturas de oferta da Saúde através de a ções especificas, como abrir o investimento a capitais privados para a constru ção de Hospitais e Organiza ções de Saúde. Aproveitando essa oportunidade, Chengdu Jiakang Investiga ção e Desenvolvimento Co.Ltd inicia um projeto de constru ção e desenvolvimento de um futuro Centro Médico Internacional (SYIMC) em Chengdu. O presente Projeto contribui para o desenvolvimento do design do modelo de neg ócio deste novo Centro Médico. Atrav és da revis ão de literatura das teorias de cria ção de valor e de Modelos de Neg ócio, é proposto um modelo de Neg ócio que integra a perspetiva da cadeia de valor para o Chengu SYIMC.

Primeiro é sugerida a tese de que o modelo de neg ócio deve refletir a l ógica da cria ção de valor da empresa, pelo que s ão analisadas referencias relevantes na modeliza ção do neg ócio na perspetiva internacional e chinesa, bem como na cadeia de valor. Em conson ância, esta tese prop õe o *design* de um modelo de neg ócio assente na cadeia de valor, onde se divide a sua estrutura em tr ês áreas: recursos humanos e relacionais, recursos operacionais e recursos financeiros. Para a operacionaliza ção e seguindo a estrutura do modelo sugerido, apresenta-se uma an álise interna e externa ao SYIMC e é, finalmente, sugerido um conjunto de estrat égias para cada uma das áreas.

O modelo de neg ócios sugerido e baseado na cadeia de Valor da SYIMC identifica as figuras de "Construtor, Gestor e Utilizador". Cada um deve contribuir com o seu capital, intelig ência e capacidade t écnica, criando m útuos benef ícios. O utilizador é sobretudo constitu ído por hospitais especializados. Os investidores de imobili ário podem fornecer equipamento de qualidade e *hardware* especializado para pequenos hospitais especializados, pela propriedade e constru ção de infraestruturas e a compra ou o *leasing* de equipamento m édico de topo. Hospitais e Clinicas especializadas podem diminuir o seu custo e risco com a utiliza ção dos equipamentos e instala ções deste novo centro clinico. Acrescente-se, ainda, uma terceira entidade gestora, de forma a gerir os relacionamentos entre as v árias entidades

parceiras, bem como a operacionalização dos recursos, procurando garantir uma imagem de marca coerente e uniforme.

O modelo de negócio proposto contribui para o conhecimento da investigação da teoria do desenho de modelo de negócio com a ligação aos ensinamentos da cadeia de valor. Também a sua aplicação a um sector em mudança e a uma organização emergente, permite guiar e ilustrar de forma inovadora o desenvolvimento do modelo de negócio na prática.

Palavras-Chave: Modelo de Negócio; Cadeia de Valor; Serviços Médicos e de Saude

JEL Codes: D46 (Teoria do Valor) ; I11 (Mercado de Cuidados de Saúde); L89 (Serviços)

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Chapter 1: Introduction

1.1 Research background

1.1.1 The imbalance of high-end medical resources

High-end medical resources include high investment of hardware facilities (construction, environment, equipment), high standards of operation systems and a high level of expertise. And now in China, there exist the problem of imbalance between supply and demand of high-end medical resources, and it can be analyzed from two aspects as follows.

(1)Demand side

The problem of "poor availability of medical service" for Chinese public has attracted extensive focus of the whole society. To be specific, "poor availability of medical service" can be classified into two types: one is "absolutely poor availability", i.e. "poor availability" of basic medical service due to absolute insufficiency of medical resources, which often occurs in remote rural areas in central and western China where economic development is backward, traffic conditions are disadvantageous, and the area is vast with sparse population; the other is "relatively poor availability", i.e. "poor availability" of specialists in large-scale hospitals due to relative shortage of high-quality medical resources against high public medical needs. The most obvious problem is the poor availability of medical service and specialists in large-scale hospitals. On the one hand, the relatively complete medical facilities, well-qualified physicians and advanced medical techniques, and high proportion of excellent medical staff earn large-scale hospitals with high credibility among general public, and are the main reasons why large-scale hospitals are always overcrowded. However, complicated procedures and excessive steps make it inconvenient for patients to get access to medical care. On the other hand, treatment of specialists means a long wait for patients, which may take hours or even days. To register for a specialist, many patients have to either queue overnight or buy a quota of outpatient service appointment slip from "scalpers" at a much higher price. This situation, however, is pervasive and represents the main feature of "poor availability of medical service".

(2)Supply side

More than 98% of medical institutions in medical service system of China are hospitals funded by the government, known as "public hospitals" (China Statistical Yearbook, 2012). Most of the existing public hospitals in China were established in the context of a planned economy. Though thirty years of opening-up and reform have brought about so many changes, the public hospitals are still undergoing transformation and development, due to present medical and health mechanism in China and the specialty of medical and health undertakings as a kind of social public establishment. A series of reform and improvement in the medical and health system have dramatically transformed the organization structure, operation and management level and medical service standards of the public hospitals; however, if compared with public hospitals in developed countries, the public hospitals in China are still weak in terms of system mechanism and service level, and still have many disadvantages. Many hospitals are operated in the same marketing and management mode as that under a planned economy. Such mode cannot satisfy the demands of the changing medical market, and may give rise to financial deficit, low operation and management efficiency, unsatisfactory service level, and many other management-related problems.

Aiming at the social topic of "poor availability of medical service" that has raised a lot of concern, the central government has made a major policy decision on deepening medical and health system reform. The Opinions of the CPC Central Committee and the State Council on Deepening the Reform of the Medical and Health Care System issued in April 2009 is a "prescription" to tackle "poor availability of medical service", in which the previous reform approach that laid excessive attention to marketization is abandoned and the government declares to strengthen its duties in basic medical and health system, continuously increase investment in medical and health system, maintain social fairness and justice, and strive to realize the goal of establishing a basic medical and health system that can benefit both urban and rural residents, and provide access to medical service for every citizen step by step. In addition to persisting with guaranteeing public benefits, emphasizing duties and the leading role of the government and providing basic medical service to all the citizens under the principle of equality, the new reform scheme also clearly proposes to set up government-led diversified health care investment mechanism, to encourage and introduce social capital into medical and health industry. This helped to pave the way for social capital to flow into medical and health industry in the following five aspects: (1) Rearrange the power of market participators for balance. (2) Loosen the restrictions on hospitals funded by foreign investment. (3) Promote the equality relevant to major policies among different market

players. (4) Conduct classified management in strict accordance with the nature of economic entities. (5) Encourage professional management and industrial concentration.

As everyone knows, public hospital reform has been known as the "toughest nut to crack" in the past medical reforms. Among the five major fields of medical reform proposed according to 2009-2011 Implementation Scheme for Deepening Medical and Health System Reform, the public hospital reform also became the most complicated and the most researched field and was listed as focal and difficult points in medical reform. The year 2011 is decisive for the public hospital reform. However, Chen, minister of Ministry of Health, indicated during the "Two Sessions" that the public hospital reform has not made too much progress.

The public hospital reform involves multiple systems, i.e. medical care insurance system and medicine supply system, and multiple governmental departments such as department of finance, department of health, and department of drug administration. In other words, reforms are required in health system, hospital system and medical system at the same time. Without existing experience for reference or mature model to copy, there is still a long way to go because the goal cannot be reached in one step. Anyhow, "public welfare regression of public hospitals" is the direction to be defined through the entire reform process of medical and health system. However, at present, a great proportion of public hospitals in China are engaged in the profitable medical services. The public medical resources are diverted to the profit-making "special medical services", resulting in widespread controversy.

Why are the public hospitals engaged in profit-making high-end medical services? First, the services are marketable; second, the hospitals are resourceful; and third, the society has such demands. In addition, the high-end medical services are always inseparable from excellent subject resources, so the development of high-end medical services is one of the important means of promoting the development of preponderant medical subjects. As a result, to develop special medical services and "hospital in the hospital" becomes an inevitable choice for the public hospitals.

However, the medical and health system reform is constantly deepened and the financial compensation mechanism is approaching perfection, and the special medical services are impossible to see further development in the public hospitals under the existing model. Therefore, the public hospitals have to look for breakthroughs in operation mechanism, thus realizing the separation of special medical services from basic medical services step by step. In other words, the special outpatient service, special hospital bed, and "hospital in the hospital" certainly will be further restricted by the future policies on the public hospitals and

be regarded as an important mission in the future public hospital reform.

The former medical and health reform was announced to be a failure by Ministry of Health in 2006 and the new reform is now taking its shape. The medical industry of China will surely undergo dramatic changes in the future and this may means both numerous opportunities and more crises or challenges. With such a trend ahead, how to introduce social capital into medical and health industry becomes a central issue that enterprises pay attention to.

1.1.2 Background of developing high-end medical service in Chengdu

Against the background of increasing medical service demands and rapid development of health industry, in particular potential development of healthy housing industry, the key to develop modern service industry depends on striving to develop modern medical service industry to satisfy the multi-level and diversified medical service demands while building the medical care insurance system with "generalized preference and fairness" by means of real estate industry. It is not only a need for urban internationalization development, but also a need for transformation development.

As an important immigrant city in western China, Chengdu has a great number of non-native high-end job hunters, and the number is growing year by year with the rise of Chengdu's international status. Most foreigners living in Chengdu gave high appraisals to Chengdu's intangible infrastructures, in particular to the modern service industry, i.e. hotel, recreation, shopping, and finance, and the social service industry, i.e. transportation, environment, and education. On contrast, they are disappointed with the foreigner-oriented and high-end medical services in Chengdu. Meanwhile, Chengdu also holds a leading position among the cities across the country for the number rich and the power of luxury consumption (Li, 2012). All of these factors have given birth to the emerging market of high-end medical service.

It is not hard to see that the high-income groups will maintain a high demand for high-quality medical services and drive the growth of market capacity for high-end medical services. At present, Chengdu already has sufficient medical institutions, complete and reasonably-distributed basic medical service system, and relative high level of medical resource allocation, with some indexes approaching the level of medium-developed country, but there are not more than 300 large-scale and influential medical institutions, and even not more than 10 professional medical institutions capable of offering high-end medical services

to high-income groups and foreigners. The high-end medical service industry has not taken shape yet and was underdeveloped as supply falls short of demand. Thus it can be seen that the development of high-end medical service is of great urgency in Chengdu.

Furthermore, striving to develop modern medical service industry also plays an important part in the development of economic transformation and the promotion of modern service industry development. According to the studies (Zhang, 2012), the amount of consumption in Chengdu's high-end medical service market is more than 8 billion RMB as a conservative estimate, and each 100 million RMB spent in high-end medical market is able to bring in income of 400 million RMB from other modern service industries. In other words, 1 RMB of medical consumption can boost 4 RMB of extra consumption in service industries such as transportation, accommodation, catering, sightseeing, and shopping. By analogy, the development of Chengdu's high-end medical service industry is believed to make the modern service industries gain an income of 50 billion RMB, which represents high-quality GDP that features few environmental pollution and low energy consumption.

As a result, striving to develop high-end medical service industry is an important strategy of Chengdu, and has far-reaching social significance.

1.1.3 Company profile and project background

(1) Introduction to Chengdu Jiakang Investment and Development Co., Ltd.

Chengdu Jiakang Investment and Development Co., Ltd., established on January 17, 2011, with a registered capital of RMB 30 million, is mainly responsible for the investment and construction of Chengdu Shangyi International Medical Center (shorthand for SYIMC in this thesis). The company was co-founded by two shareholders, namely Chengdu Jiakang Industrial Group Co., Ltd. and Fu, a natural person. The former contributed RMB 27 million, holding 90% of the shares and the latter, RMB 3 million, holding 10% of the shares. Guided by the strategy of seeking diversified development while centering on real estate properties, forward-looking Jiakang Group is positioned to become the best medical and healthcare property investor depending on its strong brand value and capital. It is dedicated to investing in medical and healthcare industry and building first-class projects in this field. Long-term development of medical and healthcare industry can be stimulated by operating healthcare property, developing and investing in the projects of medical tourism. Depending on professional medical resources, this center offers specialized, diversified and integrated services including medical rehabilitation, health management service and wellness tourism

products through traditional Chinese medicine, western medicine, nutrition and health care as well as wellness tourism products. So far, the group has invested in Shanghai International Medical Zone, Chengdu International Medical Center and Zhuzhou International Health Valley.

(2) Project description

Chengdu SYIMC is supported by Chengdu Jiakang Investment and Development Co., Ltd. This is based on the overall development trend in China's medical service industry, the market demand for medical care and healthcare in Sichuan and the advantages of Chengdu International Medical Center's local resources. In July 2011, Jiakang handed over the investment feasibility study report to the Investment and Development Center of Jiakang Group. After being approved, a team responsible for SYIMC was set up. It is in charge of the investment management, construction, development and business invitation cooperation and so forth.

Located in the Medical Healthcare Park of Chengdu International Medical Center, SYIMC covers 7.6 hectares with 163,000 m2 of floor area. Detailed construction specifications are shown below in Table 1.

Table 1- 1 Construction information of SYIMC

Project site area (m^2)		76000	
Total floor area (m^2)		162693	
Underground floor area (m^2)		41891	
Above ground floor area (m^2)		120802	
Including:	Medical technology building (m^2)	34800	Hall: 7floors, 32 meters in height; outpatient building: 6 floors, 28 meters in height
	Specialized clinic building (m^2)	29766	5 floors, 24 meters in height
	Inpatient building (m^2)	36543	24 meters in height for 6-floor building, 27 meters in height for 7-floor one and 31 meters in height for 8-floor building
	Dining room (m^2)	3139	2 floors, 9 meters in height
	Administrative management center (m^2)	16554	Office building:11 floors and 46 meters in height
Ground floor area (m^2)		22698	
Building density		29.90%	
Plot ratio		1.59	
Green area (m^2)		31160	
Ration of green space		41%	

Road and parking area (m^2)	22142	
Number of parking spaces		773

(3) Target market and major competitors

The target markets of SYIMC are the international and Chinese patients who expect medical care of a higher quality and standard. And the major competitors are the public hospitals and the specialized hospitals. And it has the advantages on professional，cutting edge medical equipment, and comprehensive medical care.

1.2 Description of problems

At the moment there is a shortfall between the demand of patients seeking high quality care and capacity of the care providers to cope with these increasing needs. Cutting edge equipment, efficient administration and experienced highly trained medical professionals. All three of these attributes are essential, however, there is no ‘one’ medical provider that provides all three of these at the same time, in fact they are individually occupied by investors, professional medical management institutions and specialized hospitals.

Chengdu Jiakang Investment and Development Co., Ltd is an experienced and well –organized real estate company. Being an investor, it also has the added advantage of being financially solid and possessing large amounts of liquid assets to fund the expansion into medical industry. But this company is the main investor but does not have specialist knowledge in medical technology and hospital management.

However the future international medical management institution of SYIMC possesses first-class medical management experience; and desperately desires a stage which would allow it to exhibit their many strengths.

Small to medium-sized specialized hospitals boast medical experts and technology in their specialized area, but they lack the capital needed for constructing better facilities with the equipment required for staying ahead in their field, as well as the management experience and structure displayed by the international medical management institution.

1.3 Research approach and content

This dissertation aims to design a business model to a new medical centre taking the opportunity of the growing social capital flows into the medical industry of China. Later,

based on the theoretical research, the findings will be applied in business model design and evaluation of "Chengdu SYIMC".

As a result and trying to give a solution to the above problems described, we are trying to develop a creative business model to tackle this problem, enabling the three groups as investors with the resources, efficient administration and experienced medical professionals work together to provide high quality medical services and whilst creating impressive returns as well as create a new business model for social enterprises to enter the medical service industry. The new business model will respond to the relationship and active network partnership between three market players as we can see in Figure 1. It has to guarantee profits, efficient usage resources, well run business management and the high quality services.

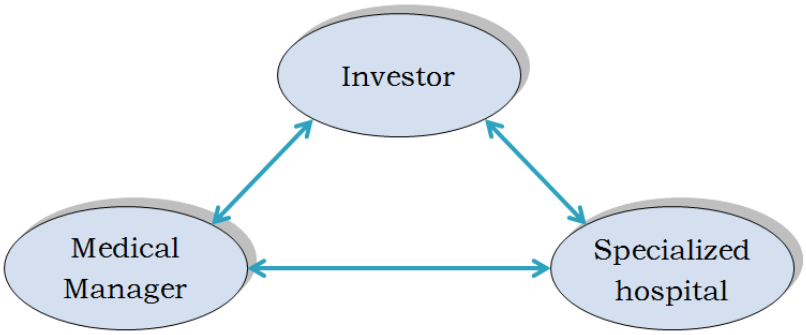

Figure 1- 1 Research dilemma of this thesis

Among the existing literature of business model research, few of them deal with business model design. In the existing literature, the researches on the business model design mainly focus on profit, and most of them stay on the qualitative research level, emphasizing on commercial design train of thought, key factors, indexes, and some other matters which need attention. However, there are still few dissertations studying the design method of business model.

The dissertation starts from the perspective of value chain, which is widely recognized and certified by the academic circle, to study and solve the abovementioned problem. The study on business model design on the basis of introducing social capital into medical care industry has certain theoretical significance to enrich existing business model theories, fill and supplement theory and method system of business model design, and put forward the direction for further research.

The dissertation structure is: at first, literature review about relevant theories concerning business models is made, including connotation, elements and design of business model, as well as meaning of value chain and characteristics and content of hospital value chain; secondly, methods used in business model design are introduced, on the basis of comparison

of business model structural system and selection of value-chain-based business model design system; thirdly, a market survey is carried out based on methods that have been introduced, and then the data acquired is processed and analyzed; fourthly, the business model of SYIMC is designed according to date processing results; at last, the differences between and advantages and disadvantages of SYIMC business model and traditional public hospital business model are compared and summarized, and then a further research prospect is made. According to research problem and research approach, the structure of this dissertation is as follows:

The first chapter "Introduction" mainly introduces the research background and significance as well as research approach and content. It establishes the basic framework for this dissertation.

The second chapter "Literature Review" mainly conducts a literature review about relevant theories concerning business models and value chain, including connotation, elements and design of business model, as well as meaning of value chain and characteristics and content of hospital value chain.

The third chapter "Conceptual Model and Methodology" introduces the Conceptual framework of Value chain-based business model, the methods used in the business model design, and also specifies the research procedure, including data collection methods, survey method, and data processing methods.

The fourth chapter "Research on Business Model of SYIMC" conducts a research on business model of SYIMC by using the methods that are introduced in Chapter 3, introduces the collection and processing of data to obtain the data processing results, and analyzes elements and appeals of business model design of SYIMC, so as to lay a foundation for the following business model design of SYIMC.

The fifth chapter "Business Model Design of SYIMC" mainly introduces the business model design of SYIMC according to the elements and appeals that are introduced in Chapter 3, and put forwards specific implementation programs.

The sixth chapter is "Conclusion". The chapter analyzes the main contribution of this thesis, and summarizes the implication and implementation of the business pattern of separated "constructor, manager and user", and puts forward visions for future studies.

Chapter 2: Literature review

In order to design a suitable business model for Chengdu SYIMC, we did a large amount of analysis into the previous articles and studies relating to the business models. On the whole, academic circles mainly approach business models from four perspectives, as systems, value chains, enterprise operations and profits. The literature review started with analyzing the concept of business model, and then we analyzed the concept and development of the value chain. After that we summarized the business models based on the value chain perspective. Finally, we studied the research on the structures of business models, in doing that; we laid down the ground work for producing our theoretical model in chapter 3.

2.1 Business model

At present, the concept of business model has been deeply rooted among the people (Fu and Wang, 2011), but it attracted not much attention when it was originally raised in the 1970s by the scholars in the information management field. However, it gained concerns from the academic circle until the rise of e-commerce in the middle of the 1990s. So far, research on problems concerning business model exists only for a short period, not longer than 30 years, and there are lack of complete, sophisticated and systematic research findings. Many scholars have been researching on the definition of business model, but a consensus has not been reached until now.

The expression 'business model' has been widely accepted in the last two decades. While no generally accepted definition of the term has emerged yet, some characterization and description have been put forward by several scholars. Among which, Amit and Zott (2001, 2010), Magretta (2002), Johnson and Christensen (2008), Teece (2007，2010), Weil (2001), Chesbrough and Rosenbloom (2002) ,Giesen(2007) are the most prominent examples. One of the most cited definitions, by Amit and Zott (2001), frames business model as 'the design of transaction content, structure and governance so as to create value through the exploitation of business opportunities'. Business model can also be used to define the structure of value chain, i.e. 'a set of activities conducted during the entire process from raw materials to final consumer with value of the material being added throughout the course' (Amit and Zott,

2010). During their earlier work, they described the content, structure and governance as core design factors of the pattern; while in their more recent work, Zott and Amit (2010) reckon business model as the activity system. An activity is defined as a focal firm's engagement of human, physical, or capital resources of any part of the business model to serve a specific purpose which aims at the overall objective. An activity system is described as a set of interdependent organizational activities centered on a focal firm. It also encompasses activities that are either conducted by the focal firm or by its partners, customers or vendors.

At present, definition of business model can be understood from the following four aspects:

(1) From the perspective of system

Timmers (1998) applies system approach to define the business model, and considers it as an organic system composed of products, services and information. Tapscott et al. (2000) put forward "b-webs", which represents a supply chain system composed of supplier, distributor, service provider and customer, and where participants can make business communication and business trade via internet. Weng (2004) defines the business model as a value analysis system composed of value proposition, value support and value maintenance.

(2) From the perspective of value creation

Afuah and Tucci (2000) suggest that the business model is decisive factor for operating model of an enterprise and for value creation by an enterprise for all members in the supply chain system. An enterprise is able to obtain core competence by design a reasonable business model. Petrovic et al. (2001) point out that the business model is a complete system that is able to create values inside and outside the enterprise and covers all links of enterprise value chain. Dubosson et al. (2002) state that the business model is a business structure, composed of an inside organizational structure formed for the purpose of value creation, value marketing and value offering and an outside supply chain network, that is able to provide sufficient cash flow and customer resources to the development of enterprise.

(3) From the perspective of profits

Stewart and Zhao (2000) consider the business model as feasible means of an enterprise to make profits and maintain long-term development. Afuah and Tucci (2001) agree that the business model can be used by an enterprise to make profits. However, the profits are classified into long-term profits and short-term profits, and in short term, business model may make the enterprise loss money. Rappa (2004) suggests that the business model is a way to do

business, and to bring profits for an enterprise, and for survival of an enterprise. It provides the position of the company in the value chain and instructs the enterprise to make profits.

(4) From the perspective of enterprise operations

Applegate (2001) indicates that the business model is a description of complicated enterprise operations, a reflection of major structural elements of an enterprise and intricate relationships therebetween, and a method for an enterprise to satisfy customer demands. Magretta (2002) suggests that the business model explains how an enterprise operates. Huang and Chen (2003) state that business model is an operation model for an enterprise to make profit by getting more output than input.

2.2 Value chain

In the early 1980s, Porter realized from his study on the issue concerning strategic management of trans-national enterprise that the analysis of enterprise competitive advantage is required to break down production and operation activities rather than only start from the perspective of overall situation. Porter (1985) introduced the concept "value chain" for the first time in his book Competitive Advantage, and defined value chain as a series of value activities of an enterprise to convert raw materials into finished products. Among these value activities, inbound logistics, production operation, outbound logistics, and marketing and sales service are classified as primary value activities, while procurement, technological development, HR management, and firm infrastructure are classified as secondary value activities. The two above value creation processes supplement each other to form a complete dynamic value creation process of an enterprise.

At the same time, Porter also explained the concept of value and stated that value is the commodity price paid by the customer. The strategic target of an enterprise is to make profits for the enterprise while creating value for customers, i.e., the output is greater than input. In order to realize the strategic target of enterprise, Porter put forward cost advantage strategy, differentiation strategy and so on to offer the enterprise relevant instructions to obtain competitive advantage.

In addition to affirming Porter's value chain theory, we need to realize its limitations, which can be seen in the following two specific aspects: first, the definition of Porter's value chain only covers the activities inside the enterprise without reference to the competition and industry environment; second, the strategic target of enterprise defined in Porter's value chain

theory is only for maximizing profit but neglects the importance of customers.

Considering the limitations in Porter's theory, the future researchers began to expand his theory mainly in two aspects: research scope of value chain and strategic target of enterprise. In regard to the research scope, Shank and Govindarajan (1992) expanded value chain throughout the whole process from procurement of raw materials from supplier to sales of finished products to customers, instead of being limited to the production and operation activities inside the enterprise. In addition to the relevant researches of Shank and Govindarajan (1992), quite a few scholars turned their eyes to the more macro enterprise structure and framework, and attempted to define the value chain from the perspective of industry. Pan (2001) suggested that the industrial value chain is value activities of an enterprise carrying out technological development and production by targeting at a particular industry. Du and Li (2004) regarded the industrial value chain as the extension of the enterprise value chain. The industrial value chain covers internal value activities of upstream and downstream enterprises in the industrial chain, thus the enterprises in the industrial chain collaborate with each other to form an organic and well-organized value system.

Except the expansion of value chain from the perspective of industry, quite a few scholars began attempting to expand the value chain from the perspective of economic globalization and keep their theory pace with the times by breaking through the geographic restrictions of value chain. Kogut (1984, 1985) stated that the relative economic advantage of different countries determines how to allocate the links of enterprise value chain activities to different countries, and the core competence of enterprise determines how much resource the enterprise inputs into the links of value chain activities. Kogut's theory reflected the global allocation of value chain, and then the concept and theory "global value chain" was generated. Gereffi (1994, 1999) put forwards the concept global commodity chain on the basis of Kogut's research and made suggestions to the formation and governance of global commodity chain through the analysis of the value adding of different global commodity chains and the structural relationship of commodity chains. After that, Gereffi expanded his research out of the commodity scope and analyzed the globalization process of economic enterprise from the perspective of value chain, marking the birth of global value chain theory.

With regard to the further research on strategic target of enterprise, customer demand became the point attracting much attention from scholars. Hines (1998) expanded the concept value chain as the transportation line of the integrated material value by adding two elements, i.e. raw material and customer, into the value chain. At the same time, Hines suggested that

the final objective of an enterprise is to satisfy customer demands and the profits are the side products during the process of realizing the said objective. Slywotzky (1996) wrote a book titled Value Migration, in which the significance of customer demand was further emphasized. At the same time, the book also introduced that, at the early 1980s, Porter realized from his study on the issue concerning strategic management of trans-national enterprise that the analysis of enterprise competitive advantage is required to break down production and operation activities rather than only start from the perspective of overall situation. In 1985, Porter introduced the concept "value chain" for the first time in his book Competitive Advantage, and defined value chain as a series of value activities of an enterprise to convert raw materials into finished products. However, different from Porter's value chain theory, Slywotzky（1996）stated that the value chain shall focus on customer demand, and the marketing channel, products, raw material, and enterprise competence shall aim at satisfying customer demand and serve this purpose. Based on the above theory, Slywotzky（1996）suggested that enterprise managers shall firstly understand the hierarchy and expectation of customer demand by the means of market survey, secondly design reasonable marketing channel and plan the product and service configuration in marketing channel to satisfy the customer demand, and lastly consider what raw materials are to be applied and how to design and plan enterprise's production and service capabilities to offer products and service.

Waiters and Lancaster (2000) stated that the value chain is a business value system that is able to create value for customers and make profits for all participants in the value chain. The above theory was proposed to further expand the definition of value chain. As with Slywotzky's (1996) theory, Waiters and Lancaster (2000) also took customer demand as the center and origin and suggested that an enterprise shall understand the hierarchy and expectation of customer demand, and then create value for customers and make profit for all participants in the value chain by the means of cost analysis, value chain positioning, organization and coordination, and business structure improvement.

In addition, some scholars, on the basis of abovementioned value chain theory expansion, expanded the research on value activities, existing ways, and structural styles of value chain from the perspective of technology. With regard to the value activities, Hines (1998) included information technology into the secondary activities of value chain at the same time of taking customer demand as the center and origin. Xiong (2007) emphasized the significance and value of technology R&D to high-tech enterprises in the doctoral dissertation, and indicated that the technology R&D plays a fundamental role in the generation and operation of value

chain, which means that the technology R&D determines the mode of value chain activities such as raw material, production mode, logistics, and sales. In other words, the technology R&D, as the most important activity in the value chain, has influenced and infiltrated all links of value chain operation.

The wide application of information technology also inspired scholars in their researches on the value chain. Raport and Sviokla (1995) put forward an assumption to establish a virtual value chain. They conceived that a virtual value chain system corresponding to the real world can be constructed by collecting and integrating the physical value chain information in the real world. Different from the physical value chain system, the virtual value chain comprises the value activities, including collection, collation, screen, integration, and transfer of information, instead of the primary value activities such as inbound logistics, production operation, outbound logistics, and marketing and sales and the secondary value activities such as procurement, technological development, HR management, and firm infrastructure. While the significance of constructing a virtual value chain is that the coordination and optimization of all links of physical value chain can be promoted by the virtual value chain, thus realizing its visibility. Compared with the physical value chain, the virtual value chain, in the form of information, is able to break through the time-space restrictions in the real world to realize arbitrary flexibility, regulation, and transformation. The manager can apply the virtual value chain to construct a more extensive and complicated network system. Bovet et al. (2001) defined the said network system as a value network and further explained the important role of value network. He pointed out that the value network, when it accesses the internet, is able to facilitate the sharing of information resource throughout the activities in the physical value chain and provide an information base for quick response to external competitive environment and market changes, thus maximizing the customer value.

With more detailed social division of labor, the internal links of value chain become more and more. It is almost an impossible mission to maximize the profits of whole system by only attempting to improve the production efficiency in a single link of value chain. Therefore, the only method to improve the competitiveness of value chain is to manage and optimize the value chain from the perspective of system optimization, as well as effectively utilize and coordinate the activities of all links in the value chain. Actually, early in 1994, Gereffi put forwards the relevant conception about value chain management while raising the concept of global commodity value chain. Humphrey and Sehmitz (2001, 2002) summarized the concepts of value chain management on the basis of existing research findings. They stated

that the value chain management is a kind of partnership arrangement and system mechanism for realizing the value coordination in the operating links of value chain. For more in-depth research on the model of value chain management, Humphrey and Schmitz (2000) classified management structure into four types from the different value chain control degree of the dominant enterprise in the value chain: hierarchy type, quasi-hierarchy type, network type, and market type. The abovementioned four types are in a descending order according to the control degrees. That is to say, when the dominant enterprise has a high degree of control on the value chain, the value chain management gravitates towards the hierarchy type. In contrast, when the enterprises in the value chain are independent from each other, the value chain management gravitates towards the market type.

Kaplinsky and Morris (2001) stated that the formulation, supervision, and implementation of rules and standards are the key to collaboration, mutual trust, and smooth development of production and operation activities of the value chain operation links inside and outside the enterprise. As a result, they defined the value chain management as the managements for rule formation, rule supervision and evaluation, and rule implementation, and indicated that there are differences among the degrees and types of management when the value chains are different. Based on the researches of Humphrcy and Schmitz, Gereffi et al. (2003) tried to include the complexity of trade, the standardization of trade, and the competitiveness of supplier into the measuring standards of value chain management degree, and detailed the types of value chain management into hierarchy type, captive type, relational type, modular type, and market type. At the same time, Gereffi et al. (2003) pointed out that the value chain management is always changing and requires corresponding alterations and improvements along with the changes of the complexity of trade, the standardization of trade, and the competitiveness of supplier.

The most part of above researches on the management and optimization of value chain are qualitative; meanwhile, some scholars are attempting to conduct quantitative analysis by using the method of building mathematical models. Torres (2002) attempted to analyze and resolve the optimal value in all links of value chain by building an enterprise planning model and using the methods such as game theory and performance indicator analysis.

By defining the business model as value attribute and structure attribute, a domestic scholar Wang (2009) researched and designed the business model for telecommunication enterprises on the basis of value chain. Based on the perspective of value, Chen (2010) summarized the approach and structure of business model design from the general cases.

The value chain exists everywhere in economic activity. There is industrial value chain between upstream and downstream enterprises in the industry, and enterprise value chain between the business units in an enterprise. Among the value chains of business units in the enterprise, there is value chain linkage. That is to say, every value activity in the value chain may have an influence to how big the value will be achieved by the enterprise at last.

In the value chain analysis, basic value chain, as an organic whole for reflecting the specific activities of enterprise, can be used for analyzing the operations of all constituent parts in a particular enterprise. Each of production and operation activities in an enterprise has a corresponding link in the value chain. The enterprise is required to not only improve and complete the production and operation activity in a certain link of value chain to maximize the profits, but also coordinate all links in the whole value chain system to obtain the core competence. The structure and form of value chain are quite different for different enterprises even in the same industry, because the value chain of an enterprise and the management and coordination modes of operation activities in the value chain depend on the development history of the enterprise and the formulation and implementation modes of enterprise competitive strategy. The main content of value chain innovation, or the partial content of business model innovation, is reflected in the innovations of new business, new technology, new supply sourcing, new channel, new marketing and organization structure that are carried out by the enterprise with the purpose of promoting development.

The value chain can be analyzed to obtain the approach of business model innovation, including: extending the basic value chain (e.g. forward integration and backward integration); separating the value chain; combining extension with separation of the value chain; keeping the enterprise value chain intact and innovating the value activities in the basic value chain. In addition to this, the enterprise can also realize the business model innovation by combining any one of the said three approaches with the innovation of value activities. Therefore, the concept of enterprise business model innovation can be defined by the value chain innovation, which means that the enterprise business model innovation is regarded as the set of all approaches that optimize and integrate the enterprise value activities and the stakeholders involving the value activities on the basis of value chain innovation. The business model innovation is established on the basis of analyzing the internal and external environments of enterprise, and essentially speaking, the business model innovation of enterprise is to integrate and optimize all activities in the enterprise value chain.

2.3 Business model design based on value chain

To sum up, there are many definitions of Business model, but basically, the Business model reflects the logic created by enterprise value. In a survey on research literatures about the constitution of the current Business model, Shafer et al (2005) classify and arrange the constitution factors of each kind of Business model proposed by scholars through cluster analysis, discovering that they are mainly focused on four aspects: strategic choice, value network, value creation and obtainment. Therefore, they define the business model as the reflection of the strategic choice and core logic of the enterprise to create and obtain value from the value network. According to this thesis, the presentation of Shafer and others grasp the essential connotation of Business model. What the Business model reflects is the logic created by enterprise value. So in this thesis, we take this as the definition of Business model.

As the essence of business model is to reflect the logic created by enterprise value, which conditions should a successful business model be equipped with to realize and extend this logic? That is to say, what are the dimensionality variables that we can apply to measure and reflect the essence of business model? Schweizer (2005) points out that a successful Business model needs to answer the following questions: firstly, how should an enterprise orient itself in the value network to create values? secondly, the enterprise has competitive advantages to protect the profit it creates from being violated by other enterprises in the value network, so where do these advantages come from? Thirdly, is the profit eventually obtained by the enterprise high enough?

For the first question, it involves the strategic orientation of the enterprise in the industrial value chain, and even in the industrial value network. The enterprise value chain is linked with the supplier value chain in the upstream, and the channel value chain and customer value chain in the downstream, composing a complete industrial value chain; the industrial chains, in which each stakeholder in close relationship with the enterprise lies, interweave with each other, composing the value network. In the value network, the relatively solidified enterprises and stakeholders, which are at different locations in the value chain and possess some exclusive asset, combine with each other to create value for customers; the ultimate value of products or services is created and integrated by members of the network, and the value crated by each individual member is an inseparable part of the ultimate value.

Li and Yuan (2005) have pointed out that the profit is transferred between each link of the value chain. Therefore, from the goal of creating and realizing value at the maximum, a

successful business model requires the enterprise to orient itself rationally in the industrial value chain or the value network.

We can find out that there is a close relationship between the value chain and the business model design. Nevertheless, most of the current literatures are not from the perspective of value chain. Some articles of business model design, which are based on the value chain, do not analyze the special value chain of hospital. Therefore, focusing on the business model design of high-end medical service agencies, this thesis applies the theory of value chain as the theoretical basis, showing its rationality and creativity.

We also find many articles focus on the business model of healthcare. For example, Sophie and IvankaVisnjic (2011) focus on the recent changes regarding healthcare providers in Belgium, and discuss their motivations, characteristics and the collective influence upon the industry. The constructs and theory of business model innovation explains the obtained empirical insights, where the activity system perspective (Amit and Zott, 2010) is proven to be particularly helpful in explaining the changes.

2.4 Structures of business model

All studies on structures of business model are based on the studies on its elements. Namely, they study its structures through comprehending the relationships among the elements. As set out above, no consensus about the knowledge of the elements of business model has been reached in the academic circles, thus, the structures of business model established thereupon differ a lot. Some major studies on structures of business model are summarized as follows.

Hamel (2000), on the basis of the four elements composing the business model he puts forward, interrelates them through three “bridges”, forming a structure of business model (see Figure 2-1). This is a simple but complete structural frame. And it helps to think about the opportunities to innovate the business models existing both in the internal and external environment of an enterprise in a deeper manner, and may enlighten future business model structures and related studies.

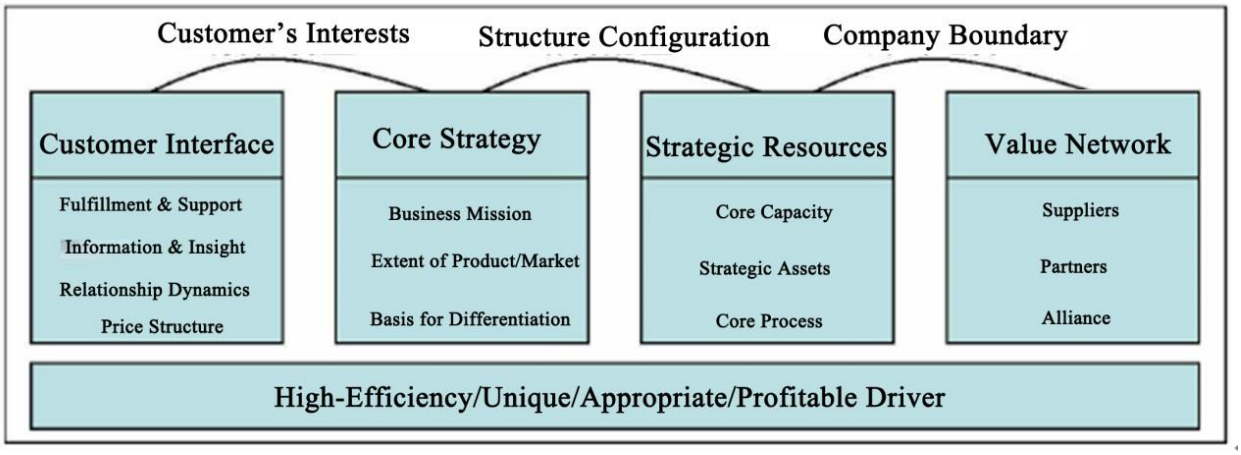

Figure 2- 2 Hamel's structure of business model

Osterwalder (2004), on the basis of his reference model relating to the elements of business model, constructs an ontology-based system concerning the structure of business model (see Figure 2-2). Osterwalder's (2004) view is constructed on the basis of ontology, and explains well how the value is generated and how the business logic is obtained. It possesses strong academic and theoretical property.

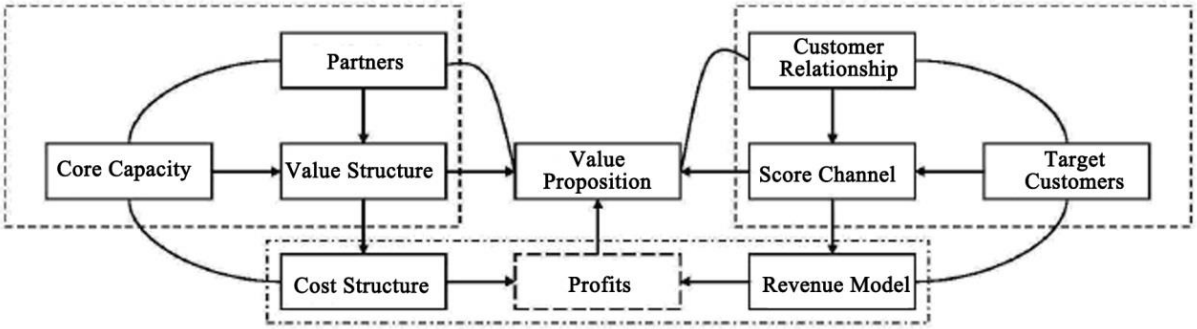

Figure 2- 3 Osterwalder's ontology-based structure system of business model

Weng (2004), a Chinese scholar, proposes the concept of mesoscopic business model, giving a full account of mesoscopic business model. He points out that the business model is the meaningful composition of the element forms of three core interfaces, namely, customer interface, internal structure, and partner network (see Figure 2-3). Weng inherits predecessors' knowledge of structures of business model from the point of the internal and external environment of an enterprise. His structure of mesoscopic business model is exactly based on the internal and external environment of an enterprise, and helps to understand the structures of business model in a direct manner. However, the elements of each core interface needs to be further refined.

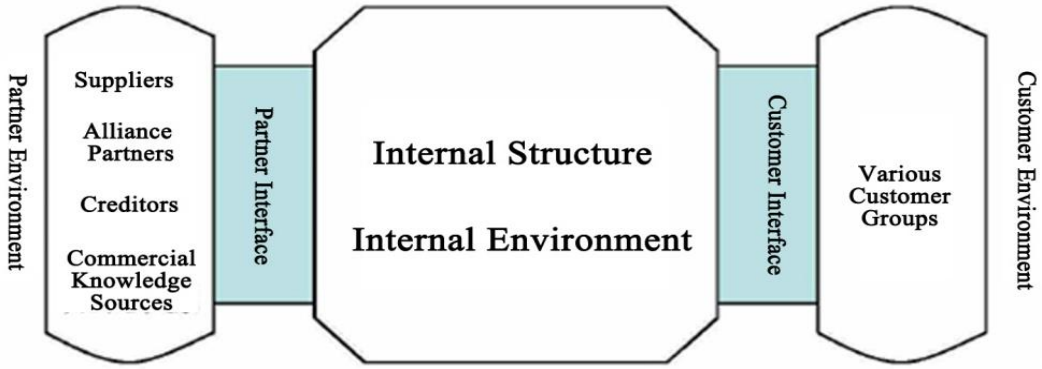

Figure 2- 4 Weng's structure system of mesoscopic business model

Zeng (2008) puts forward that the business model consists of three parts, namely, customers, suppliers and shareholders, which constitute the triangular structure model of business model (see Figure 2-4). The triangular structure model provides a simple but effective tool for the understanding of the business model, and is much easier to be accepted by those business people who are engaged in specified work. It can not only inspire people's business imagination and creativity, but also provide a systematic perspective and holism which are needed in case of thinking about various kinds of complex business problems.

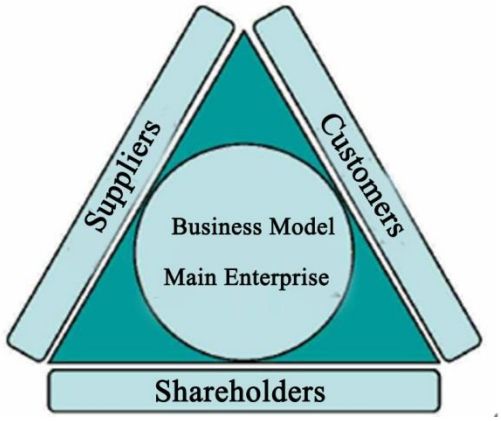

Figure 2- 5 Zeng's triangular structure of business model

Business model is an integral system with the outstanding attribute of system complexity. Hence, business model is required to satisfy two necessary conditions at least: first, business model must be integral and constitute a certain structure rather than be a single component; second, there must be internal relationships among the components of business model. The components are connected to each other via the internal relationships, give mutual support, and function together, so as to form a positive cycle. Consequently, the system structure of business model must be deeply understood and mastered firstly to design the complex system, which is the business model design basis.

In existing researches related to the elements and structure of business model, views of

Hamel (2000), Osterwalder (2004), Weng (2004), and Zeng (2008) et al. are widely accepted and frequently quoted, and so are very representative in the field. From Table 2-1 and relevant discussions of the four scholars, we can conclude that they all illustrate the business model structure from three aspects, namely, customer interface, enterprise internal structure and partner interface.

According to Porter's (1985) value chain analysis, business operation can find its expression in a series of value chain system, including but not limited to supplier value chain, enterprise value chain, channel value chain and buyer value chain. Business model design is to design a model of business operation and management. The model is usually constrained by external and internal resources. So, business model is the sum of overall operation plan and activities aimed at decomposing and effectively combining value activities, creating value and obtaining profit on the basis of value chain analysis and under constraints of external and internal resources.

With respect to practical operation, Potter's value chain system can be divided into upstream value chain, enterprise value chain and downstream value chain. The three parts are connected by two interfaces, namely resource interface between upstream value chain and enterprise value chain, and customer interface between enterprise value chain and downstream value chain.

Table 2- 1 Comparison between typical views on components and basic elements of business model

Hamel (2000)		**Osterwalder (2004)**		**Weng (2004)**		**Zeng (2008)**	
Components	Basic elements	Components	Basic elements	Components	Basic elements	Components	Basic elements
Customer interface	Processing and support response Information and insight Relationship dynamics Pricing structure	**Product services** **Customer relationship**	Value proposition Target customers Distribution channel Customer relationship	**Customer interface**	Value object Value contents Value submission Value recovery	**Customers**	Value object Value proposition Value realization methods Internal structure Resources configuration Value potential
Value network	Suppliers Partners Alliance	**Basic structure**	Partner network	**Partner interface**	Value object Value contents Value submission Value recovery	**Suppliers**	Value object Value proposition Value realization methods Internal structure Resources configuration Value potential
Core strategy **Strategic resources**	Business principle Extent of product/market Basis for differentiation Core competitiveness Strategic assets Core process	**Basic structure** **Finance**	Ability Value configuration Cost structure Revenue model	**Internal structure**	Value object Value contents Value submission Value recovery	**Shareholders**	Value object Value proposition Value realization methods Internal structure Resources configuration Value potential

2.5 Problems in existing literature

It can be seen from the researches related to business model mentioned above that there is no unified understanding of the connotation of business model in academic circles; therefore, the elements of business model are also diversified and a clear difference exists in utilization of relevant theories by academic circles due to the difference among the elements of business model. It can be seen from researches of the aforesaid scholars that research of business model design is still in its initial stage, and the existing research results mainly have the following problems.

(1) The designed business model is not persuasive due to insufficient understanding of business model design. What causes the designed model to be unpersuasive is that the existing literatures do not introduce the business model design thoroughly and have no profound understanding about the nature of business model and the problems required to be answered.

(2) Proposed design methods are not instructive for practice of business model design, because they are not very operable. Many design methods only explain broadly how to design the business model from qualitative perspective and do not illustrate detailed problems deeply, so the lack of operability makes them not very instructive for the practice of enterprises.

(3) Few business model designs, from a value chain perspective, give consideration to particularity of medical centers and their steps, methods and procedures cannot be applied to medical center projects directly.

Consequently, the start point and research purpose of this dissertation aims to remedy the above problems, focus on the design research of business model, and survey and design business model of Chengdu's SYIMC.

Chapter 3: Conceptual model and methodology

Based on the literature review of Chapter 2, close relations between value chain and business model design can be seen. However, the major existing documents failed to design business model from the perspective of value chain. Although a few researches of business model design base on value chain, they didn't include any of the characteristics of SYIMC. In light of the theory of value chain and specialties of SYIMC, this article mainly analyzes SYIMC's business model design.

3.1 Conceptual model of value chain-based business model

On the basis of the literature review of chapter 2, we deem that the nature of the business model is to reflect the logic of enterprises' value creation, namely, to reflect how the enterprises use resources to get profit.

While analyzing a value chain, two key aspects shall be focused on: Firstly, overall analysis shall be performed on the status of every key operating segment of the enterprise to figure out on which segment more effort is being put and its proportion in the entire value chain; secondly, the activity of every operating segment shall be systematically analyzed in detail and compared with that of the competitors to discover differences, advantages and disadvantages. Through analysis of these two aspects, the enterprise will clearly see in which segment of the value chain its advantages and disadvantages lie and in what exact forms they are represented, and eventually forge a perfect business model for itself and realize innovation of business model.

Based on this thought, we analyzed the important and valuable activities of SYIMC and divided them into three parts: resource relationship part, business operation part and profit acquisition part. The three parts can be further divided into 9 parts, namely resource category and portfolio, resource supplier, resource cost, operation procedure, operation mechanism, object, pricing, method and channel, forming the structure system of the SYIMC's business model (See Figure 3-1). Object refers to the products and services offered by the company, and they could be seen as the source of the income. Pricing refers to the pricing policy for the products and services. Methods mean the marketing tools for the realization of benefits.

Channel refers to the way of benefits achievement, such as rent, revenue sharing and so on.

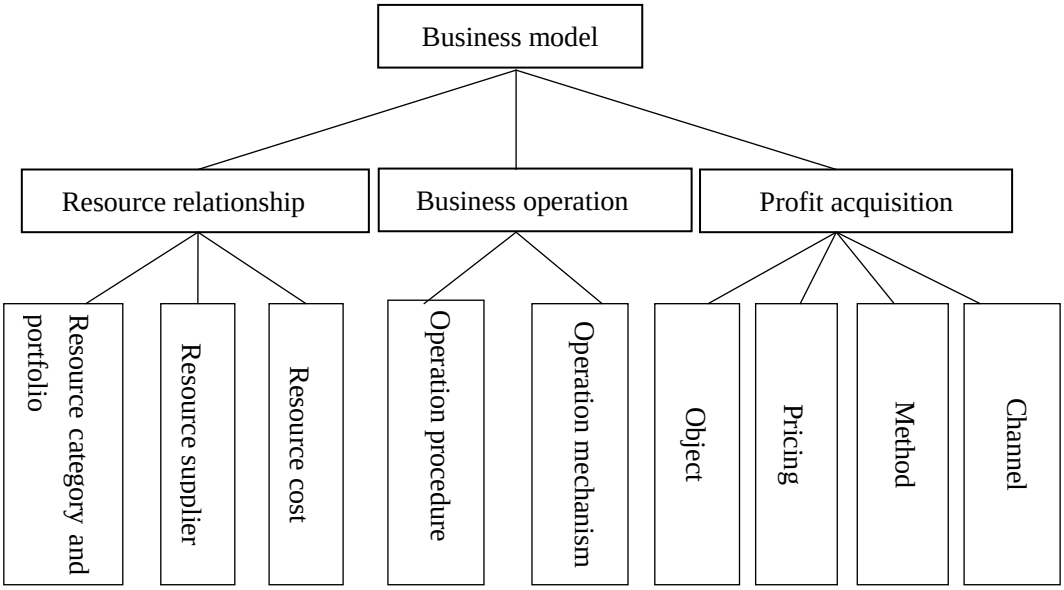

Figure 3- 1 Business model structure system

If we present value activities of the 3 sub-models, i.e. resource relationship part, business operation part and profit acquisition part, with A, B and C and the 9 parts with a1, a2, a3, b1, b2, c1, c2, c3 and c4 respectively, business model is a subset (excluding null set) of ｛A, B, C, a1, a2, a3, b1, b2, c1, c2, c3, c4｝.Therefore, we can consider business model as a function of value activities.

For hospitals and other medical institutions, their major activity of value creating includes construction, management and of course, providing care for their patients. Construction refers to investing in expanding the hospital. Management is the necessary cost for guaranteeing the efficient administration, creating revenue through the usage of existing outpatient building, the inpatient department and medical equipment. Using these revenue streams, we can cover our original costs to enable us to make profit.

Construction, management and usage reflect the Resource relationship, Business operation and Profit acquisition in our theoretical model. Therefore, this model has applicability for general hospitals.

Chengdu SYIMC, being an investor, it has to seek out the other professional groups to assume the roles with skillsets that it lacks. We found out that in this process the construction, management and utilization were actually separated. As a result considering the constructor, manager and consumer was a key point when developing ideas.

(1) Constructor

Constructor takes the responsibility of medical center's construction work. It mainly

solves the problem of resource relations. The resources of SYIMC largely refer to fixed assets like houses and equipment. Based on the characteristics of high-end medical treatment's demand, patients always have a comparatively high demand towards the equipments, technological level, credit and comfortable environment of hospitals. However, in reality, although public hospitals own a large number of senior medical staffs, their construction relies on themselves and to build a new hospital or to upgrade service capability, such as purchasing a piece of land or high-point medical equipment, building a new hospital, will produce enormous cost pressure. To private and small specialized hospitals, they have some competitive medical staffs, but owing to their small sizes, it will be easier for them to face cost pressures. Therefore, Chengdu Jiakang Investment Company, as the principal party of this project, is mainly responsible for the construction of SYIMC.

(2) Manager

Real estate developers know nothing about medical technology or hospital management. After the construction of SYIMC, they will hire a professional medical service management company to apply modern, international and standard management tools and rules to manage SYIMC.

(3) User

The users of the SYIMC are small and medium-sized specialized hospitals. Small specialized hospitals have many professional medical staffs and characterized treatment technology. If they open hospitals independently, they have to invest more than they can stand and will be easy to cause risks. By entering into medical center, those small specialized hospitals can reduce their construction cost and operation risk, share advanced medical equipment and upgrade quality of service. What's more, they can form linkage mechanism with other specialized hospitals and optimize their resources to satisfy customers' demands towards high-end medical service.

According to the above analysis, it is easy for us to find out that the three main value activities are both mutually separated and cooperative. The purpose of separation is to better carry out their strengths respectively. For instance, the mainly strengths of the real estate developers are their strong funding and abundant constructing experiences; the chief strengths of the professional medical management companies are their specialized medical management norms and standards; and the strengths of those small-sized specialized hospitals are their human resource and distinctive technologies. Besides fully carrying out each party's strengths respectively, those three parties also need to cooperate with each other to achieve the value of

the high-end medical service of SYIMC. Based on all the above thoughts, we put forward the conceptual model of SYIMC's business model—the business model of separated construction, management and utilization. See Figure 3-2.

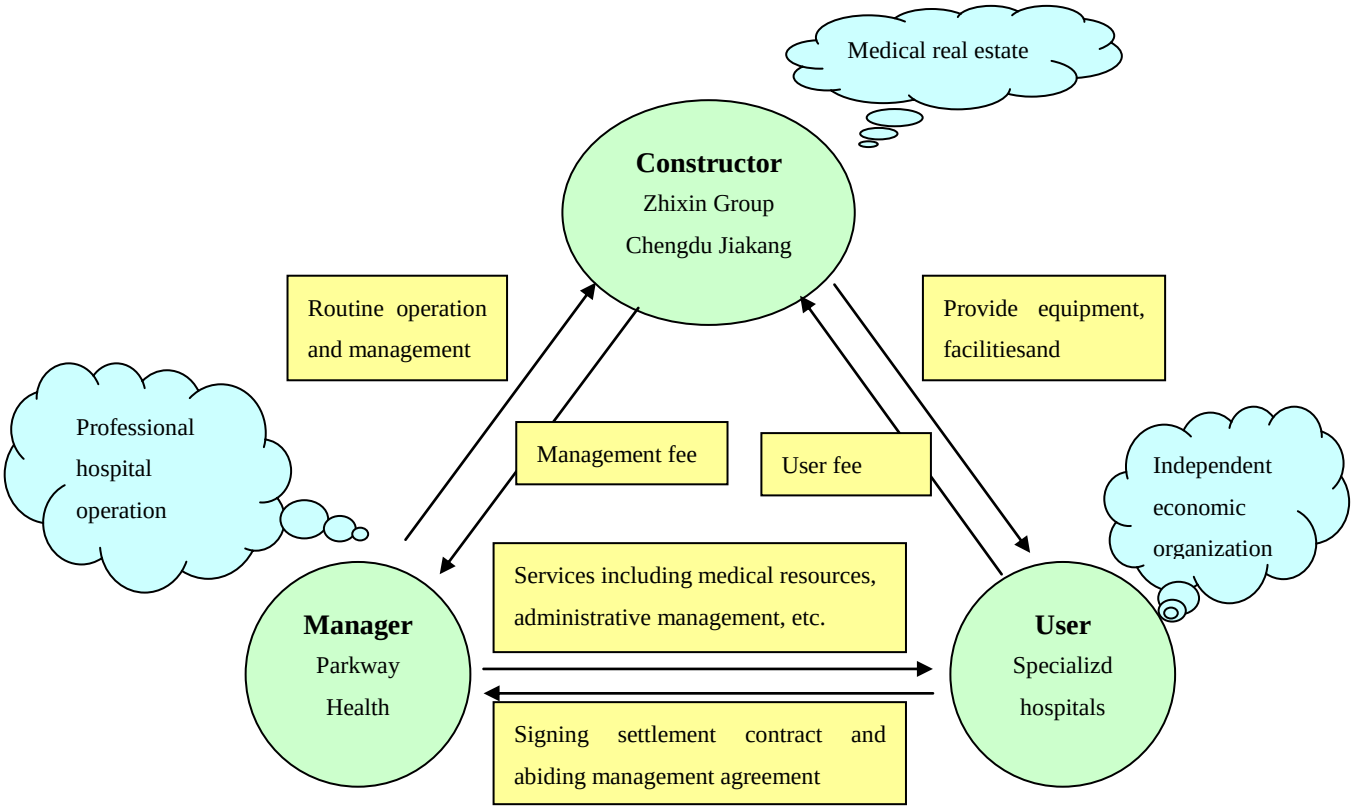

Figure 3- 2 Business model of SYIMC

3.2 Procedure of business model design

After the confirmation of the conceptual model of business model, the next step is to design the business model. According to the literature review of Chapter 2, we know that business model design refers to the process that an enterprise analyzes the inside and outside environment, resources and capabilities, opportunity and challenge. Business model design may stay relatively stable over a period of time, but under the influence of the external economy, politics, culture and technology, it will be changed and adjusted constantly.

Because of the above reasons, SYIMC's business model design is formulated after the total understanding and deep analysis of the external macro-environment, status quo of the internal resources and survey of customer demand. Therefore, in Chapter 4, on the analysis of the external macro-environment, status quo of the internal resources and survey of customer demand will be the focus. Then in Chapter 5, based on the conclusion of Chapter 4, the

business model of SYIMC will be designed from the aspects of constructor, manager and user. Concrete procedures are as follows.

3.2.1 Method of investigation on macro and industrial environment

Approach and steps of survey on macro and industrial environment are set forth as follows:

(1) Data collection

The objects we collect include economic, political, legal, social, cultural and other data regarding macro environment are collected from Internet, news, dissertations, periodicals, magazines, government bulletins and yearbooks.

(2) Data classification

Collected data are classified into 4 categories, i.e. macro environment, medical service industry environment, enterprise and resource conditions and customer demand.

(3) Analysis

Contrastive analysis, deductive reasoning or causal analysis is conducted on collected and classified data to find macro and industrial environment's basic conditions, existing problems, reasons and future development trend.

In total, 3 yearbooks (China Statistical Yearbook 2010, 2011 and 2012), 3 reports (China medical industry annual report 2010, 2011 and 2012), 238 literatures, 178 websites and 12 government bulletins (policies) are referred to.

3.2.2 Method of information collection on enterprises and resources

The following is approach and steps of survey on enterprises and resources:

(1) Data collection

The objects we collect include data regarding strategy, organization; resources and service quality are collected within the enterprise. The major methods adopted are collecting enterprises' statements of strategic plan, culture propaganda, asking HR department for materials about organizational chart, HR distribution and enterprises' service condition, surveying and interviewing department managers or above and checking into their opinions and suggestions to SYIMC's business model.

(2) Data classification

Collected data are classified into 4 categories, i.e. strategy, organization, resources and service quality.

(3) Analysis

Advantages and disadvantages of enterprises participating in the construction of SYIMC are concluded from collected and classified data.

3.2.3 Method of survey on customer demand

The purpose of the survey of the customer demand is to understand the need of the specialized hospital which is the direct customer of SYIMC. Therefore, the object of the survey is the specialized hospital. And it could be divided into 7 steps, as described:

(1) The first task is to establish relationship and maintain communication with these first-class specialized hospitals. We firstly made some fine publicity material and arrange commissioners to contact specialized hospitals or relevant departments in large hospitals throughout the country, hoping to let them have a summary understanding of SYIMC and attract their attentions. In this period, we collect secondary information of 568 medical institutions, including the public hospitals and the private hospitals. The information contains their basic introduction, main business, advantage department and so on.

(2) Out of 568 medical institutions we narrowed down our options to 258 specialized hospitals to contact on the telephone. And the standard of the selection is the possibility of these hospitals being our direct customer.

(3) Out of that number we identified 59 of them which were looking to extend their businesses. The 59 samples are which expressed keen interest in the project during early communication. These respondents distributed throughout the country, covering professional departments such as obstetrics and gynecology, pediatrics, medical aesthetic, ophthalmic, dental and so on.

(4) Then, we have face to face semi-structure interviews with 15 specialized hospitals. The object of the interviews is the CEOs of these hospitals.

(5) Questionnaire design. The core part of the questionnaire (the evaluation of importance) uses the five-level Likert Scale for measurement.

(6) Issue and withdraw questionnaire by Email to the CEOs.

(7) Statistics and Data Analysis.

3.2.4 Method of business model design

Based on the above three steps, the internal and external environment and customer demand have been fully analyzed, and then the business model will be designed. The business model design will be in the light of three parts: constructor, manager and user.

The constructor part of business model design contains four aspects: construction thoughts, project financing, construction development and equipment acquisition.

The manager part of business model design refers to three respects: management thoughts, operation model and resource allocation.

The user part of business model design mainly focuses on the selection and profit realization of SYIMC' target users—small and medium-sized specialized hospitals. It covers four aspects: use thoughts, selection of specialized hospitals and profit realization.

The business model design of SYIMC, namely three separated parts: construction, management and utilization is going to be completed based on the above analysis.

Chapter 4: Data collection and analysis

This chapter lays the basis for business model design. Following the proposal framework presented in Figure 3.2 in Chapter 3, this chapter analyses the main environment variables that not only have an impact as they will be influenced by the new company. As described in the Chapter 3, several resources and methods of collecting data were used, namely observation and qualitative analysis of secondary information from statistics, media's news and companies' reports, as well as quantitative description analysis from a survey conducted to a sample of customers in specialized hospitals and high-end hospitals. According to the macro environment analysis, we want to know whether it is wise for Jiakang Company to invest the health care industry, and does this fit for the future development of this industry. Analysis of relevant enterprises and resources makes us to tell whether Jiakang company has the massive resource to establish the health medicine center. At last, the demand analysis of specialized hospital, that is the direct customer of SYIMC, is to design the business model of SYIMC better.

4.1 Macro environment analysis

4.1.1 Health care reform of China

Private-owned hospital is a product of Chinese market economy and also a significant accomplishment of China's medical health system reform. Based on former experience, private-owned hospitals have played very positive roles in accelerating the establishment of a medical service system that suits the socialist market economy. The significance of private-owned hospital is also demonstrated in strengthening and rationally distributing urban/rural medical health resources. Hence, the private-owned hospital has met the demands of medical health requirement by various public groups.

Due to the nature of healthcare pricing structure as well as the low coverage of medical insurance programs, the growth potential in the demand for services and products related to healthcare is significant. While the increase of healthcare expenditure is slightly behind the macroeconomic indicator through much of the last decade (even during periods with double-digit GDP growth), the preliminary reform initiatives have led the proportion of GDP

expenditure upon healthcare to increase since 2008 (Zhao, 2011).

Pricing and insurance reimbursement systems in public sectors have tended to encourage turning to larger "high-end" hospitals for minor ailments, leading major urban or "comprehensive" hospitals of high utilization to be flooded by regular out-patients, leaving smaller community and village hospitals and clinics unattended. Nevertheless, the remuneration in public sector remains dramatically lower than in the private sector.

For much of the last century, China's emphasis has been on providing a relatively universal healthcare system, targeting mass public health campaigns and state-provided 'cradle to grave' support. While market reforms since 1978 have propelled much of the country's economy into the 21st century, progress in healthcare provision has slowed.

The final shape of reform, in its implementation at the national, provincial, city and rural levels, remains to be seen. However, the consultation process gives some indications as to where the major developments are likely to be and how the private sector can contribute to, and benefit from, such changes. The timeline for healthcare reform policy development is shown by Figure 4-1.

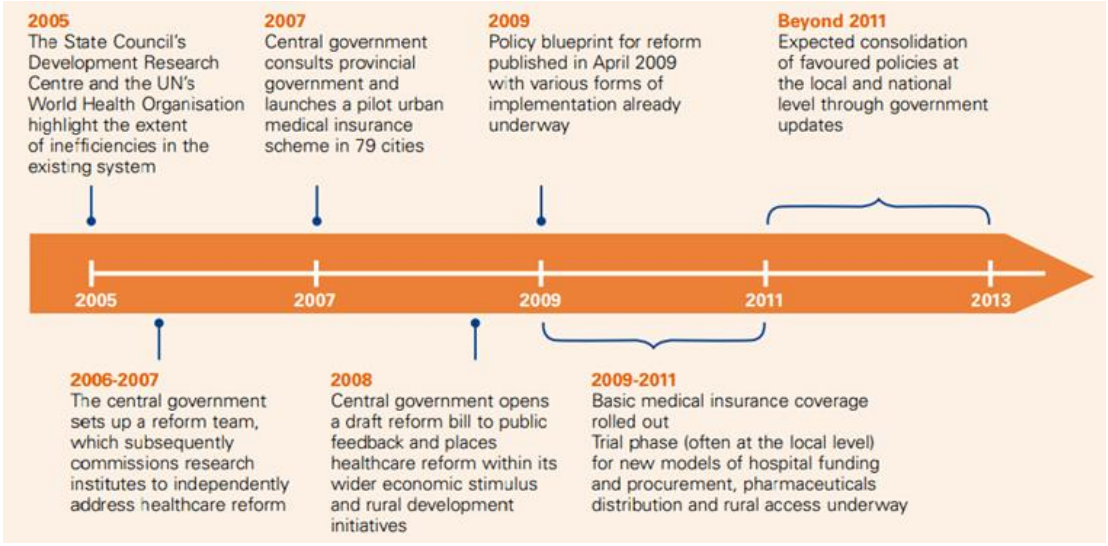

Figure 4- 1 The timeline for healthcare reform policy development

As the cases in a majority of countries, China's medical industry has dual attributes, i.e. a public and social offer from the State Government's responsibility and a market orientation motivating the market balance between demand and offer. The public attribute facilitates equitable distribution of medical resources and services, while the market attribute promotes competition and efficiency of medical establishments. However, China's medical industry is a very incomplete competitive market where there is severe monopolistic market structure and information asymmetry. Mere market mechanisms can't lead to healthy and sustainable

development. It is necessary for the government to intensify regulation over medical market and overcome defects in medical market with economic and social regulatory measures. Below, China's policy environment is analyzed from 4 aspects, namely medical staff, technology, equipment and fund (Liu and Tian, 2004).

(1) Medical staff

Medical staffs are medically knowledgeable professionals providing medical and health services, including prevention personnel, medical treatment personnel, maternity and child care personnel, nurses, pharmaceutical personnel, medical technicians and health technology managers. In recent years, China has set talent development strategy and goal and carried out policy measures to promote team building in fields of rural health, community health, public health and health regulation, and specified requirements on acceleration of innovation in health talent development mechanism, which has effectively advanced China’s health talent team building. Signs can be found in the following aspects:

1) Overall engagement system and post management system are established. Employment mechanism is converted, employment system improved and engagement system and post management system carried out so as realize the transition from fixed employment to contracted engagement and from identity management to post management. Fair competition among talents and performance evaluation mechanism are established. Posts are established only when necessary. Recruitment is open to the public. Talents are employed after winning competition for a post. Performance is evaluated scientifically and staffs are managed according to contracts.

2) Income distribution system of health institutions is improved. Staffs of health institutions are paid according to their performance at their posts. Some desperately needed high-level talents may be paid on the basis of agreements, projects and other flexible distribution standards. Forms of the participation of technology and other production factors in income distribution are actively explored.

3) Funds for health talent team building are increased. All medical and health organizations should allocate funds for talent team building and cultivation, selection, appraisal, award and employment of high-level health talents. To advance health talent team building, the participation of social capital in health talent team building is encouraged and loans from international organizations, foreign governments and social contribution are promoted.

(2) Medical technology

High medical technology is risky and its efficacy is uncertain, so in order to prevent abuse of high medical technology, China has set conditions for admission of high medical technology in legislation. In Regulations for Clinical Application of Medical Technology, it is specified that a system for admission and management medical technology's clinical application shall be established to manage medical technology in a classified and graded way.

According to the regulations, medical technology is classified into 3 categories. The first category is medical technology, through which the safety and efficacy are clear and can be ensured by routine management. This category of medical technology is managed by medical establishments according to function, task and technical capacity.

The second category is medical technology whose safety and efficacy are clear and which involves some ethical issues or is risky and therefore shall be supervised by health administrative authorities. Clinical application of this category of medical technology is managed by provincial-level health administrative authorities.

The second category, medical technology, whose safety and efficacy are to be verified and which involves major ethical issues, is very risky and needs to use scarce resources, like cloning, autologous stem cell and immune cell treatment, drug treatment by central nervous system operation, organ transplantation, transsexual operation, artificial heart implantation, gene chip diagnosis and treatment, as well as using racks to lengthen people's leg. Catalogue of medical technology in this category is prepared, released and amended by The Ministry of Health and its clinical application is also managed by The Ministry of Health.

It is also set forth in the Regulations that third party technical review system shall be applied prior to clinical application of medical technology in the second and third categories. The Ministry of Health appoints or organizes an organization to perform review of medical technology in the third category. Provincial-level health administrative authorities appoint or organize an organization to perform review of medical technology in the second category. Within 2 years upon approval of clinical application of medical technology in the second and third categories, a medical establishment shall annually report conditions of clinical application, including the number of diagnosed and treated cases, comprehension of indications, efficacy of clinical application, clinical applications, side effects and follow-up visits, to the health administrative authority that approves the clinical application of the medical technology. Accreditation of medical staff's capacity in clinical application of medical technology in the first category shall be conducted by medical establishments

themselves or provincial-level health administrative authorities.

(3) Medical equipment

As large medical equipment is high in value and technology and strict in safety requirements, if medical establishments are permitted to be equipped with valuable large high-tech precision instruments and equipment at their own discretion, this will lead to unreasonable medical resources allocation and medical costs growth. Medical establishments without competent staff and technology can hardly ensure safe operation of large medical equipment and therefore will give rise to potential medical safety hazards. Therefore, configuration and use of large medical equipment shall be strictly controlled and planning system, permission system, technical evaluation and personnel management system regarding configuration of large medical equipment shall be established. Regarding this problem, China has promulgated Interim Regulations for Management of Large Medical Equipment Configuration and Application, Technical Requirements for Safe Clinical Application of Medical Oxygen Cabins and other regulatory documents.

(4) Medical fund

Notice forwarded by General Office of the State Council on Opinions of National Development and Reform Commission, Ministry of Health and Other Departments on Further Encouraging and Guiding Social Capital's Participation in Founding Medical Establishments has loosened qualifications for, encouraged and supported social capital's participation in founding medical establishments. Social capital is given priority in adjusting and adding medical and health resources. Foreign capital is allowed to set up both for-profit and non-profit medical establishments. Foreign capital is encouraged to set up medical establishments in central and western China. Hong Kong and Macao Special Administrative Regions and Taiwan capital setting up medical establishments in mainland China is entitled to preferential policy.

Apart from the aforesaid policy, the Notice also explicitly encourages competent non-public medical establishments to be bigger and stronger. Social capital is encouraged to establish and develop large-size and distinctive medical establishments. Competent medical establishments are guided to develop into large high-level and hi-tech medical groups, carry out brand development strategy and establish social reputation. Non-public medical establishments are encouraged to intensify clinical research and talent team building.

4.1.2 Global allocation of medical resources

For the aging of global population, the medical treatment and public health systems of all countries are under huge pressures. Usually, the patient has to make a choice: Receiving medical treatment from a public hospital after an endless wait, or turning to the private hospital at a higher cost of medical treatment. The government and consumers of each country are increasingly looking forward to high-quality medical services at a low cost. Especially in some countries where the cost of medical and health services is high, the demand for seeking high-quality medical and health services in other countries is increasing with each passing day.

According to the data of World Health Organization, China will become the sixth biggest health and medical market in the world, owning a scale of 27 billion USD. Generally speaking, from 1997 to 2010, the compound growth rate of pure pharmaceutical market is 18.4%. In 2020, the medical market of China will exceed Japan and become the second largest market in the world, following the USA(KPMG, 2011).

After China entered the WTO, the pharmaceuticals industry has already become one of the industries with the fastest development speed in the Chinese economy. Under the environment of integration of medicine trade and the internationalization of medical and health market, multinational corporations accelerate their speed of extension and permeation in China. Meanwhile, the inflow of great amount of outside capital leads to more fierce competitions. What could the Chinese pharmaceutical enterprises and medical agencies do to improve their capabilities of independent innovation and core competences, grasp the opportunities, and realize the sustainable and leapfrog development? This becomes the most significant problem for the pharmaceutical and health industry of China.

Entering the year of 2008, related policies of medical system reform were released successively. The state opened the high-end medical market to a higher degree, which provides good opportunities for private capital to enter the high-end medical market. Meanwhile, the introduction of the market and competitive mechanisms awards many private hospitals with a more fair and loose development environment.

The medical system reform advances the further opening of the high-end medical market. At present, policies do not treat capital of different ownerships equally in admittance, occupation and capital investment; and the high-end medical market is not completely open, but under the specific precondition of general medical system reform, the private capital is sure to benefit from the new medical system reform. At the same time, the promising future of reform attracts foreign capital to some extent.

At present, the state emphasizes the support for basic medical care and the guarantee for vulnerable groups, and is responsible for carrying out the obligation of social public health, so it is impossible for the state to invest a large amount of capital in high-end medical care. Let's take Beijing as an example, who owes over 40 large-scale public hospitals, but only a few of them are equipped with such top grade medical service items as top grade wards or door-to-door services. Confronted with the huge demand from the market for high-end medical services, the supply of these individual items is far from enough, which cannot basically change the imbalance between supply and demand.

Under this situation, private capital entering the high-end medical market is an irresistible trend and a common aspiration. Private capital takes an energetic part in it is completely reasonable. The government should formulate regulations and standards, hold the admittance strictly, enhance marker supervision, and provide the private capital with rational compensations and a fair competition environment for them to develop flexibly and independently under the law of the market, thus really satisfy the demand of high-income and high-requirement groups for medical and health services.

Of course, the medical reform of any country is a systemic reform with great difficulties, and any change aimed at the medical system must be implemented step by step. Although the opening of the high-end medical market of China has its reality and urgency, it has to experience such a gradual progress.

Meanwhile, private hospitals express their service energies sufficiently through the medical system reform. The medical system reform not only creates more admittance opportunities for private capital, but also makes the high-end private hospitals express huge service energies. It injects vitalities and motivations into the high-end medical market, and plays a leading role in the high-end medical market gradually.

In the aspect of medical treatment, private hospitals and public hospitals could share resources with each other. Many private hospitals own excellent expert resources from hospitals with grade A class III, top grade technologies and advanced medical equipment. In the aspect of service, the private hospitals show their differences from public hospitals. By providing high-end services, the demand of which exceeds the supply in the current medical market, they attract many high-income groups, who have special requirements for their treatments.

Walking into a high-end hospital, you'll get an experience which is totally different from that of public hospital: Facilities in the hospital matches those of a five-star hotel, and there

are cafés, visiting rooms, dining halls, high-grade wards; there are specially-assigned persons for a one-on-one full service, and they explain instructions patiently, register, pay the fees and receive descriptions for their patients; the arrangement of procedures sufficiently expresses the humanistic care, and considers the feelings and privacies of the patients. All of these show the qualities that a high-end service agency should have.

Motivated by the medical system reform of the state, private hospitals fully express their imaginations and creativities in the aspect of high-end services, which drives the medical market to develop in a diversified way. In this progress, some high-end hospitals with unique features appear. For example, Beijing San Paulo Man's Hospital has attracted massive attention from all circles for its unique club operation mode and its rich cultural connotation of elite men. This hospital provides medical and health services to those gold-collared men, who are successful in their business and are pursing the high quality. It is decorated as the standard of an international top royal club in a totally European style. There are also many leisure facilities, including cigar bars, cafés, teahouses and Internet cafés. Besides investing a huge amount of money to purchase lots of high-grade equipment, the hospital employs experts, who enjoy international fame, to be its general medical advisors, and establishes cooperation relationships with many major medical organizations in the world. As this hospital is oriented in the pure high-end market and applies full membership operation, it has high standards for the identity of members.

Some experts point out that a developed prosperous model will be presented in the high-end medical market under the new situation of medical system reform. The private medical organizations could grasp the trend of the market gradually, find their ways to survive, and play a big role in the high-end medical market.

According to the analysis above, we find that the medical system reform advances the further opening of the high-end medical market, and the private capital entering the high-end medical market is an irresistible trend and a common aspiration. As a result, it is very wise for Jiakang Company to enter into the health care real estate industry.

4.2 Analysis of relevant enterprises and resources

4.2.1 Strategy

In recent years, demand for medical services always increase sharply.With the entry of foreign capital and private capital into domestic medical industry, the competition in medical

market has become fierce. The medical services offered by medical institution tend to be diversification and specialized. In terms of the coverage of medical services, there are public healthcare services, basic medical services, and high-level medical and health services. In terms of the purpose of medical services, there are preventing services, health-care services and treatment services. In terms of the suppliers of medical services, there are general hospitals, specialized hospitals, and characteristic services suppliers.

Focusing on the positioning of "urban operation enterprise" and "systematic life service provider", Chengdu Jiakang Group took quality as the first and foremost concernment, and put forward the "Jiakang lifestyle", which was firstly advocated in China and greatly pushed forward the community cultural construction and spiritual civilization construction, thus leading a trend of urban housing culture. Chengdu Jiakang Group is the first company in Sichuan to enter into medical real estate market, which shows its striking strategic advancement.

4.2.2 Organization

The goal of Jiakang Group is to forge "China's Jiakang, Century Jiakang". The enterprise mission of Jiakang is "to satisfy clients, staffs, shareholders and the society". Presently in Jiakang, there are over 12,000 staffs. Through 15 years of development, Jiakang Group established the Jiakang Training School, which is known as "the Huangpu Military Academy in real estate industry", and created a set of systematic enterprise culture as behavior specification, which is well-known in real estate industry. The enterprise culture of Jiakang is aiming at unifying the concept, idea, morality, and value of all employees by means of cultural connotation, cultural infiltration, and cultural force, thus forming powerful cohesion, affinity, creativity, and vitality in the company to encourage employees to make constant progress and keep transcending themselves and maintain the company in a long-term, stable, and sustainable development. The spirit of enterprise culture is not only the soul and heart of sustainable development, but also the internal impetus and spiritual pillar of long-term development in the company. Once applied into to industry and the building of SYIMC, such advanced enterprise culture will have positive impact on the building of SYIMC.

4.2.3 Resources

Resources fall into the following three categories: human resources, material and

equipment resources, and technology resources.

1. Human resources.

Similar to other industries, human resources play a key role in medical industry. Hospitals need renowned experts and academic leaders to increase their industrial influence; they also need a perfect talents team including high-end, medium-end and low-end talents because any weakness or deficiency will seriously affect the building of hospitals' talents team and restrict hospitals' development. Additionally, hospitals need to pay attention to improving talents' self-quality and professional skills and offering various opportunities for development and improvement to different talents to avoid outflow of talents caused by lack of development opportunities. Finally, hospitals should offer rational salary structures to talents at different levels so as to retain talents.

2. Material and equipment resources.

It includes capital and equipment. Hospitals are capital and technology intensive, so their good operation requires a large amount of capital and a variety of technical equipment. In terms of capital, hospitals should offer careful analysis and consideration on financing and investment. to avoid financial risks, such as running out of cash, the decrease of debt paying ability, ability to pay, and anti-risk capability. In terms of equipment, hospitals should have complete equipment and avoid deficiency and overlapping. As to high-end medical equipment, investment and purchase should be conducted according to financial condition and practical demands.

3. Technology resources.

It covers the knowledge and technology sharing within hospitals, hospitals' protection of their own intellectual properties and patents, and hospitals' scientific researches.

Following presentation of each category of the company's resource, the thesis utilizes a table to demonstrate Jiakang's specific advantages in resources (see Table 4-1).

Table 4- 1 List of Jiakang Investment Company's specific resources

S/N	Resource	Advantage
1	Government relationship	Long-term cooperation with the government has made the company very familiar with the process of project approval.
2	Project land	The company has acquired 113 mu of project land with even larger space for company expansion.

3	Construction capital	Along with strong capital strength, the company has established cooperative relationship with banks and funds, reaching 800 million Yuan of available project capital.
4	Development team	The group company has developed 10 million m^2 of property; fostered 230 experienced team members, among which, 186 has passed the Level-1 Construction Qualification. Hence, they are totally capable of ensuring the construction quality. In the operation, the company has also gathered lots of competent marketing personnel to carry out to ensure that the market promotion in the later stage can attract more customers.
5	Operation management	The company has a profound culture and an advanced service concept, along with an excellent employee training school for more outstanding talents in management, construction development and marketing.

During the building period of SYIMC, a large number of excellent (the excellent here means that the hospital has well-deserved reputation) resources of health industry will be introduced. Jiakang has been keeping in contact with nearly 1,000 project resources of medical and healthcare enterprises.

4.3 Analysis of specialized hospital's requirements

The development vision of SYIMC is to build an integrated, high-end medical service center, which provides good quality medical services for the people in Sichuan, even people throughout the country. To achieve all this, the key premise lies in attracting a number of specialized hospitals with a common vision to join the center. Therefore, SYIMC as a service platform, in the design, how to better meet the needs of specialized hospitals and providing them with an attractive service model and content is particularly important.

To achieve this goal, the first task is to establish relationship and maintain communication with these level-1 specialized hospitals. To this end, we firstly made some fine publicity material and arrange commissioners to contact specialized hospitals or relevant departments in large hospitals throughout the country, hoping to let them have a summary understanding of SYIMC and attract their attentions.

With the above groundwork, we combined the characteristics of the project producing a questionnaire and handed it over to hospitals which have an interest in SYIMC to fill. The questionnaire seeks to find out their focuses on the construction of SYIMC. The questionnaire

has three parts, namely: basic information, basic needs and evaluation of importance. The basic information part is used to record the nature and level of the respondent's unit, etc.; the basic needs part is used to record investigated groups' requirements of the area of buildings, the number of beds, etc; the evaluation of importance part starting from several aspects of service, investigated each unit's evaluation of importance about property, logistics, management platform and other issues.

The questionnaire was carried out in a week, adopting the way of e-mail to distribute questionnaires. The questionnaire has a total of 59 samples, which expressed keen interest in the project during early communication. These respondents distributed throughout the country, covering professional departments such as obstetrics and gynecology, pediatrics, medical aesthetic, ophthalmic, dental and so on.

The core part of the questionnaire - the evaluation of importance uses the five-level Likert Scale for measuring respondents' attitudes, that is respondents were asked in the five options (very important, more important, in general, less important, very unimportant) to select. In quantifying, from "very important" to "very unimportant" represent the numbers 5 to 1.

The progress of the survey is so smooth that is the response rate is of 100%, specifically the number of actual taken back questionnaires and the number of distributed questionnaires are both 59 copies. Based on the research data of "Basic Information" part, we can gain a simple understanding of the sample's basic situation, as shown in Figure 4-2 to Figure 4-4.

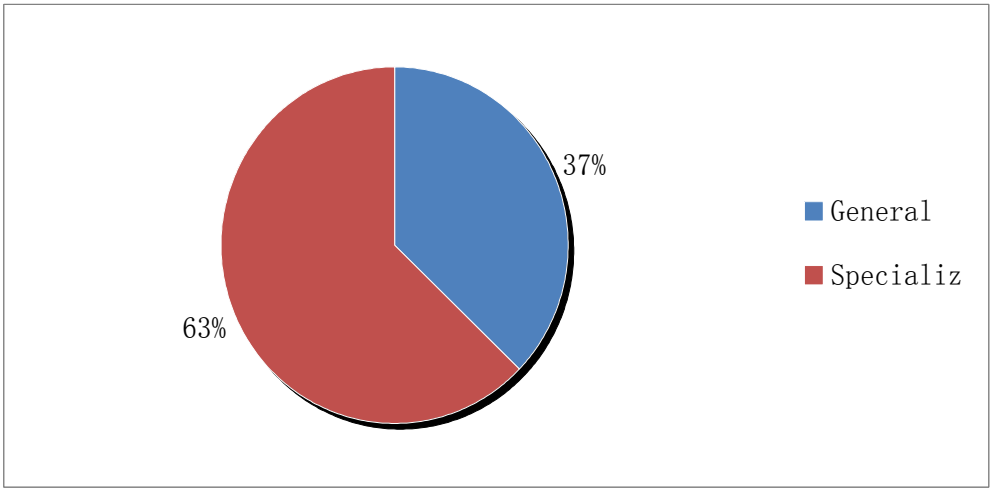

Figure 4- 2 Figure Nature of hospital

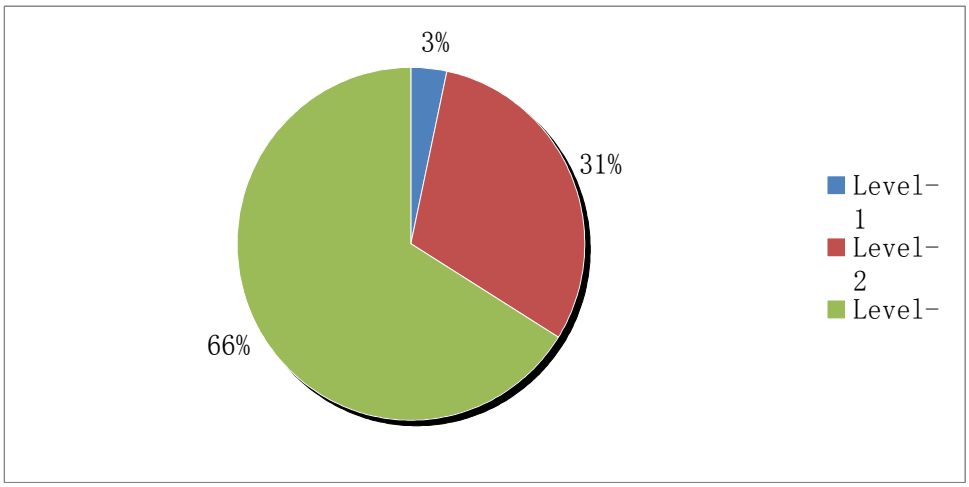

Figure 4- 3 Level of hospital

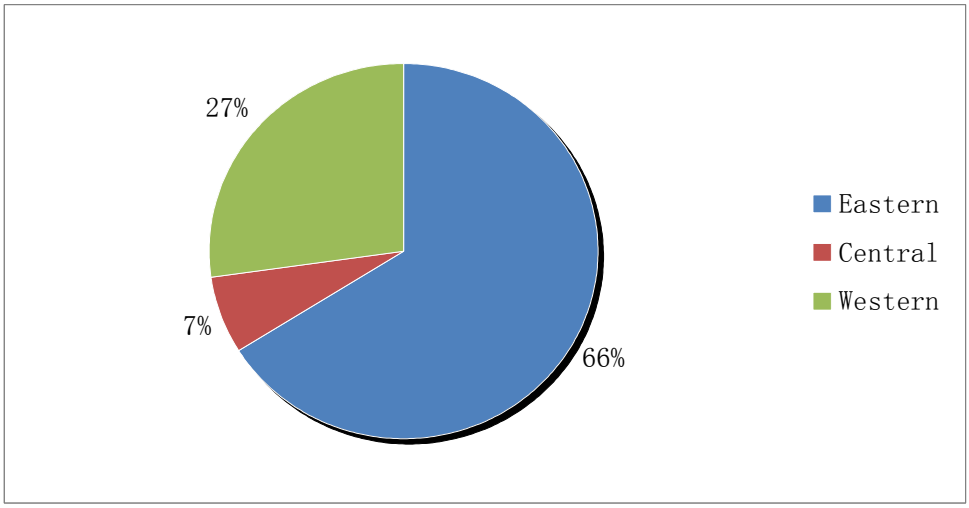

Figure 4- 4 Area of hospital's location

4.3.1 Specialized hospital's basic needs

1. Demand for beds

It is known by the survey results(see Figure 4-5), the number of beds that specialized hospital demanded is mostly concentrated from 51 to 200, among which a maximum is from 51 to 100 whose scale is only equivalent to a level-1 hospital's number of beds in general sense. From this we can see that entering hospitals have not many requirements on scale, but maybe tend to control the quality of services, which is consistent with the positioning of SYIMC.

[1]Baidupedia, Level of hosipitals, 2013

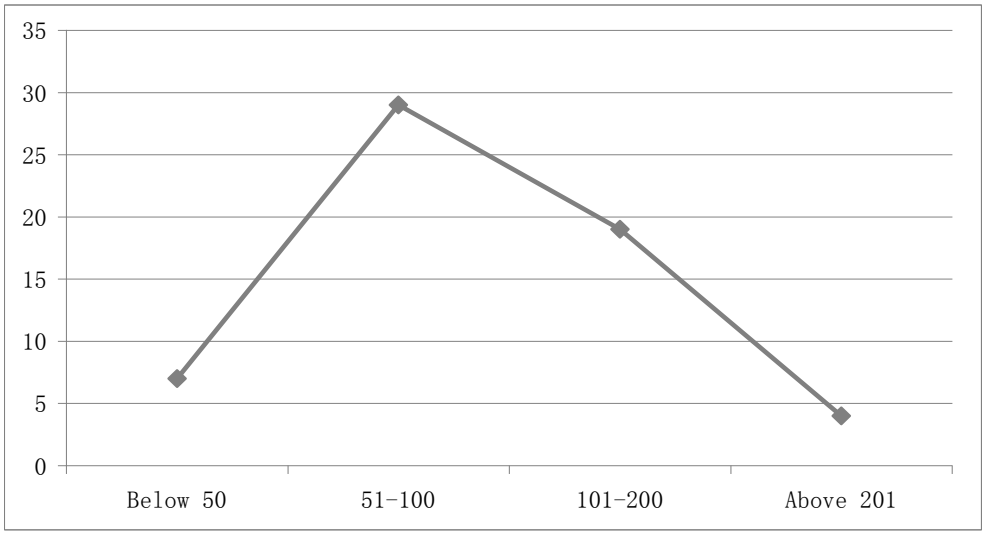

Figure 4- 5 Specialized hospital's demand for beds

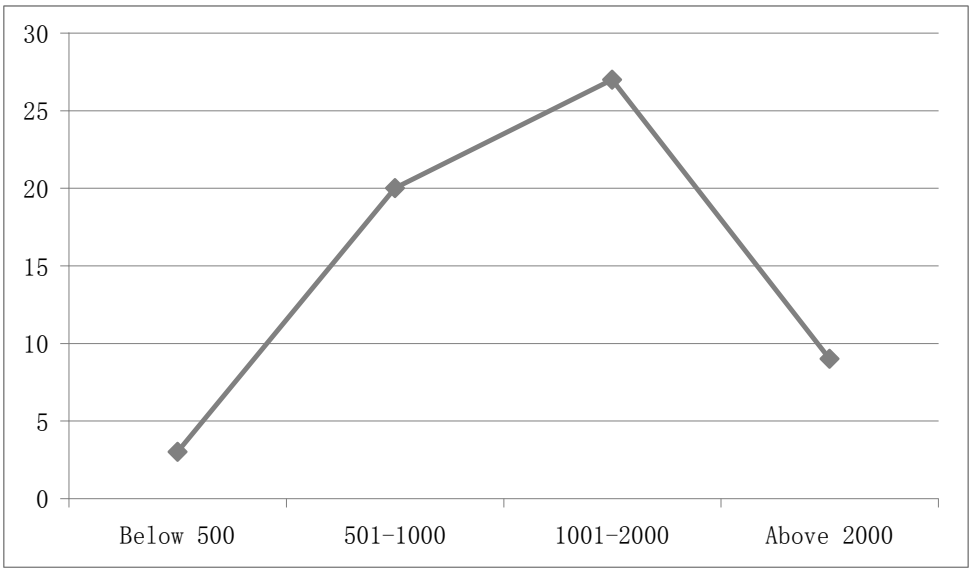

Figure 4- 6 Specialized hospital's demand for the construction area of outpatient building

From the demand for construction area, specialized hospitals with the intention prefer 1001-2000 square meters(see Figure 4-6). If in the terms of each floor with 25 or so rooms, this is roughly equivalent to the size of three to four floors.

From the view of the demand for decoration grade, most of specialized hospitals choose "medium" and "high" decoration grade, which requires SYIMC during the renovation of buildings to choose higher standards and strictly monitor the quality of construction(see Figure 4-7).

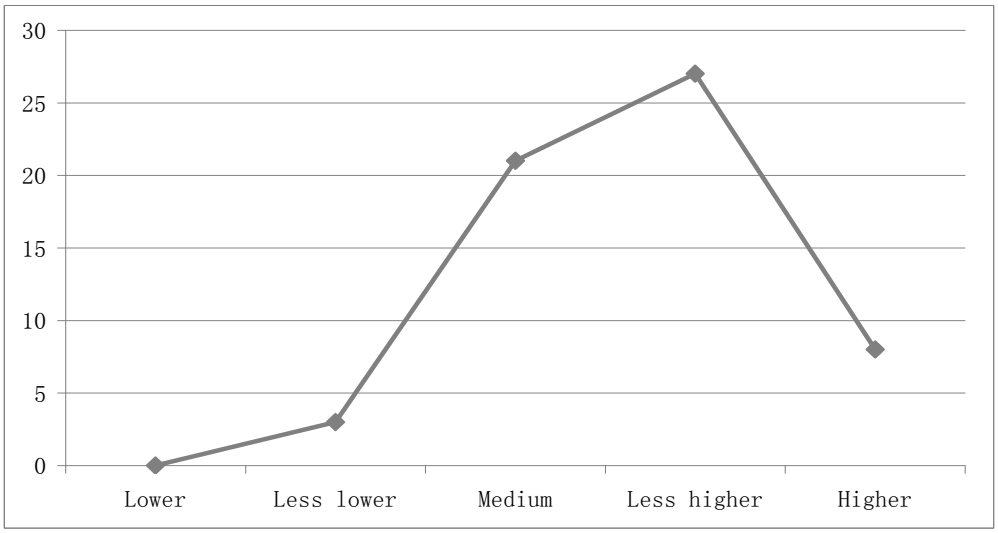

Figure 4- 7 Specialized hospital's demand for the decoration grade of outpatient building

4.3.2 Specialized hospital's demand for property management

Property management is not only the basic function which SYIMC needs to complete, but also the core function. According to the early interaction, we outlined five elements related to property management which specialist hospitals concern: the rental prices, property management fees, wastewater treatment, energy-saving design and the park environment.

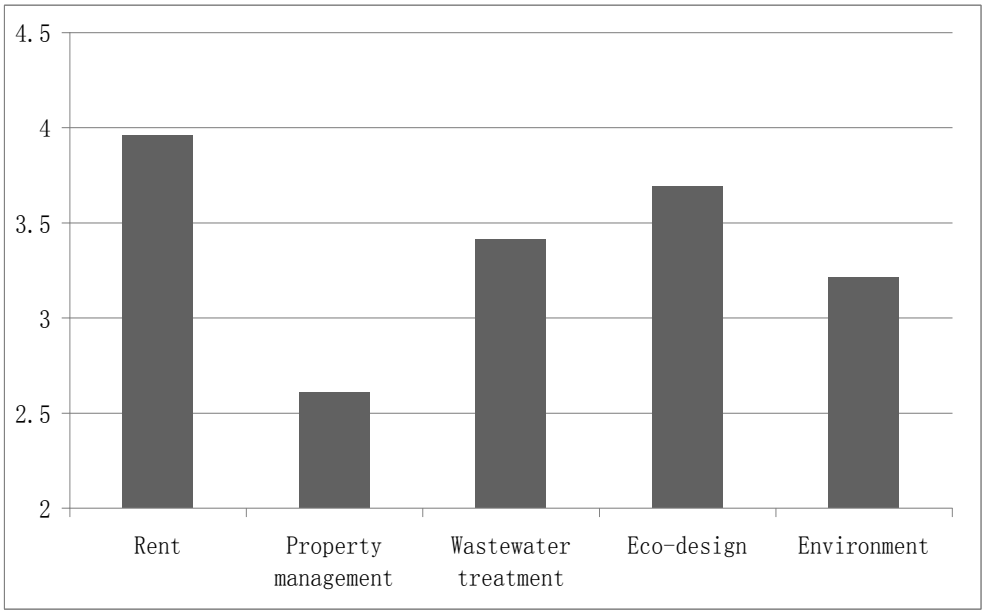

Figure 4- 8 Specialized hospital's demand for property management

From the results of Figure 4-8, relatively speaking, the contents that each specialized hospitals particularly concern include rental prices, energy-saving design. These two elements are closely associated with specialized hospital's operating costs, which to a certain extent, determines its level of profitability. As a result, SYIMC when designing the income program

should appropriately reduce the rental price, but turn to compensate it by earning money from property services, advertising services and other fields.

In addition, for waste water treatment and park environment respondents still have a high degree of concern, which, these two aspects should not be overlooked by SYIMC.

4.3.3 Specialized hospital's demand for logistics support

Logistics support is the key to ensure the normal operation of each specialized hospital. SYIMC should be sure to do a detailed and comprehensive work in this area. According to my arrangement, medical company's logistics support commonly contains four elements: resource allocation of inpatient department, daily supply of medical materials, medical waste treatment, and catering security.

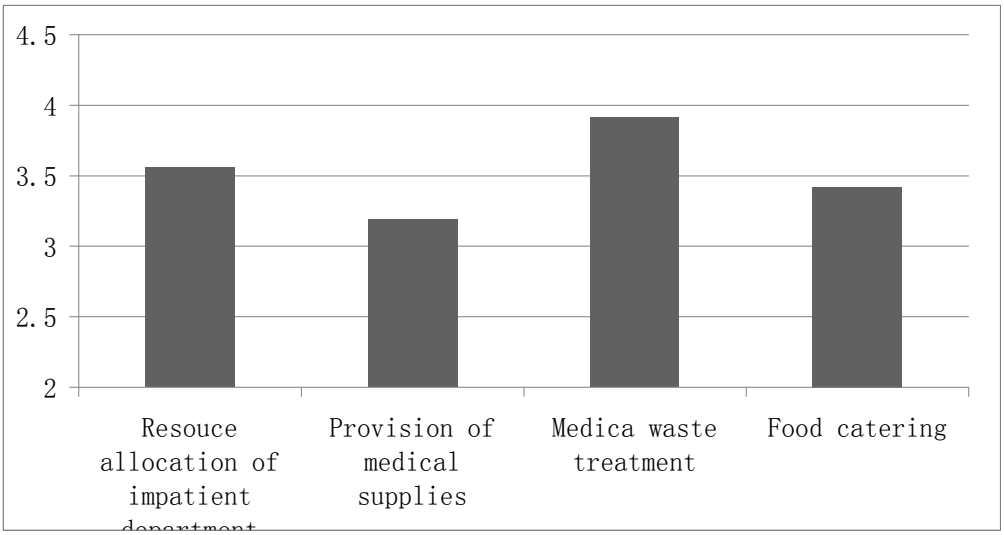

Figure 4- 9 Specialized hospital's demand for logistics support

From the survey data, it shows that there is not much difference in specialized hospital's concern about the four aspects. Comparatively speaking, they are mostly concerned about the medical waste treatment. This link usually refers to the replacement and cleaning of sheets and pillowcases and medical waste treatment, etc. which is the key to ensure quality of service and security of production of specialized hospital.

4.3.4 Specialized hospital's demand for management platform

Management platform has a wealth of meaning, which includes the construction of informationization and the building of cooperation mechanism between various units and other important content. The merits of management platform have impacts on the entire SYIMC's operating efficiency.

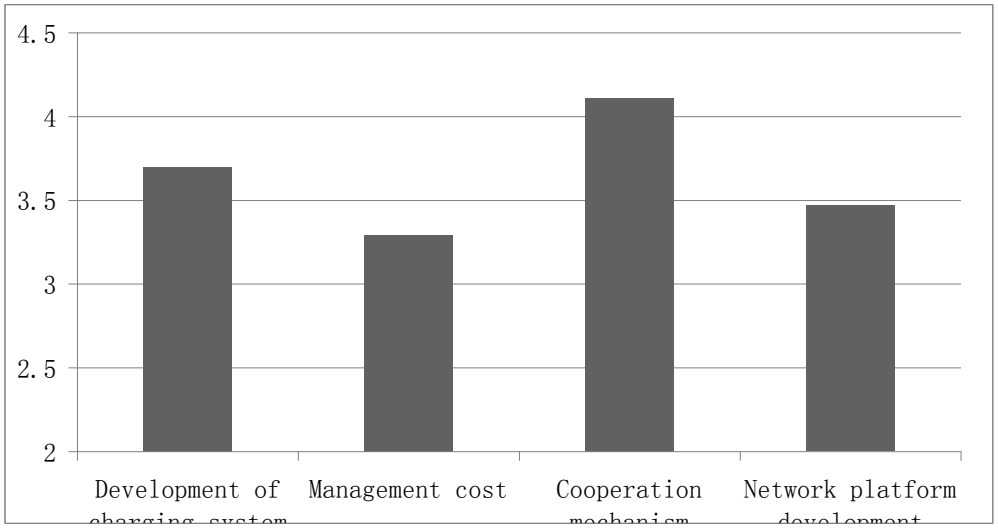

Figure 4- 10 Specialized hospital's demand for management platform

Figure 4-10 shows that there is a clear difference in these four elements, that is specialized hospitals pay more attention to the inter-units cooperation mechanism and construction of charging system, while pay less attention to management costs and other issues. The establishment of inter-units cooperation mechanism is a major highlight advantage of SYIMC, which enables patients to receive cross sections' high-end medical services conveniently, thereby to enhance the coordination between specialized hospitals and to reduce customer's troubles.

4.3.5 Specialized hospital's demand for medical technology center

In our planning, medical technology center is also a major bright spot of SYIMC. Each entering specialist hospital can take use of this platform to share high-end medical equipments and data of patient; at the same time, it is also able to carry out some research co operations.

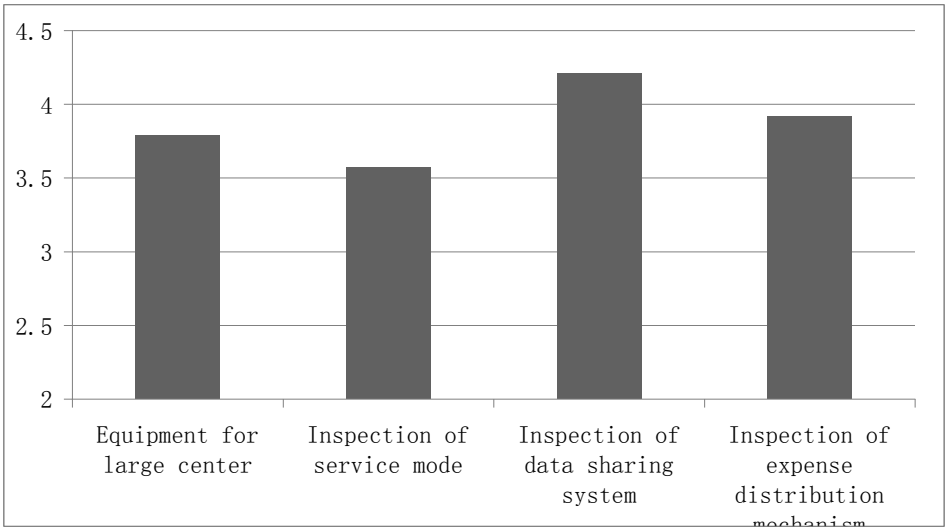

Figure 4- 11 Specialized hospital's demand for medical technology center

From the survey results, specialized hospital has a very clear degree of concern for the data detection sharing system, as well as more attention to the allocation mechanism of detection costs and large center's equipment demands. The data detection sharing system enables medical equipment suppliers and various specialized hospitals shared some valuable data of consumers that can be used for its own research, but also to help keep track of consumers' information, to provide them with continuing medical services.

4.3.6 Inspiration from demands survey

The above analyses more comprehensively set forth various demands of specialized hospitals which have an intention to enter SYIMC. These survey results played extremely important roles in the construction and planning of SYIMC, enabling it better to meet the specialized hospital's demands. Property management, logistics support, management platform and medical technology center, these four aspects, are mediums between SYIMC and various specialized hospitals. If only we have a sincere concern for specialized hospitals' demands, we can achieve a win-win situation.

From the research results, SYIMC during the planning and construction processes should note the following points:

1. Not to pursue scale expansion blindly

Most specialized hospitals implement a service model of small but fine, which requires that in the construction of inpatient department the situation of blindly pursuing the scale must be avoided. In addition, specialized hospitals due to the smaller scale, have relatively limited departments and relatively limited equipments. Therefore, an out-patient department of moderate building area (1000-2000 meters) has been fully able to meet most of specialized hospital's demands.

2. To adopt the cooperation mode of "low rental price, high turnover commission"

For specialized hospitals are more sensitive to rental prices, in order to attract them to enter, and coordinate the strategic objective of both SYIMC and specialized hospitals, in cooperation with specialized hospitals, to adopt the mode of "low rental price, high turnover commission" is a good choice.

3. To pay attention to medical waste treatment

As previously mentioned, the pros and cons of medical waste treatment are related to the good or bad qualities of specialized hospitals' service, or even related to specialized hospitals'

medical safety, and the problem is also very emphasized on by each specialized hospital. Thus, to regulate the processing work of medical waste treatment is particularly important.

4. To strive to a good construction of informationization

As the construction of informationization is the trend of companies' development, SYIMC is no exception. And, among the problems which specialized hospitals particularly pay attention to, the construction of billing system, the inter-unit cooperation mechanism, and the data detection information sharing system etc. have very close links to informationization. Thus, in planning SYIMC, the construction of informationization should be in its important position.

Chapter 5: Business model design of SYIMC

Based on the theory analysis of value chain in Chapter Three, this thesis put forwards the medical center business model of three separated core modules, "constructor, manager and user". Chapter Four further from macro-environment, industry environment, demand environment and other environmental factors and analyzes the rationality and scientificalness of this business model. Based on the above studies, the problem which this chapter will focus on solving is: based on this business model, how to construct, manage and profit exactly for SYIMC. That is, how to put these three modules "constructor, manager, user" into effect.

5.1 Constructor

5.1.1 Concept

In the said business models, "constructor" means that the investors help the SYIMC to invite investments and do some groundwork, mainly including project financing, construction and development, and purchase of equipment. Among them, the latter two is the core parts, while project financing is the basis.

5.1.2 Project financing

The whole land use plan of SYIMC is 375 mu, with a total estimated investment of 3 billion Yuan. More specifically, the first phase of the construction covers 104 mu, of which the estimated investment is 1.2billion Yuan; the second phase project covers 153 mu, with an estimated investment of 1.1 billion Yuan; the third phase covers 81 mu, and the estimated investment is 700 million Yuan.

In order to scatter risks and to lower financing cost, the project financed in various ways, including direct investment, cooperation financing, bank loans, and funding. Specifically, Jiakang Company, the proprietor of the project, directly invested 1 billion Yuan, introduced 500 million Yuan of the medical industry fund of the Indonesian Company Lipo Group as project cooperation (5 years period, guaranteed unsecured, annual interest rate of 12%), applied for a project loan of 900 million Yuan to the Bank of China (3 years period, collateral, annual interest rate of about 8%), and are now negotiating the cooperation of equipment

leasing with Neusoft Medical Group, GE, and Siemens, expecting an equipment leasing of about 600 million Yuan, with the annual interest rate of 8%, and the payment of principal started in the third year, paid in five years.

After the successful financing, how to allocate money efficiently became especially important. The money was mainly used to buy land, develop construction and purchase equipment. To know whether the enterprise capital allocation is reasonable or not, we have to analyze and evaluate, and only on the basis of analysis and evaluation, can we improve resource allocation. The analysis and evaluation of capital allocation is a dynamic process. To make the analysis and evaluation as objective as possible, we intend to introduce a professional consulting firm to cooperate, and the negotiation is now underway.

5.1.3 Building development

1. Location selection

After repeated comparisons, SYIMC was finally located in Yongning Town in Wenjiang District of Chengdu. This choice is determined under the comprehensive consideration of its location specific advantages, infrastructure, geological conditions and other factors.

WenjiangDistrict is not only a national ecological demonstration zone, but the natural barrier of Chengdu. With the rich cultural heritage, pleasant subtropical climate, river with bluish poppers, 60,000 mu of verdant landscape and traffic in all directions, it was constructed the best Human Settlement environment, and was entitled the reputation of "Golden Wenjiang". The Cross-Strait Technology Industry Development Park in-country is a cluster base of modern industries, was hailed at home and abroad as the "bridgehead into the west." Wenjiang District is reputed to be the "pilot area of national village and city", "the first satellite town in Chengdu", "the first well-off area in central Sichuan", "one of the top 10 comprehensive economic areas of Sichuan Province", "one of the national top-100 counties(districts)."

Yongning Town was approved by the Ministry of Construction Development and Reform Commission and other six ministries as a national key small town, and the various primary facilities that support the project construction are perfect: the whole town is with a SPC telephone capacity of 20,000 lines; telecommunication and fiber optic network are covering the whole region; its water pipe network is connected to Wenjiang District’s city water pipe network whose daily water supply capacity reaches 100,000 cubic meters; the sewage treatment plant in Wenjiang District daily processes industrial and domestic sewage of 30,000

tons; the project area has been installed a 3 km-long gas pipeline, with a daily supply capacity of 60,000 cubic meters, which after completion of this project is much larger than the demand of water, gas and electricity and sewage capacity. At present, Yongning Town has 146 kilometers of highway. Within the 7.8 square kilometers of planning area, a road network with directions of "one vertical and four horizontal and one ring" has been built. Chengdu-Wenjiang-Qionglai Highway, Chengdu Ring Road, Furong Avenue, and Wenjiang-Pixian Avenue constitute the skeleton of Yongning Town's transport network, which ensures a very convenient traffic.

In the region, the surface water is mainly supplied by the upstream groundwater and meteoric water, which has abundant and high quality water, and simple hydro geological conditions. The groundwater is quaternary sediments pore water, with sound infiltration drainage conditions, and its water level above the surface at 1-2m. The groundwater level under the influences of atmospheric precipitation and Minjiang River water level has an annual variation rate of about 1.5m, and has no erosion effect upon the concrete.

2. Building plan

In order to improve SYIMC's resource utilization efficiency and to enhance the linkages between agencies of SYIMC, enabling it to operate as an overall pattern in true sense, building planning was extreme picky. In accordance with the former planning, buildings of SYIMC are divided into public and private buildings. Among them, public buildings refer to those buildings were used by multiple or specialized agencies together, while private building means a building generally is only allowed to be used by an independent institution.

Specifically, the in-patient department, the administration building, the academic center etc. are programmed as public buildings, while the out-patient department, the business department etc. are parts of private buildings. These public buildings at one hand can not only bring convenience to consumers, but also make the cooperation between agencies more efficient; at the same time, the existence of special buildings also ensures the necessary independence of agencies and strengthens its "professional" characteristics. The rendering of in-patient department and public areas is as shown in Figure 5-1.

Figure 5- 1 Rendering of in-patient department and public area

3. Building schedule

SYIMC's building resources development is mainly committed by the project's investor, who owns the ownership of the project real estate format. In November, 2012, pre-construction development on the planning, evaluation processes has been completed. According to the plan, stage I is on the way, which is made up of three steps as shown in Table 5-1.

Table 5- 1 The development plan of Stage I

Step	Time Period	Planed Buildings to be Developed	Investment Budget (In RMB 100,000,000)
I	2012.1-2013.12	Inpatient department, administration building	4.62
II	2012.10-2014.9	Academic center, four dedicated buildings, garden	3.75
III	2013.1-2015.1	Rehabilitation center, logistics center	3.63

Currently, Stage I Project's related infrastructure work has been completed, while the construction of the inpatient department and dedicated buildings are in ongoing.

5.1.4 Equipment acquisition

SYIMC's equipment resources consist of medical equipments and non-medical equipments (financial settlement system, logistics, catering equipment, etc.). From the budget situation, the required capital investment in the non-medical equipments' purchase and maintenance is much lower than medical equipments. Thus, for non-medical equipments, the

way SYIMC adopted is to purchase in total independently. Medical equipments often have characteristics of valuable, high maintenance costs, etc., as for the acquisition of such equipments analysis need to be emphasized. Through analysis, we are going to implement some of the following sharing schemes to reduce acquisition costs of medical equipments, and improve its utilization.

First, share high-value medical equipments. Doing so, on the one hand, it can reduce the individual hospital's pressure on self-configuration; on the other hand, it can significantly improve the utilization of these high-value equipments.

Second, share general medical equipments. Equipments which will be used in all specialists of SYIMC, even if without high values should be allocated and shared in a unified manner, so that it can improve equipment utilization and reduce costs.

Expanding hospitals or purchasing large high-end equipments with their own capital will put heavy cost pressures on both of public hospitals and private hospitals. The following is an analysis on equipment demands of a cancer hospital.

It is assumed that besides regular diagnosis and treatment equipment necessary for large specific cancer hospitals, a specific cancer hospital still needs to purchase equipments to offer world-class molecular medicine pathological examination, international long-distance diagnosis, treatment, consultation by doctors, and information network. Equipment include functional imaging equipment that can detect early–stage caner and tumor, some cardiovascular and cerebrovascular diseases, and nervous system diseases--PET/CT, integrated high-end radiotherapy equipment--Tomotherapy, a combination of Spiral CT's imaging scanning function and intensity-modulated radiation therapy (IMRT), and the most advanced radiotherapy equipment in the world – advanced proton therapy system with superconducting cyclotron and proton intensity-modulated spot scanning therapy polar. The main equipments purchased by cancer hospital is shown as Table 5-2.

The total cost of purchasing the above equipment hit RMB 108.46 million, not including expenses for basic detecting instruments. Absolutely, it is unpractical to put such equipment cost pressure on a small specific cancer hospital. Even if such a hospital be able to afford such purchases, the input-output economic benefits will not be satisfactory because service efficiency will be too low caused by the fact that there is only one specific department using that equipment.

Table 5- 2 List of main equipments used by general hospitals' oncology departments

S/N	Equipment name	Number (Set)	Estimated price (In RMB 10,000)	Estimated total price (In RMB 10,000)
1	PET CT	1	2720	2720
2	Linear accelerator 1	2	639	1278
3	Linear accelerator 2	1	1020	1020
4	X-ray simulated locator	1	408	408
5	CT simulated locator	1	408	408
6	Short-range therapeutic machine	1	272	272
7	Treatment plan system	1	82	82
8	TOMO	1	3400	3400
9	Verifying equipment for dosage	1	136	136
10	MRT	1	680	680
11	X-knife	1	340	340
12	Ultrasonic	1	102	102
In total				10846

Kangcheng Hospital Investment Management Limited adopts the main way of attracting business and investment to introduce domestic and foreign large-scale medical equipment suppliers. Atpresent, we have negotiated related matters with Siemens, Philips, GE and other companies, and specific programs are emerging.

5.2 Manager

5.2.1 Concept

After SYIMC was put into use, its advantages and disadvantages of management of medical city will directly affect the interests of entering institutions and the sustainable development of SYIMC. Here the "manager" contains content includes the introduction of specialized hospitals, the daily operation of medical city, the maintenance of relationship between medical city and specialized hospitals. In the aforesaid business model, the content of management module is not by us personally to complete, but we commission specialized company to manage with us. The former is mainly responsible for the daily management work, while we mainly control the strategic direction and assess the former's management

effectiveness.

5.2.2 Operating pattern

1. Choice of operation team

To ensure the management level of medical service of SYIMC, in the process of this project's construction, our project team has already comprehensively communicated with many professional and international medical management service institutions such as Washington Medical Care Investment Management Company, John Hopkins Hospital Management Company, Singapore ParkwayHealth, Huaxia North American Medical Care Service Company, etc. Through the first round comparison and selection, Singapore ParkwayHealth is preliminarily selected as this project's management service unit. A complete set of operation project has been raised by common discussion and research of both sides and an integrated project cooperation agreement will be signed within half a year. Half a year before the official operation of this project, ParkwayHealth will overall take part in the preparation of this project.

As the largest private medical group of Asia, Singapore ParkwayHealth devotes itself to offer timely and convenient medical services to patients all over the world all along. ParkwayHealth operates 16 hospitals across Asia, opening more than 40 departments, having more than 3,000 beds and more than 1,200 experienced physicians.

2. Establishment of cooperative relationship

Cooperative relationship here refers to cooperation between investors and stakeholders such as medical institutions' management companies, medical equipment suppliers and brand specialized hospitals. Good relationship of cooperation is necessary for SYIMC's normal operations.

Main patterns of cooperative relationship include contract, equity participation and joint venture. Contract pattern means foundation of partnerships through signing contractual treaties. Nothing changes on asset size, organization structure and management mode of alliance partner enterprises. Administration of alliance chiefly depends on drawing up treaties and norms. In the pattern of equity participation, by the input of a small number of capitals, partner enterprises form the relation of joint stock. For shareholders, pattern of equity participation can be either bi-directional or unidirectional, and, as its merit, it highlights the long-term responsibility among partners which manages to give consideration to both

short-term and long-term goals. Joint venture refers to two or more enterprises using joint contributions to found independent enterprises with corporate status. This pattern is very efficient to the establishment of long-term cooperative relationship, to mutually share inner materials and capabilities of other companies, and what's more special, to turn materials and capabilities of others into ourselves. Pattern of joint venture can be divided into three types: one-party management, two-party management and joint enterprises' self-management. Their meanings are literal and easy to understand.

(1) Cooperation with the management company of medical institution

The management company of medical institution, as one of the core enterprises for the whole project, needs unified management to SYIMC. This requires medical management institution to reach an agreement on short-term and long-term goals with SYIMC. With clear duties and obligations in the short term and mutual development impetus in the long run, medical management institution and SYIMC will set up secular, stable and mutually trustful cooperative relationship.

If contract pattern is adopted, duties and obligations between medical management institution and SYIMC will be only limited to the explicitly provided content. While to those obligations not explicitly provided in the contract, there will be no constraint force. This would be difficult for both sides to trust each other. Therefore, contract pattern is not appropriate.

For SYIMC and medical institution, to build a joint venture company is infeasible, either. Since SYIMC itself is built in specialty to be in charge of the operation of the whole project, it is lack of rationality and necessity to rebuild a joint venture company in order to enforce long-term cooperation with medical management institution.

The pattern of equity participation highlights the long-term obligations between partners and makes both sides to give consideration to short-term and long-term goals. This just accords with SYIMC's requirements to the management of medical institution.

Therefore, SYIMC will adopt the pattern of equity participation to build cooperative partnership with the management of medical institution. Meanwhile, both sides should try their best to avoid the defects of this pattern and keep each side's independency.

(2) Medical equipment suppliers

Based on the prices, medical equipments of this project can be divided into two types: common medical equipments and high-grade, precision and advanced medical equipments.

Common medical equipments are comparatively easy on purchase and maintenance. Although high-grade, precision and advanced medical equipments are expensive, it is indispensible. Without them, corresponding services cannot be provided which would directly affect the quality of medical services and patients' attitudes towards this project. Therefore, those high-grade, precision and advanced medical equipments will become one of the core competences of SYIMC. Under the circumstances of lacking of capitals to purchase them, choosing a cooperative way to attract equipment suppliers is the key to bring in those equipments.

Therefore, to those suppliers who only provide common medical equipments, contract pattern can be used to build relations. While to those suppliers who provide high-grade, precision and advanced medical equipments, contract pattern lacks constraint force, exists risks and inadequacy in ensuring immediate bringing in, maintenance and upgrades of those equipments. Joint venture pattern lacks rationality and necessity. So, we will adopt the pattern of equity participation to establish cooperative partnership with high-grade, precision and advanced medical equipments' suppliers.

(3) Brand specialized hospital

The brand specialized hospital is the central carrier of SYIMC and it is very important to guarantee the cooperative interests. Due to the focus of the different fields, operation of the brand specialized hospital in SYIMC needs lots of flexibility which shouldn't be affected by other suppliers. Therefore, contract is the best pattern to guarantee mutual freedom and interests and it is the pattern we are going to perform.

3. The development of core competencies

To strengthen the core competencies of SYIMC and lay a solid basis for its further development, SYIMC will do all it can to cultivate the following three core competencies.

(1) External coordination ability

SYIMC always strives to develop its external coordination abilities, which mainly used to interacting with the complex and volatile external environment, including the social environment, market environment and knowledge environment.

The social environment of SYIMC is fundamentally determined by the Chinese government. As a small special but comprehensive medical center, SYIMC enjoys industry cluster effect. Therefore, the relevant policies are accountable for the development of its internal industry cluster. From the beginning, we have been focused on cultivating good

relationships with governments at all levels. Moreover, we have established a special team for communicating with the government. Now, we have been keeping interacting with the YongningTown, Wenjiang District of Chengdu instantly, and the local government have supported our developments with tax relief and affiliated facilities.

The ability to cooperate with the market environment mainly demonstrated in the brand's ability to interacting with other companies and its clients. Whether it is strong or not can impose an obvious influence on manufacturing, marketing and R & D capacity of the enterprises within the cluster. In this respect, SYIMC maintains a sustainable relationship with more than 30 hospitals, aiming to cooperate with them for a win-win result.

As SYIMC belongs to the knowledge-based industries, knowledge is the main driving force of its developments. We plan to found an academic center in the hospital, and we expect to use it as a platform for interacting with universities, researching institutes, training centers and intermediary organizations, thus we can take in the knowledge and resources for advancing the developments of SYIMC. In this way, SYIMC will be more competitive in the market.

(2) Internal coordination ability

The internal coordination ability mainly refers to the interacting ability of SYIMC with other specialized hospitals. The key point is try to keep in consistency of SYIMC's aim and behaviors with other specialized hospitals', which directly determines whether the project of SYIMC can be carried out successfully. Regarding this problem, we plan to deal with it from two aspects, one is institution, and the other is culture. We will utilize institution to stipulate individual's responsibilities and obligations, and foster culture to create a win-win climate. Moreover, creating a good communicating platform to ensure timely communication is also very important.

(3) Individual core competencies

Specialized hospitals are key elements of SYIMC, thus each hospital's core competencies consists an important unit of the cluster core competencies. All the internal organizations and institutions' core competencies form the core competencies of the cluster. SYIMC mainly consists of specialized hospitals and equipments providers, so their core competencies become the core competencies of SYIMC.

To enhancing each one's core competencies, we plan to adopt two methods: supervising the service quality of specialized hospitals and establish a learning platform for mutual

advancements of all the specialized hospitals.

Besides, it should be emphasized especially that the quality of service can be a key index for evaluating a medical service enterprise's core competencies. As for this problem, we will cooperate with a medical management company of Singapore to develop a set of service system, service quality specification system, medical environment system and so on. Our purpose is to improve the service quality of SYIMC.

5.2.3 Resource allocation

1. Human resource allocation

To make sure this project is carried out smoothly, board of directors made up by all the investors is going to lay down great decisions and the team accredited by medical institutions is responsible for leading every functional department to perform relevant tasks for SYIMC. The following functional departments are preliminarily set by SYIMC: information department, financial department, investment department, logistic department, human resource department, public relations department and academic department. SYIMC adopts linear organizational chart, as shown in the brief Figure 5-2.

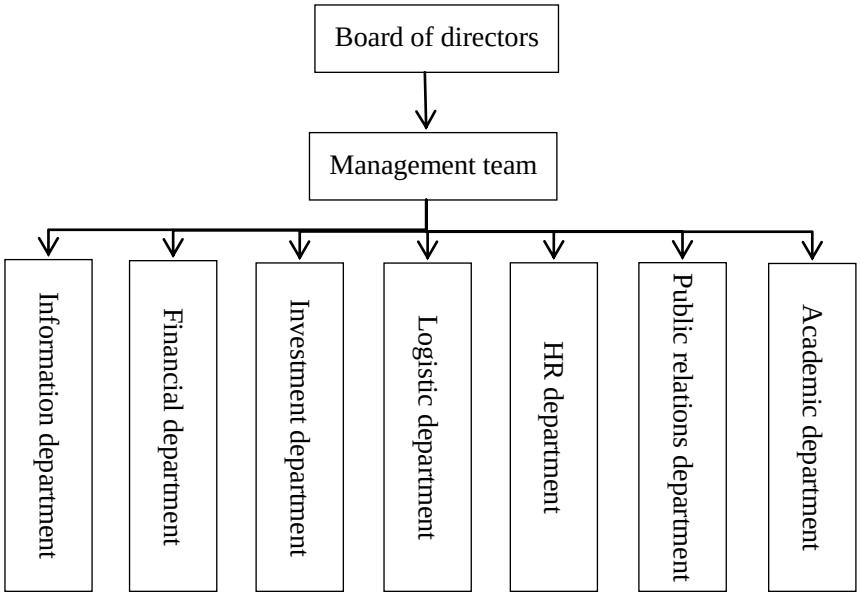

Figure 5- 2 SYIMC's organizational chart

The information department is mainly in charge of the information construction and maintenance of SYIMC. This department plans to recruit 30 employees, among which include 3 managers, responsible for coordinating tasks of this department, 15 professionals, 10 operators and 5 other staffs.

The financial department is chiefly responsible for daily financial management of SYIMC. 25 employees is planned to be recruited, among which include 3 managers, 12 daily financial staffs, 4 auditors and 6 other stuffs.

The investment department principally takes charge of the attraction of investment and the management under and after the process of SYIMC's construction. This department is also responsible for bringing in specialized hospitals and supervising them. It plans to recruit 48 employees, among which include 4 managers, 30 business specialists, 7 clerical stuffs and 7 other staffs.

The logistic department is mainly in charge of the equipment procurement, assets management, catering supplying and security of SYIMC. 112 employees is planned to be recruited, among which include 7 managers, 21 engineering technicians, 23 assets management specialists, 36 catering related staffs and 27 security staffs.

The human resource department is largely responsible for the works like the personnel recruitment and training of the management team of SYIMC. This department plans to recruit 24 employees, among which include 3 managers, 12 HRM specialists and 9 training specialists.

The public relations department is chiefly responsible for keeping close relationship with the government, media and counterparts. This department plans to recruit 32 employees, among which include 3 managers, 23 public relations practitioners and 6 other staffs.

The academic department is largely in charge of the preparations of SYIMC, including the establishment of the organization, procurement of the equipments and recruitment of the researchers. This department plans to recruit 27 employees, among which include 4 managers, 10 equipment procurement staffs, 6 scientific research support stuffs and 6 other stuffs. Besides, the academic department also decides to recruit researchers, like the following Table 5-3.

Table 5- 3 Plan of researchers' recruitment

Researcher	Associated researcher	Assistant researcher	Research intern	Technician	Subtotal
12	23	16	11	9	71

Besides taking care of its own HR allocation, SYIMC should cooperate with the specialized hospitals to complete their HR allocation. This part of work has been taken into our account and its implementation of later stage has been consigned to HR department and investment department.

2. Cost Management

Cost management seeks to sort out and adjust construction and operation costs of SYIMC, in order to improve efficiency in the use of funds. Before proposing cost management strategies, we must first analyze SYIMC's cost situation. Without loss of generality, there is also in accordance with the fixed and variable costs to sort out.

(1) Fixed cost

Fixed cost is resulted from long-term assets that are invested in by enterprise such as plant, equipment and so one, which presents the size or production capacity of the enterprise. Total fixed cost in the short run will be unchanged, while unit fixed cost changes with traffic inversely proportional. SYIMC's fixed cost includes:

1) Costs of infrastructures

Costs of infrastructures include the construction cost of the outpatient and medical technology building, specialized outpatient building, inpatient building, administration building, etc. and expenditures for purchasing communal facilities and equipments. The amount of money for this part is very high, of which the cost of building constructions is as high as 600 million RMB. After completion, the investment of infrastructure turns out to be sunken cost.

2) Purchase cost of public medical equipments

Public medical equipments refer to the medical equipments purchased by the brand-name medical center and could be shared by each specialized hospital, except those equipment purchased by the specialized hospitals. These equipments could be divided into common equipments and high-grade equipments according to their prices. The capitals used to purchase these equipments are fixed cost.

3) Purchase cost of such information management systems as office system

The operation of brand-name medical center needs related information management systems. Capital used to purchase these information management systems is also fixed cost.

(2) Variable cost

Variable cost equals to such a kind of cost that is the total amount of those costs within the relevant scope varies along with changes in the traffic. SYIMC's costs include operating costs, activity fees, etc., as follows:

1) Operation cost

This cost refers to the management fees paid by the brand-name medical center to the

property company during its routine operations, the salaries of staffs (not including staffs of specialized hospitals), utility bills and some others outsourcing service fees. These fees are variable costs.

2) Activity fees

Fees incurred for preparing such activities as thesis seminars or forums, and inviting key target customers of investment promotion to the medical centers for local investigations, etc.

3) Introduction of public medical equipment

Among the public medical equipments, high grade equipments are usually very expensive, and some even cost over 100 million Yuan. If the brand-name medical center cannot afford direct introductions, it could introduce these high-grade equipments by the mode of inviting the suppliers of equipments to become shareholders. Therefore, the dividend paid to equipment suppliers is the variable cost of the project.

4) Fees of maintenance and upgrading of information management system

As the service life period of the information management system grows and the complexity of problems to be solved increases, the brand-name medical center need to maintain and upgrade the related information management system. These fees is variable cost.

Suggestions for the optimization of the resource cost structure of the brand-name medical center are showing in the following.

Firstly, improve the awareness of cost management control. Improve the awareness of cost management control inside the enterprise from top to bottom; perfect the related collecting process of cost management and control data, and the tabulation and completion of forms; control the cost of each link inside middle and minor enterprises; make the most use of the limited cost. Moreover, regard the cost factor of enterprise as an important assessment criterion in the strategic decision-making of enterprise.

Secondly, reduce the incurred fixed cost. Among the fixed costs of brand-name medical center, just the construction cost of buildings reaches as high as 600 million Yuan. The excess fixed cost may increase the operation risk of enterprise. Therefore, the operation of brand-name medical center should take stability as the priority, and reduced as many fix cost as possible from the perspective of risk control. Specifically, when introducing hospital management agencies, avoid pay all the commissions at one time. Instead, we should apply the mode of commission according to profits, or the combination of fixed commission and commission according to profits to change the fixed cost into variable cost; when purchasing

equipments, we should also apply the method of turning fixed cost into variable cost for those equipments needing a great amount of capitals. We should pay the fees of introduced equipments according to the profits or the number of use. In the long term, do not invest capital for the long term blindly, and formulate strategies according the market demand. When the market is promising, invest fixed costs in time or in advance, expand the production scale and improve efficiencies to gain greater profits; when then environment becomes depressing, reduce fixed cost as possible to decrease the operation risk.

Thirdly, conduct information construction to reduce cost. The brand-name medical center could improve its operation efficiency and optimize its cost through informatization. Firstly, informationize basic management, use OA system to sharply improve the efficiency of routine office work, reduce the use of paper and other related supplies, and reduce the cost of routine work. Secondly, introduce advanced management concepts, optimize the internal procedures, improve the efficiency and level of routine management work of enterprise, and reduce the cost of each link in the management work of enterprise. Then, the brand-name medical center could utilize the complete computer technology to improve the efficiency of obtaining business information. Moreover, it could also improve the process of strategic decision making and reduce the cost of enterprise obtaining market information by handling business information with such technology as data analysis and data mining. Thirdly, the brand-name medical center could establish vivid virtual corporations in the Internet through modern information technology to realize the trans-regional operations. As the rapid-developing e-commerce could reduce the transaction cost of enterprise sharply, the brand-name medical center could fully utilize e-commerce to achieve cost advantages when the condition permits.

5.3 User

5.3.1 Concept

SYIMC’s managers are the investors as well as professional medical management companies, and its users are high-end specialized hospitals. These specialized hospitals can be understood as the "customers" of SYIMC, and SYIMC provides a full range of services to ensure all specialized hospital's operation and benefits. From the above findings on consumers, it shows that currently Chengdu people have a great demand for high-end medical, and this demand in the coming years will be with a rapid growth. The development of SYIMC is committed to seize this opportunity. We are integrating various types of high-end specialized

hospitals into SYIMC, providing them with professional guidance and protection, as for the people of Chengdu to provide convenient and comprehensive high-end medical platform.

The problems which this part "user" must focus on solving are to introduce what high-end specialty hospitals, as well as SYIMC how to profit.

5.3.2 Selecting specialized hospitals

In order to achieve business philosophy of specialization and integration, SYIMC programs to take small specialist, large integration as the standard to introduce hospitals with strong techniques and good reputation.

During the building of SYIMC, a large number of excellent resources of health industry are introduced. Jiakang has been keeping in contact with nearly 1,000 project resources of medical and healthcare industry, and the following are its partners.

Table 5- 4 Specialty clinic matchmaking information about SYIMC

S/N	Specialty clinic	Name of hospital	Remarks
1	Gynaecology and obstetrics	United Family Healthcare	
		Angel	
		The Obstetrics and Gynecology Hospital of Medical Center of Fudan University	Floor area: 31,000 m^2 and 496 beds
		West China Second University Hospital (West China Women's and Children's Hospital)	Floor area: 41,000 m^2 and 500 beds
2	Paediatrics	Chengdu Children's Hospital	Shanghai Children's Medical Center
		Children's Hospital of Chongqing Medical University	510 beds
		Xi'an Xijing Hospital(The First Affiliated Hospital of Fourth Military Medical University of PLA)	Floor area :2,200 m^2, 58 beds
3	Medical cosmetology	South Korean beauty cosmetic agencies	
		Plastic Surgery Hospital, Chinese Academy of Medical Sciences	Grade A Class Three, 328 beds Peking Union Medical College
		Huamei Plastic Hospital	
4	Ophthalmology	Aier Eye Hospital	
		Ophthalmic Center of Zhongshan School of Medicine	Floor area: 35,000 m^2 and 317 beds
		China PLA General Hospital (301 Hospital)	40 beds

5	Stomatology	West China School/Hospital of Stomatology Sichuan University	300 sets and 200 beds
		Jiamei Dental Hospital	
		Chongqing Xinqiao Hospital(The Second Affiliated Hospital of the Third Military Medical University)	70 beds
6	Neurosurgery	Xi'an Tangdu Hospital(The Second Affiliated Hospital of Fourth Military Medical University of PLA)	80 beds, neurosciences brain trauma research laboratory of the whole army
		Chongqing Xinqiao Hospital(The second affiliated hospital of the Third Military Medical University)	No. 9, 70 beds
7	Neurology	Xuanwu Hospital	200 beds
		Beijing TiantanPuhua Hospital	Foreign-invested
8	Respirology	Wuhan Tongji Hospital	
		Chongqing Xinqiao Hospital(The Second Affiliated Hospital of the Third Military Medical University)	No. 4 in this specialty clinic Research laboratory of the whole army concerning disease of respiratory system
9	Orthopedics	Beijing Jishuitan Hospital (The Fourth Clinical College Affiliated to Beijing University)	
		China PLA General Hospital (301 Hospital)	200 beds, National Key Discipline The largest specialty center for orthopedics of the whole army
		Sichuan Orthopedic Hospital	
10	Minimally invasive therapy	Shanghai Wooridul Minimally Invasive Spine Surgery Hospital	
11	Gastroenterology	Xi'an Xijing Hospital(The First Affiliated Hospital of Fourth Military Medical University of PLA)	134 beds
		The Second Affiliated Hospital of Chongqing Medical University	42 beds
12	Otorhinolaryngology	Beijing Tongren Hospital	131 beds
13	Burns	Beijing Jishuitan Hospital	80 beds
		West China Hospital	Surgery and assistance, 132 beds
		Chongqing Southwest Hospital(The First Affiliated Hospital of the Third Military Medical University of PLA)	Urology surgery and renal, 160 beds

15	Rheumatoid immune	Huangzaijun Hospital	
16	Diabetes	Endocrinology Department Of Peking Union Medical College Hospital	
17	Male hospital	Chongqing Xijing Male Hospital	
18	Anus and intesine	Ningbo BoaiAnorectal Hospital	

In addition to the aforementioned hospitals, we are still looking for some good local Chengdu high-end hospitals. In recent years, healthcare industry in Chengdu urban district developed rapidly,emerging many specialized hospitals with demonstrations, which are also forming a certain foundation of brand among the people of Chengdu. Under positive linkage support by the investment department, these following high-end specialized hospitals expressed their intentions of cooperation: Sichuan 81 Rehabilitation Center, Chengdu International Cancer Treatment Hospital, Huaxi Hospital Wenjiang Branch, IVT, She Says, Tianhong anti-aging hospital, diabetes specialist hospital and FuwaiCardiovascular Hospital, Chengdu and so on.

5.3.3 Revenue realization

Income realization is the fundamental problem of business model. From the perspective of business operation, in general, companies provide products and services to customers, from them earning money, which is a transaction. In general terms, SYIMC provide its main beneficiaries - specialized hospitals services, including building leasing, property management, integrated marketing, etc. Therefore, when analyzing beneficiary and other follow-up questions, I will focus on the perspective of service to commence.

1. Identification of beneficiaries

To determine the beneficiaries is achieved through market segmentation. Market segment is not based on product variety, product line to carry out, but from the perspective of the consumer or service recipient to divided; is based on the theoretical basis of market segmentation, namely, consumer’s demand, motivation, diversity and difference of purchase behavior to divide. In this regard, we have the following considerations.

SYIMC is composed of medical equipment suppliers, brand specialized hospitals, managing companies of medical institutions etc. These enterprises come from all parts of China or even foreign nations. They are the income objects of SYIMC Investment & Management Co., Ltd. As a result, there are no regional limitations in the income objects of SYIMC.

Based on the previous analysis, the income objects of SYIMC Investment & Management Co., Ltd. have the following features:

Managing company of medical institution-It is able to manage the participants of this project and be responsible for the daily operation and management after the project is built. SYIMC may apply equity participation approach to establish partnership with the managing company.

Medical equipment supplier-Provide ordinary and sophisticated medical equipment.

Brand specialized hospital-Offer the demanded medical services to clients. It has great flexibility and autonomous right. Thus, it is relatively easy to build partnership.

Through further analysis, it is not difficult to find that SYIMC's main revenue is actually coming from its health care recipient consumers who can be regarded as the indirect beneficiaries of SYIMC. Therefore, the analysis of beneficiaries, in addition to the above three units, but also should take into account the consumer, which is very critical. Positioning on what kind of consumers will determine what level of specialized hospitals we should introduce and what marketing strategies we should take.

Target consumer groups of SYIMC fall into three categories on the grounds of their consumption ability, namely, low-end, middle-end and high-end clients. Among the three categories, the project chooses high-end clients as its target group. Reasons are shown below.

First, judge from consumers' demands. Due to limited consumption ability, low-end consumers normally are in need of treatment for acute diseases and they will go to community hospitals or private clinics. It is difficult to identify middle-end consumers because they do not show particular preferences. High-end consumers have strong purchasing power so they need more healthcare services in addition to curing acute diseases. They have higher requirement for services; hence they always choose to go famous domestic large-scale general hospitals or specialized hospitals. The value proposition of SYIMC is that high-end treatment is in line with the needs of high-end consumers. Second, choose based on the conditions of medical service supply. Basic medical service can satisfy low-end consumers, while the non-basic medical service is in short supply. Now the new healthcare reform gives priorities to fairness and public welfare so the State will allocate more medical resources to basic medical service. However for high-end medical service, the resources are relatively insufficient, such as specialized medical services, services catering to special demands and customized services. SYIMC offers high-end medical services to complement such

insufficiency. Therefore, it is very rational and reasonable to choose high-end clients.

From the regions where consumer live to considerate, we can do more in-depth analysis on the target consumers. The number of high-end consumers in a region is limited. Therefore, it is suggested that SYIMC shall have much broader influence. The targeted region of the high-end diagnosis and treatment service is that: 40% clients from Chengdu, the rest coming from other regions in Sichuan Province and other places outside Sichuan, mainly clients from southwest China. Reasons are as follows. First, Sichuan is the largest province in southwest China. It boasts relatively developed economy. Hence, the target consumer group of SYIMC is mainly in Sichuan Province. It is expected that over 3/4 consumers of SYIMC shall be from Sichuan Province. Chengdu, capital city of Sichuan Province, has well-developed economy so the majority of high-end consumers are in Chengdu. As a result, 40% of the expected target consumers are from Chengdu. Although some places in Sichuan Province have lower demand toward high-end medical service, the supply of such service is also insufficient. Plus, Chengdu has its charm as a capital city, which has brought many high-end consumers to Chengdu. This can be shown from the attractiveness of West China Hospital. Therefore, some consumers may come from these regions. Apart from consumers from Chengdu, it is estimated that about 40% consumers will come from other places in Sichuan. Second, it is unlikely to receive clients from other provinces. Because of the geological features of medical service industry, consumers are more accustomed to seeing doctors in places where they live.

2. Income strategies for specialized hospital

The revenues SYIMC gains from specialized hospitals are its main source of income. These revenues can be derived from the sale, rental, service, dividends, advertising and other different aspects. Understanding these sources of revenue and profit will enable companies to make better strategic decisions.

(1) Sales

The SYIMC may gain profit by selling premises to its revenue objects.

(2) Lease

It means the enterprise rents out certain item to other parties to use, such parties shall return the item after a period of time and pay a certain amount of rent according to value of the item and lease term. Items to be rented out are exclusive, which means the enterprise cannot use or rent them out to some other parties during the lease term. The SYIMC may gain profit by renting out premises to its revenue objects.

(3) Service offering

SYIMC may gain profit by providing some large medical equipment to enterprises.

(4) Dividend

According to agreement that has been reached, SYIMC shall share dividends with enterprises which enter the industrial cluster through equity participation structure.

(5) Advertisement

Advertisement refers to activities such as prints, TV, network, advertising board that influence public choices, ideas and behaviors for things. In general, advertisement is the main source of revenue of media companies, larger and more specific the audience of the media is, better effect of the advertisement will be, so will there be more advertising revenue. SYIMC may gain profit by renting out advertisement space in the medical center.

3. Channel of revenue

SYIMC may establish a unified financial information system to allow every enterprise in SYIMC to manage their capital and payment of fees.

To ensure long-term profit, SYIMC must implement fine customer relations management. For that, a few things as follows must be properly handled.

(1) Selection of the type of customer relation

Considering the type of customer relation and status quo of SYIMC, we believe SYIMC needs to establish partner relationship with its customers. The reasons are shown below.

1) The number of customers is relatively low in SYIMC. Target customers of SYIMC are citizens who can afford medium or high level consumption, aren't in critical conditions, and pay great attention to medical techniques, quality of service and hospitalization environment. As a result, SYIMC is only able to receive a relatively small number of customers.

2) SYIMC has relatively high profit margin. Equipment, buildings of SYIMC are fixed cost, which does not vary with the number of customers. For every new customer, variation of the cost is relatively small, so that the profit margin is high.

3) It can be learnt from a customer relation diagram that partner relationship is preferable for high profit margin and low number of customers.

However, as SYIMC develops, the number of its customers and profit margin will change, so will the type of customer relation needs to be established. No matter what changes there will be, they should all be made for providing satisfactory services to each and every customer and improving profit margin of the services.

(2) Selection of marketing strategy

Customer is the god; therefore, an effective approach to customer resource is the key to success of an enterprise. SYIMC still attaches great importance to customers; issues such as how to obtain customers and how to keep them remain to be settled. Having determined its customer group, the next step for SYIMC is to choose better marketing strategy to locate, verify and approach potential customers, so that communications can be made to obtain precious customer resources. Specifically, we will take the methods as following.

1) Promotion scheme by advertisement

Advertisements on bus bodies and at bus stops. They should be mainly distributed in the western and southern areas of Chengdu City, where some upscale communities are located.

Considering routines, habits and focuses of the medium and high income group, TV advertisements should be broadcasted on CDTV and SCTV during non-prime time, especially after 11:00 PM and during news programs.

Set up a website of the hospital, and pay BAIDU and GOOGLE to increase the rank and click-through rate of the hospital on the search engines.

Carry out marketing in the hospital, like increase the hospital's popularity by giving patients giveaways such as household items, reusable shopping bags, etc. with SYIMC's logo on them.

2) Conference and academic marketing

The hospital could actively develop inclusive connections with medical academic groups and medical magazines; publish articles titled with SYIMC by renowned experts and professors from the hospital on industrial media. Convene academic exchange meetings as well as medical technology workshops when the budget allows, so as to promote the hospital's profile.

3) Data marketing

With the "Hospital Consultation and Management Network System", the hospital is able to gather and organize client information to set up a client database, which is composed of an individual database and a group database. The individual database contains the information of discharged patients. On the basis of providing follow-up phone calls for individual clients, the hospital may visit patients with serious conditions in person so as to promote word-of-mouth marketing. As for group clients, regular health lectures, free consultation and other activities may be provided for executives of the client companies according to their basic information,

so as to encourage group clients to receive health examination annually. The group database contains information of foreign-funded enterprises and private owners.

4) Sales promotion with VIP cards

In order to attract high-end and long-term clients, SYIMC will adopt card marketing to expand its service range and meet the psychological demands of high-end customers. The target members are mainly high-income groups or foreigners, who value the quality of service very much; and demand higher standards of diagnose or treatment technology

Target members:

Mainly high-income or foreign patients.

Terms & Conditions of promotional discount:

Each VIP card is planted with an IC smart chip which stores its holder's ID code. SYIMC will archive health records and medical records of the VIP. When a VIP shows his/her card in the waiting room, medical staff will be dispatched for reception. The VIP will be guaranteed 10% discount in the fees of clinical check-up, laboratory tests and hospitalization. In addition, the holder of Class-A VIP card will get free vehicle transport for reception at night or on-the-spot service; free emergency treatment services; and free health examination service for one year.

5) PR maintenance

Health service industry is an industry about public welfare, an industry that depends on social responsibility rather than economic efficiency. Therefore, SYIMC is very concerned about maintaining its public relations and always thrives to build a better brand. SYIMC should further spread its popularity and reputation by combining the above marketing approaches; promoting positive image of SYIMC's treatment towards the public through different channels and expanding the people's knowledge of the hospital to the greatest extent.

(3) Establish an organization matching customer relation management

1) Match between organizational structure and customer relation management

Organizational structure is a critical factor of successful implementation of customer relation management; therefore, the idea of "customer orientated" shall be represented when conceiving the organizational structure of SYIMC. As SYIMC consists of many specialized hospitals, enterprises and organizations, efficiency of the organization will be compromised if each enterprise or specialized hospital manages customers themselves. So a health management center can be established when conceiving the organizational structure to

manage customers of the organization instead.

2) Match between business process and customer relation management

Business process represents a series of activities from the point where the enterprise inputs a variety of resources and starts off with customer needs until it eventually delivers satisfactory services and realizes value for the customer. When designing a business process, the idea of customer relation management shall be considered throughout the process, so that a customer-orientated business process can be established to improve performance of the organization and realize the match between business process and customer relation management of SYIMC.

3) Match between organizational culture and customer relation management

To implement customer relation management, SYIMC shall establish a corresponding organizational culture. Organizational culture represents mutual thinking and behavioral habits of enterprises and people inside an organization and has a great influence on that organization. To implement customer relation management, SYIMC shall establish a corresponding organizational culture and a "customer-orientated" organizational culture strategy.

5.3.4 Analysis on project income

According to the project operation, the estimated investment income from the construction period to the operation period is as shown in Table 5-5.

Table 5- 5 Estimated investment income of SYIMC

Item	In total	Construction Period			Operation Period						
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Capital inflow (In RMB 10,000)	413116	20000	50000	50000	18250	37083	41720	42331	49120	47336	57276
Operating revenue					18250	22083	26720	32331	39120	47336	57276
Number of visits (10^4 persons) (increasing by 10% annually)					37	40	44	49	53	59	65
Clinic fee (Yuan/person, increasing by 10% annually)					500	550	605	666	732	805	886

Shareholder investment		20000	10000								
Fund investment (In RMB 10,000)			20000	10000							
Bank loan			20000	20000		15000	15000	10000	10000		
Financial lease of equipment				20000							
Capital outflow (In RMB 10,000)	387907	20000	50000	50000	15700	36833	40952	38396	48252	43408	44367
Construction investment (excluding interests)		20000	48400	44400							
Bank loan interest (8%)			1600	3200	3200	2800	2400	3200	2800	1600	
Repayment of bank loan						20000	20000		15000	15000	20000
Repayment of fund principal and interest (12%)				2400	3600	3600	3600	18600	11800	5600	
Financial leasing fee of equipment (8%)					1600	1600	5600	5280	4960	4640	4320
Operation cost (30% for the first 2 years, 25% from then on)					5475	6625	6680	8083	9780	11834	14319
Shareholder dividend (10% of the turnover as pre-set dividend)					1825	2208	2672	3233	3912	4734	5728
Surplus capital (In RMB 10,000)					2550	250	768	3935	868	3928	12910
Accumulated surplus capital (In RMB 10,000)					2550	2800	3567	7503	8371	12299	25209

Chapter 6: Conclusions and further research

6.1 Conclusions

On the basis of value chain theory, this dissertation proposes a conceptual business model of separated parties involved in "construction, management and utilization". Additionally, with sufficient survey about macro environment, industrial environment, enterprise and resource conditions, customer demand, the dissertation designs the business model for SYIMC. The major proposals are as follows.

(1) Private investment in medical industry is becoming a development trend, while the current medical staff, technology, equipment and capital in China are still behind the demand for medical service. In the meantime, as the medical internationalization and tourism medical industry develop, China has issued policies to attract private investment into the medical service areas, especially the high-end ones. It is the future development trend of Chinese medical industry.

(2)Through analysis of key activities in the value chains of SYIMC, the dissertation divides the business model of a medical center into three parts, i.e. resource relations, company operation and income realization.

(3) Business model of separated "constructor, manager and user".

As for SYIMC, the resource relation, company operation and income realization are to be respectively undertaken by the constructor party, manager party and user part. Therefore, the dissertation proposes the business model of separated "construction, management and utilization", specifically:

1) Constructor. Constructor takes the responsibility of medical center's construction work. It mainly solves the problem of resource relations. The resources of SYIMC largely refer to fixed assets like houses and equipments. Based on the characteristics of high-end medical treatment’s demand, patients always have a comparatively high demand towards the equipments, technological level, credit and comfortable environment of hospitals. However, in reality, although public hospitals own a large number of senior medical staffs, their construction relies on themselves and to build a new hospital or to upgrade service capability,

such as purchasing a piece of land or high-point medical equipments, building a new hospital, will produce enormous cost pressure. To private and small specialized hospitals, they have some competitive medical staffs, but owing to their small sizes, it will be easier for them to face cost pressures. Therefore, Chengdu Jiakang Investment Company, as the principal party of this project, is mainly responsible for the construction of SYIMC.

2) Manager. Real estate developers know nothing about medical technology or hospital management. After the construction of SYIMC, they will hire a professional medical service management company to apply modern, international and standard management tools and rules to manage SYIMC.

3) User. The primary users of the SYIMC are small and medium-sized specialized hospitals. Small specialized hospitals have many professional medical staffs and characterized treatment technology. If they open hospitals independently, they have to invest more than they can stand and will be easy to cause risks. By entering into medical center, those small specialized hospitals can reduce their construction cost and operation risk, share advanced medical equipment and upgrade quality of service. What's more, they can form linkage mechanism with other specialized hospitals and optimize their resources to satisfy customers' demands towards high-end medical service.

In such way, the three parties of "constructor, manager and user" have together fulfilled the operation and management objectives of SYIMC, i.e. to provide comprehensive, high-end and quality medical services for the clients with the pattern of "small specialized hospitals integrated with comprehensive services". In fact, the operation mode of separated "constructor, manager and user" divides the works based on specialization to create innovation of management, mode and system in the area of hospital operation. In the core project of SYIMC, the constructor, manager, user respectively contributed their capital, intelligence and technical strength to the development of the hospital, forming a community of interest connected by the economic relation of "pay--return". Other than that, in the market economy, the three parties also have broad development space and vision of their own, thus making the "trilateral economic cooperation" even more firm and promising.

The main contributions of this thesis are as follows：

Firstly, the thesis has enriched the business model design research based on value chain. On the basis of existing research, the thesis stated that the business model consists of resource relationship, business operation, and profit acquisition.

Secondly, innovatively put forward the business model of separated construction, management and utilization. It is not only the extension towards the theories of value chain, but also enrichment to the design of business model, with certain academic innovation.

Thirdly, provide the medical institutions with the reference of business model design. Few existing literature concerning business model based on the perspective of value chain, without considering medical industry's specialties, those flows, and methods they put forward cannot be applied directly to the medical centers, and the thesis just right solved the above-mentioned problems.

6.2 Limitation and further research

(1) Limitation

In the process of compositing this dissertation, a lot of interviews and surveys have been conducted for the internal of Chengdu Jiakang Investment Company and the customers (medium/small specialized hospitals), along with questionnaires regarding the demand and preference of the customers (medium/small specialized hospitals). However, the conclusion is relatively limited, since the major proposals are refined from simple methods such as description statistics and catalogued organization during the conclusion stage of the questionnaire survey. For example, we have only studied the general preference for key indicators in medical centers of medium/small specialized hospitals receiving the survey, but ignoring the specific differences in the preference of different hospitals as well as the influence brought about by the difference upon their selection, because the relevant analysis is unavailable due to lack of samples. Fortunately, the number of samples can be gradually increased in the future operation of SYIMC, posing positive influence on SYIMC to better identify the demand of customers (medium/small specialized hospitals).

(2) Future research

1) Considering that the SYIMC project is yet to be commenced, research outcomes described above have not been applied in real practice, so the implementation effect of the said business model is unclear. In the future, research outcomes can be applied in the project and have the feasibility of said business model assessed in actual project operations, so that optimization can be made to the business model based on actual effect and value chain theory, and it will solve the problem of high-end medical recourse scarcity by copying and popularizing this model.

2) Demonstrate the applicability of the theoretical model in this thesis in other industry, and popularize this model into other industry.

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Annexes

1. Specialized Hospital Requirements Qusetionnaire

Dear XX,

We are the project preparatory team of SYIMC that have contacted with you before. In order to better understand your needs and offer you high-quality service at the SYIMC, we recently launched the research of "The SYIMC Specialized Hospital Requirements Survey". According to the type of issues of your major concerns, we listed some relevant contributory factors here to know your advices and operational requirements. There is no right or wrong answer to the questionnaire, and please tick on the option you think is appropriate. Your opinions are very important to our follow-up work. Thank you for your help and support.

Part One: Basic Information

1. Type of Hospital: A.General hospital B.Specialized hospital

2. Level of Hospital: A.First-level B.Second-level C.Third-level

3. Location of Hospital: A.Eastern B.Central C.Western

Part Two: Basic Requirements

4. The ideal number of beds provided by SYIMC

A. below 50 B. 51-100 C. 101-200 D. above 200

5. The ideal building area of the outpatient building provided by SYIMC

A. below 500m^2 B. 501-1000m^2 C. 1001-2000m^2 D. above 2000 m^2

6. The ideal decoration level provided by SYIMC

A. lower B. less lower C. medium D. less higher E. higher

Part Three: Significance Evaluation

Factors concerned	Very Important	Relatively Important	Average	Less Important	Not Important
Property management					
Rent					
Property management cost					
Wastewater treatment					
Eco design					
Park environment					
Logistic service					
Resident resource allocation					
Daily supply of medical supplies					
Medical waste disposal					
Food catering					
Management platform					
Construction of toll system					
Management cost					
Mechanisms of cooperation					
Construction of the network platform					
Center for medical technology					
Major center medical equipment requirements					
Detection of service mode					
Detection of data-sharing system					
Detection of cost allocation mechanism					