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Dynamic Capabilities in Private Hospitals—A Case-based Research of Henan Shengde Hospital

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Doctor of Management

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March, 2021



BUSINESS
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I declare that this thesis does not incorporate without acknowledgment 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.

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Abstract

China's medical industry is in the stage of transformation. As new reform policies are released frequently and increasing number of private hospitals entry the medical industry, the external environment is constantly changing. Why is Henan Shengde Hospital capable to survive and prosper through market changes but others fail?

This study adopts Dynamic Capability Approach and investigates the role of dynamic capabilities in achieving superior medical staff satisfaction. The main purpose of this study is to examine the importance of dynamic capabilities for Henan Shengde Hospital to cope with the external environment as well as their mediating role in the relationship between organizational resources, capabilities and medical staff satisfaction.

Both exploratory and conclusive research are conducted in this study. Seven managers were interviewed and a total of 315 questionnaires were distributed and collected in Henan Shengde Hospital.

The findings indicate that organizational culture and managerial capability have positive impact on employee satisfaction. Responding capability and reconfiguring capability affect employee satisfaction positively, while sensing capability does not. We also find that reconfiguring capability play a mediating role in three pairs of relationship, namely, organizational culture and medical staff satisfaction, leadership and medical staff satisfaction as well as managerial capability and medical staff satisfaction. When the organization faces a volatile and unpredictable external environment, reconfiguring capability is an important source of medical staff satisfaction.

Key words: Dynamic capability; Private hospital; Organizational resource; Organizational capabilities

JEL: M14; I11

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Resumo

A indústria da saúde na China encontra-se numa fase de transformação. A liberação constante de novas políticas e a entrada de um número crescente de hospitais privados provocam turbulência na envolvente externa. Partimos da seguinte questão principal de investigação: porque é que o Hospital Henan Shengde é capaz de sobreviver às mudanças de mercado e outros falham?

Este estudo adopta a abordagem das capacidades dinâmicas para investigar o papel destas na obtenção da satisfação do pessoal médico. O principal objetivo desta tese consiste em examinar a importância das capacidades dinâmicas para o Hospital Henan Shengde lidar com a envolvente externa assim como o seu papel mediador na relação entre os recursos organizacionais, capacidades e a satisfação do pessoal médico.

Este estudo conduziu uma pesquisa exploratória e conclusiva. Sete gestores foram entrevistados e um total de 315 questionários foram distribuídos e recolhidos no Hospital Henan Shengde.

Os resultados mostram que a cultura organizacional e capacidade de gestão têm um impacto positivo na satisfação dos empregados. A capacidade de resposta e a capacidade de reconfiguração afetam positivamente a satisfação dos empregados, enquanto a capacidade de deteção não afeta. Concluímos também que a capacidade de reconfiguração desempenha um papel mediador em três pares de relacionamento, nomeadamente, cultura organizacional e satisfação do pessoal médico, liderança e satisfação do pessoal médico assim como capacidade de gestão e satisfação do pessoal médico. Quando a organização enfrenta uma envolvente externa volátil e imprevisível, a capacidade de reconfiguração é uma fonte importante da satisfação do pessoal médico.

Palavras-chave: Capacidades Dinâmicas; Hospitais Privados; Recursos Organizacionais; Capacidades Organizacionais

JEL: M14; I11

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摘 要

我国医疗产业正处于转型阶段。随着新的改革政策不断出台，越来越多的民营医院进入医疗行业，外部环境也在不断变化。为什么河南圣德医院能够在市场变化中生存和发展，而其他医院却失败了？

本研究采用动态能力的方法，探讨动态能力在提升医护人员满意度中的作用。本研究旨在探讨河南圣德医院动态能力在应对外部环境中的重要性，以及动态能力在组织资源、组织能力与医务人员满意度之间的中介作用。

本研究既进行定性研究，也进行定量研究。对河南盛德医院 7 名管理人员进行访谈，发放并回收问卷 315 份。

研究表明，组织文化和管理能力对员工满意度有积极影响。反应能力和重构能力对员工满意度有积极影响，感知能力对员工满意度没有积极影响。在组织文化与医务人员满意度、领导与医务人员满意度、管理能力与医务人员满意度三对关系中，重构能力起中介作用。当组织面临不稳定和不可预测的外部环境时，重新配置能力是医务人员满意度的一个重要来源。

关键词：动态能力；民营医院；组织资源；组织能力

JEL: M14; I11

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Chapter 1: Introduction

1.1 Research background

1.1.1 Practical background

The private hospitals in China emerged in the 1980s, and most of them developed from private clinics or reform of public hospitals. As the reform and opening up gradually deepens and the economy and society continuously develop in China, the medical supply provided by the public hospitals can no longer meet the public's growing demand for medical healthcare. Especially since the new medical reform in 2009, due to the continuous deepening of public hospital reforms and the imbalance between the supply and demand of medical services, the government has successively issued policies to encourage and support the social capital in running medical services. The overall number of hospitals has increased sharply, and private hospitals have been flourishing.

In November 2010, the State Council of China issued the Opinions on Further Encouraging and Guiding the Establishment of Medical Institutions by Social Capital (The State Council of China, 2010). The Opinions put forward 25 preferential policies to encourage and guide the social capital in running medical institutions such as improving and implementing preferential policies, eliminating policy barriers that hinder the development of non-public medical institutions, and ensuring that non-public medical institutions enjoy the same treatment as public ones in terms of access and practice.; and in October 2013, the State Council issued Several Opinions on the Promotion of the Development of the Health Service Industry (The State Council of China, 2013), which focuses on the support of social capital to operate non-profit medical institutions and provide basic medical and health services; in March 2015, the State Council issued the Planning Outline of National Medical and Health Service System (2015-2020) (The State Council of China, 2015), which stipulates to reserve planning space for social hospitals in sickbed setting and large-scale medical equipment procurement and proposes a series of favorable planning to liberalize the hosting requirements, improve fiscal and tax price policies, and support private hospitals to be incorporated into medicare designated units. Governments at all levels continuously promulgate policies to encourage and support social capital to run medical healthcare, which has played a positive role. With the continuing increase

in the overall number and scale of private hospitals, they are playing an increasingly important part in the medical and health service system, breaking the monopoly of public hospitals, and forming more fair and orderly competition with their public counterparts.

In recent years, against the backdrop of more policy dividends, the increasing influence of successful private hospitals, and the imbalance in the overall supply and demand of medical services, the medical service industry has become a hot spot for investment capital. Emerging private hospitals are blossoming everywhere through forms of new construction, acquisitions, mergers, and reorganization. After 30-year accumulation and development, some private hospitals have stood out and become industry benchmarks and targets. Taking the general hospital as an example, Peking University International Hospital was jointly invested and built by Peking University and Founder Group Co., Ltd. in 2003. This Hospital is currently the largest non-profit general hospital invested by social capital in China. As an affiliated hospital of the Peking University Health Science Center, the Hospital has received strong support from the Center and its affiliated hospital system in medical treatment, teaching, and scientific research. This Hospital possesses abundant human resources and a total investment of 4.5 billion yuan. With 1,800 approved sickbeds, it covers an area of 298 mu (or 198,666.7 m²) and a total construction area of 440,000 square meters, which is one of the largest single medical buildings in Asia. In addition, Xiamen Chang Gung Hospital enjoys a high reputation in China. As the first and largest Taiwan-funded cooperative hospital in China's mainland, the Hospital was jointly invested and constructed by Taiwan's plastic giant Formosa Plastic Group and Xiamen Haicang Public Utilities Development Co., Ltd. The total investment is about 1.78 billion yuan and it covers an area of 70 hectares. In 2008, it was rated as a tertiary hospital, which has 501 sickbeds and provides outpatient, emergency, and inpatient services with about 2,500 outpatient visits per day. In specialty hospitals, Wuhan Asia Heart Hospital is a large-scale cardiology specialty hospital in China with 750 sickbeds. It has received over 2.4 million heart disease patients from 31 provinces, municipalities and autonomous regions of China, and successfully completed more than 200,000 cases of various cardiac surgery operations. Among dental specialist hospitals, Tongce Medical Investment Management Co., Ltd. is currently the only main-board listed company in China whose main businesses are medical investment and hospital management. This Company specializes in dental medical services and has 17 dental hospitals and clinics in Hangzhou, Ningbo, Kunming, Quzhou, Beijing, Cangzhou, Huangshi, Yiwu and other places. In 2015, its operating revenue reached 760 million yuan, an increase of 30.59% compared with that of the same period of the previous year. The net profit attributable to shareholders of listed companies was 190 million yuan, an increase of 74.79% over the same

period of the previous year and the operating revenue was primarily from dental medical services. In high-end medicare, United Family Healthcare (hereinafter abbreviated as UFH) is a high-level hospital established in China by Chindex Medical Limited (CML), which provides high-end medical services. Chindex is a medical group listed on Nasdaq in the United States. UFH established the first foreign-funded hospital, Beijing United Family Healthcare in 1997 with the cooperation of the Chinese Academy of Medical Sciences. At present, UFH has already set up nearly 10 Grade-A Tertiary general hospitals in Beijing, Shanghai, and other cities and it is currently one of the largest foreign-funded medical institutions in China. To sum up, the above five private hospitals all possess a certain background in the medical and health industry. They are either jointly organized with medical universities, or invested by medical companies, or invested by companies that have mature experience in hospital management. Private hospitals newly built by non-medical investors are now in the exploratory development stage.

1.1.2 Policy background

1.1.2.1 Medical treatment partnership

The earliest concept of medical treatment partnership in China was put forward in the 1980s. From the perspective of the system reform of hospital management, an urban-rural medical treatment partnership with Grade-A Tertiary hospitals as the core was proposed. As the new medical reform in 2009 advances gradually, there are increasingly more researches on medical treatment partnership in China. Shi (2013) proposed a “vertical medical treatment partnership” from a regional perspective, that is, a longitudinally coordinated satellite service organization composed of high-level medical institutions within a certain region (such as tertiary or secondary hospitals) along with the low-level primary medical and health institutions (community health service institutions, township health centers, health villages), so that all levels of medical institutions in the region can form an integrated health service organization with a good order of diagnosis and treatment, and a distinct level and functional positioning, which can be convenient for patients to effectively and reasonably adopt healthcare service resources. Fang et al. (2014) analyzed the partnership mode between the core hospital of Wuhan medical treatment partnership and its member institutions, which can be further divided into “compact type”, “semi-compact type” and “loose type” from the perspective of the coordination degree of personnel, finance, and materials. Zhu (2013) believes that the medical treatment partnership is a cooperative alliance or medical group, not only a community of interests, but also a community of responsibilities|. Patients enjoy convenient and high-quality services such

as two-way referral between primary medical institutions and hospitals and mutual recognition of results in the medical treatment partnership. Gao (2013) holds that, compared to the vertical integration of medical and health institutions with the same asset attribute, the “medical treatment partnership” proposed by the National Health Commission refers to the strengthening partnership among tertiary and secondary hospitals, and community health service centers without breaking the original ownership relationship, so that medical resources can be shared within the partnership .

At the policy level, the 2013 Health Work Conference Report proposed the development of medical treatment partnership for the first time. On April 26, 2017, the General Office of the State Council issued the Guiding Opinions on Promoting the Construction and Development of Medical Treatment Partnership (The State Council of China, 2017), officially clarifying that the construction and development of medical treatment partnership is an important step and system innovation in the medical and health work for the grassroots. The document divides the medical treatment partnership into four major organizational models: the medical groups mainly established in cities, the medical communities mainly established in counties, the specialist alliances established in cross-regions, and the collaboration network of telemedicine in remote and rural areas. It also proposes that they can be included in the medical treatment partnership according to the willingness of medical institutions run by social capital.

In May 2019, the National Health Commission issued the Notice on Promoting the Construction of a Compact County-level Medical and Health Community (National Health Commission, 2019a), requiring that county medical and health service system should be further perfected and the allocation efficiency and utilization of county health resources should be improved by constructing a compact medical community. By 2020, a medical community of services, responsibilities, benefits, and management will be basically established in 500 counties (including county-level cities and municipal districts). The issuance of this document represents the phased achievement in the medical community construction.

1.1.2.2 Medical Community

The Guiding Opinions on Promoting the Construction and Development of Medical Treatment Partnership clarified the establishment of major medical communities in counties, which focuses on exploring the integrated management of counties and townships, with county-level hospitals as the lead, township hospitals as the hubs, and village clinics as the basis and to effectively connect with rural integrated management. Full attention shall be given to the role of county-level hospitals as a link between urban and rural areas and the leading role of county-

level hospitals to form a coordination mechanism for the labor division in the three-level medical and healthcare institutions of counties, towns and villages and construct a county medical service system of three-level linkage. Thus, the county medical community is an important unit to build an integrated medical and health service system. By integrating medical and health resources at the county and township levels and maximizing resource advantages and technological advantages, the quality of county medical and health services can be improved and the order of a well-organized, hierarchical and reasonable diagnosis and treatment can be constructed progressively. Gu (2019) believes that the hugest difference between the construction of the medical community and that of the medical treatment partnership is that inter-institutional integration replaces the inter-agency alliance. The most fundamental goal is to make the entire medical community a community of common interests, responsibilities, and services.

The promulgation of the county medical community policy has a huge impact on the development of private hospitals. In the context of changing policy environments and fierce competition in the region, it is of particular significance for hospitals to make strategic adjustments and ensure their survival and development.

1.2 Research questions and research objectives

1.2.1 Research difficulties

1. Difficulties for favorable policies to be implemented

Although China frequently promulgates preferential policies to encourage social capital to run medical services, the introduction of local health policies was relatively slower compared with the firm and clear principles and guidance at the national level. In terms of equipment access, scientific research projects, and personnel training, there is still an “invisible glass door” hindering the private hospital development in policy implementation.

2. Huge impact brought by the public hospitals’ monopoly position on private hospitals

At present, public hospitals monopolize the best medical resources in China, mainly in terms of doctors and equipment. Private hospitals mainly hire retired experts as subject leaders and fresh graduates as their main team members. Due to the lack of advantages in professional title evaluation and scientific research projects, private hospitals are not attractive to medical personnel with intermediate and senior titles, resulting in the phenomenon of “two big ends and a small middle” and the unreasonable structure of the personnel team.

3. Scattered investment entities and lack of professionalism of the operation management

Currently, most private hospital investors are non-medical ones. The simplification of the property right structure leads to the mixture of ownership and management rights, and it is impossible to obtain benefits from the division of capital and management. The decision-making power of most private hospitals is held by a small number of investors. Although it can ensure that investors fully enjoy operational autonomy and flexibly response to market changes, hospitals still face huge operational risks due to the lack of professionalism in decision-making.

4. The quality of medical services restricting the development of private hospitals

Among most private hospitals, there are still common phenomena such as weak awareness of medical practice according to the law, failure to implement the medical safety responsibility system, imperfect or non-established medical care system, and poor professional skills of medical personnel so that the quality of medical services cannot be well-guaranteed. Coupled with the exaggerated propaganda of the media, the chaos of individual hospitals such as medical accidents, excessive medical treatment, arbitrary charges, and false advertising all go along with private hospitals. If they strive to endure the competition and improve the level of medical services, it is their top priority to ensure the quality and safety of medical services.

5. Misunderstandings and prejudices towards private hospitals

The most conspicuous difference between public and private hospitals is their different investment entities. The difference between for-profit and non-profit hospitals lies in the varied use of revenue and expenditure balances, which are used for non-profit hospitals' development and construction and for for-profit ones' shareholder dividends. Therefore, not all private hospitals are for-profit and for-profit private hospitals do not affect the nature of public welfare of medical services. However, the public generally believes that the purpose of private hospitals is to charge high medical expenses to maximize their own profits so that people lack trust in private hospitals.

1.2.2 Research questions and research objectives

What role do leadership, organizational culture, operational capabilities, and dynamic capabilities play in creating operating performance for private hospitals? The main research issue is solved by the following research questions: To what extent can leadership, organizational culture, operational capabilities and dynamic capabilities contribute to enterprise performance? To what extent can operational capabilities and dynamic capabilities adjust the relationship between leadership, organizational culture, organizational performance, and new

capabilities?

Starting from the perspective of dynamic capabilities and through a combination of theoretical research, literature research and empirical research, the main research objective is to analyze the development of strategic management capabilities and the cultivation of competitive advantages of private hospitals in a dynamic environment and conduct the discussion on strategy formulation and realization paths.

Based on the development status of the strategic management capabilities of private hospitals, this research introduces the Dynamic Capability Approach based on the full demonstration of the necessity of the private hospitals' strategic management of capability development and aims to explore and analyze the main connotation of their dynamic capabilities so as to construct a conceptual model of their dynamic capability development and provide theoretical support for their development. Dynamic capability is a mechanism for an organization to respond to the ever-changing external environment. In the survival and development of a hospital, the dynamic capability is specifically manifested in the utilization of hospital resources to obtain organizational performance. Research objectives are: 1) To study the importance of organizational resources, operational capabilities and dynamic capabilities to organizational performance; 2) Dynamic capabilities can enhance the impact of organizational resources and operational capabilities on corporate performance, so that private hospitals' dynamic capabilities can be studied and used as an empirical basis to put forward a strategy for their development that can meet the requirements of hospital development and the residents' health needs.

1.3 Research contributions

1.3.1 To develop the Dynamic Capability Approach

This research uses the Dynamic Capability Approach as theoretical support to analyze the relationship between organizational resources, operational capabilities, dynamic capabilities, and organizational performance, define the specific concepts of private hospitals' dynamic capabilities and adjust the measurement dimensions and indicators of organizational resources, operational capabilities, dynamic capabilities, and organizational performance so as to stay in line with the actual situation of private hospitals, which has a certain theoretical innovation.

1.3.2 To make contributions to Chinese private hospitals' research

The dynamic capabilities of private hospitals are significant guarantee for hospitals to adapt to the external environment and remain invincible in the fierce competition in the medical service market. With a combination of theoretical analysis and empirical research and based on the actual development of private hospitals in China, this study sorts out the development characteristics of private hospitals at different development stages, analyzes the crucial role of dynamic capabilities in the private hospitals' development, and proposes targeted optimization strategies to provide a reference for the private hospitals' survival, development, and reform, so that they can adapt to the current policy situation.

1.4 Research methods

1.4.1 Research design

This study includes both exploratory and conclusive research. The exploratory phase can provide a theoretical basis for the dimensional division of research models and research variables, and the construction of indicators; while the conclusive phase can prove the relationship between variables through empirical research.

This research covers 5 phases altogether. In Phase 1, related research on dynamic capability models from the literature perspective and defines the concept and dimensions of dynamic capabilities are reviewed. The studies on the relationship between leadership, organizational culture, operational capabilities, dynamic capabilities and organizational performance are also reviewed and a conceptual model of independent variables, intermediate variables, and dependent variables is proposed. Based on the initial scale, the existing variable dimensions are selected and adjusted and new variable dimensions are studied in Phase 2. In order to ensure the validity of the scale and enable the measurement dimensions and indicators to reflect the measurement content, that is, to stay close to the actual situation of Henan Shengde Hospital, it is necessary to interview the hospital personnel. Adjusting the scale according to the interview results can not only improve the accuracy of the scale, but also play a supplementary role in the dimensions and indicators that have appeared in the case but have not been covered in the literature research so as to provide thoughts for future research on hospital dynamic capabilities. Longitudinal research is a repeated measurement of the same sample with the same variables, describing a series of changes brought about by circumstances and time (Malhotra et al., 2008). Because this research case, Henan Shengde Hospital has undergone three phases of preparations,

constructions and operations, with a time span, so Longitudinal research is adopted as a descriptive research. A questionnaire survey is conducted in Phase 3. Phase 4 is for data entry and analysis and Phases 5 is for result evaluation and analysis. Figure 1.1 demonstrates the research design.

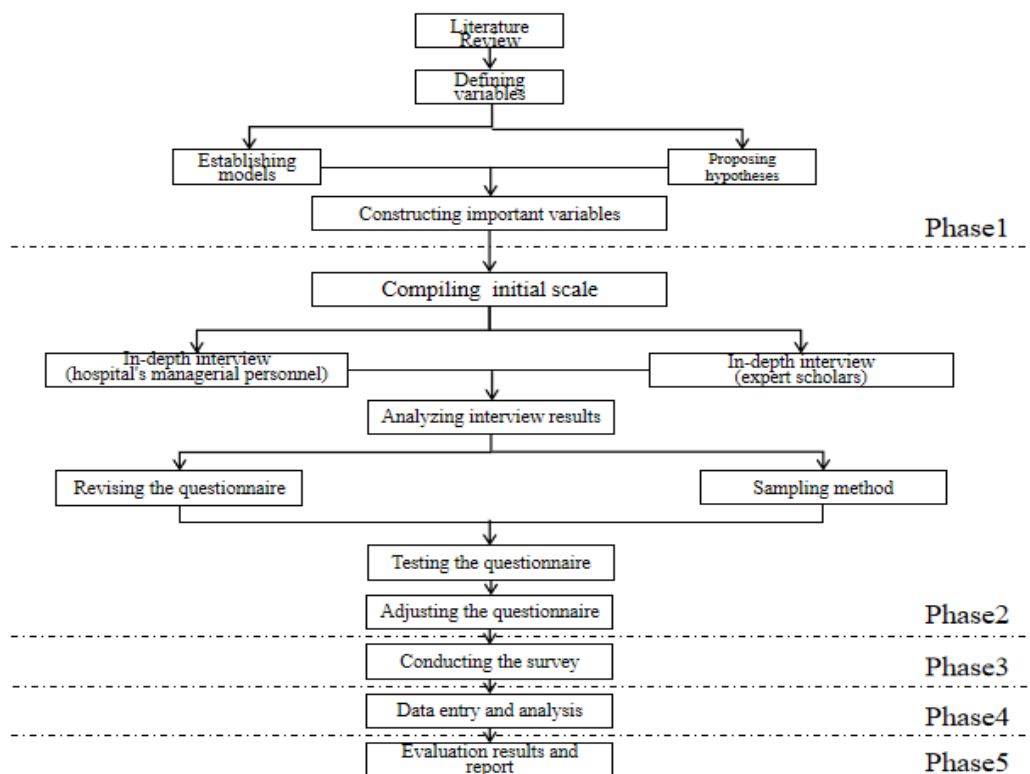


Figure 1.1 Research design

1.4.2 Literature analysis

This study adopts the method of literature analysis, reviews the development history of dynamic capabilities in China and abroad, and summarizes the theoretical research results and practical application results of dynamic capabilities in the health service system; also, it investigates the implementation of medical policies in relevant countries and regions, concludes the experience and lessons for private hospital construction as well as the successful experience of service capacity evaluation and analyzes its reference to the study of dynamic capacity evaluation and the construction of private hospitals in China.

1.4.3 Empirical research

Interviews shall be conducted with members of the hospital's senior management team (including the president and his/her direct subordinates). The senior management team includes the president and heads of various functional departments (medical healthcare, finance, and

operation).

The data source contains four aspects: (1) initial interview with the president (2) semi-structured interview with each member of the hospital's senior management team (3) questionnaire survey (4) collection of existing data and statistical reports data.

Interview with the president: To conduct the first interview with the hospital's president in a semi-structured form. First, the president is required to describe the hospital's dynamic capabilities. Second, he/she is asked to describe the hospital's unique organizational resources, the external environment, competitors and their performance. Then, the president is demanded to list important events and related information since the establishment of the hospital. The researcher then selects a number of decisions for in-depth research, and carry out detailed investigations on the decisions in subsequent interviews with each member of the senior management team.

Interview with senior managerial personnel: After the initial interview with the president, the next step is to conduct semi-structured interviews with each member of the senior management team (medical healthcare, finance, operation). The interviewees are asked to give examples of the hospital resources and important events mentioned by the president during the initial interview. They are also demanded to describe the hospital's organization property, that is, more abstract resources such as hospital routines, work procedures, corporate culture, and leadership.

Questionnaire survey: Through interviews with hospital president and managerial personnel, the theoretical model proposed in this study is verified and revised, the variables, dimensions, and indicators that conform to the actual situation of private hospitals are redefined and improved, and the hospital medical personnel are surveyed with questionnaire.

Collection of existing data and statistical report data: The hospital information and medical reform policies are collected from relevant departments.

Data analysis: For quantitative data, IBM SPSS Statistic 21 is adopted for data entry and analysis.

1.5 Research outline

Chapter One: Introduction. This chapter discusses the source and significance of research questions chiefly based upon the theoretical and practical background and further clarifies research objectives and core questions of this study. Also, reasonable research methods are selected to solve the core questions on the basis of the research objectives and the existing

theoretical basis.

Chapter Two: Literature review. This chapter defines the concept and dimensions of variables and provides theoretical support. This chapter also proposes the research model and research hypotheses for the relationship among the various variables in accordance with the literature and the hospital's actual situation.

Chapter Three: Methodology. Both qualitative and quantitative method are used in the study. This chapter concludes the results of interviews and defines the variable dimensions and establishes the indicator system to form the questionnaire according to the literature and the actual case situation.

Chapter Four: Discussion of the results.

Chapter Five: Conclusions. This chapter summarizes the research results, research contributions, and shortcomings, as well as future research direction.

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Chapter 2: Theoretical Foundation and Literature Review

The previous chapter is the overview of the research. This chapter introduces the theories, therefore the chapter establishes the foundation of conceptual framework and research hypotheses are derived.

This chapter starts with introducing Resource-Based View (RBV) and Dynamic Capability Approach (DCA) as the main theoretical foundation of the research. Three important dynamic capabilities are identified. Next, key organizational resources and organizational capabilities of private hospital are identified. Their importance on medical staff satisfaction is discussed and the mediating role of dynamic capabilities in the relationships between organizational resources, organizational capabilities and medical staff satisfaction are proposed.

2.1 The Resource-based view

In recent years, firm competitive advantage has become an important focus in research on strategic management. Resource-Based View (RBV) has also become an important theoretical basis for understanding the competitive advantages of organizations, gaining wider and wider influences in the theory and practice. Resource-Based View explains how organizations gain their competitive advantages and how they can maintain the sustainability of these advantages (Barney, 1991).

2.1.1 Competitive advantage

Michael Porter first proposed the concept of competitive advantage in the 1970s, believing that competitive advantage is the core of corporate performance in a competitive market (Porter, 1979). Competitive advantage is fundamentally produced by the value a company can create for customers, or refers to the relatively lower cost when there are equal benefits, or the surplus of extraordinary benefits used to compensate for premium. In other words, there are two ways in which an organization can achieve competitive advantage: low cost and differentiation.

Porter also believes that from the perspective of competition, value is the price that buyers are willing to pay for the products provided by companies. Value is measured by gross income, a reflection of the price of a company's products and the quantity sold. If the value earned

exceeds the costs of making the products, there is surplus for the company. With value chain tools, Porter analyzed many separate activities carried out by companies in the design, production, marketing, delivery and auxiliary processes, holding that each of these activities contributes to the position of relative cost and lays the foundation for innovation. Although Porter did not clearly propose the concept of competitive advantage, it can be considered that Porter's competitive advantage theory is based on customer value creation (Porter, 1979).

There are several typical propositions in China. One view is that competitive advantage is a strategic advantage. "Advantage" refers to the competitive position and competitive strength that make you outperform other rivals. "Strategic advantage" refers to the long-term favorable position and strength of a company that is closely related to the success or failure of its operation and fundamental aspects. "Favorable position" refers to the superior geographic, industrial and policy positions, which are determined by objective and historical conditions. "Favorable strength" refers to resource accumulation, integration and utilization. Another view is that companies' ability to perform outstandingly in industries according to the RBV, i.e., the ability to earn higher profit margins than its counterparts, is defined as competitive advantage.

From the perspective of hospital, researchers found that offering specific services which are highly valued by their customers appears to be rewarded. Those organizations that exhibited a higher level of strategic competencies also performed at a higher level (Porter, 1979). Higher level of continuous quality improvement providing has a positive impact on hospital profits. In this competitive environment, as health care organizations focus on developing and providing strategic competencies, the overall value and quality of services provided can be enhanced. Clinical service provision improvements and financial stability are two essential components of establishing a competitive advantage in the community-based behavioral health care sector. With improvements in clinical, financial, and administrative functions, the ability of behavioral health care to offer higher quality, clinically proven effective services at lower costs than those of their competitors will surely enable those providers to establish a competitive advantage in the behavioral health care market place - even in today's tumultuous economic environment (Hsieh & Lin, 2011).

2.1.2 Definition of resource

Researchers on strategic resource have different definitions of corporate resource. As an early researcher on the resource-based view, Wernerfelt and Karnani (1987) defined "corporate resource" in his famous paper published in *Strategic Management Journal* as "anything which

could be thought as a strength or weakness of a given firm; more formally, a firm's resources at a given time could be defined as those (tangible and intangible) assets which are tied semi-permanently to the firm". He regarded assets that can bring advantages or disadvantages to the firm as a firm's resources, and further divides the resources into three types: fixed asset, plan and culture.

Barney (1986), another scholar who has made a great contribution to RBV, believes that not all resources are strategic. Some resources will hinder the formulation and implementation of valuable strategies, some will lower the efficiency and effectiveness of the formulation and implementation of valuable strategies, and others may have no impact on a firm's strategies. Therefore, Barney (1991) defined firm resource as "all assets, capabilities, organizational processes, firm attributes, information, and knowledge, controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness. In the language of traditional strategic analysis, firm resources are strengths that firms can use to conceive of and implement their strategies."

Based on traditional methods, Barney (1991) classified firm resources into three categories: physical capital resources, human capital resources and organizational capital resources. Physical capital resources include the physical technology used in a firm, a firm's plant and equipment, its geographic location, and its access to raw materials. Human capital resources include the training, experience, judgment, intelligence, relationships, and insight of individual managers and workers in a firm. Organizational capital resources include a firm's formal reporting structure, its formal and informal planning, controlling, and coordinating systems, as well as informal relations among groups within a firm and between a firm and those in its environment.

Collis and Montgomery (1995) found that resources cannot be evaluated in isolation, because their value is determined in the interplay with market forces. A resource that is valuable in a particular industry or at a particular time might fail to have the same value in a different industry or chronological context. Based on the classification of resources as intangible, tangible and personnel based, Russo and Fouts (1997) considered resources and capabilities in the following combinations: (1) physical assets and the technologies and skills required to use them, (2) human resources and organizational capabilities, which include culture, commitment, and capabilities for integration and communication, and (3) the intangible resources of reputation and political acumen.

Madhavaram and Hunt (2008) defined resources as operand and operant resources. While operand resources are typically physical (e.g., raw materials), operant resources are typically

human (e.g., the skills and knowledge of individual employees), organizational (e.g., controls, routines, cultures, competences), informational (e.g., knowledge about market segments, competitors, and technology), and relational (e.g., relationships with competitors, suppliers, and customers).

Grant (1996) defined firm resources as inputs into the production process, including items of capital equipment, skills of individual employees, patents, brand names, finance and others. He classified resources into six categories: financial resources, physical resources, human resources, technological resources, reputation and organizational resources. Grant (1996) also believes that there is a key distinction between resources and capabilities. Few resources are productive. Productive activity requires cooperation and coordination of teams of resources. A capability is the capacity for a team of resources to perform some task and activity.

Amit and Schoemaker (1993) defined firm resources as “stocks of available factors that are owned or controlled by the firm”, including know-how that can be traded (e.g., patents and licenses), financial or physical assets (e.g. property, plant and equipment), and human capital. They believe that resources are converted into final products and services by using a wide range of other firm assets and bonding mechanisms such as technology, management information systems, incentive systems, trust between management and labor, and more.

According to Amit and Schoemaker (1993), in contrast, capabilities refer to a firm's capability to deploy resources, usually in combination using organizational processes to effect a desired end. They are information-based, tangible or intangible processes that are firm-specific and are developed over time through complex interactions among the firm's resources. They can abstractly be thought as “intermediate goods” generated by the firm to provide enhanced productivity of its resources, as well as strategic flexibility and protection for its final product or service.

In China, Wang and Bao (2004) stated that a firm has two typical resources: corporate assets as well as potential and skills. Corporate assets are elements that a firm uses to provide customers with valuable goods and services; potential and skills are the capabilities including technologies, knowledge and methods used to give full play to its assets. He proposed to divide corporate assets based on asset effect into two categories: assets with visible effects and assets with invisible effects. Assets with visible effects are those that have direct and obvious contributions to corporate performance, such as patents, property and equipment, and secret recipes; assets with invisible effects are those that have indirect and potential contributions to corporate performance, mainly including brand names, reputation, culture, and communication skills.

Xiang (2003) holds that resources generally refer to those explicit, static, tangible, and passive “objects” that can be fully mastered by managerial staff; and capabilities refer to potential, dynamic, intangible, and active “subjective conditions” with which individuals or groups are competent for a certain job or activity.

We conclude the definitions of resources presented in Table a.1 in Annex A.

2.1.2.1 VRIN model

Porter (1979) systematically discussed the development of competitive advantage and the choice of corporate competition strategies from industrial and corporate perspectives, and believes that long-run profitability depends on the attractiveness of the industry and the firm's competitive position in the industry. Barney (1986) argued that competitive advantage theories represented by Porter lay too much emphasis on external industrial environment and choice of industry, especially the analysis of the impact of the competition of the industry on a firm's competitive advantage and performance.

However, they lack detailed discussions on the features of the firm's resources, which means that it is difficult to explain why there is a difference of corporate performance among firms even in the same external environment and industry. Peteraf (1993) and Collis (1994) believe that RVB fills such gap by unveiling the “black box” of the firms. They regard a firm as an integration of “heterogeneous” resources, and hold that a firm’s competitive advantage is derived from its internal resources and capabilities.

Unlike traditional strategic management, which emphasizes industry environment and strategic choices, RBV focuses on the theoretical research within the organization and takes three hypotheses as the analysis premise: (1) an organization can be regarded as the sum of a series of resources; (2) the resources possessed by an enterprise feature heterogeneity; (3) the heterogeneity of resources can exist for a long time. In this regard, the enterprises utilizing resources and capabilities which are scarce and hard to imitate have long-term performance differences from their counterparts, and those enterprises that monopolize these resources for a long time are more likely to obtain lasting excess profits and competitive advantages (Barney, 1991).

Dierickx and Cool (1989) worked hard to understand the kind of organizational resources that can lead to competitive advantages. They examined the features of heterogeneous resources in a firm, investigated the source of differences in corporate performances, and established a research framework for RVB. As an important researcher in RVB, Barney (1991) defined resources as the following: “Firm resources including all assets, capabilities, organizational

processes, firm attributes, information, and knowledge controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness.” According to him, not all aspects of a firm's physical capital, human capital, and organizational capital are strategically relevant resources. Some of these firm attributes may prevent a firm from conceiving of and implementing valuable strategies; others may lead a firm to conceive of and implement strategies that reduce its effectiveness and efficiency; still others may have no impact on a firm's strategy formulation and implementation.

Barney (1991) distinguished the concepts of general resources and strategic resources, and believes that the strategic resources that lead to sustainable competitive advantages must be characterized by value, rareness, inimitability, and non-substitutability. With heterogeneity and immobility, some firm resources may hold the potential of sustained competitive advantages. To have this potential, according to Barney, a firm resource must have four attributes: (1) it must be valuable, in the sense that it exploits opportunities and/or neutralizes threats in a firm's environment; (2) it must be rare among a firm's current and potential competition; (3) it must be imperfectly imitable; and (4) there cannot be strategically equivalent substitutes for this resources that are valuable but neither rare or imperfectly imitable. All of the four attributes are indispensable, without either of which there are only sources of competitive advantage and sustained competitive advantages, not resources.

According to Barney (2002), if a resource is valuable, it will enable a firm to choose or implement strategies that exploit environmental opportunities or neutralize environmental threats. A resource is valuable only when it possesses either or both of the attributes; value indicates the differences in resources and capabilities among firms in terms of value creation. Barney (2002) also believes that value only does not constitute the source of competitive advantage of a firm. If a particular resource or capability is controlled by numerous competing firms, then that resource is unlikely to be a source of competitive advantage for any one of them. Instead, rareness is another attribute of heterogeneous strategic resources. Among a set of current and potential competitors, if a firm possesses valuable resources and capabilities, they can generate a competitive advantage. But value and rarity do not contribute to the full picture of a firm's sustained competitive advantage.

Therefore, Barney (2002) proposed “inimitability”, which incorporates “inimitability” and “non-substitutability”. If a firm's heterogeneous resources can be imitated by its competitor in a low cost, or be strategically substituted by other resources, then it does not possess a sustained competitive advantage. According to Barney (2002), a firm's potential for competitive advantage depends on the value, rarity, and imitability of its resources and capabilities.

However, to realize this potential fully, a firm must be organized to exploit its resources and capabilities.

2.1.2.2 VRIO model

Barney (1991) and Wernerfelt (1984) believe that unique resource allocation will affect important output, which means that only when a firm has the ability to effectively allocate resources will the value, rarity, and inimitability of resources play their roles. Barney (1991) paper “Firm Resources and Sustained Competitive Advantage” published in *Journal of Management* is widely accepted as a systematic integration of previous research on resource-based views with a well-established theoretical framework. Barney (1991) proposed the VRIN framework which highlights the four attributes of resources that can bring competitive advantages: value, rareness, inimitability and non-substitutability. Barney (2002) constructed the VRIO (value, rarity, inimitability and organization) framework, a basic theoretical framework based on the assumption of resource heterogeneity, and analyzed the source of a firm's competitive advantage and the differences in performance among firms.

Based on his work, Cardeal and Antonio (2012) performed a VRIO test for each of the resources a firm exploits and a VRI test of the capability by combining RBV and dynamic capabilities (DC). They argued that the “O” in VRIO refers to DC, and that competitive advantage comes from VRI DC rather than VRIO resources. Capability is the result of how the company integrates a particular set of critical resources. Individual resources are the inputs to the capability. The capability is the "output" of how the company integrates these critical resources to the capability corresponding to the organization, that is, the “O” of the model VRIO (Cardeal & Antonio, 2012).

Based on the framework, Barney and Hansen (1994) gave a detailed discussion on “organization”. He believes that to realize this potential fully, a firm must be organized to exploit its resources and capabilities, including its formal reporting structure, its explicit management control systems, and its compensation policies. These components are often called complementary resources and capabilities because they have limited ability to generate competitive advantage in isolation. However, in combination with other resources and capabilities, they can enable a firm to realize its full potential for competitive advantage potential. Therefore, Barney and Hansen (1994) definition of resources (i.e., resources should be valuable, rare, inimitable and organized) has shed new lights on the understanding of resources by integrating the capability of using and exploiting resources.

Barney (2002) framework has two levels: value, rarity and inimitability are at the first level,

while organization is at the second level, a higher one. An organized firm can effectively integrate value, rarity and inimitability. Therefore, organization is rooted in abstract resources such as corporate routines, workflows and corporate culture. From the above analysis, we can see that despite differences in description, both models cover the basic attributes of strategic resource: uniqueness and advantage.

2.1.2.3 Economic perspective

From the perspective of market competition, Peteraf (1993) focused on sorting out different competitive strategies through their resource differences, and sought out to explain the emergence and maintenance of differences in corporate performance through choice of competitive strategies. In other words, he conducts a detailed analysis of the competitive strategies that lead to a firm's competitive advantage as well as the results. Peteraf (1993) analyzed the economic features of competitive advantages based on RVB, and concluded that competitive advantages emerge in the following four situations: (1) there is resource heterogeneity, from which come Ricardian or monopoly rents; (2) ex post limits to Competition are necessary to sustain the rents; (3) imperfect resource mobility ensures that the rents are bound to the firm and shared by it; (4) ex ante limits to competition prevent costs from offsetting the rents.

First, from production factors, resource heterogeneity is such a foundation that organizations can earn rents which is the excessive part of earnings than breakeven point. This echoes Barney (1991) concept of “valuable” resources. However, heterogeneity in an industry may reflect the presence of superior productive factors which are in limited supply. It is because of limited supply that a firm can outperform other rivals in gaining a competitive advantage. But heterogeneity cannot guarantee a sustained competitive advantage. If a firm want to gain it, it must choose the other three strategies.

Secondly, ex post limits to competition, as a way to gain rents over a longer term, requires individual firms to protect themselves from imitation and preserve their rent streams through isolating mechanisms (Rumelt, 1991). Property rights protection, information asymmetries, producer learning and buyer switching costs may cause no recoverable costs. Such uncertainty may limit imitative activity, thus preserving the condition of heterogeneity. This is similar to Barney (1991) view that resources need to have imperfect imitability and imperfect substitutability.

Thirdly, imperfect mobility means that a firm's resources cannot be traded, and that some other kinds of resources are tradeable but more valuable when they are somewhat specialized

to firm-specific needs, such as cospecialized assets (Teece, 1982). Imperfect mobility comes from a high sunk cost or transaction cost produced by a firm's effort to gain the resources, which may inhibit the factor's exit from the firm. Due to resource immobility, sustained rents can be generated within the firm. Cospecialized assets, as a complementary asset, may not produce any value when existing alone, yet can create value that is difficult to imitate when capitalized with other assets (Lippman & Rumelt, 2003). The organization's actions such as defining, developing, and utilizing in the combination of specialized assets and cospecialized assets manifest important dynamic capabilities.

Finally, *ex ante* limits to competition means that when a firm acquires an important resource in strategic factor markets, the cost cannot exceed the rents it brings. In short, in light of entrepreneurial rents, Peteraf (1993) explained the four kinds of rents that promote a firm to produce sustained competitive advantages, and also elaborated on their relationship and mechanisms.

2.1.3 RBV in healthcare industry

From the perspective of the firms, the VRIO model analyzes the features of the firms' internal heterogeneous resource factors, studies the sustainability of the firms' sustained competitive advantages and the source of differences in the firm performance, and constructs the research framework of RBT. The difference between general resources and the strategic resources is identified and we believe that the strategic resource factors generating sustained competitive advantages must be valuable, rare, imperfectly imitable and non-substitutable. Based on the previous research results, the heterogeneity of strategic resources clearly classified as value, rarity, imperfect inimitability and organization.

The value of resources suggests that the firm's resources can neutralize the threats in the environment or exploit the opportunities in the environment, and the resources are valuable only when they have one of the two attributes or both. The value reflects the differences in the firms' resources and capabilities to creating value. The firm only with value is unable to generate competitive advantages if other firms also have such resources, and therefore, the rarity is another feature of various strategic resources. The rarity is a concept used when comparing with other competing firms. A firm with valuable and rare resources can generate competitive advantages but do not generate sustained competitive advantages. If the firm's heterogeneous resources can be successfully imitated by competitors with relatively low costs or strategically substituted by other resources, then the sustained competitive advantages will

not be achieved. Thus the imperfect inimitability is discussed. Conclusively, firm's potentials to generate competitive advantages depend on its valuable, rare, imperfectly imitable and non-substitutable resources but the resources must be effectively combined to give play to themselves.

The different resource allocation will influence the important output, which means that the resources' value, rarity and imperfect inimitability will play a role when the firm is capable of effectively allocating resources. The resources generating competitive advantages are featured with value, rarity, inimitability and non-substitutability, namely the VRIN framework. Barney (1991) further improves this framework and constructs the VRIO framework. Based on the above discussion, it is apparent that Barney's (2002) RBT analysis framework is divided into two levels: resources' value, rarity and imperfect inimitability belong to the first level—the lower level. And the resources' organization, which belongs to the higher level and reflects the intangible capabilities, can effectively integrate the value, rarity and imperfect inimitability. Therefore, the organization is rooted in the firm's routine, working process, corporate culture and other more abstract resources. Based on the above analysis on the features of heterogeneous strategic resource factors, it is apparent that although there are some differences in expression, they all cover strategic resources' basic attributes, namely "uniqueness" and "advantages".

Based on the VRIO research on the firm's internal heterogeneous strategic resources, Barney (1991) constructs the RBT framework and gives a detailed explanation on the source of the firm competitive advantages and the differences in performance between different firms.

RBV mainly examines the uniqueness of firm resources. Different firms have different resources, and thus develop capabilities that cannot be imitated by others, which spurs sustained competition. Different from the analytical paradigm of "structure, production, and performance" of industrial economic strategy, exclusiveness, rarity, value and non-replicability are the standards of a firm's core resources, which are the reasons for the obviously different performance among different firms. Managerial staff often formulate strategies around core high-quality resources, maintain and widen the gap with other firms to achieve a more leading market position (Pan et al., 2020). As RBV is based on the perspective of endogenous resources, it is usually used for strategic management, human resources management and information technology strategic planning in the medical and healthcare.

Kash et al. (2016) compared the effects of Resource Dependency Theory and RBV on strategic initiatives, and found that the healthcare industry is highly affected by heightened regulation and external environment. It is discussed that healthcare systems generally take on an external environmental perspective in order to establish strategic choice, yet the internal

perspective plays a greater role in the implementation phase, through offering key human resources and organizational capacity building functions. Medical service quality and security, financial indicators, and doctor-related strategic decision-making triggers are external factors, such as the needs of medical reform, industry standards and changes in compensation mechanisms, while organizational and culture-related strategic decision-making triggers are co-influenced by internal and external factors.

Based on RBV, Upadhyay et al. (2019) classified hospital resources into tangible and intangible assets. Tangible assets include equipment, facilities and nurses, while intangible assets include skills, knowledge, efficient procedures and practices. In terms of patient safety, tangible assets include electronic health record (EHR) implementation, while intangible assets include communication, cooperation and feedback mechanisms. Upadhyay et al. (2019) demonstrated that safety culture is positively related with financial performance in a hospital. Electronic health record (EHR) implementation as a tangible asset plays a moderating role in the relationship between safety culture and financial performance.

Compared with public hospitals, private hospitals have relative advantages in equipment investment, medical environment and service quality. The hospital has the right to distribute the operating income and decide whether the staff will stay or not. The salary of the staff is set in accordance with the market situation, which is generally higher than that of the doctors in public hospitals. From personalized service to differentiated functional departments, private hospitals pay more attention to think from the perspective of patients, which is more humanized and friendly than public hospitals. Private hospital managers and employees are more aware of competition than public hospitals.

In healthcare, since special hospitals are often good at certain disciplines, the descriptive method of resources in RBV can be adopted to analyze the case of special hospitals from the perspective of competitive advantage generation. Though such disease can be diagnosed and treated in general hospitals, they are faced with scattered resources due to overall considerations. In contrast, supporting facilities can be installed for the treatment of certain diseases in special hospitals, including doctors, nurses, beds and equipment. Special hospitals are well-positioned in their specialties and maintain their own advantages, which distinguishes themselves from other hospitals. Patients care more about specialists' expertise than about the facilities and equipment in the hospital. It is because there are professionals who boast profound medical knowledge and expertise that special hospitals are valuable and irreplaceable. The development of special hospitals often focuses on cultivating, strengthening and improving specialists. The development approach centered on disciplinary resources has made a significant influence on

the research on strategic management of special hospitals (Pan et al., 2020).

2.1.4 Limitations of RBV

RBV is different from the Porter's five forces model in that it shifts the perspective of exploring a firm's sustainable competitive advantage from the external environment to the internal, and analyzes the impact of the heterogeneous resources on the competitive advantage and performance difference. This "vacuum" perspective is less adaptable to changes in the dynamic and complex environment, making itself less effective to explain corporate problems. Although RBV opens the "black box" of the firm, it only demonstrates the resource attributes of competitive advantages without elaborating on how resources are transformed into competitive advantages. VRIO are essentially descriptive concepts. From an empirical analysis, RBV is still less effective in quantitative research on resource, with measuring indicators of intangible assets to be improved as well as reliability and validity of the indicator system to be further verified (Priem & Bulter, 2001). In addition, there is no consensus on the terminologies, resources, capabilities, and competitiveness in RBV, which hinders the further development of the theory.

In addition, RBV is based on the assumption that resources are heterogeneous, but there are many "duopolies" in the world, such as Coca-Cola, Pepsi, McDonald's and KFC. These firms are very similar in resource attributes and corporate strategies. Hence, RBV is less explanatory in their competitive advantages and performance differences. RBV also implies an important hypothesis--complete information hypothesis. According to RBV, it is assumed that a firm has a complete understanding of its own and its rivals' resource conditions, i.e., no information barrier, and that it can acquire its own and rivals' complete information unconditionally for strategic heterogeneous resources. But in fact, such hypothesis does not hold water in real life, i.e., there is no complete information.

Enterprise RBV analyzes the impact of heterogeneous resources on the competitive advantages and performance differences of enterprises in an external environment with a high degree of abstraction. This "vacuum" perspective is difficult to adapt to the changes in a dynamic and complex environment, thereby making it hard to explain the enterprises' problems. Difference from RBV which is vague and tautologically defined abstraction, dynamic capabilities include specific organizational processes such as product development, alliancing, and strategic decision making within dynamic markets (Eisenhardt & Martin, 2000).

Based on the ever-changing external environment, dynamic capabilities explain the mechanism of a firm's survival and development. Starting from the path of organizational

capability changes, it discovers how organizations and industries interact with changes in the external environment. The Dynamic Capability Approach also explores organizational growth, process and routines, organizational learning and decision-making from the perspective of organizational behavior (Helfat et al., 2007).

2.2 Dynamic capability approach

2.2.1 The definition of dynamic capability

How an organization maintains its competitive advantage has always been a major concern in management study. The Dynamic Capability Approach (DCA) evolved from the Resource-Based View (RBV) and competitive advantage theory.

Teece, Pisano, and Shuen (1999) defined dynamic capabilities as the firm's ability to integrate, build, and reconfigure internal and external competences to address the rapidly changing environments. Dynamic capability is the ability to obtain competitive advantage. "Dynamic" means that organizational competitiveness needs to adapt to the changing market environment, that is, the organization needs to respond flexibly in the context of important development opportunities, rapid technological reform and uncertain market environments in the future. "Capability" means the organization's core strategic management ability while adjusting, integrating and reshaping its external and internal functions and techniques.

Dynamic capability is beyond operating capability, and difficult to replicate (Teece, 2007). Dynamic capabilities, on the other hand, are the ability of a firm to create new capabilities and renew its resource base from within and outside the firm in order to adapt to a changing business environment. As for the relationship with the environment, dynamic capability can not only help the organization adapt to the changing environment, but also change the ecosystem of the whole industry through innovation and cooperation with competitors (Teece, 2007).

Eisenhardt and Martin (2000) from the perspectives of process and routine, hold that dynamic capability is the process of integrating, reshaping, obtaining and releasing resources, with the aim of adapting to, sometimes even creating, market changes. Since the definition of dynamic capability has always been a controversial topic, Mosakowski and Mckelvey (1997) defined dynamic capability as a series of specific and identifiable process, including product development, alliance, and strategic decision-making. Different from Teece, they believe that, although dynamic capabilities vary in terms of detail and path dependence, a specific type of dynamic capability shows similarities in organizations, that is, "best practice". As for the

evolvment of dynamic capability, Eisenhardt and Martin (2000) conducted their discussion according to the intensity of market change: in a market experiencing mild changes, dynamic capability resembles a series of stable and specific processes which produce predictable outcome; yet in a market undergoing drastic changes, dynamic capability is a series of exploratory processes formed by new knowledge, which produce unpredictable outcome.

Helfat et al. (2007) proposed that dynamic capability is the capacity of an organization to purposefully create, extend, or modify its resource base, and consists of patterned and somewhat practiced activities. In their definition, Helfat et al. (2007) highlighted resource base and capacity. They believe that resource base includes tangible resources, intangible resources, human resources and capability. These resources are more easily possessed, controlled and obtained by organizations. Capacity, different from capability and competence, is the ability to improve the resource base at least to a minimum extent. It is replicable and acquirable. Dynamic capability includes three types of capability: the demand or opportunity of knowledge change, the response to such demand or opportunity, and the following actions. Compared with operating capability which enables the organization to survive in the market, dynamic capability focuses on market change (Winter, 2003). Helfat et al. (2007) believe that, through endogenous growth, mergers and acquisitions, as well as strategic alliance, dynamic capability enables the organization to enter new areas or keep expanding in its conventional areas.

Jiang, Mavondo, and Matanda (2015) found that merely possessing useful resources is an insufficient condition alone for value creation and does not guarantee the development of competitive advantage. Indeed, value is created only when resources are appropriately combined, manipulated, and deployed within the firm's environmental context. To extend the RBV in the context of business partnerships, DCA and a relationship marketing perspective were incorporated. The important role of integrative capability and relational capabilities was examined in achieving effective cooperation and superior firm performance in business partnerships. Jiang, Mavondo, and Matanda (2015) found that integrative capability mediates the relationship between organizational resources and firm performance.

In a world where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge. From the perspective of learning, the best companies survive by consistently creating new knowledge, disseminating it widely throughout the organization, and quickly leveraging it in their business processes and their products. In The knowledge-creating company, know-how tricks demonstrate the organization's capability to innovate and learn, which is difficult to imitate whether it is the technological transformation of products from within the organization, outside the organization, or with scientific research institutions. Good

incentive design and creation of learning, knowledge sharing and knowledge integrating procedures are likely to be critical to know-how and a key (micro) foundation of dynamic capabilities (Nonaka & Takeuchi, 1995).

2.2.2 The hierarchy of dynamic capability

Collis (1994) believes that dynamic capability includes the functions of management and operating capability. According to the view that dynamic capability is the competence to build new competences, Danneels (2008) proposes that dynamic capability is second-order competence, including second-order marketing and research and development (R&D) competences, reflecting the ability of a firm to explore new market and technological domains, respectively. The first-order competence is the ability to conduct specific tasks, yet the second-order competence is the ability to learn new tasks, therefore the second-order competence is superior to the first-order competence. Winter (2003) believes that the ability that enables organizations to survive in the market in the short run is “zero-level” competence, yet dynamic capabilities are those that operate to extend, modify or create ordinary capabilities.

Wang and Ahmed (2007) established a “hierarchical order” in terms of the relationship between organizational resources and competences. They believe that, resources, as the base of an organization, belong to the “zero-order”, the organization’s capabilities to realize its goals to the “first-order”, and the core capabilities, a group of resources and competences, belong to the “second-order”. With strategic importance, the organization’s core capabilities exist at a certain time and help the organization to obtain competitive advantage. However, due to the changes of the external environment, core capabilities may show “core rigidities” (Leonard-Barton, 1992). In order to adapt to the environment, dynamic capabilities in the “third-order” are the ultimate organizational capabilities, highlighting the renewal, reconfiguration and re-creation of “zero-order” resources, “first-order” organizational capabilities and “second-order” core capabilities.

According to the “resource-advantage” theory, Wang and Ahmed (2007) developed resource hierarchy theory and divided the resources into: (1) basic, operant resources (BORs); (2) composite, operant resources (CORs); and (3) interconnected, operant resources (IORs) Madhavaram and Hunt (2008). BORs are tangible and intangible low-order resources such as the employees’ skills and knowledge, which are similar to “zero-order” resources. CORs is the integration of BORs, which enables the organization to effectively meet market demand, and the sustainability of competitive advantage is slightly improved. IORs are similar to CORs. The

difference lies in that the BORs integrated by IORs have strong mutual influence and promotion, thereby improving the sustainability of competitive advantage. They are difficult to imitate or obtain.

Zollo and Winter (2002) believe that organizational learning is the source of dynamic capability. Like the operating capability, dynamic capability is composed of replicable organizational activities, not the random ones. The uniqueness of Zollo and Winter's theory is that the result of dynamic capability is not necessarily the improvement of organization efficiency. Although dynamic capabilities exist, the organization may still fail to achieve growth and obtain competitive advantage.

To deal with unpredictable and uncertain environment, "agility" is a popular notion which plays a similar role as dynamic capabilities. Tallon and Pinsonneault (2011) found that agility defined as the ability to detect and respond to opportunities and threats with ease, speed, and dexterity, has emerged, next to alignment, as a key business imperative. Organizational agility is an organization's ability to (pro)actively detect signals in its environment, to 'sense' and evaluate these as relevant cues and categorize them into threats or opportunities and then formulate an adequate organizational response (Dove, 1999).

We conclude the definitions of dynamic capabilities presented in Table a.2 in Annex A.

2.2.3 Dimensions of dynamic capability

The dimensions and measuring criteria of dynamic capability are based on its definition. Since there is not yet a universal definition, the dimensions still vary. According to the literature review, overseas research on the dimensions of dynamic capability is divided into two major perspectives: one expands from the behavioral level of dynamic capability to the cognitive level of organization, so as to continuously enrich and improve the conceptual system of dynamic capability; the other one regards dynamic capability as the firm's ability to complete specific strategies and organizational processes, thereby further exploring the theoretical study on dynamic capability from both aspects of cause and result.

2.2.3.1 Dimensions based on overall organizational behavior

Teece (2007) divides dynamic capability into three dimensions: (1) to sense and shape opportunities and threats; (2) to seize opportunities; and (3) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, re-configuring the business enterprise's intangible and tangible assets.

Sensing and shaping opportunities is a series of scanning, creation, learning and interpretive

activities, with the aim of obtaining existing or new knowledge from customers, suppliers, standard-setting bodies, and governments (Teece, 2007). Seizing opportunities means that the organization makes the right decisions and carries out such decisions in time to produce new products, services and processes. Lack of the ability of seizing opportunities may result in that the organization cannot obtain value from obtained new technologies (Chesbrough & Rosenbloom, 2002). In order to keep growth and profits, after sensing and seizing opportunities, firms reconfigure and integrate organizational assets and structures in response to the rapid changes in markets and technologies (Teece, 2007).

Based on Teece's three dimensions of sensing, seizing and re-configuring, O'Reilly and Tushman (2007) from the angle of organizational ambidexterity, discussed the capability of exploration and exploitation in helping organizations to reconfigure existing assets, identify and seize new opportunities. In the short run, exploitation makes the organization emphasize efficiency and rules, and reduce uncertainties; in the long run, exploration makes the organization more explorative and innovative, enabling it to take on risks and improve flexibility.

Absorptive capability (AC) is a key dynamic capability that is likely to create innovation value to sustain an organization's competitive advantage. Wang and Ahmed (2007) divided dynamic capability into three dimensions: adaptive capability, absorptive capability and innovative capability. Adaptive capability emphasizes the organization's ability to coordinate internal resources and external changes. Absorptive capability is the ability to obtain, absorb, transform and apply knowledge, highlighting the absorption of external knowledge and its combination with internal knowledge. Innovative capability is the ability to produce new products and explore new markets, connecting the internal resource capability and external product market.

Zahra and George (2002) found that absorptive capability includes a set of four capabilities that combine naturally and build upon one another to create new knowledge and commercial outputs. The first two dimensions, namely acquisition and assimilation capabilities, constitute an organization's potential absorptive capacity. The other two dimensions, namely transformation and exploitation capabilities, constitute an organization's realized absorptive capacity.

Barreto (2009) defines the four dimensions of dynamic capability as follows: change the firm's resource base, sense opportunities and threats, make timely decisions, and make market oriented decisions. To change the firm's resource base is in line with the propensity to extend, and reconfigure the resource base. To sense opportunities and threats requires the capability of

monitoring. To make timely decisions is to quickly accomplish reconfiguration and transformation ahead of competitors. To make market oriented decisions means that creating superior value for customers is as crucial as timing.

2.2.3.2 Dimensions based on specific strategic process

Teece (2007) refers to dynamic capabilities as “skills, processes, procedures, organizational structures, decision rules, and disciplines” without specifying the practical nature of such capabilities. Most scholarly discussions about dynamic capabilities focus on abstract concepts with vague operationalization, such that there is a lack of sufficient understanding about the constitutive elements of dynamic capabilities and how they relate to business functions.

Eisenhardt and Martin (2000) found that dynamic capability is a specific and identifiable management process, and divide it into three dimensions: product development, strategic decision-making and alliance. Product development refers to the organization’s ability to use production capacity. Strategic decision-making is the leadership’s ability to make decisions according to the business, functions and professional experiences of the organization, and carry out such decisions. Alliance is the ability to obtain external resources and release internal resources. They added the RVB empirical study to the research on the specific processes of dynamic capability, thereby further clarifying the attributions of organization efficiency from the perspective of resource application.

Weerawardena et al. (2015), from the perspective of learning and innovation, divide dynamic capability into two subsystems and four dimensions which consist of a dual subsystem of dynamic capabilities: a market subsystem consisting of market-focused learning capability and marketing capability, and a socio-technical subsystem comprised of network learning capability and internally focused learning capability.

Dynamic capability can be divided into marketing and R&D second-order competences. The second-order marketing competence is thus a competence at explorative learning by exploring new markets and adding new customer, and the second-order R&D competence is a competence at explorative learning by exploring new technologies (March, 1991; Levinthal & March, 1993; Danneels, 2002).

Since the economic system, development level and cultural environment of various countries are varied, it is difficult to popularize and apply the dynamic capability measurement system established by foreign scholars in China, and the reliability and validity need to be further verified in a specific background. Therefore, the measurement system based on Chinese experience enriches the quantitative research tools for dynamic capability and provides

reference for further study.

He, Li, and Fan (2006) preliminarily defined the six dimensions to measure dynamic capability through theoretical analysis, including customer value orientation, technology and its support system, organizational support system, institutional support mechanism, strategic isolation mechanism, organizational change and organizational learning ability. However, through semi-structured interviews with senior managers of 29 domestic enterprises, it is found that Chinese entrepreneurs divide the measurement dimension of dynamic capability into five aspects: market potential, organizational flexibility, strategic isolation, organizational learning and organizational change. According to the above dimensions, the quantitative changes of dynamic capability and corporate performance are compiled and measured, and the conclusion that market potential is the most explanatory dimension is obtained.

Resource orchestration theory is regarded as the extension of the resource-based theory, because it explicitly provides effective structuring, bundling and leveraging of firm's resources to create value for competitive advantages. Wade and Hulland (2004) found that integration can be considered as an operational capability to support the orchestration of resources across functions and firms. Internal integration and external integration represent two core organizational dynamic capabilities of a firm that facilitates the use of resources. Internal integration enables the deployment and coordination of internal resources across functions. It helps firms structure and leverage internal resources effectively to perform, track and monitor management efforts across functions. External integration allows firms to obtain valuable information and resources from suppliers and customers and manage the supply chain activities by orchestrating resources and competencies across the supply and customer bases (Li et al., 2019).

Dong and Ge (2012) measured from the view of resource integration, and found that there is no direct correlation between resource identification process and dynamic capability, while resource acquisition, resource allocation and resource utilization play an important role in the construction and expansion of dynamic capability. Combining the characteristics of service-oriented enterprises, Sun et al. (2017) put forward the composition of dynamic capability of service-oriented enterprises from five dimensions, including resource allocation capability, learning capability, innovation capability, environmental awareness and environmental adaptability.

According to the particularity of health service capability, Chen, Lee, and Lay (2017) proposed that the dynamic capability of large-scale public hospitals should include the ability to obtain and allocate resources, the basic ability to provide services and the potential of

sustainable development. She regards the “input-output” efficiency as an indicator to evaluate the dynamic capability. Zhang and Sun (2019) carried out a situational analysis of the conceptual framework of dynamic capability, and proposed the four dimensions of dynamic capability in domestic public hospitals under uncertain environment, including perception recognition, coordination and integration, flexible management and improvisation ability. We conclude the dimensions of dynamic capabilities presented in Table a.3 in Annex A.

2.2.4 Dynamic capability of medical institutions

Singh et al. (2011) explored the role of technology in developing the transformation capabilities of home health-care companies, arguing that employees perceive the value of technology and develop dynamic capabilities by evaluating the existing processes of technology. Davison and Hyland (2002) demonstrated that, in a palliative care unit, sharing and integrating knowledge that helps to meet patient needs among employees facilitates the development of innovative capabilities. Ridder, Doege, and Martini (2007) believe that the ability of employees to accept innovation, the availability of resources to support change, and the organizational processes created for change and knowledge sharing contribute to transformation.

Ridder, Bruns, and Spier (2005) find that the ability of clinical departments to develop new operational capabilities or reconfigure existing capabilities in order to deal with the new reimbursement system depends on their evolutionary path and distinctive dynamic capabilities (e.g. learning and coordination processes). Highlight that successful and unsuccessful department’s deal differently with resource constraints. For example, successful hospitals tend to mobilize additional financial and personnel resources to foster the implementation of DRGs.

Dohan, Green, and Tan (2017) used the DCA model to analyze the impact of Health-care Informatics Competencies on the innovation capability of medical institutions. At the group-level, “Technology Application Competencies” significantly impacted the learning, integrating and coordinating capabilities, and “Understanding of the Workings of Technology” impacted the sensing and coordinating capabilities.

Douglas and Ryman (2003) studied the relationship between dynamic capability and innovation in the medical field, concluding that: (1) in teaching hospitals, learning, coordination and integration abilities are related to product and service innovation and process innovation; (2) in community hospitals, learning and integration abilities are related to product and service innovation and process innovation. The coordination ability of teaching hospitals and

community hospitals is insufficient, which hinders the integration and reorganization of internal and external resources, technologies and capital, and affects innovation.

Takahashi (2018) describes the reforms of health-care system in the United States and observes the collaborative dynamic capabilities which provide high-quality health-care services with cost benefits to patients required in Accountable Care Organizations (ACO). Collaborative dynamic capabilities among stakeholders have three elements: (1) building relationships of trust through strategic collaboration; (2) asset cospecialization; and (3) capabilities synthesis among the ecosystem partners in the ACO. Agwunobi and Osborne (2016) defined dynamic capabilities as uncommon competencies, resulting from a difficult to imitate collection and configuration of organizational routines, structures, and assets, which confer sustainable competitive advantage. Dynamic capability is an ability that a hospital simultaneously reduces the costs and improve the quality of medical/surgical conditions and procedures within the enterprise. There are six interdependent components for creating high value health care delivery system. These are (1) Organize into Integrated Practice Units (IPUs), (2) measure outcomes and costs for every patient, (3) move to bundled payments for care cycles, (4) integrate care delivery systems, (5) expand geographic reach, (6) build an enabling information technology platform.

Yang, Xue, and Liu (2020) believes that the county-level public hospitals' dynamic capabilities of medical services refer to their capabilities of continuously being aware of the dynamic needs of the medical service market and providing appropriate and effective medical services in a timely manner. The acquisition of dynamic capabilities of county-level public hospitals means that in a dynamic environment, hospitals can effectively acquire (absorb) and allocate (integrate) limited medical resources to create a unique brand value while maintaining and expanding their competitive advantages, so as to provide high-quality medical services.

The dynamic capabilities of medical services in county-level public hospitals can be divided into three dimensions: innovation, absorption and integration capabilities. The capability of innovation means that hospitals use existing resources to adapt to the changing environment through innovation in technologies, decision-making and knowledge, and provide medical services that can better meet patients' needs. The capability of absorption refers to the creation of competitive advantages in medical services through acquisition, absorption, generalization and utilization of knowledge and resources. The capability of integration means that hospitals can integrate current resources by identifying various opportunities in the medical market, and adjust the uncoordinated organizational structure and operating mechanism, so as to acquire knowledge and technological competitive advantages.

2.2.5 The definition of dynamic capability in this study

2.2.5.1 Sensing the opportunities and threat

Sensing and shaping new opportunities is very much a scanning, creation, learning and interpretive activity. There are two ways for organizations to explore opportunities: one is to obtain from existing information, and the other is to obtain from new information and knowledge. When a major event occurs, the organization must discover the possibility of technological changes, the changes in customers' demand and the possible actions taken by competitors. (Teece, 2007) found that a series of actions taken by organizations can affect customers, competitors, groups that set industry standards, and government departments, and such actions are not one-way. Instead, they usually influence one another and can even change the opportunity itself.

The dynamic capability of a private hospital is providing proper medical and health services to meet the changing needs of patients in time. Sensing capability is a dynamic capability, so private hospitals sense the demand of patients, the opportunity of technological development and the impact of the policy change. Private hospitals and public hospitals are different. The most obvious difference between public hospitals and private hospitals is their goals. While public hospitals have the responsibility to provide basic medical service including vaccination and public health care, or undertake tasks assigned by the government, private hospitals have a high degree of flexibility to make strategic decisions independently.

Starting from the characteristics of the medical industry, the industry opportunities are mainly derived from the development of biotechnology and life sciences. Due to the high cost of R&D and large investment in the early stage, research work is more often than not jointly completed by multiple units such as scientific research institutes, hospitals, and enterprises, the achievements of which can help promote industry changes. Being strictly supervised by government departments, the medical industry often faces policy changes, such as a hierarchical diagnosis and treatment system and the construction of a county medical community, which may bring both opportunities and challenges to hospitals.

From the perspective of a single organization's the dynamic capabilities, the ability to identify opportunities depends on some individuals' capabilities and the organization's operating mechanism. Personal cognitive and creative capabilities are important factors for identifying opportunities, which require professional knowledge, creative activities, the understanding of customers' needs, decision-making capability, and practical wisdom (Nonaka & Toyama, 2007). However, only relying on personal capabilities is quite risky for an

organization. The organization should form an organizational process to determine whether there indeed exist opportunities. The complete process of perceiving opportunities is to first collect information and make it flow within the organization. The next step is to present it to the management team, and finally the management team can verify information and further make decisions through data, facts, or even anecdotes (Teece, 2007).

2.2.5.2 Responding to the change

Once a new (technological or market) opportunity is sensed, it must be addressed through new products, processes, or services. It always requires investments in development and commercialization activity (Teece, 2007). How to respond to changes in the external environment and seize opportunities is a pivotal issue facing the organization, that is, the organization needs to make appropriate investment decisions at the appropriate time and field.

First of all, organizations must choose a specific business model and institutional structure. The ability to innovate, adjust, polish and even change business models is the foundation of dynamic capabilities. Secondly, management should avoid excessive decision-making authority and path-dependence, which suppresses innovation. Finally, the organization should choose enterprise boundaries, and make a correct choice between vertical integration and outsourcing. Responding to the change is a decision-making process that requires managerial personnel not only to make the correct decision, but also to possess communicative skills, show leadership charisma, and propose future vision so as to motivate employees (Teece, 2007).

Wang and Xiao (2014) found that private hospitals' strategic choices are more flexible than those of public hospitals. Eighty percent of private hospitals exist in the form of specialist hospitals with unique specialty advantages. Private specialist hospitals have accurate positioning, choosing to develop businesses with low risks and comparatively high profits, and taking the path of differentiated development to make up for the lack of public hospitals' service capacity.

Private hospitals are less interfered by the government in the way of operation, so they can closely grasp the market dynamics and constantly make adjustments in the direction of development to adapt to the changes in the needs of patients. Private hospitals can also set their own prices according to the actual situation, especially in the special medical technology and service demand, which is easy to obtain the initiative of market competition. Due to market mechanisms, it is often assumed that private hospitals have more incentive in cost control. Because of abandoning the overstaffed and inefficient personnel system, and without the

financial burden of a large number of retirees, private hospitals reduce cost, improve operation efficiency, and have stronger competitiveness under the same conditions.

While public hospitals and private hospitals compete with each other, it is also necessary for both sides to cooperate. In the process of cooperation, it can not only reduce the financial burden, but also support the development of private hospitals by making use of the resources advantages of public hospitals, such as talents, equipment and scientific research projects, which is conducive to providing medical services to people with different demand levels and increasing the effective supply of medical services. The cooperation modes worthy of promotion include the sharing of software and hardware resources between public hospitals and private hospitals. The establishment of internal meeting, two-way referral system, personnel training, and horizontal cooperation between private hospitals and public hospitals are also encouraged.

In terms of governance structure, most private hospitals implement the president responsibility system under the leadership of the board of directors. In order to avoid the problem of entrusted agency, the post of president is commonly assumed by a member of the board of directors, who owns decision-making power in personnel, finance, marketing, and internal control. In regard of marketing, private hospitals are willing to invest more capital, diversify their promotion channels, meet market demands, and expand the number of patients.

Dynamic capabilities exist in the organization's senior management team, yet are deeply affected by the organization's processes, systems, and mechanisms. Compared with managerial capability, maintaining dynamic capabilities requires entrepreneurial capability because dynamic capabilities lie in perceiving and grasping opportunities rather than analyzing and optimizing them (Teece, 2007).

2.2.5.3 Reconfiguring and learning

By sensing changes and seizing opportunities, organizations can achieve growth and create value. With the development of organizations, market changes, and technological revolutions, organizations must reintegrate and allocate resources if they desire to achieve sustained growth. Reconfiguring ability is the ability of an organization to break core rigidity and path dependencies. Organizational capability continuously creates value through the existing processes and procedures, but dynamic capability changes an organization's formed resource base and develop new capability. Teece (2007) found that this development, both origination of new dynamic capabilities and improvement of existing ones, can occur through organizational learning processes and investment processes.

Dynamic capabilities are the abilities to change an organization's existing resource base. Organizations create resource base, including obtaining new resources through acquisitions and alliances, as well as through innovation and entrepreneurial activity. Organizations also can extend their current resource base in the direction of more of the same. As for modification of a resource base, organizations search and select for external alliances as well as destroy part of its existing resource base by selling, closing, or discarding it. Dynamic capabilities apply to exit, not just expansion. Decentralization and decomposability can help organizations obtain integration capabilities (Teece, 2007).

From the perspective of processes and practices, the formation of dynamic capabilities requires both planned strategy and emergent strategy. The organizations have to maintain a degree of flexibility to allow strategies to emerge during the operations of the companies which fosters generative and adaptive learning.

2.3 Hypotheses

This section will discuss the logical relationship between variables and propose research hypotheses.

2.3.1 Organizational resources

Two resources are identified as strategic resources contributing to firms' competitive advantage, namely organizational culture and leadership. These two identified organizational resources are the most relevant resources to a new private hospital in China and they reflect critical aspects of business issues in this specific context.

As there some significant disadvantage for private hospitals in China, such as lack of medical experts, high liquidity of employees and a sense of mistrust among patients, some resources including organizational reputation, brand reputation and human resources are invalid in this industry. Therefore, the following hypotheses are proposed and will be examined in the following sections.

2.3.1.1 Organizational culture and medical staff satisfaction

The most popular cited definition tends to be that of Schein (2010) who considered organizational culture as a social force that is largely invisible, yet very powerful. In fact, it is that invisible force that pushes organization toward specific goals or in a particular direction. It is an amalgam which includes beliefs, ideology, language, rituals, myths, values, norms and

artifacts(Hogan & Coote, 2014) and drives both individual behaviors and collective or cooperative acts (Pettigrew, 1979).

By comparing the three types of foreign-funded enterprises with the local enterprises in China, Chinese scholars Zhang and Zhang (2010) concluded that the dimensions of the OCQ scale only partially show the characteristics of the Chinese corporate culture, that is to say, the construct validity of the scale needs to be improved. They found that this is caused by many factors such as Chinese history and culture, socialist thoughts and modern management ideas.

Through improving the hypothesis and conducting the empirical test, Wang, Zhang, and Shao (2006) believes that the measurement of organizational culture can be adjusted from 12 sub-dimensions to 7 dimensions, namely, goal vision, team consciousness, core values, staff consciousness, innovation consciousness, enterprise consciousness and customer consciousness. Based on Competing Values Framework, Cameron and Quinn (2006) developed OCAI (Organizational Culture Assessment Instrument) from the perspective of organizational effectiveness. OCAI mainly includes six dimensions for measurement: dominant characteristics, organizational leadership, management of employees, organization glue, strategic emphases, and criteria of success. There are four items for each dimension, 24 in total. The horizontal axis of the Competing Values Framework distinguishes the internal and external characteristics of organizational effectiveness, while the vertical axis differentiates the flexible and stable characteristics. Based on the framework, four kinds of organizational culture are proposed: hierarchy, market, clan and adhocracy. The OCAI measures organizational culture from these four types. In addition, the Competing Values Framework is such an important theoretical framework that it is valuable in quality management, organizational leadership and human resource management. OCAI helps individuals adopt effective ways of diagnosing and changing culture in order to enhance organizational performance. In measuring organizational culture, survey instruments using the process-oriented approach—the Denison Organizational Culture Survey can rely on these results to strengthen the construct validity of the instrument (Tan, 2019).

Organizational culture is a collection of shared meanings, beliefs, and values held by a group or organization and have influence over the thought, attitude and behavior of the members (Jaskyte & Dressler, 2004). Meng and Berger (2019) confirm that a supportive culture that understands the value of public relations, shares decision making power, practices two-way communication, and embraces diversity is crucial.

Most organizational scholars and observers now recognize that organizational culture has a powerful effect on the performance and long-term effectiveness of organizations. Empirical

research has produced an impressive array of findings demonstrating the importance of culture to enhancing organizational performance. The organizational culture and leader performance could have great impact on public relations professionals' work engagement, trust, and job satisfaction.

Hartnell et al. (2019) suggest that higher levels of organizational effectiveness may be driven by a complex combination of culture dimensions. There is also a correlation between organizational culture and employee satisfaction. Stebbins and Dent (2011) suggest that some organizational culture has positive effect on employee job satisfaction, such as constructive culture which sub-dimensions are affiliative, self-actualizing and humanistic- encouraging organizational cultures. In contrast, job satisfaction relates negatively to aggressive/defensive and passive/defensive organizational culture styles.

Thereby, given by the above arguments, the hypothesis of organizational culture is:

Hypothesis 1: Organization culture is positively associated with medical staff satisfaction.

2.3.1.2 Leadership and and medical staff satisfaction

Leadership represents the leaders' management philosophy, world outlook and personality, which can guide the team to achieve goals and results. From the perspective of the general concept of leadership, leadership and organizational performance are positively correlated. Yet in recent studies, the wrong choice of leadership style reduces employee performance, and on the other hand, can be the source of pressure for managers Denison and Mishra (1995). Transformational leadership and transactional leadership are the most studied pair among leadership concepts. According to the difference of China's cultural background from that of the Western world, Farh and Cheng (2000) put forward paternalistic leadership (PL); Li and Shi (2005) added the dimension of moral modelling on the basis of in the Multifactor Leadership Questionnaire.

Transformational leaders encourage employees to be more creative and innovative (Jung Chow, & Wu, 2003). Employees following transformational leaders are more likely to have ambitious goals, be familiar with and identify with the strategic objectives of the organization, and they believe that their goals are essential to the organization (Bono & Judge, 2003). Transformational leadership and employee satisfaction and motivation are correlated, and they are also related to better organizational performance. In summary, compared with transactional leadership, transformational leadership shares a stronger correlation with low turnover, high productivity, low psychological stress of employees, and high employee satisfaction (Hetland, Sandal, & Johnsen, 2007).

Bass (1990) believes that transformational leadership has four dimensions. Firstly, idealized influence provides vision and sense of mission, instills pride, gains respect and trust. Secondly, inspirational motivation communicates high expectations, uses symbols to focus efforts, expresses important purpose in simple ways. Thirdly, intellectual stimulation promotes intelligence, rationality and careful problem solving. Fourthly, individualized consideration gives personal attention and treats each employee individually.

Rafferty and Griffin (2004) divided transformational leadership into five dimensions, namely, supportive leadership, intellectual stimulation, vision building, personal recognition and effective communication. Li and Chen (2015) believe that the dimensions of transformational leadership are personalized care, vision motivation, moral integrity, innovative and leadership charm. Cheng, Chou, and Farh (2000) puts forward that, in addition to transactional leadership and transformational leadership, there is paternalistic leadership, which is divided into three dimensions, including authoritarian leadership (authority, autocracy, concealment, austerity, and teaching), benevolent leadership (individual care, understanding and tolerance), and moral leadership (integrity and responsibility, none freeloader, and selfless model).

Brown and Treviño (2006) found three common characteristics of leadership in most papers: concern for others, integrity, and the organization of tasks (role modeling). Training of managers is lacking, so leadership is an important resource. Entrepreneurial leadership is particularly important in small businesses because the leader is both the manager and the owner. Leitch and Volery (2017) believe that entrepreneurial leadership is a new concept that combines the characteristics of leadership with those of entrepreneurs. In particular, entrepreneurial leadership should be authentic, charismatic and transformational leadership style.

Thereby, given by the above arguments, the hypotheses of leadership is:

Hypothesis 2: Leadership is positively associated with medical staff satisfaction.

2.3.2 Organizational capabilities

In the perspective of sustainable competitive advantage, organizational capability is an ability to perform the basic functional activities of the firm, such as plant layout, distribution logistics, and marketing campaigns, more efficiently than competitors. Collis (1994) defines organizational capabilities as the socially complex routines that determine the efficiency with which firms physically transfer inputs to outputs. One element of the definition is that organizational capabilities are embedded in firm routines, and that those routines are a product

of the organization as an entire system (Nelson & Winter, 1982). The other element is that it involves the transformation of physical inputs into outputs inside the “black box” of the firm (Collis, 1994). There are many differences between private hospitals and public hospitals. Private hospitals are more flexible in internal management and have stronger learning ability, while public hospitals have stronger scientific research ability and service delivery. As the research object is private hospitals, we define organizational abilities as managerial capability and learning capability.

2.3.2.1 Managerial capability and and medical staff satisfaction

Managerial capability usually refers to the ability, experience, and knowledge that organizational managers are born with or acquire after learning (Castanias & Helfat, 2001). Managerial capability is also a resource with continuity, such as the ability to create, innovate and respond to change. These abilities enhance the effectiveness, efficiency, and finance of the organization (Sirmon & Hitt, 2009). Managerial capability can not only play a positive role in the organization, but also facilitate the win-win alliance between organizations. Managerial capability with external alliance is to find right opportunities, choose the right partners, negotiate and forge alliances for better organizational performance (Kale, Singh, & Perlmutter, 2000). Managers evaluate the benefits and costs of cooperation through social relations and information (Peyrefitte, Golden, & Brice, 2002), identify available resources and capabilities (Lambe et al., 2002), and measure strategic and operational alignment with partners (Kale, Singh, & Perlmutter, 2000).

From the perspective of managerial knowledge, an uncertain but significant amount of time is likely to be essential for managerial knowledge to be adjusted in response to the broader scope of firm activities. No matter which strategy an organization take, new managerial capability should be established to parallel the existing organizational skills at the core stage (Peyrefitte, Golden, & Brice, 2002). While most empirical studies tested and established the dynamic capabilities of organizations, other researchers noticed that managerial cognition was missing in the management studies. Current organization and management study findings show that managers and their managerial cognition are key factors in sensing opportunities and reconfiguring resources to sharpen organizational competitive advantages (Kim, 2016).

The importance of improving managerial capability of both private sector and public organization has been widely recognized (Castanias & Helfat, 2001; Fitsilis, Kirytopoulos, & Leopoulos, 2011). However, different industries require different managerial capabilities. Hospital management differs from that in other industries (Thomas & McDaniel, 1990). As for

the public organizations, hospitals are knowledge-based organizations, in that medical care is readily available knowledge of best practice.

Since it aims to provide effective services to patients, and pursue economic gains, the inherent contradiction of the two goals makes managerial cognition a requirement for hospital management to promote strategic decision-making and implementation of strategic actions (Kim, 2016). Resource allocation, service efficiency, operation and management are the main factors affecting medical service capacity and hospital outcomes (Yang, Xue, & Liu, 2020).

From the perspective of management, currently, most private hospital investors are from non-medical industries such as the private business industry, real estate industry and mining industry. The single structure of property rights leads to the mixture of ownership and management, and therefore hospitals cannot benefit from the separation between capitals and management. In most private hospitals, only a few investors enjoy the power to make decisions, which ensures that the investors have complete operational autonomy so as to respond flexibly to market changes. But it also may incur huge business risks for the hospitals as the investors may fail to make professional decisions.

Thereby, given by the above arguments, the proposition and hypothesis of managerial capability is:

Hypothesis 3: Managerial capability is positively associated with medical staff satisfaction.

2.3.2.2 Learning capability and and medical staff satisfaction

Knowledge is constantly updated along with social development, and learning capability has become an important capability of the organization. It not only requires good learning habits of individuals, but also needs a cultural environment that encourages learning formed by organizations (Zollo & Winter, 2002). Moon, Ruona, and Valentine (2017) discovered seven dimensions of strategic learning capability:(1)external focus, (2)strategic engagement, (3) strategic dialogue, (4) customer centric strategy, (5) disciplined imagination, (6) experimental learning and (7) reflective responsiveness.

Miller (1996) noted that organizational learning is the “acquisition” of new knowledge by actors who are able and willing to apply the knowledge in making decisions or influencing others to the organization. Organizational learning is an important determining factor of competitive advantage and organizational performance (Bhatnagar, 2006). Learning capability reduces production costs, accelerates resource accumulation (Dierickx & Cool, 1989), enhances the stability of enterprise output (Levinthal & March, 1993), fosters organizational innovation (Cohen & Levinthal, 1990), and enhances customer value (Nasution & Mavondo, 2008).

Learning capability not only plays an important role within the organization, but also enables organizations and partners to transform themselves and utilize knowledge, thereby forming a mutual-beneficial partnership in which both can develop their new organizational capabilities (Cegarra-Navarro, 2005; Chen et al., 2009).

Having a learning capability has positive payoffs for an organization with respect to a number of desired performance outcomes. In the case of the non-financial data, both innovation and job satisfaction had the highest correlations with learning capability. Being a learning organization seems to have a positive impact not only on financial performance but also on employee attitudes toward their work and job satisfaction (Goh, Elliott, & Quon, 2012). Ebrahimian and Ebrahimian (2012) explored that there is a positive relationship between organizational learning capability with job satisfaction. Furthermore, the results revealed the five dimensions of organizational learning capability (experimentation, risk taking, interaction with the external environment, dialogue and participative decision making) had positive relationship with job satisfaction.

A learning organization is characterized by the ability of its members to find or make opportunities to learn from every resource or situation, and every member tries to add value to the organization by converting one's own information in to organizational knowledge. There were significantly positive interrelations among organizational learning culture, job satisfaction, and organizational commitment; particularly, learning organization learning culture had a strong impact on job satisfaction and a considerable impact on organizational commitment, and job satisfaction also had a moderate impact on organizational commitment (Wang, 2007). Organization's capabilities to obtain knowledge from external integration resources can play a positive role in its productivity (Henderson & Cockburn, 1994).

Currently, some private hospitals are still commonly unaccustomed to practicing medicine according to the law; have not carried out the medical safety and responsibility system; possess imperfect or no core systems and medical staff without qualified medical expertise, which makes the hospitals unable to guarantee the quality of medical services. Besides, due to the exaggerated reports made by media, the medical malpractices of some hospitals, excessive medical treatment, arbitrary charge, and false advertising have been closely associated with private hospitals. To survive the competitions, private hospitals need to improve their medical services and keep on learning to ensure the quality of their medical services and take medical security as the top priority.

Thereby, given by the above arguments, the hypotheses of learning capability is:

Hypothesis 4: Learning capability is positively associated with medical staff satisfaction.

2.3.3 Dynamic capabilities

2.3.3.1 Dynamic capabilities and medical staff satisfaction

Dynamic capabilities can expound how organizations obtain sustainable competitive advantages (Teece, 2007). Collis (1994) argues that high-order capabilities can enable organizations to overcome path dependence. Teece, Pisano, and Shuen (1997) hold that organizational processes and opportunities depend on asset position and evolutionary path, while dynamic capabilities can change asset position, affect competitive advantage and organizational performance, and further generate new path positions. Teece (2007) thinks that dynamic capability for seizing opportunity is to make investment decisions at the appropriate time and field, and ultimately produce products or services. Organizations can achieve growth and create value, but they also need dynamic capability for re-configuring to reintegrate resources and configure resources, thus obtaining sustained growth.

The DCA proposes that the traditional elements of business success in previous models—maintaining incentive alignment, owning tangible assets, controlling costs, maintaining quality, optimizing inventories—are necessary but not sufficient for sustained superior performance in changing environments (Teece, 2007). The real sources of a sustainable competitive advantage are dynamic capabilities, which ‘integrate, build, and reconfigure internal and external competencies to address rapidly changing environments’ (Teece, Pisano, & Shuen, 1997). Dynamic capabilities lie at the core of organizational success (and failure).

Wang and Ahmed (2007) classified dynamic capabilities into three dimensions of adaptive capability, absorptive capability and innovative capability, and empirical studies have proved that the above three dynamic capabilities play an important role in firms’ long-term survival and success. Rindova and Kotha (2001) emphasized the importance of the adaptive capability for the success of Yahoo! and Excite in a highly competitive environment. Zahra and George (2002) found that absorptive capability, as a dynamic capability, influences the nature and sustainability of a firm’s competitive advantage. D’Este (2002) believes that innovative capability allows for more efficient internal change in organizations so as to help organizations adapt to the new market demands.

Thereby, given by the above arguments, the hypotheses of dynamic capabilities are:

Hypothesis 5: Sensing is positively associated with medical staff satisfaction.

Hypothesis 6: Responding is positively associated with medical staff satisfaction.

Hypothesis 7: Reconfiguring is positively associated with medical staff satisfaction.

2.3.3.2 The mediating role of dynamic capabilities

However, the relationship between dynamic capabilities and competitive advantage remains controversial. Zott (2003) argued that dynamic capabilities are indirectly linked with firm performance by aiming at changing a firm's bundle of resources, operational routines, and competencies, which in turn affect economic performance. Eisenhardt and Martin (2000) hold that long-term competitive advantages exist in the resources allocated by the organization's adoption of dynamic capabilities, but not in the capabilities themselves. That is to say, the organization which has dynamic capabilities but lacks resources cannot produce competitive advantages. In this regard, dynamic capabilities are a necessary and insufficient condition for competitive advantages. Wang and Ahmed (2007) proposed that dynamic capabilities are conducive to long-term firm performance, but the relationship is an indirect one mediated by capability development which, in turn, is mediated by firm strategy; dynamic capabilities are more likely to lead to better performance when particular capabilities are developed in line with the firm's strategic choice.

In summary, there are still many disputes about the relationship between dynamic capabilities and organizational performance. As organizational resources and capabilities have direct relationship with dynamic capabilities, and dynamic capabilities are proposed to affect firm performance, thus the relationship among dynamic capabilities, organizational resources and firm performance will be tested in this research, among which dynamic capabilities are taken as a mediating variable, mediating the relationship between organizational resources and firm performance.

This leads to the following hypotheses:

Hypothesis 8: Sensing mediates the relationship between organizational culture and medical staff satisfaction.

Hypothesis 9: Responding mediates the relationship between organizational culture and medical staff satisfaction.

Hypothesis 10: Reconfiguring mediates the relationship between organizational culture and medical staff satisfaction.

Hypothesis 11: Sensing mediates the relationship between leadership and medical staff satisfaction.

Hypothesis 12: Responding mediates the relationship between leadership and medical staff satisfaction.

Hypothesis 13: Reconfiguring mediates the relationship between leadership and medical staff satisfaction.

Hypothesis 14: Sensing mediates the relationship between managerial capability and medical staff satisfaction.

Hypothesis 15: Responding mediates the relationship between managerial capability and medical staff satisfaction.

Hypothesis 16: Reconfiguring mediates the relationship between managerial capability and medical staff satisfaction.

Hypothesis 17: Sensing mediates the relationship between learning capability and medical staff satisfaction.

Hypothesis 18: Responding mediates the relationship between learning capability and medical staff satisfaction.

Hypothesis 19: Reconfiguring mediates the relationship between learning capability and medical staff satisfaction.

2.3.4 Medical staff satisfaction

Job satisfaction is the sense when the employees feel satisfy with their job. In general terms, job satisfaction represents the projection of the extent to which an individual is positively oriented toward his or her job. Employees' cognition and attitude to organizational transformation is the key to the success of an organization's transformation.

Within healthcare organizations, job satisfaction assumes relevance because it predicts several important job-related behaviors, such as citizenship, turnover intentions, and performance of individual physicians (Kinicki et al., 2002). Konrad et al. (1999) designed a multidimensional scale of physician job satisfaction and global satisfaction scales for assessing physicians' job perceptions across settings and specialties. The measurements include 15 facets which are autonomy, relationships with colleagues, relationship with nurses and other health professionals, relationship with patients, pay, resources, status, personal time, day to day practice administration, bureaucracy, work itself, relationships with other personnel in the practice organization, altruism, educational preparation and teaching role. As for nurse practitioners, Fournier et al. (2019) found that there are several contributors to job satisfaction, including the importance of a balance between interdependence and independence, interdisciplinary practice model, challenging work and collaboration among team members with diverse areas of expertise.

Mascia, Morandi, and Cicchetti (2014) suggested that the internal reconfiguration of hospital organizations affects professionals' job satisfaction. Structural aspects of change significantly influenced overall job satisfaction, and a physician's openness to experience moderated the adoption and implementation of new clinical directorates. Specifically, results demonstrate that physicians with high openness to experience scores were more receptive to the positive impacts of change on overall job satisfaction. Hongngoc and Diaz (2015) found that factors including advancement opportunities, relationships with superiors, work conditions and work-itself, directly impact general job satisfaction and specific job satisfaction. Hooker, Kuilman, and Everett (2015) explored that physician assistants seem to experience job satisfaction supported by low attrition rates and competitive wages. Contributing factors are autonomy, experienced responsibility, pay, and supportive supervising physician.

As for the relationship between job satisfaction and organizational performance, Zhou et al. (2008) suggested that organizational-level market orientation culture leads to unit-level market orientation behavior, which improves employee-level job satisfaction and then product quality, which in turn fosters organizational performance. Bakotić (2016) explored the link between job satisfaction and organizational performance and found that job satisfaction determines organizational performance, rather than organizational performance determining job satisfaction.

2.3.5 Conclusion

In this section, we discussed the links between organizational resources, organizational capabilities, dynamic capabilities and medical staff satisfaction. It is proposed that organizational resources, organizational capabilities and dynamic capabilities have positive association with medical staff satisfaction. It is also proposed that dynamic capabilities mediate the relationships between organizational resources and medical staff satisfaction, and between organizational capabilities and medical staff satisfaction. This leads to the following propositions and hypotheses presented in Table 2.1.

Table 2.1 Hypotheses

Hypotheses	Content
H1	Organization culture is positively associated with medical staff satisfaction.
H2	Leadership is positively associated with medical staff satisfaction.
H3	Managerial capability is positively associated with medical staff satisfaction.
H4	Learning capability is positively associated with medical staff satisfaction.
H5	Sensing is positively associated with medical staff satisfaction.

H6	Responding is positively associated with medical staff satisfaction.
H7	Reconfiguring is positively associated with medical staff satisfaction.
H8	Sensing mediates the relationship between organizational culture and medical staff satisfaction.
H9	Responding mediates the relationship between organizational culture and medical staff satisfaction.
H10	Reconfiguring mediates the relationship between organizational culture and medical staff satisfaction.
H11	Sensing mediates the relationship between leadership and medical staff satisfaction.
H12	Responding mediates the relationship between leadership and medical staff satisfaction.
H13	Reconfiguring mediates the relationship between leadership and medical staff satisfaction.
H14	Sensing mediates the relationship between managerial capability and medical staff satisfaction.
H15	Responding mediates the relationship between managerial capability and medical staff satisfaction.
H16	Reconfiguring mediates the relationship between managerial capability and medical staff satisfaction.
H17	Sensing mediates the relationship between learning capability and medical staff satisfaction.
H18	Responding mediates the relationship between learning capability and medical staff satisfaction.
H19	Reconfiguring mediates the relationship between learning capability and medical staff satisfaction.

2.4 Proposed conceptual model

The research model mainly describes the logical relationship between variables, and introduces the research hypotheses as the framework of the research. The Resource-Based View is often used to explain how an organization forms a competitive advantage, especially when the organization has the resources with VRIN characteristics, it is more likely to gain a competitive advantage. But the sheer possession of VRIN resources is not enough to make the organization gain competitive advantage. Scholars have supplemented the Resource-Based View, that is, the DCA, which holds that dynamic capability is the way to obtain competitive advantage. Therefore, this research, starting from the Resource-Based View, discusses the dynamic capability of hospital as well as the various factors influencing dynamic capability.

According to the above theoretical logic, in the development of private hospitals, organizational resources (organizational culture, leadership) and organizational capabilities (managerial capability and learning capability) are important independent variables for organizations to gain medical staff satisfaction. However, the sheer mastery of resources does not necessarily lead to medical staff satisfaction. Only when the organizational resources are

properly integrated, controlled and used, can the organization constantly adapt to the changing external environment so as to create value and gain competitive advantage.

China’s medical industry is in the stage of transformation, with new reform policies released frequently. Since the medical industry is highly restricted by policy constraints, private hospitals are facing policy changes with huge influence, and particularly, the hierarchical diagnosis and treatment system, and the medical insurance policy affect patients’ choice of medical treatment and hospital income. Although the Chinese government has frequently introduced preferential policies to guide and encourage the social capital to establish medical institutions, the local governments are relatively less efficient at issuing health care policies compared with the national government who can quickly set principles and guidelines. The environment is constantly changing. In addition, fierce competition is also a major problem faced by private hospitals. This study holds that dynamic capability is an important ability of private hospitals to cope with the external environment, and it is divided into three dimensions, namely, sensing capability, responding capability and reconfiguring capability.

Dynamic capability is formed in the daily routine and process of the organization, and the dynamic capability of different organizations is varied. Dynamic capability is difficult to imitate and non-transferable, so it is positively related to the competitive advantage of the organization. Dynamic capability, as a mediating variable in the research model, regulates the relationship between organizational resources and medical staff satisfaction, and the relationship between operating capabilities and medical staff satisfaction. Further, dynamic capability provides us a perspective to explore how private hospitals in China could survive the competition.

Based on the Resource-Based View, and with the DCA as the core, Figure 2.1 depicts the model of this research. It is believed that the combination of all factors constitutes a more comprehensive model. The following chapter will discuss the research methodology used to test research hypotheses.

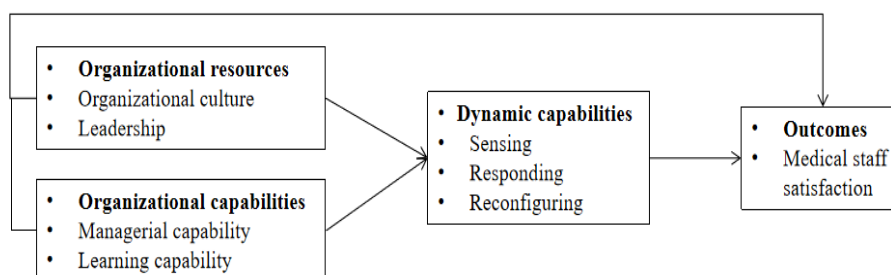


Figure 2.1 Conceptual model of the study

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Chapter 3: Methodology

3.1 Exploratory research design

3.1.1 Data collection method

The exploratory research included developing a conceptual model, constructing key variables and examining the relationships between the variables. The conceptual model was formed by constructing the key variables and studying the relationships between the variables through a literature review. Through the qualitative research of semi-structured interview, the research model was further revised, key variables were constructed, and the accuracy of dimensions and indicators got improved. The semi-structured interview also served to clarify professional terms with respondents, i.e., hospital managers, who have different understandings of variables such as dynamic capability and operational capability. Through the semi-structured interview, ambiguities could be avoided and measurement errors reduced in the process of designing the questionnaire.

3.1.2 Sample selection of senior managers

In this semi-structured interview, 2 senior managers and 5 middle managers of Henan Shengde Hospital were selected, a total of 7 people. According to the functional differences of clinical department, medical technical department and administrative department, 5 middle managers were selected as the respondents, including 4 department directors and 1 head nurse due to the important role of nursing staff in providing medical services. Two senior managers have been working for the hospital since its preparation stage. According to the requirements of longitudinal research on the time span, the senior managers have more experience of the changes in the hospital and are suitable for the interview.

3.1.3 Data collection technique for in-depth interviews

This semi-structured interview was completed in July 2019 and was conducted respectively in the respondents' office, with each interview lasting from 1 hour to 1.5 hours. Prior to the interview, the respondents were informed that the interview would be recorded for an academic

research, and they were all agreed.

3.1.3.1 Introduction

At the beginning of the interview, the researcher introduced the research purpose and content to the respondents, and emphasized the confidentiality of the interview content. The interview consisted of open questions.

3.1.3.2 Department information

The researcher first asked the respondents about their jobs, duties, working background, and other basic information. The respondents described their job duties, job content, major tasks they had participated in, the functional position of their department, and their work experience before taking up this position. Since the research object of this case, Henan Shengde Hospital, was established in 2014, all medical staff had been appointed during the preparation period. The respondents had had different work experiences before taking up the relevant positions in the hospital, and they provided diversified feedback to the interview questions.

3.1.3.3 Organizational resources

After the respondents described their personal information, the researcher asked which key factors had helped the hospital achieve success and how these factors had changed over the course of the hospital's construction and development. Through the interviews, the respondents believed that besides tangible assets such as personnel, finance, and equipment are essential elements for the survival of the hospital, leadership and organizational culture also play a vital role as intangible assets. Thus, the research model was determined with leadership and organizational culture as independent variables in this study.

3.1.3.4 Organizational capabilities

The respondents described the daily work of the hospital and their departments, the main problems the hospital had faced and how they had been solved. Respondents believe that the required operational capabilities are different in different development stages of the hospital. During the preparation period of the hospital, the organization and integration of internal and external resources played an important role. In the initial stage of hospital operation, discipline construction, medical service quality and safety management were key tasks. In the period of stable development, marketing and cost control are the capabilities for private hospitals to survive.

3.1.3.5 Dynamic capability and outcomes

The researcher first explained the meaning of dynamic capabilities to the respondents so that the respondents could distinguish between dynamic capabilities and operational capabilities. The researcher asked about the challenges that the hospital had experienced from the external environment, and how the hospital had perceived and responded to the changes brought by the environment. Respondents' answers about the hospital's dynamic capabilities enriched the connotation of dynamic capabilities and were more in line with the current reality of Chinese private hospitals in terms of the dimensional division of dynamic capabilities and measurement indicators. The researcher asked questions about the operational performance of the hospital, and proposed the content of the assessment about the operational performance of private hospitals, including financial data, resource utilization efficiency and effectiveness, and satisfaction of medical staff.

3.1.3.6 Policy environment

Finally, the researcher asked about the policies that had a huge impact on the operation and construction of the hospital, including the overall national policies and provincial and municipal implementation programs. The respondents explained that due to the special nature of the healthcare industry and the reforms experienced in medical and health sector over the past decade, hospitals have been affected by policies in terms of service pricing, financial compensation, and personnel appointment, especially in recent years when the state has promoted the establishment of tightly-knit county medical communities, and how to face policy changes is an important task for private hospital.

3.2 Conclusive research design

3.2.1 Questionnaire design

After a systematic review of the existing literature, the initial questionnaire was designed in a scientific and reasonable way. Then, it was modified according to the interview results, several discussions within the team, and the opinions given by the invited experts and scholars. In this way, the final questionnaire came into being.

In the first step, in order to measure the key variables in this study, we referred to the academic achievements published in the authoritative journals at home and abroad. Those mature and widely accepted scales were chosen as the basis of the study. As most of the scales

used in this study are foreign scales, the method of two-way back translation was taken to ensure the accuracy of the Chinese scales. With repeated revision and retranslation, there is no significant difference between the Chinese questionnaire and the English questionnaire.

In the second step, the method of expert judgment was used to test and ensure the validity of the scales. We invited experts in hospital management and strategic management to make subjective judgments on whether each measurement indicator was consistent with their perceptions. Discussions were made on the issues that were in dispute, until the agreements were reached.

In the third step, the questionnaire was formed. Through the above two steps, the content of the questionnaire was initially determined. We also designed the expression of each question, the order of the items and the prologue of the questionnaire. The variables in this study were measured by the 7-point Likert scale, in which 1 stands for strongly disagree, 2 for disagree, 3 for somewhat disagree, 4 for neither agree nor disagree, 5 for somewhat agree, 6 for agree, and 7 for strongly agree.

3.2.2 Construct measurement

3.2.2.1 Organizational resources

1. Organizational culture

Through the literature review, it is found the measurement of corporate culture mainly depends on the scales, among which the classical ones include Organizational Culture Assessment Instrument(OCAI), OCQ scale and Hofstede scale.

Organizational Culture Questionnaire (OCQ) scale is a measurement tool proposed by Denison and Mishra (1995) from the perspective of organizational effectiveness and with the model of competing values framework as the basis. OCQ scale includes four dimensions, that is, involvement, consistency, mission, and adaptability. As each dimension consists of three sub-dimensions and each sub-dimension includes three items, Fey and Denison (2003) developed a total of 36 items which are used to describe the cultural characteristics of effective organizations. Denison used the OCQ scale to conduct a quantitative study on the corporate culture in different regions and countries. The OCQ scale used by this study includes four dimensions, that is, involvement, consistency, mission, and adaptability. Besides, the number of the items is reduced to 9 for easier answering.

2. Leadership

As for leadership, Bass (1990) put forward transactional leadership, and divided it into four

dimensions, that is, contingent reward, management by exception (active), management by exception (passive) and laissez-faire. Transactional leadership emphasizes the achievement of goals by employees, while transformational leadership encourages employees to do what transcends their own interests. Avolio, Bass, and Jung (1999) designed the widely used Multifactor Leadership Questionnaire (MLQ) scale that is composed of 21 items of six dimensions, including charisma/inspirational, intellectual stimulation, individualized consideration, contingent reward, active management-by-exception, passive-avoidant leadership.

In this study, according to the results of the interview, hospital leadership mainly shows the characteristics of transformational leadership, so we took advantage of Podsakoff et al. (1990) scale, a six-dimensional scale for transformational leadership, including the dimensions of vision description, high-performance expectations, cooperation encouragement, model demonstration, personalized care and intellectual stimulation, as well as a total of 10 items.

3.2.2.2 Operational capabilities

1. Managerial capability

Managerial capability is an adaptation of the measure developed by Hitt and Ireland (1985). It consists of 12 items such as “attracting and retaining well-trained and competent top managers”, and “ability to unify conflicting opinions, improve coordination and enhance effective collaboration between key executives, generate enthusiasm, and motivate sufficient managerial drive for better performance”.

2. Learning capability

The scale developed by Nasution and Mavondo (2008) was used to measure learning. The scale of learning is based on Sinkula, Baker, and Noordewier (1997) and composed of three components, including commitment to learning, shared vision and open-mindedness. Central to the organization’s learning orientation is the fundamental value it holds toward learning. This value influences whether an organization is likely to promote a learning culture. When organizations proactively question long-held routines, assumptions, and beliefs, they are engaging in the first phase of unlearning. Unlearning is at the heart of organizational change, and open-mindedness is an organizational value that may be necessary for unlearning efforts to transpire. Most scholars who write about organizational learning view the concept of vision sharing as a crucial foundation for proactive learning because it provides direction--a focus for learning that fosters energy, commitment, and purpose among organizational members.

3.2.2.3 Dynamic capabilities

1. Sensing capability

Considering the operating time of organizations, some organizations are sensitive to the information of market changes, and they pay attention to the collection, analysis and utilization of the information about competitors, as well as the changes of market demands and government policies. Therefore, they can take corresponding measures ahead of their competitors. Such enterprises are often able to quickly respond to the market changes and seize the first-mover advantage. On the contrary, a considerable number of enterprises do not pay attention to the collection and analysis of such information, so they respond slowly to the changes in the market and competition, leading to the loss of the competitive advantages that they ever have or should have gained. Thus, the capacity of sensing is the core element of dynamic capabilities (Cao, Zhao, & Wang, 2009).

In this study, these measurement indicators are adopted, including that “your firm can quickly obtain the information of market changes”, “your firm can quickly obtain the information of internal operation”, “your firm can accurately judge the trend of change based on the collected information”, and “your firm can quickly sense the change of customers’ demands”.

2. Responding capability

Sun et al. (2017) found that responding refers to the ability to adjust business processes in time, allocate resources quickly and rationally, and quickly adjust enterprise strategies when the external environment changes. New knowledge acquiring via sensing and learning is applied in combination with the current knowledge to organically integrate the firm’s internal and external resources, practices, operation capabilities and core competencies, so as to enhance the adaptability of the environment.

3. Reconfiguring capability

According to Sun et al. (2017), reconfiguring refers to the ability of an organization, either by itself or with the help of its partners, to quickly summarize and accumulate knowledge, acquire new technologies and core processes, and apply them more quickly to the service process, so as to provide better service to customers and deliver value back to the organization, when in a complex and dynamic external competitive environment.

3.2.2.4 Medical staff satisfaction

According to the characteristics of private hospitals, Zhou, Mei, and Chen (2018) conducted an investigation on the staff’s job satisfaction in Luohu Hospital in Shenzhen, China,

after the reform of this hospital. The investigation includes the staff’s satisfaction with their work, the interpersonal relationship and the hospital development. Job satisfaction includes the satisfaction of work content, location and facilities, income distribution, performance appraisal, promotion of professional titles, skill improvement, career autonomy and salaries. Interpersonal relationship includes the doctor-patient relationship and organizational atmosphere. Hospital development mainly consists of the development of the hospital in recent years, the future and the commitment of the hospital.

Measurements used in this research are presented in Table 3.1, 3.2, 3.3 and 3.4.

Table 3.1 Measures for constructs of organizational resources

Construct and source	Measures used	Items
Organizational culture Denison and Mishra (1995)	Decisions are usually made at the level where the best information is available.	A1-1
	Working in this organization is like being part of a team.	A1-2
	This organization is constantly improving compared with its competitors in many dimensions.	A1-3
	There is a clear and consistent set of values that guide us do business in this hospital.	A1-4
	When disagreements occur, we work hard to achieve solutions that benefit both parties in the disagreement.	A1-5
	People from different organizational units still share a common perspective.	A1-6
	This organization is very responsive and changes easily.	A1-7
	Customer comments and recommendations often lead to changes in this organization.	A1-8
	We view failure as an opportunity for learning and improvement.	A1-9
	This organization has long-term purpose and direction.	A1-10
	There is widespread agreement about goals of this organization.	A1-11
	We have a shared vision of what this organization will be like in the future.	A1-12
Leadership Schaubroeck et al. (2016) Podsakoff et al. (1990)	Leader..... has a clear understanding of where we are going.	A2-1
	is always seeking new opportunities for the organization.	A2-2
	leads by “doing,” rather than simply by “telling”.	A2-3
	fosters collaboration among work groups.	A2-4

Construct and source	Measures used	Items
	develops a team attitude and spirit among employees.	A2-5
	insists on only the best performance.	A2-6
	shows respect for my personal feelings.	A2-7
	behaves in a manner thoughtful of others' personal needs.	A2-8
	challenges me to think about old problems in new ways.	A2-9
	asks questions that prompt others to think.	A2-10

Table 3.2 Measures for constructs of organizational capabilities

Construct and source	Measures used	Items
	Attracting and retaining well-trained and competent top managers.	A3-1
	Achieving a better overall control of general organization performance.	A3-2
Managerial capability Hitt and Ireland (1985)	Unifying conflicting opinions, improve coordination and enhance effective collaboration between key executives, generate enthusiasm and motivate sufficient managerial drive for better performance.	A3-3
Carmeli and Tishler (2004)	Developing a more effective organization wide strategic planning system for planned overall organizational development.	A3-4
	Generating advanced developmental and training programs for our organizational members.	A3-5
	Increased participative decision making at senior and middle management levels.	A3-6
	Our organization's ability to learn is considered as a key competitive advantage	A4-1
Learning capability	Our organization believes that employee learning is an investment, not an expense	A4-2
Nasution and Mavondo (2008)	In our organization all employees commit to the organizational goals	A4-3
	There is a total agreement on our organizational vision across all functions	A4-4
	Our organization places a high value on open-mindedness	A4-5
	Our organization encourages staff to come up with original ideas to improve the hospital's performance	A4-6

Table 3.3 Measures for constructs of dynamic capabilities

Construct and source	Dimensions	Measures used	Items
Dynamic Capability	Sensing Cao et al. (2009)	The hospital organization can quickly get information about market changes.	B1-1
		The hospital can quickly get information about its internal operations.	B1-2
		The hospital can accurately determine the trend of changes in the situation according to the information obtained.	B1-3

	The hospital can timely find changes in customer needs	B1-4
	The hospital can successfully develop strategies.	B2-1
Responding Sun et al. (2017)	The hospital has its own strategy formulation procedures to avoid wrong decisions by decision makers.	B2-2
	The hospital is able to successfully execute strategic decisions to create new products, processes and services.	B2-3
	The hospital can clearly discover customer needs and has a business model that determines commercialization strategies and investment priorities.	B2-4
	The hospital often adopts new management methods.	B3-1
Reconfiguring Sun et al. (2017)	The hospital often adopts new or substantially changed marketing methods or strategies.	B3-2
	The hospital often substantially updates business processes.	B3-3
	The hospital often uses new or substantially changed methods to achieve their goals.	B3-4

Table 3.4 Measures for constructs of medical staff satisfaction

Construct and source	Measures used	Items
Medical staff satisfaction Zhou, Mei, and Chen (2018)	I am satisfied with.....	
	the level of wages and benefits	C-1
	the career autonomy	C-2
	the improvement of professional skills	C-3
	my career advancement and development	C-4
	the workplace and facilities	C-5
	the physician-patient relationship	C-6
	the working atmosphere in the hospital	C-7
	I work well with colleagues in other departments	C-8
	I have good relationship with colleagues in the same department	C-9
	I have a good relationship with my superior	C-10
	I have confidence in the development of the hospital	C-11
	I am satisfied with the development of the hospital in the past two years	C-12
	The hospital made good on its promises	C-13
	The efficiency of hospital operation has been improved	C-14
	The medical environment has been improved	C-15
The service level has been improved	C-16	

3.3 Reliability

Reliability is the degree of consistency or the faithfulness of measurement results, and it is measured by the internal consistency. The internal consistency reliability is mainly used to evaluate the homogeneity between the internal indicators of a scale. All the indicators measure the same construct, so the more consistent the indicators show, the smaller the random error of the whole scale is. At present, most scholars use Cronbach (Coefficient) alpha and CITC (Corrected Item-Total Correlation) to measure the indicators. “Cronbach’s Alpha if item deleted” is sometimes used to assist with the measurement. If Cronbach alpha is greater than 0.5, less than or equal to 0.7, the indicator is barely acceptable; if greater than 0.7, less than or equal to 0.9, the indicator is credible; if greater than 0.9, the indicator is very credible. If CITC is greater than 0.5, the indicator can be retained; if less than 0.5, it should be deleted. If Cronbach Alpha increases after the item is deleted, the item should be retained, and it should be deleted if Alpha reduces.

This study has analyzed the reliability of the measurement scales of organizational culture, leadership and dynamic capabilities by using the statistical software IBM SPSS Statistic 21. The results are presented in Table 3.5, 3.6 and 3.7.

3.3.1 Organizational resources and capabilities

Organizational resources include organizational culture and leadership. They have a total of 22 items, and their respective Cronbach’s Alpha are 0.861 and 0.935, meeting the basic criteria of greater than 0.7. Operation capabilities include management ability and learning ability. With a total of 12 items, their Cronbach’s Alpha is 0.883 and 0.874 respectively. It can be seen that the questionnaire used in this study has good reliability. In addition, most of the CITCs between the items are close to or greater than 0.5, basically meeting the statistical requirements, which shows that each question is well set, and the reliability of the questionnaire is good. Besides, the deletion observation is also conducted. The specific method is to delete each item once. If the reliability index does not improve after the deletion, it shows that the deleted item is very important for the measurement of the variable, and it has a good reliability.

Table 3.5 Reliability analysis of measurement scale of organizational resources and capabilities

Construct	Items	CITC	Cronbach alpha if items deleted	Cronbach alpha
Organizational culture	A1-1	0.481	0.926	0.861
	A1-2	0.551	0.925	
	A1-3	0.466	0.927	
	A1-4	0.504	0.926	
	A1-5	0.525	0.926	
	A1-6	0.583	0.925	
	A1-7	0.500	0.926	
	A1-8	0.533	0.926	
	A1-9	0.472	0.927	
	A1-10	0.527	0.926	
	A1-11	0.579	0.925	
	A1-12	0.567	0.925	
Leadership	A2-1	0.700	0.922	0.935
	A2-2	0.632	0.924	
	A2-3	0.671	0.923	
	A2-4	0.667	0.923	
	A2-5	0.665	0.923	
	A2-6	0.605	0.924	
	A2-7	0.668	0.923	
Managerial capability	A3-1	0.618	0.884	0.883
	A3-2	0.628	0.884	
	A3-3	0.624	0.884	
	A3-4	0.576	0.886	
	A3-5	0.605	0.885	
	A3-6	0.586	0.886	
Learning capability	A4-1	0.649	0.882	0.874
	A4-2	0.615	0.884	
	A4-3	0.542	0.888	
	A4-4	0.610	0.885	
	A4-5	0.537	0.888	
	A4-6	0.657	0.882	

3.3.2 Dynamic capabilities

Dynamic capabilities consist of the abilities of sensing, seizing and reconfiguring. They have a total of 12 items, and their Cronbach's Alpha is 0.858, 0.880 and 0.929, meeting the basic criteria of greater than 0.70. Therefore, the questionnaire used in this study has good reliability. In addition, most of the CITCs between the questions are close to or greater than 0.5, basically meeting the statistical requirements, which shows that each question is well made, and the reliability of the questionnaire is good. Besides, the deletion observation is made on the items. That means each item has been deleted once. If the reliability index does not improve after the deletion, it is believed that the deleted item is a key to the measurement of the variable, and it has a good reliability.

Table 3.6 Reliability analysis of measurement scale of dynamic capabilities

Construct	Items	CITC	Cronbach alpha if items deleted	Cronbach alpha
Sensing	B1-1.	0.506	0.868	0.858
	B1-2	0.490	0.869	
	B1-3	0.525	0.867	
	B1-4	0.464	0.871	
Seizing	B2-1	0.554	0.865	0.880
	B2-2	0.522	0.867	
	B2-3	0.507	0.868	
	B2-4	0.537	0.866	
Reconfiguring	B3-1	0.670	0.858	0.929
	B3-2	0.676	0.857	
	B3-3	0.672	0.858	
	B3-4	0.633	0.860	

3.3.3 Medical staff satisfaction

There are 16 items for the satisfaction of medical staff. Cronbach's Alpha is 0.910, reaching the basic standard of greater than 0.70. Hence, the questionnaire used in this study has good reliability. In addition, most of the CITCs between the items are close to or greater than 0.5, which basically meet the statistical requirements, showing that the setting of each question is good and the questionnaire also has good reliability. The deletion observation is also conducted. Each item has ever been deleted. If the reliability index does not increase after the deletion, it

shows that, with good reliability, the deleted item is of great importance for the measurement of the variable.

Table 3.7 Reliability analysis of measurement scale of medical staff satisfaction

Construct	Items	CITC	Cronbach alpha if items deleted	Cronbach alpha
Medical staff satisfaction	C-1	0.454	0.909	0.910
	C-2	0.386	0.910	
	C-3	0.412	0.910	
	C-4	0.416	0.910	
	C-5	0.480	0.908	
	C-6	0.693	0.901	
	C-7	0.630	0.903	
	C-8	0.653	0.902	
	C-9	0.630	0.903	
	C-10	0.676	0.902	
	C-11	0.766	0.899	
	C-12	0.657	0.902	
	C-13	0.630	0.903	
	C-14	0.605	0.904	
	C-15	0.626	0.903	
	C-16	0.716	0.900	

3.4 Validity

Reliability measures whether a scale has random errors, while validity tests whether a scale has systematic errors. Validity is defined as “the extent to which differences in scores on a measuring instrument reflect true differences among individuals, groups, or situations in the characteristic that seeks to measure, or true differences in the same individual, group, or situation from one occasion to another, rather than systematic or random errors” (Churchill & Brown, 2007).

3.4.1 Content validity

Content validity mainly includes three aspects. First, whether the content measured fully and accurately covers the target construct. Second, whether the test indicators reflect the proportion of importance of each component in the studied construct. Third, whether the form and the

expression of the questionnaire are appropriate for the respondents, and whether they are in line with the respondents' cultural background and language convention. In the process of questionnaire design, the foreign scales with authority were mainly used for reference. After the preliminary design, the scale was revised several times according to the results of the in-depth interviews and the discussions with three experts and scholars. Through the above process of questionnaire design, the scale has high content validity.

3.4.2 Exploratory factor analysis

3.4.2.1 The KMO and Bartlett test

Exploratory factor analysis is used to measure the construct validity of a scale, and judge whether the measurement variables of each latent variable have stable consistency and structure. It is the most commonly used index to evaluate the validity of the scale. The software SPSS.21 is used in this study to test the composition of each dimension. When using factor analysis for validity analysis, first of all, we need to judge whether the conditions of factor analysis are satisfied. Generally, there are two conditions that need to be satisfied. First, the KMO value should be greater than 0.7; second, the significance of Bartlett's test of sphericity should be less than 0.05. If these two conditions are met, it shows that there is a strong correlation between the measured variables, which are suitable for factor analysis. As can be seen from the table below, all of the KMO values are greater than 0.7, indicating that the questionnaire is suitable for factor analysis. The results of Bartlett's test of sphericity shows that the approximate chi-square values are relatively high, and the significant probabilities are 0.000 ($p < 0.01$). Therefore, the null hypothesis for Bartlett's test is rejected, and the scale is considered to be suitable for factor analysis. Hence, the validity construct is good. The results are presented in Table 3.8.

Table 3.8 The KMO and Bartlett test results of measurement model

Construct	KMO	Bartlett's test of sphericity		
		Approx. chi-square	df	Sig
Organizational resources	0.921	4241.096	231	.000
Organizational capabilities	0.903	1856.551	66	.000
Dynamic capabilities	0.876	2314.151	66	.000
Medical staff satisfaction	0.889	3320.982	120	.000

3.4.2.2 Principal factor analysis

1. Organizational resources

In the process of factor analysis, principal factor analysis was used to rotate the factors in varimax rotation, through which five common factors with characteristic values greater than 1 were obtained. Table 3.9 presents the results. It is found that the cumulative percent of the variance is 71.480%, more than 60%, so it is considered that the validity of the scale is good. In the rotated component matrix analysis, component 1 is leadership, and components 2 to 5 are the mission, adaptability, participation and consistency of the organizational culture. Since the scale used is OCQ, four dimensions are included, that is, involvement, consistency, mission, and adaptability. Table 3.10 is about the rotated factor matrix, in which 22 items can be classified into 5 categories of factors. The loading of each factor is greater than 0.5, and there is no high loading of double factors, indicating that the organizational resources have good content validity.

Table 3.9 Cumulative percent of variance of organizational resources

Component	Initial eigenvalue			Extraction sums of squared loadings			Sums of squared loadings (rotated)		
	Sum	% of Variance	Cumulative %	Sum	% of Variance	Cumulative %	Sum	% of Variance	Cumulative %
1	8.908	40.492	40.492	8.908	40.492	40.492	6.269	28.498	28.498
2	2.656	12.073	52.565	2.656	12.073	52.565	2.552	11.601	40.098
3	1.682	7.645	60.210	1.682	7.645	60.210	2.431	11.051	51.150
4	1.341	6.095	66.306	1.341	6.095	66.306	2.263	10.285	61.435
5	1.138	5.174	71.480	1.138	5.174	71.480	2.210	10.045	71.480
6	.639	2.904	74.384						
7	.557	2.530	76.914						
8	.501	2.278	79.192						
9	.485	2.202	81.395						
10	.457	2.079	83.473						
11	.427	1.939	85.412						

12	.412	1.871	87.283
13	.371	1.685	88.968
14	.355	1.613	90.581
15	.336	1.525	92.106

Table 3.10 Factor matrix of organizational resources (rotated)

	1	2	3	4	5
A1-1	.186	.066	.236	.821	.044
A1-2	.224	.103	.185	.809	.185
A1-3	.126	.153	.026	.753	.317
A1-4	.173	.136	.084	.202	.842
A1-5	.162	.151	.224	.176	.779
A1-6	.203	.147	.427	.151	.677
A1-7	.148	.062	.747	.191	.271
A1-8	.183	.206	.801	.177	.091
A1-9	.173	.083	.826	.067	.152
A1-10	.170	.870	.162	.074	.164
A1-11	.260	.850	.123	.189	.063
A1-12	.261	.864	.083	.066	.178
A2-1	.755	.121	.239	.145	.067
A2-2	.772	.129	.118	.065	.036
A2-3	.772	.148	.128	.184	-.003
A2-4	.751	.120	.079	.164	.130

A2-5	.823	.137	.043	.072	.084
A2-6	.751	.027	.041	.092	.165
A2-7	.789	.122	.031	.097	.166
A2-8	.761	.102	.093	.065	.193
A2-9	.735	.158	.144	.002	.087
A2-10	.715	.187	.208	.200	.044

2. Organizational capabilities

In the principal factor analysis, varimax rotation was used to rotate the factors, through which two common factors with characteristic values greater than 1 were obtained. It is found that their cumulative percent of the variance is 62.549%, more than 60%, so it is believed that the validity of the scale is good. The results are presented in Table 3.11. In the rotated component matrix analysis, which is presented in Table 3.12, component 1 is management capability, and component 2 is learning capability. Since the loading of each factor is greater than 0.5 and there is no high loading of double factors, the organizational operation capability has good content validity.

Table 3.11 Cumulative percent of variance of organizational operation capability

Component	Initial eigenvalue			Extraction sums of squared loadings			Sums of squared loadings (rotated)		
	Sum	% of Variance	Cumulative %	Sum	% of Variance	Cumulative %	Sum	% of Variance	Cumulative %
1	5.544	46.198	46.198	5.544	46.198	46.198	3.826	31.883	31.883
2	1.962	16.351	62.549	1.962	16.351	62.549	3.680	30.666	62.549
3	.681	5.676	68.225						
4	.616	5.137	73.361						
5	.514	4.282	77.644						
6	.497	4.144	81.788						
7	.463	3.860	85.648						
8	.430	3.587	89.235						

9	.363	3.021	92.257
10	.354	2.946	95.203
11	.300	2.503	97.706

Table 3.12 Factor matrix of organizational operation capability (rotated)

	1	2
A3-1	.744	.237
A3-2	.760	.234
A3-3	.811	.174
A3-4	.755	.168
A3-5	.746	.216
A3-6	.802	.135
A4-1	.231	.786
A4-2	.287	.690
A4-3	.081	.795
A4-4	.218	.750
A4-5	.132	.737
A4-6	.246	.783

3. Dynamic capabilities

In the principal factor analysis, varimax rotation was conducted, through which three common factors with characteristic values greater than 1 were obtained. It is found that their cumulative percent of the variance is 75.622%, more than 60%, so it is believed that the validity of the scale is good. The results are presented in Table 3.13. In the rotated component matrix analysis which is presented in Table 3.14, component 1 is reconfiguring, component 2 seizing, component 3 sensing. Since the loading of each factor is greater than 0.5, and there is no high loading of double factors, the dynamic capabilities have good content validity.

Table 3.13 Cumulative percent of variance of dynamic capabilities

Component	Initial eigenvalue			Extraction sums of squared loadings			Sums of squared loadings (rotated)		
	Sum	% of Variance	Cumulative %	Sum	% of Variance	Cumulative %	Sum	% of Variance	Cumulative %
1	5.070	42.246	42.246	5.070	42.246	42.246	3.264	27.203	27.203
2	2.143	17.856	60.102	2.143	17.856	60.102	2.976	24.804	52.007

3	1.862	15.519	75.622	1.862	15.519	75.622	2.834	23.615	75.622
4	.471	3.929	79.551						
5	.434	3.619	83.170						
6	.376	3.137	86.307						
7	.350	2.915	89.221						
8	.348	2.899	92.121						
9	.293	2.438	94.558						
10	.243	2.027	96.585						
11	.225	1.874	98.459						
12	.185	1.541	100.000						

Table 3.14 Factor matrix of dynamic capabilities (rotated)

	1	2	3
B1-1.	.156	.096	.826
B1-2	.090	.148	.814
B1-3	.153	.125	.830
B1-4	.167	.021	.811
B2-1	.198	.859	.077
B2-2	.168	.816	.089
B2-3	.114	.835	.112
B2-4	.145	.840	.117
B3-1	.867	.161	.189
B3-2	.860	.225	.142
B3-3	.872	.177	.173
B3-4	.910	.119	.127

4. Medical staff satisfaction

Through principal factor analysis, varimax rotation was carried out, through which three common factors with characteristic values greater than 1 were obtained. It is shown that their cumulative percent of the variance is 69.612%, more than 60%, so it is considered that the validity of the scale is good. The results are presented in Table 3.15. In the analysis of the rotated

component matrix which is presented in Table 3.16, component 1 is staff’s satisfaction with hospital development, component 2 staff’s satisfaction with interpersonal relationships, and component 3 staff’s satisfaction with the jobs themselves. As the loading of each factor is greater than 0.5, and there is no high loading of double factors, the medical staff satisfaction has good content validity.

Table 3.15 Cumulative percent of variance of medical staff satisfaction

Component	Initial eigenvalue			Extraction sums of squared loadings			Sums of squared loadings (rotated)		
	Sum	% of Variance	Cumulative %	Sum	% of Variance	Cumulative %	Sum	% of Variance	Cumulative %
1	6.954	43.461	43.461	6.954	43.461	43.461	4.176	26.099	26.099
2	2.571	16.068	59.529	2.571	16.068	59.529	3.753	23.458	49.557
3	1.613	10.083	69.612	1.613	10.083	69.612	3.209	20.056	69.612
4	.676	4.224	73.837						
5	.631	3.945	77.782						
6	.488	3.052	80.834						
7	.469	2.934	83.768						
8	.436	2.722	86.490						
9	.397	2.479	88.969						
10	.368	2.301	91.270						
11	.328	2.051	93.320						
12	.310	1.935	95.256						
13	.253	1.580	96.836						
14	.215	1.345	98.181						
15	.165	1.030	99.210						

Table 3.16 Factor matrix of medical staff satisfaction (rotated)

	1	2	3
C-1	.129	.090	.816
C-2	.054	.101	.756
C-3	.128	.063	.765
C-4	.137	.052	.771
C-5	.120	.157	.790
C-6	.317	.818	.117
C-7	.213	.826	.122
C-8	.329	.775	.073
C-9	.238	.796	.127
C-10	.261	.855	.110
C-11	.831	.343	.137
C-12	.794	.250	.098
C-13	.762	.175	.185
C-14	.737	.259	.062
C-15	.744	.213	.152
C-16	.854	.253	.128

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Chapter 4: Discussion of the Results

4.1 The case study

4.1.1 General information

This study takes Shengde Hospital in Xinyang City, Henan Province as a specific case. Shengde Hospital is a general tertiary hospital established and registered upon the approval of Henan Health and Family Planning Commission and the first private general third-grade hospital in Henan as well as a key construction project designated by Xinyang Municipal Party Committee and Municipal People's Government and one of the "Ten Major Practical Things about People's Livelihood" in Xinyang.

Located in Yangshan New District, Xinyang City, Shengde Hospital covers an area of 340 mu (or 226,667.8 m²) with a total planned floorage of 420,000 m² and total investment of RMB 2 billion. Shengde Hospital is to set up 2,200 medical sickbeds and 800 healthcare sickbeds. To date, the floorage of Phase I medical area has reached 320,000 m² and the Phase II healthcare project is under construction. Prepared in May 2014, Shengde Hospital went through the review and appraisal for practice on December 16, 2017 by Henan Health and Family Planning Commission and was put into operation on December 30, 2017. The background and conditions of the hospital's establishment are shown as follows:

Practical needs: It is located in the south of Henan, Xinyang, adjacent to Anhui Province and Hubei Province. With picturesque scenery, pleasant climate and convenient transportation, Xinyang has long been praised as "Jiangnan (South of Yangtze River) in the northern China and Northern China as Jiangnan". Possessing unique geographical conditions, the city has been designated as one of "the Ten Most Livable Cities" for ten consecutive years. Xinyang covers an area of about 22,000 km² and its total population is about 8.65 million. As Xinyang is located in the old revolutionary base area of Dabie Mountain, it has insufficient medical resources, especially high-level general hospitals above third-grade. In this regard, Xinyang not only lags far behind the developed regions in China but also fails to reach the average level in Henan. As Henan has 69 general hospitals above third-grade, there should have been three or four hospitals of this kind on average in the 18 prefecture-level cities. However, there is only a hospital of this sort in Xinyang, namely Xinyang Central Hospital with 1,200 sickbeds and 1,200 doctors. The

total number of sickbeds and medical practitioners in Xinyang is about 19,000 and 5,200 respectively. In accordance with Planning Outline of National Medical and Health Service System (2015-2020) (The State Council of China, 2015) issued by the State Council of China (PRC) in March 2015, the number of sickbeds and medical practitioners in the medical and healthcare institutions for every ten thousand permanent residents should have been 4.55 and 2 respectively; Xinyang City should have had 39,000 beds and 17,000 medical practitioners, which is far better than the current status quo.

The state's policy environment for supporting social medical services: in recent years, China strongly encourages and supports social capital to invest in the medical industry and successively introduces policies to support social capital in hospital operation. The policies of multi-sited medical practices, registration of practice, professional ranking appraisal and application for academic projects have been implemented universally. A large group of entrepreneurs and enterprises with a sense of social responsibility and foresight and sagacity successively invest in the medical industry. The hospital operation with social capital has taken shape and showcased conspicuous effects. So far, the private hospitals have occupied half of the market share and embraced a spring of development.

Investors' strong social responsibility: Shengde Hospital is jointly founded by Shengde International Hospital Group Co., Ltd. and Xinyang Vocational and Technical College. Shengde International Hospital Group Co., Ltd. is a corporate enterprise jointly contributed by Xinyang Daqing Real Estate Group and Henan Xinfang Group and its investment direction chiefly includes medical industry, pension industry and other health-related industries. Through individual or joint efforts, Xinyang Daqing Real Estate Group and Henan Xinfang Group have developed many real estate projects in Xinyang downtown and other affiliated counties and districts and have achieved remarkable social-economic efficiency. Many of their housing communities have become model projects in the local region. After achieving success, these enterprises' decision makers make a strategic decision to transform to the public welfare and livelihood sectors with the purpose of returning to the society. They chose the pension industry and medical industry after investigations. With a history of one hundred years, Xinyang Vocational and Technical College sets up four medical sub-colleges: Clinical School, School of Pharmacy, School of Laboratory Medicine and School of Nursing. The establishment of a new campus in Yangshan New District requires the teaching support from a large-scale hospital. In March 2014, the three parties made an eventful decision to jointly establish a hospital.

Local government support: As a livelihood investment project, Shengde Hospital receives the proactive support from the Municipal Party Committee and Municipal Government. On

May 23, 2014, Guo Ruimin, the Municipal Party Secretary back then held a meeting of members of Municipal Standing Committee, which approved the project of Shengde Hospital and rated it as a municipal key project and one of the “Ten Major Practical Things”. On July 15, Qiao Xinjiang, the Mayor then presided over the Mayor’s routine meeting of construction preparation of Shengde Hospital and chiefs of relevant functional departments attended the meeting. The meeting studied the construction preparation of Shengde Hospital and decided to establish a joint meeting system to support the construction of Shengde Hospital. In February 2017, the establishment of Shengde Hospital as a general tertiary hospital was officially approved by Henan Health and Family Planning Commission. Shengde Hospital became the first private third-grade hospital in Henan.

4.1.2 Stages of development

4.1.2.1 Preparation stage (January 2014 - September 2015)

Henan Shengde Hospital is a large-scale healthcare project invested and constructed by social capital. The investors are two local real estate companies, namely Xinyang Daqing Estates Group Co., Ltd. and Henan Xinfang Group Estates Co., Ltd. After years of development, the two companies aim to transform themselves to benefit the society, and decide to invest in healthcare and elderly care sectors. The two companies signed an agreement with Xinyang Vocational and Technical College to jointly establish Shengde Hospital Co., Ltd., as well as build Henan Shengde Hospital, the second affiliated hospital of Xinyang Vocational and Technical College.

1. Government support

Xinyang Municipal Government held joint meetings to support the construction of Shengde Hospital. During the preparation period, a total of eight joint meetings were held to solve the problems of land planning, land requisition, financing and official staffing recommendations. Officials from the Municipal Government Inspection Office, Yangshan New District, Xinyang Vocational and Technical College, Finance Bureau, Land Resources Administration, Municipal Urban and Rural Planning Bureau and Shengde Hospital attended the meetings. Measures such as setting a clear schedule, jointly enforcing laws by various departments and strengthening supervision were taken to ensure the smooth completion of the land requisition for the hospital and pave way for the construction.

2. Administrative approval

Another important task in the preparation stage was to design the hospital building and get

approval. Due to the huge difference between the hospital building and ordinary buildings, Ricky Liu & Associates Architects + Planners, a company with rich experience in designing hospital buildings, was commissioned to design the building. It proposed a plan for land use and construction, which was later approved by the Xinyang Municipal Planning Review Committee. This marks the beginning of the construction stage of Shengde Hospital. Timeline of preparation stage is showed in Table 4.1.

Table 4.1 Timeline of preparation stage

Stage of development	Item	Time	Summary	Contents
Preparation stage (January 2014 - September 2015)	Initiation of project	Apr. 1, 2014	Government support	Xinyang Daqing Real Estate Group Co., Ltd., Henan Xinfang Group Real Estate Co., Ltd., and Xinyang Vocational and Technical College signed an agreement to jointly establish Shengde Hospital Co., Ltd.
		May 23, 2014		The Secretary of the Municipal CPC Committee Guo Ruimin presided over the meeting of the report on three key projects, including the one on the construction of the Second Affiliated Hospital of Xinyang Vocational and Technical College (Shengde Hospital), and the meeting confirmed its establishment in principle.
		Jul. 15, 2014		Mayor Qiao Xinjiang presided over the mayor's routine meeting for the construction preparation of Shengde Hospital, and those in charge of municipal departments attended the meeting. The meeting discussed the preparation of Shengde Hospital and decided to hold a joint meeting system to support its construction.
		Jul. 31, 2014		The General Office of Xinyang Municipal People's Government issued the <i>Notice on the Establishment of Henan Shengde Hospital and the Joint Meeting System for the Construction of the Second Hospital Affiliated to Xinyang Vocational and Technical College</i> .
		Aug. 15, 2014		Mayor Qiao presided over the first joint meeting on the construction of Henan Shengde Hospital and the Second Hospital Affiliated to Xinyang Vocational and Technical College in the executive meeting room of the municipal government.
		Aug. 5, 2014		Shareholder meeting

			<p>Henan Shengde Hospital Co., Ltd. submitted the <i>Report on the Location of Medical Institution</i> to Xinyang City Health Bureau, confirming that the hospital would be located at the south of Beihuan Road, east of the 24th Street, and west of the 26th Street in Yangshan New District, Xinyang.</p>
		Aug. 2, 2014	
			<p>Henan Shengde Hospital Co., Ltd. submitted a request to the Yangshan New District Planning Bureau on turning the western plot (approximately 42.59 acres) into a part of Shengde Hospital, rather than for commercial and residential purposes.</p>
		Aug. 8, 2014	
			<p>Henan Shengde Hospital Co., Ltd. submitted the <i>Request for Record of the Construction Project of Henan Shengde Hospital and the Second Hospital Affiliated to Xinyang Vocational and Technical College</i> to the Economic Development Bureau of Yangshan New District.</p>
		Aug. 18, 2014	
			<p>The land acquisition and demolition for Henan Shengde Hospital was officially launched.</p>
		Aug. 27, 2014	
			<p>Henan Shengde Hospital Co., Ltd. submitted a report to the municipal government, requesting a change of the width of Xinsan Road from 20 meters to 60 meters.</p>
		Nov. 22, 2014	
Land and planning approval	Administrative approval	Jan. 22, 2015	<p>Shengde Hospital submitted an application to the Yangshan Branch of the Municipal Bureau of Land Resources for land transfer procedures for Shengde Hospital.</p>
			<p>The plenary meeting of the Xinyang Planning Review Committee was held in the Xinyang Urban Planning and Design Institute. During the meeting, the planning department of Yangshan New District briefed upon the land planning and construction project of Shengde Hospital; Ricky Liu & Associates Architects+Planners gave a detailed description of the plan for design; and reviewers had an in-depth discussion on certain issues. The meeting unanimously approved the proposal for land planning and construction of Shengde Hospital, which marks the beginning of the construction stage.</p>
		Feb. 10, 2015	
			<p>The Xinyang government approved the plan for pre-transfer of the right to state-owned land use for Shengde Hospital, and the land transfer agreement entered a substantial stage.</p>
		Feb. 17, 2015	
			<p>The Municipal Bureau of Land Resources issued the Announcement on the Pre-transfer of the Right to State-owned Land Use for Construction in Xinyang City, officially declaring the right of Shengde Hospital to the land for construction.</p>
		Feb. 28, 2015	

	Feb. 28, 2015		<p>The Municipal Bureau of Land Resources issued the <i>Announcement on the Pre-transfer of the Right to State-owned Land Use for Construction in Xinyang City</i>, officially declaring the right of Shengde Hospital to the land for construction.</p> <p>Mayor Qiao Xinjiang hosted the Coordination Meeting of the Construction of Shengde Hospital in the executive meeting room of the municipal government. The attendees of the meeting included Feng Ming (Member of the Standing Committee of the Municipal CPC Committee, Executive Deputy Mayor), Cao Xinsheng, Zhang Fuzhi (Deputy Mayor), Hu Yacai (Secretary-General of the Municipal Government), and delegates from the General Office of the Municipal Government, Office of Inspection, Bureau of Finance, Bureau of Land Resources, Bureau of Urban and Rural Planning, Office of the Joint Meeting System of the Yangshan New District and Shengde Hospital, as well as Shengde Hospital Co., Ltd.</p>
	Apr. 20, 2015		<p>Deputy Mayor Zhang Fuzhi presided over the coordination meeting on the detention of the Henan Shengde Hospital in the third meeting room of the municipal government. Given that the land for the project had been mortgaged to China Minsheng Bank by the government, the meeting discussed the rapid response to the release of the mortgage.</p>
	May 21, 2015	Government support	<p>Deputy Mayor Cao Xinsheng presided over the promotion meeting of land acquisition and resettlement for Henan Shengde Hospital in the office of construction. Delegates from the Inspection Office of the Municipal Government, Yangshan New District, Xinyang Vocational and Technical College, Longfeishan Office, Qianjin Office, and Shengde Hospital attended the meeting. The meeting called for the adoption of measures such as defined timeline, joint law enforcement by various departments, and strengthening of supervision to ensure the successful completion of the land acquisition and resettlement for the hospital, and pave the way for the construction.</p>
	May 22, 2015		<p>Deputy Mayor Cao Xinsheng presided over the promotion meeting of land acquisition and resettlement for Henan Shengde Hospital in the office of construction. Delegates from the Inspection Office of the Municipal Government, Yangshan New District, Xinyang Vocational and Technical College, Longfeishan Office, Qianjin Office, and Shengde Hospital attended the meeting. The meeting called for the adoption of measures such as defined timeline, joint law enforcement by various departments, and strengthening of supervision to ensure the successful completion of the land acquisition and resettlement for the hospital, and pave the way for the construction.</p>
Engineering design and construction of main body	Oct. 9, 2014	Party B cooperation	<p>Ricky Liu, a famous architect in Taiwan, together with Xie Liwei, the famous medical planner, arrived in Xinyang to have a two-day inspection of the preliminary planning of the Henan Shengde Hospital, or the Second Hospital Affiliated to Xinyang Vocational and Technical College.</p>

Dec. 18, 2014	Shengde Hospital Co., Ltd. (Party A), Ricky Liu & Associates Architects+Planners (Party B), and Henan Fifth Research and Design Corporation of CNNC (Party C) signed a contract for planning and design of Shengde Hospital.
May 3, 2015	The seminar on the planning and design of Shengde Hospital was held in the meeting room on the 13th floor of Jinyan Hotel in Yangshan New District. Experts and scholars exchanged their views on Ricky Liu's proposal for the overall planning and design of Shengde Hospital.
Sept. 7, 2015	After rounds of inspections and negotiations, the hospital decided to sign a contact with Henan Fifth Construction Second Building Installation Co. Ltd. for the main building construction.
Sept. 14, 2015	Shengde Hospital Co., Ltd. and Henan Fifth Construction Second Building Installation Co. Ltd. held the groundbreaking ceremony for the first phase of construction of Henan Shengde Hospital, indicating that the construction entered a substantial stage.

4.1.2.2 Construction stage (October 2015 - December 2017)

During the construction stage, main construction projects and equipment installation were completed. In addition, disciplines were established and professionals were employed. As a result, the hospital was approved as a tertiary hospital and was opened successfully.

1. Completion of hospital infrastructure projects

The administrative building, apartment building, main building and its interior and exterior design, pathology laboratory, radiological diagnosis and radiotherapy room and operation and intensive care unit were completed, along with 4,000-square-meter supporting functional areas, landscaping, rain sewage diversion systems, sewage treatment stations and distributed energy systems. The hospital wards have a construction area of 150 square meters, with a net use area of 10 square meters. Outpatient clinics have a net use area of 3,600 square meters and a use area of 17 square meters, going beyond the standards of tertiary hospitals. Henan Shengde Hospital was founded in July 2015, and construction was started at the end of the year; it was completed and put into operation in December 2017. It is such a miracle for a hospital to be completed in only two years. The successful completion of the hospital projects laid a solid foundation for the approval of its practicing certification and operation.

2. Professional staffing

The hospital has attached great importance to the quality of staff members. In 2017, a total

of 1,224 people signed contracts or agreements with the hospital. 679 people have started their work, including 174 doctors, 21 medicine practitioners, 274 nurses, and 49 technicians. Among them, 59 have senior titles, 82 intermediate and 357 juniors. There are 7 doctors, 23 masters, and 375 bachelors in the hospital. The number of health technicians has reached 1.15 per bed, accounting for 72% of the total. The number of nurses accounted for 51% of that of health technicians. The ratio of the number of clinical ward nurses to that of available beds is 1:0.5; nurses in the operation department to available operation room is 1:3. This basically meets the standards of tertiary hospitals in terms of professional's academic and technical background, especially those leading professors. Personnel in special positions have obtained professional training certificates or relevant advanced training experience.

3. Improved discipline establishment

All disciplines in diagnosis and treatment have been established according to the standards for tertiary hospitals. After a thorough consideration, 14 first-level and 15 second-level clinical disciplines, four clinical diagnosis and treatment projects, and ten medical technology disciplines have been set up. Based on the regional disease spectrum, three key development discipline groups have been established: tumor diagnosis and treatment, women and children reproduction, and trauma rehabilitation. A high-end confinement service center (which belongs to the service industry, not a medical institution) was built; follow-up projects, such as reproductive health and infertility department, aesthetic medicine department, day-care ward, and pharmacy intravenous admixture services, were completed as well.

4. Medical equipment and information system in place

In order to better provide medical services for patients, the hospital has standardized the configuration of 600 beds and medical equipment in auxiliary medical technology departments based on the basic equipment standards of tertiary general hospitals, and purchased a total of more than 1,300 pieces of medical equipment, with a price of 200 million yuan. Medical equipment is basically qualified for the 43 disciplines in the hospital. The state-of-the-art equipment includes Aquilion ONE, mammography target machine, 26-person hyperbaric oxygen chamber, and Beckman biochemical blood cell lab automation system. During the installation of the equipment, the hospital passed the check and acceptance that is required by the environmental impact of the construction project, the radiation safety assessment of provincial and municipal secondary medical institutions, and the pre-assessment and control and assessment of radiation-related occupational diseases. The AIDS screening laboratory passed the municipal- and provincial-level examination. Hyperbaric oxygen chamber, liquid oxygen tank and disinfection facilities passed the examination by Municipal and Provincial

Administration of Quality Supervision, Inspection and Quarantine.

In terms of information system, a data integration platform was built for mutual data and information sharing, including ORD, EMR, HIS. External systems including health insurance, self-service equipment, voice of diagnosis area and triage display are synchronized with medical equipment hardware. At present, the hospital has completed the development and testing of 64 projects and five modules with structured electronic medical records, electronic medical prescriptions, and mobile nursing as the core. The hospital medical information system has been successfully built, with EMR and HIS successfully launched.

5. Improving management system

A sound management structure has been established. The hospital has eight departments and one office: general office, medical department, nursing department, equipment department, logistics department, human resources department, planning and finance department, medical business development department and infrastructure engineering department. As a new hospital, it attaches great importance to the formulation of various rules and regulations, and strengthens standards and quality management of medicine, pharmacy, nursing and technology. Five major management systems including medical care, nursing, hospital infection, pharmacy, and administration with 18 core medical systems and 21 core nursing systems have been established and laid down in papers. The staff responsibilities were identified. 13 hospital quality and safety management committees, as well as internal quality control teams regarding medical care, nursing, pharmacy and hospital infection have been established. The hospital has also strict implemented the Administrative Measures for the Registration of Practicing Medical Doctors, enhanced the standards and monitoring of medical prescriptions, and promoted clinical pathways and quality management of single disease. The hospital has followed the policy that medical workers should be equipped with basic medical theories, knowledge and skills; and medical management should be strict and organized. The hospital has finished pre-employment training on laws and regulations, core systems and hospital infection. The hospital has also completed work including level-to-level administration of operation and of antibacterial drugs, prescription management of toxic and narcotic drugs, and early warning of clinical crisis.

6. Deepening external cooperation

In order to further develop the disciplines, the hospital has signed strategic cooperation agreements with Guangdong Medical University, Bethune Charitable Foundation, and Shanghai Xixi Maternal and Baby Care Service Co., Ltd. With the support of the municipal CPC committee, the municipal government, and Promotion Association of Construction in the Old Revolutionary Areas at all levels, the hospital has become an institution that receives direct

help from the 301 Hospital. At present, around ten experts have been invited to the hospital from the Tumor Treatment Center and the Department of Obstetrics and Gynecology and Reproductive Medicine of the 301 Hospital, as well as the Institute of Neurosurgery of General Hospital of Central Theatre Command. They have become the technical and academic support for the hospital. The First Affiliated Hospital of Zhengzhou University and the remote consultation station of the 301 Hospital were also established.

7. Approval of practice

The practice registration of tertiary general hospitals has been delegated to provinces for review. Despite no detailed rules for review in Henan Province, efforts were made to formulate the Standards of Approval of Practice of Tertiary General Hospitals in Henan Province with the support of Provincial and Municipal Health and Family Planning Commission. After careful preparation, the hospital passed the first review by the Xinyang Municipal Health and Family Planning Commission and the formal review by the Henan Provincial Health and Family Planning Commission. During the provincial-level review, experts gave high praise to the hospital with 960 points, making it the first tertiary private general hospital in Henan Province.

8. Sound financial support

Finance in the hospital has been solid. Financial management accounting and management system has constantly been improved, laying a solid foundation for hospital asset management, financing management, cost management, expense management, transaction management, and capital management. It has received loan disbursement of RMB 390 million from Guangzhou Rural Commercial Bank and RMB 30 million from Zhujiang Rural Bank, completed a financing of RMB 300 million for equipment from Guangzhou Zhujiang Financial Leasing Co., Ltd., and managed well the company's financial status for an efficient operation of retained funds to support the hospital construction and operation. Timeline of construction stage is showed in Table 4.2.

Table 4.2 Timeline of construction stage

Stage of development	Item	Time	Summary	Contents
Construction stage (October 2015 - December 2017)	Management	Nov. 29, 2015	Management structure	Shengde Hospital Co., Ltd. held a board meeting, deciding to build an executive team for the company and the hospital.
		Dec. 8, 2015		Shengde Hospital Co., Ltd. established a decision-making executive committee.
		Jan. 20, 2016		Chu Wenhua, chairman and director of the decision-making executive committee, presided over the second meeting.
		Jan. 30, 2016		The management committee of Henan Shengde Hospital was established.

	May 13, 2016		The board of Shengde Hospital Co., Ltd. decided to appoint Fan Songjie Deputy General Manager of the company and President of the hospital.
	Sept. 29, 2016	Senior managers were appointed.	Xinyang Vocational and Technical College appointed Zhao Hui, former Secretary of the CPC and Vice President of the First Hospital Affiliated to Xinyang Vocational and Technical College, to work in Henan Shengde Hospital. Zhao Hui was recruited as Vice President of Henan Shengde Hospital.
	Jul. 27, 2016	Maintenance of the relationship with the government	Vice Chairman of the China Old Liberated Area Construction Association Qin Youlai, Deputy Secretary-General Wang Bingguo, Vice Chairman and Secretary-General of Xinyang Old Liberated Area Construction Association Shao Changqin, Deputy Secretary-General Qiu Jialiang and Wang Maosong visited the construction site of Henan Shengde Hospital.
	Nov. 14, 2016		Vice chairman of the China Old Liberated Area Construction Association Li Guangwen made an inspection visit to the hospital, together with Deputy Mayor Zhang Mingchun and Director of the Municipal Health and Family Planning Commission Cao Jun.
Strategic cooperation	Feb. 28, 2016	Traverse Global Healthcare	President of the hospital Cheng Hong signed a cooperation agreement with Robert Priddy, President of the Traverse Global Healthcare on international medical cooperation.
	Mar. 22-Apr. 5, 2016		Vice presidents of Guangdong Medical University Zhao Bin and Ding Yuanlin visited the hospital, and the two parties decided to officially sign the <i>Strategic Cooperation Agreement</i> before April 16.
	Apr. 11, 2016	Guangdong Medical University	President Chu Wenhua, Vice President and General Manager Cheng Hong, Director and Deputy General Manager Liang Qigui and Wu Zhaoli headed for Guangzhou for the signing of the <i>Strategic Cooperation Agreement</i> on the Dongguan campus of Guangdong Medical University, and the two parties reached a consensus on mutual cooperation.

	Apr. 22-24, 2016	Ministry of Health of PLA Nanjing Military Region, Wanda Information Co., Ltd., KingMed Diagnostics Group Co., Ltd., etc.	Yan Dongfang, President of the Shanghai Association of Non-government Medical Institutions, as well as heads and experts from Ministry of Health of PLA Nanjing Military Region, Wanda Information, KingMed Diagnostics Group and Bethune Charitable Foundation discussed opportunities for cooperation in Henan Shengde Hospital.
	Aug. 2, 2016	Bethune Charitable Foundation	Henan Shengde Hospital signed a cooperation agreement with Bethune Charitable Foundation, and the two parties agreed to jointly establish an independent blood purification center.
	Dec. 22, 2016	Shanghai Xixi Love Baby Mom Caring Service Co., Ltd.	Henan Shengde Hospital signed a contract with Shanghai Xixi Love Baby Mom Caring Service, which granted the hospital the franchise of the "confinement service center".
Construction	Jun. 29, 2017		President Chu Wenhua presided over a kickoff meeting that defined tasks for the completion of hardware installation for the hospital within three months.
	Jul. 8, 2017		President Chu Wenhua presided over a special meeting on the environmental preparation for the site used for the large-scale equipment installation in the first meeting room of the company. It was proposed in the meeting that Fifth Construction should complete the decoration of imaging and radiation areas of the basement within 20 days.
	Sept. 16, 2017	Supervision of progress	Leaders of the company, including President Chu Wenhua, Chief Supervisor Fu Jie and Deputy General Manager Liang Qigui, made an inspection tour to the construction site of Building 1#.
	Oct. 8, 2017		Leaders of the hospital and company, including President Chu Wenhua, General Manager Cheng Hong, Chief Supervisor Fu Jie, Director and Deputy General Manager Liang Qigui, made another inspection tour to Building 2# and agreed that the construction had been successfully completed.
Practice review	Jun. 8, 2017	Task assignment	President Fan Songjie presided over the seminar on the application of hospital practice and the establishment of disciplines during the early development of the hospital. At the meeting, General Manager Cheng Hong requested everyone to follow President Fan's 10

		instructions to make sure the fulfillment of the goals.
Aug. 10, 2017		Executive Vice President Chen Jianhua presided over the meeting on practice review and requirements for the opening of the hospital. The meeting pointed out the various difficulties and choices that the hospital would face in the future construction, and advocated that hospital staff improve their execution power and team cohesion for the success in passing the practice review.
Nov. 28, 2017		General Manager Cheng Hong presided over the meeting to mobilize all staff to get prepared for the the provincial practice review. The meeting emphasized that all functional departments should improve overall quality with one mind based on the result of the preliminary review on Nov. 21, so as to ensure success in passing the provincial practice review.
Dec. 12, 2017	Results Acceptance	Henan Shengde Hospital successfully passed the tertiary general hospital practice review conducted by the practice review expert group of the Henan Provincial Health and Family Planning Commission with an excellent score of 958 points (out of 1000). At the meeting where the result was reported, President Chu Wenhua and President Fan Songjie delivered speeches respectively.
Dec. 29, 2017		Henan Shengde Hospital held the Briefing on the Construction and Diagnosis of the Hospital and invited officials of the provincial and municipal health and family planning commissions.

4.1.2.3 Early stage of operation (January 2018 - December 2018)

1. Discipline development

According to the requirements for departments in tertiary general hospitals, the hospital set up 21 clinical departments and ten medical technical departments at the early stage, and established three key discipline groups, including women and children reproduction, tumor diagnosis and treatment, and trauma rehabilitation. In order to control operating costs, a total of ten wards were set up, with every individual ward for similar disciplines.

Each department improves medical quality while strengthening discipline development. Pediatrics, obstetrics and gynecology are the first groups of disciplines that have achieved preliminary success. The quality of diagnosis and treatment has gradually improved, and their

scale effect and social influence as key disciplines are gaining momentum. Building a small department within the pediatric department has been put on the agenda. Progress has also been made in ophthalmology. An independent eye center has been co-established with the Eye Hospital of Xinxiang Medical University. Traumatic orthopedics and orthopedics have become two separate disciplines and departments. Workstations have been established, including Guo Yinglu "Urology and Micro-Energy Medicine" Academician Workstation, Xizheng Vertigo Hospital affiliated to Henan Shengde Hospital, and Yin Detao "Thyroid and Breast Diseases" Workstation. In terms of rehabilitation medicine, the Group of Hyperbaric Oxygen of Xinyang Physical Medicine and Rehabilitation Branch has been set up, which is the first academic organization led by the hospital.

2. External cooperation

Over the past year, great progress has been made in cooperation with many well-known hospitals at home and abroad, such as the United States, Beijing, Shanghai, Guangzhou, Shandong, Zhengzhou, and Wuhan. The U.S. RFP International Medical Alliance Center was established as a hospital under the cooperation with the University of Florida. Progress has also been made in the cooperation with the 301 Hospital. Since the opening, the 301 Hospital has sent in experts in oncology, cardiology, neurology, orthopedics, obstetrics and gynecology for technical support. The hospital has signed a cooperation agreement with the First Affiliated Hospital of Zhengzhou University and become its partner. The hospital has established alliances with the First Affiliated Hospital of Zhengzhou University and Henan Provincial People's Hospital in reproduction, ultrasound, blood purification for acute and critical illness and rehabilitation medicine. The hospital has signed an agreement with Zhengzhou Seventh People's Hospital and joined the Henan Cardiovascular Specialty Alliance. The hospital has invited experts in reproductive medicine as a supervisor for the reproductive medicine center. The hospital has installed remote medical systems with the First Affiliated Hospital of Zhengzhou University and the 301 Hospital. Effective external cooperation has played a positive role in improving the quality of diagnosis and treatment, ensuring medical quality and safety and expanding the influence of the hospital.

3. An integration of medicine and elderly care

The overall planning of Henan Shengde Hospital includes medicine and elderly care. The plan will be carried out step by step to build a health and wellness complex. With the completion of the hospital, the first phase of the healthcare center project was launched in 2018. The project was officially included in the "Key Supervision Projects" and "Top Ten Key Projects" in Xinyang, which created favorable social conditions for the construction. With a total

construction area of 100,000 square meters, the healthcare center can meet different needs of elderly care. At present, the integration of medicine and elderly care in the hospital has attracted widespread attention from the society. Timeline of early stage of operation is showed in Table 4.3.

Table 4.3 Timeline of early stage of operation

Stage of development	Item	Time	Summary	Contents	
Early stage of operation (January 2018 - December 2018)	Major strategic project	Jan. 9, 2018		The Institute of Forensic Science of Henan Shengde Hospital was established.	
		Nov. 2, 2018	Establishment of Institute of Forensic Science	The five functional laboratories of the Institute of Forensic Science, including the forensic clinical appraisal room, forensic pathology appraisal room, document appraisal room, trace appraisal room and audio-visual inspection appraisal room, successfully passed the on-site review conducted by 11 experts including Bai Tieshan, Deputy Director of the Judicial Appraisal Bureau of the Provincial Department of Justice, and Wang Yisen, Chief of the Forensic Appraisal Management Department. Chu Wenhua, Secretary of the CPC Committee and Chief Supervisor of Shengde Group, presided over a press conference on the opening of Henan Shengde Institute of Forensic Science in the multimedia conference room.	
		Mar. 19, 2019		Topping-out of the International Academic Exchange Center	Chief Supervisor Chu Wenhua presided over a meeting on the construction of the International Academic Exchange Center of Henan Shengde Hospital.
		May 11, 2018		International Academic Exchange Center	No. 8 building of Henan Shengde Academic Exchange Center was topped out.
		Jul. 6, 2019			The groundbreaking ceremony of Henan Shengde Healthcare Center was held. Chief Supervisor Chu Wenhua requested during the ceremony that we should refine procedures for the successful completion of temporary projects; and elaborate "four great battles" as well as lay down reward and punishment policies so as to accelerate and improve the quality of the project.
		Jul. 6, 2018	The healthcare center was topped out.		
		Apr. 26, 2019			The 16# building of Henan Shengde Hospital Healthcare Center was topped out. PCR Laboratory successfully passed the on-site review of the PCR review expert group formed by Director Wang Xiying of the Clinical Inspection Center of Henan Provincial Health Commission and Guo Yongjun, President of Henan Academy of Medical Sciences.
		Jul. 30, 2018	Acceptance of PCR Laboratory		
		Aug. 3, 2018	Establishment of the		The opening ceremony of the ophthalmology center was held on the first floor of No.2 building of Henan Shengde Hospital. Professor

		Ophthalmology Center	Yu Han, Dean of the Eye Hospital of Xinxiang Medical University, and Yang Bo, Director of the Department of Ophthalmology, delivered speeches respectively.
Aug. 5, 2018		Establishment of the Stroke Center	According to the <i>Notice on Issuing the Evaluation Rules for Stroke Centers in Henan Province Secondary and Tertiary Hospitals (Trial)</i> issued by Henan Provincial Health and Family Planning Commission, a stroke center was established in the hospital to provide a platform for the early diagnosis and treatment of acute stroke.
Sept. 15, 2018		Establishment of academician workstation	Prof. Guo Yinglu, Academician of Chinese Academy of Engineering, Honorary President of Peking University First Hospital, Honorary Chairman of Chinese Medical Association (Urology Branch), and his assistant Ms. Chen Dige, made an inspection tour to Henan Shengde Hospital. Prof. Guo visited outpatient internal medicine and surgery departments, urology department, health inspection center, surgical ward II and special hospital ward.
Oct. 26-28, 2018			Henan Shengde Hospital participated in the Talent Recruitment & Project Match-making for Innovation and Development, Henan, China, which was held at the Zhengzhou International Convention and Exhibition Center, and signed a cooperation agreement for the establishment of the Guo Yinglu Academician Workstation.
Nov. 16, 2018		Preparations for cooperation with overseas medical universities	The Group established a preparatory committee for the cooperation with overseas medical universities (colleges).
Nov. 18, 2018		Establishment of the pharmacy	Henan Shengde Pharmacy was opened.
Nov. 20, 2018		Establishment of the chest pain center	A chest pain center was established.
Nov. 24, 2018		A cooperation agreement was signed with the First Hospital Affiliated to Zhengzhou University.	President of Henan Shengde Hospital Fu Jie presided over the signing ceremony for the cooperation between the First Hospital Affiliated to Zhengzhou University and Henan Shengde Hospital. The heads of the two hospitals jointly unveiled the "Cooperative Hospital of the First Hospital Affiliated to Zhengzhou University".
Management	Jan. 12, 2018	Culture of the hospital	Cheng Hong, vice chairman and general manager of the company, presided over the first general staff meeting, which reviewed the work since the opening of the hospital. President Chu Wenhua pointed out that the development of

		<p>hospital should be massive, society-oriented, targeted at the general public, and characterized by experts, brand, competition, accomplishment, cooperation and broad-mindedness.</p> <p>Shengde Hospital Group Co., Ltd. held the second shareholder meeting where Fu Jie, Cheng Hong, Liang Qigui, Wang Bing, Qin Yunde, Wu Zhaoli, Zeng Zhaoyin, Yu Yunde and Zhao Lei were elected to be board members, and Chu Wenhua, Zhao Dongsheng, Yu Wanlong, Chen Chuangui, Feng Wei as supervisors. The board convened the first meeting to elect Fu Jie as President, Cheng Hong as Vice president and General Manager; The board of supervisors held the first meeting to elect Chu Wenhua as Chief Supervisor. The board of Shengde Hospital Group Co., Ltd. decided to appoint Cheng Hong as General Manager of Henan Shengde Hospital, Fan Songjie as President, Chen Jianhua as Vice President, Zhao Hui as Vice President, Wu Zhaoli as Vice President, Zeng Zhaoyin as Vice President, Hu Gang as Vice President, Zheng Jinrong as Vice President for specialized departments, in charge of the health management center, and Yang Kui as Vice President for specialized departments, in charge of the five wards of internal medicine.</p>
Apr. 5, 2018	Shareholder meeting	
Apr. 10, 2018	Senior managers were appointed.	<p>Zhang Fenglou, member of the 15th and 16th Commission for Discipline Inspection of the Central Committee of the CPC and former head of the Disciplinary Inspection Group of the Ministry of Health, Ren Yuling, former Counselor of the State Council and member of the 9th and 10th Standing Committee of the CPPCC, Zhao Zilin, former Director of the Financial Planning Department of the Ministry of Health, Wang Zhong, Vice President of China Health Care Association, Wu Ruyi, Vice President of China Health Association (Healthcare Branch), Feng Yanhui, Deputy Director of the Finance Department of Henan Provincial Health and Family Planning Commission, and Ma Baogen, former President of Henan Provincial People's Hospital, made an inspection tour to the hospital. They were accompanied by Huang Chuan, Deputy Director of Xinyang Health and Family Planning Commission, and Lu Xin, head of the financial department of Xinyang.</p>
Jun. 11, 2018	Inspection	
Jun. 27, 2018	Senior managers were appointed.	<p>Fan Songjie resigned from Deputy General Manager of the Group and President of Henan Shengde Hospital; Cheng Hong was appointed as President of Henan Shengde Hospital, and</p>

	Nov. 21-22, 2018	Social impact	<p>Chen Jianhua as Deputy General Manager of the Group.</p> <p>Henan Shengde Hospital co-organized the "10th Anniversary of China Private Hospital Development Alliance and the 14th China Private Hospital Development Conference". More than 300 private hospital managers and experts from all over the country gathered together to discuss and exchange ideas on the theme of "innovation in management philosophy". Henan Shengde Hospital was the only institution elected to be the Vice President of the Alliance.</p>
	Jun. 25, 2018	Poverty alleviation	<p>Henan Shengde Hospital made Hejiachong Village, Tiepu Town, Luoshan County (the starting point of the Long March by the 25th Red Army) its target of medical poverty alleviation. A series of medical poverty alleviation activities were held on a regular basis.</p>
Social welfare	Aug. 19, 2018	Voluntary clinics	<p>Henan Shengde Hospital conducted targeted poverty alleviation activities in Hetang Village, Jiangji Town, Gushi County, providing free diagnosis and treatment, health consultation, free medicine and free materials about healthcare information for poor villagers and elderly people in nursing homes.</p>
	Oct. 17, 2018		<p>More than 20 medical experts from Henan Shengde Hospital carried out a large-scale voluntary clinic in Baihuayuan East Plaza for the elderly. Qiao Xinjiang, Deputy Director of the Provincial People's Congress and Secretary of the Municipal CPC Committee also paid an on-site visit.</p>
	Aug. 24, 2018	Donation	<p>Henan Shengde Hospital was awarded a plaque praising its efforts toward poverty alleviation, especially in helping poverty-stricken children fulfill their dreams of going to universities. President Cheng Hong donated RMB 50,000 to the Hope Project to further this endeavor.</p>

4.1.2.4 Stable development (January 2019 - December 2019)

1. Policy environment

Recently, the state has promulgated favorable policies for the industry: In 2012, the State Council of China issued the Notice on the Main Work Arrangements for Deepening the Medical and Health System Reform (The State Council of China, 2012), which clearly proposed to further improve the practice environment of medical institutions organized by social capital, implement policies on prices, taxation, medical insurance designation, land, construction of key disciplines, title evaluation, etc., and to subsidize non-profit medical institutions run by social

capital in places where conditions permit.

In 2014, the National Development and Reform Commission, National Health Commission, and the Ministry of Human Resources and Social Security issued the Notice on Issues Concerning the Implementation of Market-Regulated Prices for Medical Services in Non-Public Medical Institutions (The National Development and Reform Commission, 2014a), which proposed that the prices of medical services in non-public medical institutions should be regulated by the market, encouraging them to provide various forms of medical services, and establishing a negotiation mechanism between medical insurance agencies and designated non-public medical institutions.

In 2014, the Henan Provincial Government issued the Opinions on Further Improving the Payment Policy for Social Medical Services (The Henan Provincial Government, 2014b), the draft of which made it clear that private hospitals would be treated the same as public hospitals and support policies would be improved further.

In March 2016, the General Office of Henan Provincial Government officially issued the Opinions on Further Promoting the Accelerated Development of Social Medical Services (The General Office of Henan Provincial Government, 2016). The Opinions not only relaxed the requirements of the organizers, but also broadened the service areas to encourage all kinds of institutions, especially those with strong social capital, to organize large medical institutions or hospital groups.

The Implementation Opinions of the General Office of the People's Government of Henan Province on Integrating the Basic Medical Insurance System for Urban and Rural Residents (The General Office of Henan Provincial Government, 2019b) clearly stipulates that the medical insurance fund for urban and rural residents shall be coordinated at the municipal level. However, because Xinyang City has contracted medical insurance funds to the medical community, set up referral links in counties and districts, and formulated 90% of county-level consultation rates, the source of patients at Shengde Hospital has dropped sharply, and the good development momentum has taken a sharp turn for the worse. Therefore, the hospital is facing a serious survival crisis. Although national and provincial units have successively issued policies to support social medical services, local governments are responsible for introducing specific implementation plans due to obvious differences in the degree of support for social medical services and management models of medical insurance fund in each prefecture-level city. Therefore, in Xinyang City, there has been a situation that is contrary to the spirit of the national policy. First, some counties and districts stipulate that patients who seek medical treatment outside the county must be issued a referral certificate by the county hospitals,

including the Xinyang central districts (Pingqiao District, Shihe District). The patients must also conduct the referral procedures at the district hospitals before they can go to the municipal hospitals for medical treatment. Second, the Implementation Plan for Total Budget Management of the Basic Medical Insurance Fund for Urban and Rural Residents in the Construction of Tense County Medical Community in Xinyang City (draft for review) by Medical Insurance Bureau to the government, proposed that “the amount of referrals from outside the county will be strictly controlled, and if the consultation rate within the county does not reach 90% in the year-end liquidation, a certain percentage will be deducted from the total amount of annual pre-submission”. Third, some county and district hospitals have made it clear that if patients do not seek medical treatment in this hospital, their referrals will be refused and they will only be referred to public hospitals, rather than private hospitals.

The key to the above problem is the setting of unnecessary referral links within the city. The medical reform should consider the medical resources of the city as a whole, and give full play to the medical technology advantages of municipal hospitals. At the same time, hospitals at all levels should continue to improve medical technology and service quality to attract patients to voluntarily choose hospitals in their own county and city for treatment and minimize the number of patients seeking medical treatment in large cities, rather than taking mandatory referral measures. This will not only make it easier for the patients to seek medical treatment and reduce the economic burden of patients seeking medical treatment outside the city, but also help to retain the medical insurance funds and medical expenses in the city to the greatest extent, and further promote the continuous improvement of the city’s medical technology and service quality.

In order to cope with the impact of the changes in medical insurance policies, the hospital has actively communicated and negotiated with the local medical insurance bureau, and put forward the following suggestions for medical insurance work:

1. Draw lessons from the generally successful practices in other places and remove restrictions on patients choosing hospitals in the city for medical treatment. There should be no need for referrals for medical treatment in the city. If it is not possible to achieve medical treatment under free will in the whole city, at least in the downtown area (Pingqiao District, Shihe District, etc.), insured persons should then be permitted to seek medical treatment without referral procedures.

2. Use the medical insurance reimbursement ratio tier to restrict county patients’ referrals to outside the city. If patients are transferred to outside the county, they will first be transferred to the municipal medical institutions. If the municipal hospital cannot solve the problem, they

need to be transferred to outside the city by the city's third-grade hospitals.

3. Cancel the index of 90% of county-level consultation rate and return the people's right to choose hospitals for medical treatment, which truly reflects the connotation of the country's construction of medical alliance, medical community, and graded diagnosis and treatment.

4. Eliminate the responsibility of leading hospitals in the medical community to handle out-of-county referrals and cost audits for insured persons in the medical community so they can avoid being the regulated and regulator at the same time.

5. Standardize the management of medical insurance funds and abolish the system of budgetary lump sums for medical insurance funds for medical communities. The government health insurance department should not only consider the medical community when allocating and using health insurance funds, but also set aside a share for municipal hospitals.

6. Raise the level of coordination of medical insurance funds, and actively promote the municipal coordination of medical insurance funds for urban and rural residents in the city in accordance with the spirit of the document Implementation Opinions of the General Office of the People's Government of Henan Province on Integrating the Basic Medical Insurance System for Urban and Rural Residents (The General Office of Henan Provincial Government, 2019b), so as to realize as soon as possible that medical insurance participants from urban and rural areas are free to use their cards for medical treatment within the city, and enhance their convenience of medical treatment.

2. Competitor

Xinyang Central Hospital was founded in 1920 as a church hospital in Xinyang, once named "South Honan Union Hospital", at the suggestion of Dr. Distad, an American Christian Church doctor. After a hundred years of development, Xinyang Central Hospital has become a third-grade class-A general hospital.

Xinyang Central Hospital has now developed into a third-grade class-A general hospital integrating medical treatment, first aid, scientific research, teaching, prevention, health care, and rehabilitation, covering the surrounding areas of Western Anhui, Northern Hubei, and Southern Henan. The hospital covers a total area of 52,000 square meters, with a construction area of 98,000 square meters, 1,500 beds in preparation and 1,769 beds actually open. The year 2019 has witnessed more than 1.24 million outpatient (emergency) person-times, about 80,000 discharged patients and nearly 25,000 surgeries completed. In order to further alleviate the difficulty of people seeking medical services in the old districts, the Yangshan east campus of Xinyang Central Hospital is under construction with a total investment of more than 2 billion yuan, a building area of 252,000 square meters, and 1,800 beds.

There are 2860 employees on duty in the hospital, including 2537 professional and technical staff. There are 336 people with senior titles, 443 medical doctors and medical masters, 5 people enjoying government allowances, 10 professional and technical top talents in Xinyang City, and more than 40 experts serving as directors or deputy directors of the provincial and municipal medical associations.

The hospital accommodates advanced facilities and equipment, with more than 1,000 sets (pieces) of international large-scale medical equipment such as Elekta synergy linear accelerator, Philips 3.0T full-body MRI scanner, Siemens 1.5T MRI, Philips 256-slice spiral CT, Siemens 64-slice spiral CT, GE economical PET-CT, SPECT, linear accelerator, digital subtraction angiography (DSA), electronic gastroscopy, and arthroscopy, etc. In the city, it was the first to introduce the “full femtosecond laser corneal refractive treatment machine” exclusively produced by Carl Zeiss AG, Germany, to carry out full femtosecond laser SMILE surgery. During the pandemic of COVID-19, the hospital was the first to introduce the “Fang Cang CT”, which played an important role in the fight against the pandemic.

At present, there are 56 clinical and medical technical departments in the hospital, including National Standardized Training Base for Resident Physicians, National Advanced Stroke Center, National Chest Pain Center, Clinical Pharmacist Training Center of the Clinical Pharmacy Branch of the Chinese Medical Association, Clinical Training Hospital of the Pain Branch of the Chinese Medical Association, Chinese Medical Association “Huatuo Project -- Practice Training Base of Standardization Project of Peritoneal Dialysis Catheter Surgery”, Provincial Trauma Center, Xinyang High-risk Maternal Care Center, Xinyang Critical Newborn Care Center, etc. The Department of Pain is a provincial clinical specialty, and 14 clinical departments, including urology department, endocrine department, emergency department and cardiovascular department, are municipal key clinical specialties.

In recent years, more than 100 new technologies have been developed to fill the medical technology gap in Xinyang City, and some of the diagnosis and treatment technologies have reached the provincial advanced level. It has successively won more than 10 national and provincial scientific research projects, more than 10 provincial and municipal sciences and technology progress awards every year, and published more than 400 academic papers in national core journals and provincial journals every year.

In order to effectively solve the problem of difficult and expensive medical treatment of the common people, and to meet the health needs of the people in the old districts, the Internet Hospital of Xinyang Central Hospital has been built, with full coverage and deployment in 10 county hospitals, 154 township health centers, 25 community service centers, 98 community

service stations and 2,490 village clinics, totaling 2,777 free medical locations. At present, 2,433 locations have been deployed, in the lead within the province and even the whole country. The construction of the Internet hospital allows public to enjoy the diagnosis and treatment service of third-grade hospitals for free without going far from home. At the same time, it has established medical alliances with national and provincial hospitals and formed the Xinyang Central Hospital Medical Group, which consists of 23 member units. It has implemented smart healthcare, graded diagnosis and treatment, two-way referral and appointment services, and has managed 60% of outpatient numbers as appointment registration numbers, with six appointment methods such as WeChat and mobile APPs.

The hospital has always adhered to the hospital motto of “with the people-oriented principle, strengthen the hospital with science and technology”, and stuck to the hospital spirit of “kindness, integrity, innovation, and dedication”, continuously improving service attitudes, service quality, beautifying service environment, optimizing service processes, and implementing policies to benefit the people, which has gradually made the hospital become a brand hospital that the people are assured and satisfied. The hospital has successively won several awards such as “National Model Staff Home” “Henan Province Civilized Unit” “Advanced Unit of Health in Henan Province” and “Advanced Group of Health System in Henan Province”. Timeline of stable development is showed in Table 4.4.

Table 4.4 Timeline of stable development

Stage of development	Item	Time	Summary	Contents
Stable development (January 2019 - December 2019)	Major strategic project	Jan. 12, 2019	Establishment of thyroid and breast workstations	Director Yin Detao and President Cheng Hong unveiled the Yin Detao Thyroid and Breast Workstations of Henan Shengde Hospital.
		Mar. 14, 2019	Establishment of nephropathy, rheumatism and immune disease expert workstations	Kidney disease, rheumatism and immune disease expert workstations were inaugurated in the outpatient department of the first building of Henan Shengde Hospital, namely Wang Jiansheng Workstation and Wu Xianming Workstation.
		Apr. 15, 2019	Xinyang Disabled Children Rehabilitation Assessment Agency	Henan Shengde Hospital was awarded as Xinyang Disabled Children Rehabilitation Assessment Agency and Xinyang Disabled Children Rehabilitation Service Agency granted by Xinyang Municipal Health Commission and Municipal Disabled Persons' Federation. Henan Shengde Hospital has the qualifications of treatment for children's rehabilitation.
		Apr. 23, 2019	Opening of the tumor diagnosis	The tumor diagnosis and treatment center of Henan Shengde Hospital passed the review conducted by expert group of the Henan

	and treatment center	Provincial Health Commission. The center was the only project that does not need a second review in Henan Province in 2019. Henan Shengde Hospital held a press conference for the opening of the tumor diagnosis and treatment center. President of Henan Shengde Hospital Cheng Hong, General Manager of Varian Products Mary, as well as Director Ge Hong from Henan Cancer Hospital, Director Zhang Lijian from Peking University Cancer Hospital, Director Zou Ping from Wuhan Union Hospital, and Director Li Dingjie from Henan Cancer Hospital, jointly declared open the tumor diagnosis and treatment center.
Apr. 27, 2019		
May 28, 2019	Xinyang Community-level General Practitioner Transfer Training Base	Henan Shengde Hospital was awarded Xinyang Community-level General Practitioner Transfer Training Base and Practice Teaching Base of Sanquan Medical College.
Jun. 18, 2019	Opening of Reproductive Medicine Center	The Reproductive Medicine Center of Henan Shengde Hospital was established.
Nov. 2, 2019		Vice President Zhao Hui presided over the opening ceremony of the Reproductive Medicine Center of Henan Shengde Hospital.
Oct. 12, 2019	Opening of Huaibin Outpatient Department	Deputy Secretary Liang Qigui presided over the press conference for the opening of the Huaibin Outpatient Department of Henan Shengde Hospital and free expert consultation in the square in front of the Huaibin Outpatient Department.
Oct. 24, 2019	Establishment of Targeted Diagnosis and Treatment Center	The press conference of the inauguration of the Targeted Diagnosis and Treatment Center (Biological Cell Laboratory), as well as the International Medical Center, Japan Regenerative Medicine & Cancer Gene Therapy and Japan Natural Energy Co. Ltd. (Henan Shengde Branch) was held in the multimedia room in the administration building.
Oct. 26-27, 2019	Recruitment of professionals	Delegates of Shengde Hospital Group participated in the 2nd Talent Recruitment & Project Match-making for Innovation and Development, Henan, China held in Zhengzhou International Convention and Exhibition Center. The hospital recruited many professionals. Professor Zhao Lianqiang, academician of the Russian Academy of Engineering, Doctor of Medicine, Doctor of Philosophy, and Deputy Director of the Russian National Medical Center, agreed to work and run academic programs with the hospital. Moreover, 15 masters and 5

			bachelors of medicine signed the employment agreement with the hospital.
	Dec. 1, 2019	Member of Stereotactic Radiotherapy Alliance	Shengde Hospital was among the first to join Henan Stereotactic Radiotherapy Alliance.
	Feb. 20, 2019	Cooperation with Henan Provincial People's Hospital	A delegation of 8 people, including President of Shengde Hospital Group Fu Jie, Secretary of the CPC Committee of the Group Chu Wenhua, President of Henan Shengde Hospital Cheng Hong, attended the signing ceremony of the cooperation between Henan Shengde Hospital and Henan Provincial People's Hospital in the conference room on the 25th floor of the Science and Education Building of Henan Provincial People's Hospital.
	Mar. 26, 2019	Cooperation with Xinyang Vocational and Technical College	Shengde Hospital Group and Xinyang Vocational and Technical College signed an agreement to establish a medical school for a comprehensive strategic cooperation.
Strategic cooperation	Jul. 7, 2019	Capital Medical University Sanbo Brain Hospital Medical Treatment Alliance Core Cooperative Hospital	Chen Jianhua, Vice President of Shengde Hospital, presided over the inauguration ceremony of "Capital Medical University Sanbo Brain Hospital Medical Treatment Alliance Core Cooperative Hospital" and "First Hospital Affiliated to Zhengzhou University Cerebrovascular Disease Cooperative Hospital". President Cheng Hong and Member of the CPC Group of the Municipal Health Commission Tang Xiandong delivered welcoming speeches.
	Dec. 3, 2019	China-Russia joint establishment of medical university in Xinyang	Yu Yunde, President of Xinyang Vocational and Technical College, hosted a China-Russia symposium on establishing a medical university in Xinyang. Deputy Secretary-General of Xinyang Municipal Government Chen Chunping, Party Secretary of Xinyang Vocational and Technical College Yang Liangxin, Vice President Wang Hao, and President of Shengde Hospital Group Fu Jie, Party Secretary Chu Wenhua, General Manager and President of Henan Shengde Hospital Cheng Hong, and Deputy Secretary of the CPC Committee Liang Qigui attended the symposium. Guests also include heads of relevant departments of Xinyang Vocational and Technical College and Shengde Hospital Group.
Management	Feb. 22, 2019	Organization	The board of Shengde Hospital Group Co., Ltd. decided that the group company office would be replaced by the group company comprehensive office; the printing room and

		the archives room would be subordinate to the comprehensive office; a quality control management office and a party-mass office would be newly established; the International Liaison Office would be replaced by a public service development center; and the Publicity Department would be replaced by a customer service (planning) center and a news center.
Jan. 30, 2019	Culture of the hospital	Henan Shengde Hospital held the first anniversary celebration and welcome party for the new year. Chen Jianhua, Vice President of Henan Shengde Hospital, presided over a special management training. Yan Dongfang, President of the Shanghai Association of Non-Government Medical Institutions, first gave a lecture entitled "New Stories of Hospital Development with Quality as Priority".
Feb. 23-24, 2019	Training	Focusing on the development trend of private hospitals under the new situation, he emphasized "positioning of hospitals", "branding with competitiveness", "standard regulation and management" and "brand service".
Apr. 29, 2019		Henan Shengde Hospital held a contest (final) on nursing and an award ceremony for outstanding nurses. Cheng Hong, President of Henan Shengde Hospital, was invited to attend the 2019 "Two Sessions" special program "Healthy Chinese People" roundtable forum, which was hosted by People's Daily Online, People's Health and Chinese Non-Government Medical
Mar. 9, 2019		Institutions Association at the 21st floor studio of the New Media Building of the People's Daily. The theme of this forum was "Shaping and Developing China's Social Medical Brands".
Apr. 26-27, 2019	Social impact	Henan Shengde Hospital and Shanghai Medical United Industrial Co., Ltd. hosted the 7th Learning Mode Hospital Mutual Development Forum. The presidents and investors of nearly 500 private hospitals across China gathered to talk about national policies, share successful experiences, and propose valuable suggestions so as to contribute their ideas to the development of non-public medical institutions.
Jul. 7, 2019		The "Southern Henan Innovative Development Forum on Diagnosis and Treatment of Cerebrovascular Diseases" was organized by Henan Shengde Hospital in the multimedia conference room.

	May 16, 2019		Cheng Hong, Member of the Standing Committee of Xinyang Municipal CPPCC and President of Henan Shengde Hospital, delivered a speech on the blueprint for healthcare industry.
	May 25, 2019		The preparatory meeting of Xinyang Medical Association (Vertigo Branch) and academic lecture was held in Henan Shengde Hospital.
	Apr. 11, 2019	Voluntary clinics	More than 200 people including experts of Henan Provincial People's Hospital and Shengde Hospital staff participated in the inauguration ceremony of the cooperation between Henan Provincial People's Hospital and Henan Shengde Hospital and free expert consultation by Henan Provincial People's Hospital.
Social welfare	Aug. 30, 2019	Donation	As a representative, Wu Zhaoli, Vice President of Henan Shengde Hospital, participated in the activity aimed at helping poor college students in Zhengzhou Railway Police College, sponsored by Student Safety Assistance Foundation of Henan. The 6 poor college students funded by the hospital received financial assistance from Mr. Wu, and he also received a certificate of honor and a plaque issued by the foundation.

4.2 The results of exploratory research

The semi-structured interview was recorded in their entirety and transcribed into text within a week thereafter, resulting in 77,000-word interview material, which provided a more detailed understanding of the entire process of hospital construction and development. In the case study, the key variables mentioned in the interview and the relationship between the variables will be verified in conclusive research.

4.2.1 Organizational resources

1. Organizational culture

The company has a sense of social responsibility, and its management is willing to accept changes from the external environment and meet challenges, have an open and inclusive attitude, and constantly try new directions of development. The senior and middle leaders enjoy mutual trust and support and possess a strong sense of responsibility and mission to jointly manage the hospital. The organizational structure of the hospital tends to be stable with the formulated rules and regulations, the improved work process and the consistency of the hospital. With increasing team awareness, employee awareness, and patient awareness, the hospital has been running

smoothly, and the cultural conflict caused by employees with different working backgrounds has gradually become prominent.

2. Leadership

The leadership posed the willingness to make strategic changes and a strong desire to establish a hospital and reward the society, encouraging employees to devote themselves to the hospital construction across industries. The hospital encountered the problem of high entry barriers in the initial stage. The hospital leaders were good at decision-making and had the determination and perseverance to overcome difficulties, which played a key role in the completion of the hospital. Professional leaders have more influence on the development of the hospital compared to managerial leaders, mastering important tasks such as department construction, staff recruitment, and quality management. They have been very committed to work, always maintained strong enthusiasm, continued to learn to enrich themselves, and rewarded and penalized based on performance.

4.2.2 Organizational capabilities

The hospital has made full use of the social resources accumulated during the period of the original real estate company and gained the recognition and support from the government departments and the medical industry. Following the organizational structure of the original real estate company and taking advantage of it, the hospital completed the construction of the main building of the hospital as quickly as possible, formulated a plan of discipline setting and development direction, configured high-end medical equipment, and strengthened pre-job training for specialists. The hospital has focused on the development of medical and health service supply capabilities and organization and management capabilities: establishing supportive relationships with a number of stronger hospitals to improve technical capabilities, establishing effective collaboration networks, introducing experts and trained personnel to improve the overall learning capacity of the hospital, and actively marketing the hospital within the region. The hospital has focused on developing its medical and health service supply capabilities and organizational and managerial capabilities: establishing supportive relationships with a number of stronger hospitals to improve technical capabilities, building effective collaboration networks, introducing experts and trained personnel to improve the overall learning capacity of the hospital, and actively marketing the hospital within the region. Descriptions of organizational resources and capabilities are presented in Table 4-5.

4.2.3 Dynamic capability

Sensing that the development of the real estate industry had entered a period of contraction, the original real estate company quickly adjusted the direction of corporate development and funded the establishment of the hospital. With the integrated resources of government relations accumulated in the local area and the ability to liaise with others, the hospital has advantages in administrative approval and land use.

The hospital has faced huge challenges in talent introduction and discipline construction. Through continuous exploration of cooperation methods, it has established a supportive relationship with a number of third-grade class-A hospitals to retain experts and scholars and improve medical technology. The competition between the hospital and the central hospital has gradually become fierce, and hospitals could quickly capture information about its competitors and actively respond.

The hospital faces the predicament common to private hospitals. Patients lack understanding of private hospitals and there is a crisis of trust. Therefore, marketing and brand image building have become important at this stage. Even though the national and provincial medical insurance policies encourage the development of private hospitals, in the process of implementation by municipal departments, there are still situations that restrict the survival of private hospitals. The hospital immediately took measures to respond to policy changes and continued to maintain sensitive to them.

Throughout each stage of the development of the hospital, the hospital is facing different challenges. As the medical industry is deeply affected by policies, the hospital needs to invest huge amounts of staff and assets in compliance, safety and quality at the beginning of its establishment. With the operation on the right track, the hospital has adjusted its development direction by combining the available resources and formed the oncology department group, the maternity and child reproductive department group, and the trauma and stroke rehabilitation department group.

In particular, the hospital introduced experts and scholars whose ancestral home is Xinyang, Henan Province, in the process of introducing discipline leaders and building a hospital out of a hospital, with the country clan's kin party as a link, temporarily alleviating the shortage of talents in private hospitals. In the stable development stage, the hospital chose to take the path of differentiated competition, and avoided competing with the central hospital in its characteristic disciplines such as cardiovascular and pain while vigorously developing high-end medical care and elderly care. Description of dynamic capabilities are presented in Table 4.6.

Table 4.5 Description of organizational resources and organizational capabilities

Development stage	Hospital/organizational culture		Leadership		Operational capabilities	
	Conclusion	Description	Conclusion	Description	Conclusion	Description
Preparation	The enterprise has a sense of social responsibility and its management is willing to accept changes from the external environment and meet challenges, have an open and inclusive attitude, and constantly try new directions of development.	“After the success of the enterprise, out of the purpose of rewarding the society, the decision makers of the enterprise made a strategic decision to transform and develop into the field of public welfare and people’s livelihood. Through inspection, the final target was set at the elderly care and medical industry.”-- Respondent8	The leadership has the willingness to make strategic changes and a strong desire to establish a hospital and reward the society, encouraging employees to devote themselves to the hospital construction across industries.	“The leadership has strong activity ability. It is a miracle that such a big hospital can be built. Therefore, the relationship with the government is very good, and the government has provided some support to build it.”-- Respondent 2	The hospital has made full use of the social resources accumulated during the period of the former real estate company and gained the recognition and support from the government departments and the medical industry.	“The Municipal Party Committee and the Municipal Government included the hospital in the city’s key construction projects and the “ten facts” projects of people’s livelihood, and established a joint conference system to help the hospital complete the approval of relocation and land use.”--Respondent8
	The senior and middle leaders enjoy mutual trust and support and possess a strong sense of responsibility and mission to jointly manage the hospital.	“During the preparation period of our hospital, I worked late into the night every day.”--Respondent3 “In preparation for the accreditation, there were so many people working overtime to prepare documents and other materials, and then the Henan Provincial Health Commission came over for assessment and we passed with no trouble, which I think	The hospital encountered the problem of high entry barriers in the initial stage. The hospital leaders were good at decision-making and had the determination and perseverance to overcome difficulties, which played a key role in the completion of the hospital.	“Their working style is eager beaver. They pay attention to work and efficiency, and basically work day and night. As long as they are required to do things, which can be done successfully.”-- Respondent 1 “Working efficiency is very high and working style tenacious.”--	Following the organizational structure of the original real estate company and taking advantage of it, the hospital completed the construction of the main building of the hospital as quickly as possible, formulated a plan of discipline setting and development	“As the most complex comprehensive public building, the professional degree and difficulty of the design and construction of the hospital were beyond prediction and experience of the engineers. Especially after the project moved to the installation and decoration stage, part of design confirmation

	was very moving.”-- Respondent 6		Respondent 2 “They have ability, courage, motivation and desire to work hard.”--Respondent4	direction, configured high-end medical equipment, and strengthened pre-job training for specialists.	was found not accurate, the construction management not in place, and the acceptance inspection not standard. In view of this kind of problems, we adjusted personnel deployment in time, set posts and responsibilities, and truly achieved the appropriate combination of control before, amid and after events.”--Respondent8	
Early stage of operation	The organizational structure of the hospital tends to be stable with rules and regulations formulated, work process improved and the consistency of the hospital enhanced.	“In addition to the system and procedures, the hospital’s motto was also put forward at that time. How to integrate the personnel and thoughts? In the early days of its establishment, everyone came from different places and different units, and the leaders gave lectures to the personnel and encouraged them”- Respondent 1 “We are now focusing on the connotation construction of the hospital, hoping that every patient can be cured, and that the patients who come will be taken in. The communication and cooperation between	Professional leaders have more influence on the development of the hospital compared to managerial leaders, mastering important tasks such as department construction, staff recruitment, and quality management.	“Before opening including the initial period, we invited the Vice Minister of Health from the Logistics Department of Shanghai-Nanjing Military Region, a Senior Colonel, who was already retired. He used to be the director of the medical department and the director of the military hospital. Through introduction, we hired him, and he was the director for a year before opening. He	The hospital has focused on developing its medical and health service supply capabilities and organizational and managerial capabilities: establishing supportive relationships with a number of stronger hospitals to improve technical capabilities, establishing effective collaboration networks, introducing experts and trained personnel to improve the overall learning capacity of the hospital, and actively	“The core issue in the initial stage was how to make the medical process standardized... In the first half of the year, I focused on this issue in getting through the medical process. In terms of our medical system, how to manage it according to the core medical system and the management system? The hospital is like a machine. At this time, the key issue is medical safety.” --

	clinical science and medical technology departments and clinical departments need to be strengthened.”-- Respondent 2		was very capable, experienced, and professional, who was in charge of organizing the medical work at the beginning of the opening.”-- Respondent 1	marketing the hospital within the region.	Respondent 1 “Now we continue to standardize our hospital, and we have compiled training materials and plans one by one. Now the nurses have improved very quickly, and most of the operations can be done successfully.” -- Respondent 3 “As a new hospital, I think the most important thing is medical safety. It is necessary to ensure that every case you diagnose and treat is as safe as possible, which should be the first priority of all departments.”-- Respondent 4	
Stable development	With increasing team awareness, employee awareness, and patient awareness, the hospital has been running smoothly, but the cultural	“Certainly, it is impossible to enhance the culture of our hospital within one or two years of training...Public hospitals are different from ours, and hospitals in other regions are different from ours, which we are all aware of. Therefore, we can only rely on ourselves to promote	They have been very committed to work, always maintained strong enthusiasm, and continued to learn to enrich themselves, and they are all rewarded and penalized based on performance.	“We set a goal for the department. We carry out assessment, make plans and hold a summary meeting each month to summarize our work of the previous month, based on which we give rewards and	The hospital has focused on developing its medical and health service supply capabilities and organizational and managerial capabilities: establishing supportive relationships with a number of stronger	“With the steady and smooth development of medical treatment, private hospitals hope to increase the amount of medical service as soon as possible.”-- Respondent 1 “Department

<p>conflict caused by employees with different working backgrounds has gradually become prominent.</p>	<p>that process, and this goal is frequently stressed by us.”-- Respondent 1 “Our hospital proposed the motto that life is sacred and medical ethics is the most important. Hospitals have also launched activities to create a cultural shift in the mindset of medical staff.”--Respondent 2 “I have a deep understanding of various regional differences and conflicts among policy interpretations.”--Respondent 7</p>	<p>penalties as well as exchanges experience.”-- Respondent 1 “It is stipulated that each department must have a meeting at the beginning of each month to decide how many assignments should be completed every day. If the target is completed, there will be more rewards and fewer penalties.”-- Respondent 2 “The hospital leader is very pleased to accept new things because she knew little about medical field before. However, the intellectuals in the hospital were not easy to get along with while the leaders were quite nice.”-- Respondent3</p>	<p>hospitals to improve technical capabilities, establishing effective collaboration networks, introducing experts and trained personnel to improve the overall learning capacity of the hospital, and actively marketing the hospital within the region.</p>	<p>marketing should be carried out, and at the same time, connotation construction should be promoted as well. Connotation construction is the core issue of medical quality.”--Respondent 2</p>
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Table 4.6 Description of dynamic capability

Stages of development	Major task	Conclusion	Description
Preparation	Transformation	Sensing that the development of the real estate industry had entered a period of contraction, the original real estate company quickly adjusted the direction of corporate development and funded the establishment of the hospital. With the integrated resources of government relations accumulated in the local area and the ability to liaise with others, the hospital has advantages in administrative approval and land use.	<p>Sensing: “There is a serious shortage of medical resources in Xinyang City, especially the lack of large general hospitals above the third-grade. There’s a large gap between the overall level of medical services in Xinyang City and that in advanced areas, so there is a large market space and good development prospect for investment in the medical and health care field.”--Respondent 1</p> <p>“Having accumulated a certain amount of economic strength, under the current real estate market conditions, it is necessary to explore new areas of investment.”--Respondent 1</p> <p>“There are 69 third-grade hospitals in 18 prefectures and cities in Henan province, while Xinyang, with a population of more than 8.8 million, accommodates only one third-grade hospital in the center of the city. 60% of local common diseases and more than 80% of difficult and severe diseases are treated outside the city, to Hefei in the east, Wuhan in the south, Zhengzhou in the north, and some even drag their families to Beijing, Shanghai, and Guangzhou to seek medical service, which greatly increased the pressure and economic burden of people in the old districts.”--Respondent 8</p> <p>Responding: “When reorienting the investment direction, the company’s leaders conducted multiple inspections, including the banking and medical industries, and finally determined to build a third-grade hospital and develop the elderly care industry. After all these efforts, Shengde International Hospital Group Co., Ltd. was established and Henan Shengde Hospital was built.”--Respondent 8</p> <p>Reconfiguring: “In the process of transformation, especially entering a brand new field, the medical industry, which is highly specialized and has high entry barriers, all personnel need to keep learning, and the enterprise needs to constantly adjust its organizational structure and workflow to adapt to the brand new work content. For example, although I have management experience, I still had to learn from scratch to start a third-grade hospital, and I have worked very hard to do so.”--Respondent 8</p>
		Talents and disciplines construction	<p>The hospital has faced huge challenges in talent introduction and discipline construction. Through continuous exploration of cooperation methods, it has established a supportive relationship with a</p> <p>Sensing: “Xinyang, where our hospital is located, is a third- or fourth-tier city and a small place with an underdeveloped economy, which has a congenital deficiency in attracting talents. We have to build a platform, adopt cooperation and collaboration methods, and introduce a large number of experts or expert teams to drive the discipline construction and promote business development.”--Respondent 8</p> <p>Responding: “The year before last year to last year, the army was in the military reform. For example, 154 Hospital in Xinyang recruited dozens of people, from department directors to the backbone and to the head nurse, which was a very good opportunity to recruit talents. At the early stage of its establishment, the first university to establish a cooperative relationship with Shengde Hospital was Guangdong Medical University, but the cooperation was not good afterwards. Later, we cooperated</p>

Stages of development	Major task	Conclusion	Description
		<p>number of third-grade class-A hospitals to retain experts and scholars and improve medical technology.</p>	<p>with 301 Hospital, which is very famous in our local area. And people all know it. Maybe they don't even know the Union Medical College Hospital, but they know 301 Hospital. At that time, we felt that it was impossible to cooperate with 301 Hospital. Later, we turned to Xinyang Old Liberated Area Construction Association, Henan Old Liberated Area Construction Association, and China Old Liberated Area Construction Association, for the presidents of China Old Liberated Area Construction Association were all retired cadres of the central army who may be of help to us. Later, through layers of reports, the central government's approval of medical support for Dabie Mountain Revolutionary Old Areas was first delivered to the Ministry of Logistics and Health, and then transferred to 301 Hospital. An assistance agreement with Xinyang Municipal Government was signed with Shengde Hospital as the ground hospital of the medical support object of 301 Hospital."--Respondent 1</p> <p>Reconfiguring: At present, the hospital has established cooperation or collaboration relationship with more than 20 high-end medical institutions and hundreds of famous experts in each discipline, including Peking University People's Hospital, Sanbo Brain Hospital Capital Medical University, Henan Provincial People's Hospital, the First Affiliated Hospital of Zhengzhou University and Chinese PLA General Hospital, etc. A large number of experts or expert teams regularly come to the hospital for consultation, surgery, lectures and counseling, and some of them directly set up "hospitals out of a hospital", workstations, specialties, personal workshops, etc. For example, academician Guo Yinglu's Urology and Micro-Energy Medicine workstation, Shengdexizheng Vertigo Hospital, Yin Detao Thyroid and Breast Studio, as well as Wang Jiansheng and Wu Xianming's nephropathy studios have been in operation.--Respondent 8</p>
<p>Early stage of operation</p>	<p>Choice of competitive strategy</p>	<p>The competition between the hospital and the central hospital was gradually becoming fierce, and hospitals were able to quickly capture information about their competitors and develop countermeasures.</p>	<p>Sensing: "There's also a local hospital that has been watching us closely since our preparations for establishment, namely, the central hospital. Although our hospital staff thinks that we should establish a win-win cooperation with it, it always looked at us with hostility and suppressed us severely." -- Respondent 2</p> <p>"We may pose a certain threat to the local leading hospital, the central hospital. At the beginning, our relationship was not very good, but now gradually we have some communication and exchanges." -- Respondent 5</p> <p>"Some counties and districts have clearly stipulated that their patients are not allowed to come to private hospitals for treatment... When patients want to seek medical services in our private hospital, some public hospitals, including medical insurance departments, advise patients not to go to private hospitals for treatment, which is the biggest obstacle we face."--Respondent 7</p>

Stages of development	Major task	Conclusion	Description
			<p>Responding: “On the one hand, we make our requests to the local government. On the other hand, we continue to strengthen our internal management and planning-based management. On the basis of planning-based management, we continue to make representations to this type of department and submit our appeals and requests.” --Respondent 7</p> <p>“Private hospitals may not have an advantage over public hospitals in terms of technology and talents, but they do better in terms of service and provide a more spacious and comfortable medical environment.”--Respondent 1</p> <p>Reconfiguring: “We expand extensive projects and develop high-end services. For example,our VIP program for obstetrics and gynecology provides turnkey project of conception, examination, delivery and confinement. We have set up special-needs wards to provide special medical treatment, health care, rehabilitation, recuperation and health management services for patients of special needs with high-quality care, caring services, humanized facilities, elegant and comfortable environment, high-level treatment team and customized treatment plans. We have established a tumor treatment center, which carries out a series of advanced technologies for tumor treatment, such as systemic chemotherapy, radiation therapy, radiofrequency ablation, interventional therapy, molecular targeted therapy, and cellular immunotherapy. We have also equipped the Varian top-class linear accelerator, which is regarded as the “ultimate weapon” in the field of precise tumor treatment. It is currently the most advanced in the world and the only one in Henan Province, which can carry out almost all current mainstream radiation therapy techniques.”--Respondent 8</p>
Stable development	Branding and marketing	<p>The hospital faces the predicament common to private hospitals. Patients lack understanding of private hospitals and there is a crisis of trust. Therefore, marketing and brand image building have become important at this stage.</p>	<p>Sensing: “With decades or even hundreds of years of accumulation, and the natural advantages of government credibility, public hospitals have established their reputation and fixed source of customers without the need for publicity, promotion and marketing. And private hospitals, especially newly built hospitals, not only need to practice internal skills in discipline construction, talent training, environment building, service improvement and other aspects to highlight the efficacy, but also need to make great efforts in publicity and marketing to make a high-profile appearance. Without a certain degree of sensational promotion and publicity, it cannot be widely praised among the public, and it will inevitably fall into an unsustainable development dilemma over a long period of time.”--Respondent 8</p> <p>Responding: “The hospital should vigorously promote marketing, use new and old media to regularly spread advertisements, deliver publicity materials to counties, districts and the countryside. County and township hospitals should cooperate and join in key promotion. We have carried out many free medical consultations for poverty alleviation, and carried out special medical assistance to poor patients in rural areas.”--Respondent 8</p>

Stages of development	Major task	Conclusion	Description
	Policy influence	<p>Even though the national and provincial medical insurance policies encourage the development of private hospitals, in the process of implementation by municipal departments, there are still situations that restrict the survival of private hospitals. The hospital immediately took measures to respond to policy changes and continued to maintain sensitive to them.</p>	<p>Reconfiguring: “The hospital has independently operated outpatient clinics, pharmacies, and health service centers in counties and districts such as Agriculture and Forestry Colleges, shopping malls, and Huaibin county in the urban area; At the same time, it has been active in contact and coordination, taken care of the outpatient departments of surrounding universities, and constructed and managed according to community outpatient department standards. It has directly sent the doctors to the countryside and expanded the source of patients-treatment while enhancing its influence; It has organized provincial and national academic activities such as Henan Non-Public Hospital Symposium of China Non-Public Medical Institutions Association, “Health News” China Private Hospital Development Forum, and the “Cardiovascular Disease Multidisciplinary Forum”, and professional academic exchange activities such as “Innovative Development Forum for Diagnosis and Treatment of Cerebrovascular Diseases in Southern Henan”, which have effectively promoted brand building.”--Respondent 8</p> <p>Sensing: “The <i>Implementation Opinions of the General Office of the People’s Government of Henan Province on Integrating the Basic Medical Insurance System for Urban and Rural Residents</i> (Yu Zheng Ban [2019] No. 173) clearly stipulates that the medical insurance fund for urban and rural residents shall be coordinated at the municipal level. However, because Xinyang City has contracted medical insurance funds to the medical community, set up referral links in counties and districts, and formulated 90% of county-level consultation rates, the source of patients at Shengde Hospital has dropped sharply, the good development momentum has taken a sharp turn for the worse, and the hospital is facing a serious survival crisis.”--Respondent 8</p> <p>Responding: “In order to cope with the impact of the changes in medical insurance policies, the hospital collected relevant information, communicated and negotiated with the local medical insurance bureau many times, and put forward clear demands on medical insurance work to strive for the survival of the hospital.”--Respondent 8</p> <p>Reconfiguring: “In order to continuously follow up the medical insurance policy, the hospital has set up a special team led by the hospital director, with the director of the medical insurance department and other middle management staff as the main team members, who are always in contact with the medical insurance department to give feedback and make suggestions on problems encountered in the process of policy implementation.”--Respondent 8</p>

4.3 The results of conclusive research

4.3.1 Sample feature description

A total of 315 questionnaires were distributed and 315 were collected. It can be seen from the personal information that 60.63% of the investigated subjects are clinical medical staff and administrative staff, indicating that the subjects mainly come from the non-leadership level of the hospital, and the results express the grass-roots staff's understanding of the hospital. Viewed from the educational level, 95.56% of the respondents have a bachelor's degree or above, showing that they are well-educated and have certain understandings of the hospital's dynamic capabilities and the related issues. In terms of gender ratio, male accounts for 39.98%, while female accounts for 60.32%. As for age distribution, the proportion of young and middle-aged people under 45 years old is 76.51%. The results are showed in Table 4.7.

Table 4.7 Descriptive statistical analysis of respondents' personal information

Information	Categories	Frequency	Percent
Gender	male	125	39.98%
	female	190	60.32%
Position	Senior manager	8	2.54%
	Middle manager	116	36.83%
	Administrator	51	16.19%
	Doctor	89	28.25%
	Nurse	81	25.71%
Age	Aged 25 and under	23	7.30%
	26-35 (inclusive) years old	158	50.16%
	36-5 (inclusive) years old	60	19.05%
	Aged 46 (inclusive) and above	74	23.49%
Qualification	Technical secondary school / senior high school and below	14	4.44%
	Junior college / bachelor degree	276	87.62%
	Master (including MBA/EMBA) / doctor	25	7.94%

4.3.2 Structural equation modelling

Structural Equation Modeling (SEM), also known as structural equation analysis, is a statistical method to analyze the relationship between variables based on the covariance matrix. SEM is also a multivariate statistical technique, which organically combines multiple regression with factor analysis to automatically evaluate a series of interrelated causality. SEM is similar to multiple regression, but it has greater functions. It is suitable for the modeling under complex

conditions such as hidden variables, independent variables correlation, variable errors, and multiple dependent variables. The structural equation is a statistical analysis tool based on sample data to evaluate whether the theoretical model proposed by researchers is acceptable or not. Figure 4.1 demonstrates the results of SEM.

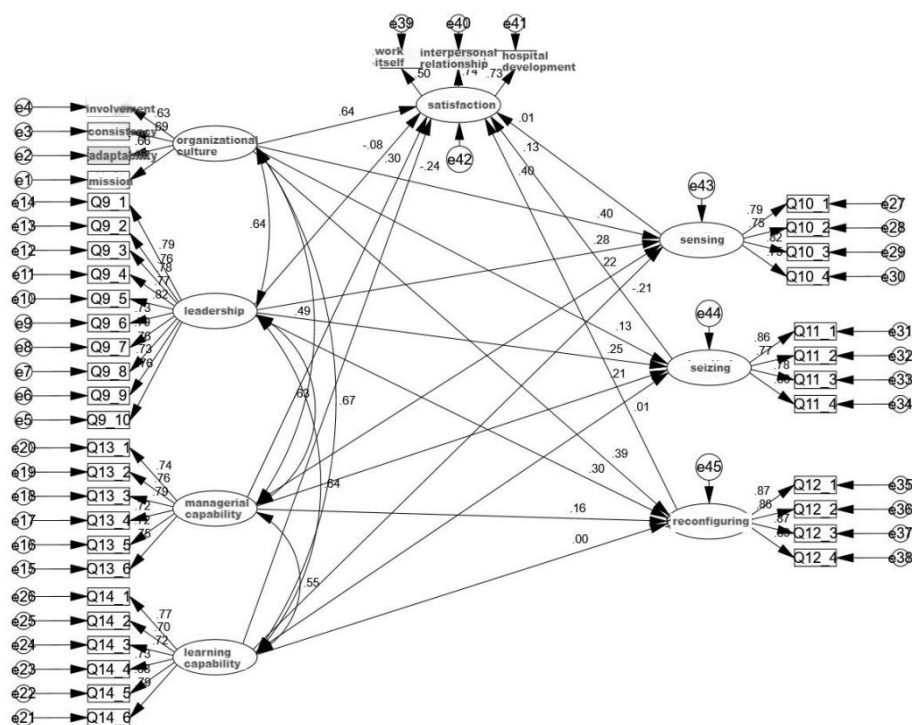


Figure 4.1 Structural equation modelling-organizational resources, organizational capabilities, dynamic capabilities and medical staff satisfaction

The judgment of the validity of structural equation modeling mainly depends on the calculation of some fit indexes. It is generally required that c_2/df should be less than 3, and goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normed fit index (NFI), incremental fit index (IFI), and comparative fit index (CFI) should be greater than 0.9, which indicates that the model has good adaptability. It is also acceptable when these values are greater than 0.80 and less than 0.90. RMSEA of the scale with good adaptability should be less than 0.08, suggesting that the fitting degree of the modeling is good. As can be seen from Table 4.8, the fitting effect of the modeling used in this study is good.

Table 4.8 The modeling’s fit indexes

Reference index	<i>c2 / df</i>	GFI	AGFI	NFI	TLI	CFI	RMSEA
Statistical value	2.813	0.908	0.876	0.916	0.933	0.944	0.076
Standard value	<3	>0.8	>0.8	>0.8	>0.9	>0.9	<0.08

The following Table 4.9 showed the results of the effects of organizational resources, organizational capabilities and dynamic capabilities on medical staff satisfaction. The standardized path coefficient from organizational culture to medical staff satisfaction is 0.636 ($t=4.92, p=0.000<0.05$), indicating that organizational culture has a significant positive effect on satisfaction. Hence, H1 is valid. The standardized path coefficient from leadership to satisfaction is -0.083 ($t=-1.082, p=0.279>0.05$), suggesting that leadership has no effect on satisfaction. Hence, H2 is invalid.

The standardized path coefficient from management capability to satisfaction is 0.301 ($t = 4.075, p=0.000<0.05$), which shows that there is a significant positive effect from management capability to satisfaction. Therefore, it is assumed that H3 is valid. The standardized path coefficient from learning capability to satisfaction is -0.235 ($t=-2.829$), indicating that there is a significant negative effect from learning capability to satisfaction. H4 is not valid.

The standardized path coefficient from sensing to satisfaction is 0.014 ($t=0.221, p=0.825<0.05$), which shows that there is no effect from sensing to satisfaction, so the hypothesis of H5 is not valid. The standardized path coefficient from seizing to satisfaction is 0.132 ($t=2.47, p=0.014<0.05$), indicating that there is a significant positive effect from seizing to satisfaction. Hence, H6 is valid. The standardized path coefficient from the reconfiguring to satisfaction is 0.399 ($t=4.969, p=0.000<0.05$), which suggests that from reconfiguring to satisfaction, there is a significant positive effect. Hence, H7 is valid.

Table 4.9 The effects of organizational resources, organizational capabilities and dynamic capabilities on medical staff satisfaction

Relationships between variables	Standardized path coefficient	Nonstandard path coefficient	S.E.	C.R.	P	Supported(Yes/No)
H1:Organizational Culture→Medical Staff Satisfaction	0.636	0.384	0.078	4.92	***	Yes
H2:Leadership→Medical Staff Satisfaction	-0.083	-0.046	0.042	-1.082	0.279	No
H3:Managerial Capability→Medical Staff Satisfaction	0.301	0.161	0.039	4.075	***	Yes

H4: Learning Capability→Medical Staff Satisfaction	-0.235	-0.109	0.039	-2.829	0.005	No
H5: Sensing→Medical Staff Satisfaction	0.014	0.006	0.029	0.221	0.825	No
H6: Responding→Medical Staff Satisfaction	0.132	0.054	0.022	2.47	0.014	Yes
H7: Reconfiguring→Medical Staff Satisfaction	0.399	0.162	0.033	4.969	***	Yes

4.3.3 The mediating role of dynamic capabilities

The following Table 4.10 used Bootstrap method to conduct mediation effect test, presenting the mediating effects of dynamic capabilities on the relationship between organizational resources, organizational capabilities and medical staff satisfaction. The results indicate that reconfiguring ($p < 0.05$) has significant mediating effects on the relationship between organizational culture and medical staff satisfaction, in the support of H10. However, sensing and responding do not have significant effects on this relationship, not supporting H8 and H9. Reconfiguring ($p < 0.05$) significant mediating effects on the relationship between leadership and medical staff satisfaction, in the support of H13. However, sensing and responding do not have significant effects on this relationship, not supporting H11 and H12. Reconfiguring ($p < 0.05$) significant mediating effects on the relationship between managerial capability and medical staff satisfaction, in the support of H16. However, sensing and responding do not have significant effects on this relationship, not supporting H14 and H15.

Concerning the relationship between learning capability and medical staff satisfaction, all three dynamic dimensions are not found to be significant mediators: sensing, responding and reconfiguring, not supporting H17, H18 and H19.

Overall, support is found for the significant mediating effects of reconfiguring on the relationship between organizational resources (organizational culture and leadership) and medical staff satisfaction. This implies that organizational resources do not directly lead to better medical staff satisfaction. Support is also found for the significant mediating effect of reconfiguring on the relationship between organizational capabilities (managerial capability) and medical staff satisfaction. This implies that managerial capability does not directly lead to better medical staff satisfaction.

Table 4.10 Mediating effects of dynamic capabilities on the relationship between organizational resources, organizational capabilities and medical staff satisfaction

Parameter	Estimate	Lower	Upper	P	Supported (Yes/No)
H8:OC→Sensing→MSS	0.006	-0.084	0.054	0.827	No
H9:OC→Responding→MSS	0.017	-0.015	0.064	0.193	No
H10:OC→Reconfiguring→MSS	0.156	0.061	0.295	0.003	Yes
H11:Leadership→Sensing→MSS	0.004	-0.041	0.048	0.825	No
H12:Leadership→Responding→MSS	0.033	0	0.11	0.055	No
H13:Leadership→Reconfiguring→MSS	0.119	0.02	0.291	0.011	Yes
H14:MC→Sensing→MSS	0.003	-0.033	0.046	0.786	No
H15:MC→Responding→MSS	0.028	-0.001	0.087	0.057	No
H16:MC→Reconfiguring→MSS	0.064	0.002	0.183	0.042	Yes
H17:LC→Sensing→MSS	-0.003	-0.043	0.032	0.689	No
H18:LC→Responding→MSS	0.001	-0.037	0.053	0.912	No
H19:LC→Reconfiguring→MSS	0.002	-0.097	0.098	0.964	No

Note: *OC* organizational capability, *MC* managerial capability, *LC* learning capability, *MSS* medical staff satisfaction

Chapter 5: Conclusions

As the last part of the thesis, this chapter gives a summary of the research results, which consists of three parts as follows: first, summary and analysis of the research results; second, the value of the research as well as a detailed elaboration on the innovation of the research from the perspectives of theoretical study and practical management; third, limitations and suggestions for future research.

5.1 Summary of findings

From the perspective of organizational resources, organizational culture has a positive impact on employee satisfaction, while leadership has no impact on employee satisfaction. From the perspective of organizational capability, organizational management capability has a positive impact on employee satisfaction, while organizational learning capability does not affect employee satisfaction. From the perspective of dynamic capability, responding capability and reconfiguring capability have a positive impact on employee satisfaction, while sensing capability does not. Concerning the degree of influence, organizational culture is the most important influencing factor, followed by reconfiguring capability, management capability and responding capability of the organization.

5.1.1 Organizational culture and medical staff satisfaction

In this study, organizational culture has a positive impact on employee satisfaction. Organizational culture is divided into four dimensions, namely, involvement, adaptability, consistency and mission. Organizational culture, as a collection of values, is the invisible resource of the organization affecting employees' specific attitudes, ideas and tendencies, and eventually the team and organization. Employee satisfaction includes the satisfaction with work, interpersonal relations and hospital development.

Involvement includes empowerment, team orientation and capability development. A highly participatory organizational culture can give employees appropriate professional autonomy, create a teamwork atmosphere, and provide vocational training for employees to improve skills. The subject of this study is a private hospital. According to the interviews, the

hospital has been providing a development platform for clinical departments since its establishment, and it also fully considers the development needs of departments and offers resource support. The hospital also provides vocational training for medical staff to improve the level of diagnosis and treatment. From the view of employee satisfaction with work, a highly participatory organizational culture has a positive impact.

Consistency includes core values, agreement and coordination and integration. A highly consistent organizational culture enables employees to share core values and seeks mutual recognition to deal with internal conflicts, so that employees from different departments can also communicate and cooperate with each other. From an interpersonal relations perspective, a highly consistent organizational culture can have a positive impact on employee satisfaction.

Mission includes strategic directions, goals and objectives and vision. Organizations with a strong sense of mission can usually form a unified goal and vision among employees. In terms of satisfaction with hospital development, the sense of mission plays a positive role.

5.1.2 Management capability and medical staff satisfaction

Different managers have different management capabilities. Management capability is influenced by education, age, work experience, personal value orientation and even gender. Since hospitals are knowledge-intensive organizations, medical staff often have high level of education and strong professional skills. But the management capability of different levels of leadership varies from person to person. Medical and nursing managers within hospitals, besides serving as professional role models and mentors among their medical team members and within their departments, are expected to lead teams of doctors and nurses through ongoing short- and long-term managerial assignments (Shetach & Marcus, 2015). It influences the way in which decisions are being taken, regarding treatment plans, their processes of implementation as part of the everyday functioning of the department, and the way long-term projects are handled (McKnight et al., 2002).

Based on the resource-based view, management capability and organizational culture, as invisible resources of the organization, play a positive role in the sustainable competitive advantage of the organization (Carmeli & Tishler, 2004). This study shows that management capability has a positive impact on employee satisfaction. Managers at different levels need different management skills. Senior leaders of the hospital need to master the overall situation of the hospital, and middle-level managers need to communicate, coordinate and manage the work of specific departments.

On the one hand, management capability emphasizes the financial accountability of managers, such as improving profit margin, ROE and ROA. On the other hand, it requires managers to form efficient decision-making and execution work-flow within the organization, and to manage conflicts and improve the efficiency of collaboration between departments. In order to improve employee satisfaction, it is extremely important for managers to create a relaxing working atmosphere, rigorous business processes, and clear development space for hospital staff.

5.1.3 Mediating role of dynamic capabilities

According to this study, the reconfiguring in dynamic capabilities plays a mediating role in three pairs of relationship, namely, organizational culture and medical staff satisfaction, leadership and medical staff satisfaction as well as managerial capability and medical staff satisfaction. Sensing and responding capability have no mediating impact on the relationship between organizational resources and medical staff satisfaction, as well as organizational capabilities and medical staff satisfaction in the research model. Thus, organizational culture and managerial capability play a positive role in the medical staff satisfaction of the organization in a stable external competition environment. When the organization faces a volatile and unpredictable external environment, reconfiguring capability is an important source of medical staff satisfaction.

From the perspective of the hierarchy of organizational resources and organizational capabilities, dynamic capabilities stand at the third-order, and serve as the ultimate capability of the organization which can continuously update, restructure and create zero-order organizational resources, first-order organizational capabilities and second-order core capabilities. The concept and connotation of dynamic capabilities have been controversial. The results of this study show that, compared to sensing and responding, reconfiguring can better prove the mediating role of dynamic capabilities. And this is also consistent with previous definition of dynamic capability proposed by Teece, Pisano, and Shuen (1997) Eisenhardt and Martin (2000), and Helfat et al. (2007). In other words, internal and external capabilities need to be integrate, build, and reconfigure so as to cope with rapidly changing environments.

5.2 Contributions and implications

5.2.1 Theoretical contributions

The lack of empirical research on dynamic capability has always been an important issue in this field. This study, as an empirical research on the dynamic capability of private hospital, elaborates on the relationship between dynamic capability and organizational resources, as well as organizational capability and employee satisfaction by reviewing previous literature related to dynamic capability. Dynamic capability plays a significant contributing role in employee satisfaction and a potential mediating role in the relationship between organizational resources and organizational capability and employee satisfaction. Organizational resources and capability are the basis of dynamic capability, which can significantly predict employee satisfaction. This provides empirical support for the hypothesis in the existing literature on dynamic capability, that is, organizational resources and capability form dynamic capability, and dynamic capability depends on organizational resources and capability.

In previous research on resource-based theory and dynamic capability, most of them either only theoretically explain the contribution of resources and capability to enterprise performance, or only empirically study a few resources and capabilities that are considered important to competitive advantage. This thesis adopts the model that integrates organizational resources, organizational capability and dynamic capability, and studies the influence of various resources, organizational capabilities and dynamic capabilities on employee satisfaction as well as the interaction between them.

Through the combination of qualitative and quantitative research, this study explores the function mechanism of dynamic capability in a particular private hospital. The qualitative research results explain the specific manifestation of dynamic capability in different stages of development. Dynamic capability can be expressed as innovation ability, ability to open up new market, and ability to deal with external relations, which is in line with the views of Wang and Ahmed (2007), and Weerawardena et al. (2015). The qualitative research, through collecting time series data, shows the characteristics of organizational culture, leadership and organizational capability in different periods, and describes the four stages of the private hospital since its establishment, as well as the opportunities, risks and strategic choices faced by the hospital at each stage.

5.2.2 Managerial implications

Combing the research and analysis of the actual environment of the hospital with the hospital's planning strategies, this thesis puts forward some strategies to promote the actual development of the hospital in the future.

5.2.2.1 Building their own unique hospital culture

A good hospital culture can not only contribute to the staff cohesion, but also motivate the employees. In order to reduce the staff mobility, Shengde Hospital must build its own unique hospital culture, which can influence its staff, so as to make them have a sense of belonging and identity to the hospital, thus promoting the long-term development of the hospital. In practice, a variety of forms can be applied to enhance the recognition of the staff to the hospital, including team construction, discussion and cultural construction. In the cultural construction of the hospital, the participation of the staff should be encouraged and their opinions and suggestions should be welcomed. For those who put forward some excellent suggestions, the hospital should give certain spiritual and material rewards to them, and praise must be given to those who make outstanding contributions. Thus, a positive atmosphere for contributions can be formed in the hospital.

5.2.2.2 Molding the brand and promoting its social image

The whole system of the hospital should be rebuilt by scientific means, and the famous teams at home and abroad should be invited to re-plan and redesign the characteristic services, humanities and values of the hospital, which should integrate the comprehensive brand performance of the hospital, including the discipline construction, staff spirit, process re-engineering, scientific research direction, environmental services, infrastructure, and main body design. All of these should be carried out through the consideration of the overall image recognition and comprehensive value evaluation of the hospital by society and patients. When shaping its own service brand, the hospital can promote its own development through long-term planning, learning from the models of the industry, making scientific references, and sending its technical personnel for standardized training. Besides, more public welfare activities can be done to improve the social image of the hospital.

5.2.2.3 Building its own talent pool

The lack of medical professionals is the most important factor restricting the development of Shengde Hospital. The talent team is built through long-term planning. In the strategic planning

of the hospital, the human resource should be set as a separate link, and the talent team should be established scientifically and completely through self-cultivation and social introduction, so as to realize the scientific collocation of the elder, the middle-aged and the young. The employees with high professional quality should help those with lower professional quality, so as to achieve the common progress of all employees. At the same time, the talent reserve should be strengthened and a reserve plan should be set up for key positions. A scientific performance appraisal system is also needed to give full affirmation of the contributions made by the staff.

5.2.2.4 Developing general practice, giving prominence to special practice, and expanding market segment.

These disciplines that are suitable for the hospital to develop should be selected for construction in the scientific and overall planning of disciplines. Taking into account its current scale and its own deficiencies and realities, the hospital should choose the market segment that is suitable for its own development. Its preponderant disciplines could be known via market research and scientific consultation, while the deficiencies should be made up, so as to enhance their market competitiveness in the field of medical services.

5.2.2.5 Encouraging technical innovation and improving the hospital's technology

Medical technology, as the core of a hospital, is of vital importance to the hospital. Without good medical technology, the treatment effect of patients will be affected, eventually leading to the loss of patients. Only good medical technology can be recognized by patients. Hospitals must take the improvement of medical technology as the focus of their future work. Part of the funds can be set aside to support the medical staff to go for further study. It can also be done to encourage the medical staff to carry out technological innovation, thus, raising the overall medical technology of the hospital to a new level.

5.3 Limitations and suggestions for future research

First of all, although the case in this study, Henan Shengde Hospital, has distinct characteristics in the private hospital industry in China, the conclusion of the study does not strongly support the hypotheses of leadership and learning capability since the samples come from only one single private hospital. Therefore, the conclusion can not be applied to all private hospitals, or the medical industry. Future research should investigate more private hospitals, obtain more reliable conclusions and improve the universality of conclusions by expanding research samples.

Secondly, due to limited amount of time, the quantitative research of this study adopts

cross-sectional data, so the research data can only reflect the feelings of the interviewees at that time. If one wants to study the function mechanism of dynamic capability during a period of time, the longitudinal study is more effective.

Thirdly, although the author reviewed a large number of literature related to the measurement system of dynamic capability, there is still no consensus in the academic circle in terms of the indicator selection. There are only a few researches on the dynamic capability of private hospitals in China, so the author has little domestic literature for reference. Therefore, more in-depth research should be carried out to propose a new dynamic capability measurement system of private hospitals which is different from the existing measurement system.

Lastly, according to the research design of this study, dynamic capability has a mediating impact on organizational resources and employee satisfaction, as well as organizational capability and employee satisfaction. Yet other potential factors are neglected, such as environmental variables, which are important regulatory variables in the dynamic capability research model. The age, education level, position and gender of employees are also often regarded as control variables. Hence, future research should combine the regulatory variables and control variables to further explore the mediating effect of dynamic capability.

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Bibliography

- Agwunobi, A. & Osborne, P. (2016). Dynamic capabilities and healthcare: a framework for enhancing the competitive advantage of hospitals. *California Management Review*, 58(4), 141-161.
- Amit, R. & Schoemaker, P. J. H. (1993). Strategic assets and organizational rent. *Strategic Management Journal*, 14(1), 33-46.
- Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology*, 72(4), 441-462.
- Bakotić, D. (2016). Relationship between job satisfaction and organisational performance. *Economic Research-Ekonomska Istraživanja*, 29(1), 118-130.
- Barney, J. (1986). Types of competition and the theory of strategy: toward an integrative framework. *The Academy of Management Review*, 11(4), 791-800.
- Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99-120.
- Barney, J. (2002). Strategic management: from informed conversation to academic discipline. *Academy of Management Perspectives*, 16(2), 53-57.
- Barney, J. & Hansen, M. (1994). Trustworthiness as a source of competitive advantage. *Strategic Management Journal*, 15(S1), 175-190.
- Barreto, I. (2009). Dynamic Capabilities: a review of past research and an agenda for the future. *Journal of Management*, 36(1), 236-280.
- Bass, B. M. (1990). From transactional to transformational leadership: learning to share the vision. *Organizational Dynamics*, 18(3), 19-31.
- Bhatnagar, J. (2006). Measuring organizational learning capability in Indian managers and establishing firm performance linkage: an empirical analysis. *Learning Organization*, 13(5), 416-433.
- Bono, J. E. & Judge, T. A. (2003). Self-concordance at work: toward understanding the motivational effects of transformational leaders. *Academy of Management Journal*, 46(5), 554-571.
- Brown, M. E. & Treviño, L. K. (2006). Ethical leadership: a review and future directions. *Leadership Quarterly*, 17(06), 595-616.
- Cameron, K. S. & Quinn, R. E. (2006). *Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework*. San Francisco, CA: Jossey-Bass.
- Cao, H., Zhao, J., & Wang, Y. (2009). Dimensions of dynamic capabilities: based on the empirical research of Chinese enterprises. *Studies in Science of Science*, 27(01), 36-44. (in Chinese).
- Cardeal, N. & Antonio, N. (2012). Valuable, rare, inimitable resources and organization (VRIO) resources or valuable, rare, inimitable resources (VRI) capabilities: what leads to competitive advantage? *African Journal of Business Management*, 6(37), 10159-10170.
- Carmeli, A. & Tishler, A. (2004). The relationships between intangible organizational elements and organizational performance. *Strategic Management Journal*, 25(13), 1257-1278.
- Castanias, R. P. & Helfat, C. E. (2001). The managerial rents model: theory and empirical analysis. *Journal of Management*, 27(6), 661-678.
- Cegarra-Navarro, J. G. (2005). An empirical investigation of organizational learning through strategic alliances between SMEs. *Journal of Strategic Marketing*, 13(1), 3-16.

- Chen, H., Lee, P., & Lay, T. (2009). Drivers of dynamic learning and dynamic competitive capabilities in international strategic alliances. *Journal of Business Research*, 62(12), 1289-1295.
- Chen, T., Min, R., Yue, Q., & Fang, P. (2017). A preliminary study on dynamic capability of large public hospitals in the context of healthy China construction. *Chinese Hospital Management*, 37(6), 1-4. (in Chinese).
- Cheng, B. S., Chou, L. F., & Farh, J. L. (2000). Paternalistic leadership: the construction and measurement of the ternary model. *Indigenous Psychological Research*, (14), 3-64.
- Chesbrough, H. & Rosenbloom, R. S. (2002). The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change*, 11(3), 529-555.
- Churchill, G. A., & Brown, T. J. (2007). *Basic Marketing Research (6th ed.)*. Melbourne: Thomson South-Western.
- Cohen, W. M. & Levinthal, D. A. (1990). Absorptive capacity: a new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152.
- Collis, D. J. (1994). Research note: how valuable are organizational capabilities? *Strategic Management Journal*, 15(S1), 143-152.
- Collis, D. J. & Montgomery, C. A. (1995). Competing on resources: strategy in the 1990s. *Harvard Business Review*, 73(4), 118-129.
- Danneels, E. (2002). The dynamics of product innovation and firm competences. *Strategic Management Journal*, 23(12), 1095-1121.
- Danneels, E. (2008). Organizational antecedents of second-order competence. *Strategic Management Journal*, 29(5), 519-543.
- Davison, G. & Hyland, P. (2002). Palliative care teams and organizational capability. *Team Performance Management An International Journal*, 8(3/4), 60-67.
- Denison, D. R. & Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness. *Organization Science*, 6(2), 204-223.
- D'Este, P. (2002). The distinctive patterns of capabilities accumulation and inter-firm heterogeneity: The case of the Spanish pharmaceutical industry. *Industrial and Corporate Change*, 11(4), 847-874.
- Dierickx, I. & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35(12), 1504-1511.
- Dohan, M. S., Green, M., & Tan, J. (2017). The impact of healthcare informatics competencies on dynamic capabilities: a multilevel study of paramedic services. *Health Policy and Technology*, 6(4), 426-435.
- Dong, B. & Ge, B. (2012). Research on the relationship between resource integration process and dynamic capability of new enterprises. *Scientific Research Management*, 33(02), 107-114. (in Chinese).
- Douglas, T. & Ryman, J. (2003). Understanding competitive advantage in the general hospital industry: Evaluating strategic competencies. *Strategic Management Journal*, 24(4), 333-347.
- Dove, R. (1999). Knowledge management, response ability, and the agile enterprise. *Journal of Knowledge Management*, 3(1), 18-35.
- Ebrahimian, J. S. Y. & Ebrahimian, J. S. R. (2012). The relationship between organizational learning capability and job satisfaction. *International Journal of Human Resource Studies*, 2(1), 15-27.
- Eisenhardt, K. M. & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic Management Journal*, 21(10/11), 1105-1121.
- Fang, P., Lin, Z., Chen, S., Xiao, Q., & Yang, L. (2014). Analysis of the comprehensive benefits of the medical combination and its core hospitals before and after the reform -- a case study

- of Wuhan. *Chinese Hospitals*, 18(7), 14-16. (in Chinese).
- Farh, J. L. & Cheng, B. S. (2000). A cultural analysis of paternalistic leadership in Chinese organizations. In J. T. Li, A. S. Tsui, & E. Weldon (Eds.), *Management and Organizations in the Chinese Context* (pp. 84-127). London: Macmillan.
- Fey, C. F. & Denison, D. R. (2003). Organizational culture and effectiveness: can american theory be applied in Russia. *Social Science Electronic Publishing*, 14(6), 686-706.
- Fitsilis, P., Kirytopoulos, K., & Leopoulos, V. (2011). Assuring the managerial capability of public organizations implementing projects. *International Journal of Managing Projects in Business*, 4(2), 329-344.
- Fournier, J., Lightfoot, N., Larocque, S., Johnson, J., & Eger, T. (2019). Theory of nurse practitioner job satisfaction. *The Journal for Nurse Practitioners*, 15(4), 290-294.
- Gao, X. (2013). How to solve the problem of medical combination. *China Hospital CEO*, (11), 32-33. (in Chinese).
- Goh, S. C., Elliott, C., & Quon, T. K. (2012). The relationship between learning capability and organizational performance. *The Learning Organization*, 19(2), 92-108.
- Grant, R. (1996). Prospering in dynamically-competitive environments: organizational capability as knowledge integration. *Organization Science*, 7(4), 375-387.
- Gu, X. (2019). Financial reformation and promotion of county medical combination in Zhejiang Province. *Chinese Hospital CEO*, (17), 76-85. (in Chinese).
- Hartnell, C. A., Ou, A. Y., Kinicki, A. J., Choi, D., & Karam, E. P. (2019). A meta-analytic test of organizational culture's association with elements of an organization's system and its relative predictive validity on organizational outcomes. *Journal of Applied Psychology*, 104(6), 832-850.
- He, X., Li, C., & Fang, H. (2006). Measurement and Efficiency of dynamic capabilities: an empirical study based on Chinese experience. *Management World*, (03), 94-103. (in Chinese).
- Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., & Teece, D. J. (2007). *Dynamic Capabilities: Understanding Strategic Change in Organizations*. Malden: Blackwell Publishing.
- Henderson, R. M. & Cockburn, I. (1994). Measuring competence? Exploring firm effects in pharmaceutical research. *Strategic Management Journal*, 15(Winter Special Issue), 63-84.
- Hetland, H., Sandal, G. M., & Johnsen, T. B. (2007). Burnout in the information technology sector: does leadership matter? *European Journal of Work & Organizational Psychology*, 16(1), 58-75.
- Hitt, M. & Ireland, R. (1985). Corporate distinctive competence, strategy, industry and performance. *Strategic Management Journal*, 6(3), 273-293.
- Hogan, S. J. & Coote, L. V. (2014). Organizational culture, innovation, and performance: a test of Schein's model. *Journal of Business Research*, 67(8), 1609-1621.
- Hongngoc, T. & Diaz, M. K. (2015). Factors of specific job satisfaction and general job satisfaction. *International Journal of Research in Commerce, Economics and Management*, 5(2), 71-76.
- Hooker, R. S., Kuilman, L., & Everett, C. M. (2015). Physician assistant job satisfaction. *Journal of Physician Assistant Education*, 26(4), 176-186.
- Hsieh, C. & Lin, B. (2011). Information technology for competitive advantage: the case of learning and innovation in behavioural healthcare service. *International Journal of Electronic Healthcare*, 6(2-4), 213.
- Jaskyte, K. & Dressler, W. (2004). Studying culture as an integral aggregate variable: organizational culture and innovation in a group of nonprofit organizations. *Field Methods*, 16(3), 265-284.
- Jiang, W., Mavondo, F. T., & Matanda, M. J. (2015). Integrative capability for successful

- partnering: a critical dynamic capability. *Management Decision*, 53(6), 1184-1202.
- Jung, D. I., Chow, C., & Wu, A. (2003). The role of transformational leadership in enhancing organizational innovation: hypotheses and some preliminary findings. *Leadership Quarterly*, 14(4), 525-544.
- Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances-building relational capital. *Strategic Management Journal*, 21(3), 217-237.
- Kash, B., Spaulding, A., Gamm, L., & Johnson, C. (2016). Healthcare strategic management and the resource based view. *Journal of Strategy & Management*, 7(3), 867-882.
- Kim, R. (2016). The U.S. Hospital management from a strategic management viewpoint. *Journal of Hospital and Medical Management*, 2(1:2), 1-7.
- Kinicki, A. J., Mckee-Ryan, F. M., Schriesheim, C. A., & Carson, K. P. (2002). Assessing the construct validity of the job descriptive index: a review and meta-analysis. *Journal of Applied Psychology*, 87(1), 14-32.
- Konrad, T. R., Williams, E. S., Linzer, M., & McMurray, J. (1999). Measuring physician job satisfaction in a changing workplace and a challenging environment. *Medical Care*, 37(11), 1174-1182.
- Lambe, C. J., Spekman, R. E., & Hunt, S. D. (2002). Alliance competence, resources, and alliance success: conceptualization, measurement, and initial test. *Journal of the Academy of Marketing Science*, 30(2), 141-158.
- Leitch, C. M. & Volery, T. (2017). Entrepreneurial leadership: insights and directions. *International Small Business Journal*, 35(02), 147-156.
- Leonard-Barton, D. A. (1992). Core capabilities and core rigidities:a paradox in managing new product development. *Strategic Management Journal*, 13(2), 111-125.
- Levinthal, D. A. & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, 14(1), 95-112.
- Li, C. & Shi, K. (2005). The structure and measurement of transformational leadership in China. *Acta Psychologica Sinica*, 37(6), 803-811.
- Li, C., Wong, C., Yang, C. C., Shang, K. C., & Lirn, T. (2019). Value of supply chain resilience: roles of culture, flexibility, and integration. *International Journal of Physical Distribution & Logistics Management*, 50(1), 80-100.
- Li, L. & Chen, W. (2015). Characteristics and measurement of transformational leadership under the situation of state-owned enterprise reform. *East China Economic Management*, 29(6), 41-65. (in Chinese).
- Lippman, S. A. & Rumelt, R. P. (2003). A bargaining perspective on resource advantage. *Strategic Management Journal*, 24(11), 1069-1086.
- Madhavaram, S. & Hunt, S. D. (2008). The service-dominant logic and a hierarchy of operant resources: developing masterful operant resources and implications for marketing strategy. *Journal of the Academy of Marketing Science*, 36(1), 67-82.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71-87.
- Mascia, D., Morandi, F., & Cicchetti, A. (2014). Hospital restructuring and physician job satisfaction: an empirical study. *Health Policy*, 114(2-3), 118-127.
- Meng, J. & Berger, B. K. (2019). The impact of organizational culture and leadership performance on PR professionals' job satisfaction: testing the joint mediating effects of engagement and trust. *Public Relations Review*, 45(1), 64-75.
- Miller, D. (1996). A preliminary typology of organizational learning: synthesizing the literature. *Journal of Management*, 22(3), 485-505.
- Moon, H., Ruona, W., & Valentine, T. (2017). Organizational strategic learning capability: exploring the dimensions. *European Journal of Training and Development*, 41(3), 222-240.

- Mosakowski, E. & Mckelvey, B. (1997). *Predicting Rent Generation in Competence-based Competition*. Chichester: Wiley.
- Nasution, H. N. & Mavondo, F. T. (2008). Organisational capabilities: antecedents and implications for customer value. *European Journal of Marketing*, 42(3/4), 477-501.
- Nelson, R. R. & Winter, S. G. (1982). *An Evolutionary Theory of Economic Change*. Cambridge, MA: Harvard University Press.
- Nonaka, I. & Takeuchi, H. (1995). *The Knowledge Creating Company*. New York: Oxford University Press.
- Nonaka, I. & Toyama, R. (2007). Strategic management as distributed practical wisdom (phronesis). *Industrial and Corporate Change*, 16(3), 371-394.
- O'Reilly, C. A. & Tushman, M. L. (2007). Ambidexterity as a dynamic capability: resolving the innovator's dilemma. *Research in Organizational Behavior*, 28, 185-206.
- Pan, C., Zhang, C., Li, C. & Yuan, J. (2020). Research on the construction of specialized medical cluster based on resource-based view. *Chinese Hospitals*, 24(05), 22-25. (in Chinese).
- Peteraf, M. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic Management Journal*, 14(3), 179-191.
- Pettigrew, A. M. (1979). On studying organizational cultures. *Administrative Science Quarterly*, 24(4), 570-581.
- Peyrefitte, J., Golden, P. A. & Brice, J. (2002). Vertical integration and economic performance: a managerial capability framework. *Management Decision*, 40(3), 217-226.
- Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H. & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *The Leadership Quarterly*, 1(2), 107-142.
- Porter, M. E. (1979). How competitive forces shape strategy. *Harvard Business Review*, 57(2), 137-145.
- Priem, R. L. & Bulter, J. E. (2001). Is the resource-based view a useful perspective for strategic management research? *Academy of Management Review*, 26(1), 22-40.
- Rafferty, A. E. & Griffin, M. A. (2004). Dimensions of transformational leadership: conceptual and empirical extensions. *The Leadership Quarterly*, 15(3), 329-354.
- Ridder, H. G., Bruns, H. J., & Spier, F. (2005). Analysis of public management change processes: the case of local government accounting reforms in Germany. *Public Administration (London)*, 83(2), 443-471.
- Ridder, H., Doege, V., & Martini, S. (2007). Differences in the implementation of diagnosis-related groups across clinical departments: a German hospital case study. *Health Service Research*, 42(6), 2120-2139.
- Rindova, V. P. & Kotha, S. (2001). Continuous 'morphing': competing through dynamic capabilities, form and function. *Academy of Management*, 44(6), 1263-1280.
- Rumelt, R. (1991). How much does industry matter. *Strategic Management Journal*, 12(3), 167-185.
- Russo, M. V. & Fouts, P. A. (1997). A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal*, 40(3), 534-559.
- Schaubroeck, J. M., Lam, S. S. K., & Peng, A. C. (2016). Can peers' ethical and transformational leadership improve coworkers' service quality? A latent growth analysis. *Organizational Behavior and Human Decision Processes*, 133, 45-58.
- Schein, E. H. (2010). *Organizational Culture and Leadership*. New Jersey: John Wiley&Sons.
- Shi, M. (2013). Progress and challenges of China's vertical regional medical combination. *Chinese Journal of Health Policy*, 6(7), 28-32. (in Chinese).
- Singh, R., Mathiassen, L., Stachura, M. E., & Astapova, E. V. (2011). Dynamic capabilities in home health: it-enabled transformation of post-acute care. *Journal of the Association for*

- Information Systems*, 12(2), 163-188.
- Sinkula, J. M., Baker, W. E., & Noordewier, T. (1997). A framework for market-based organizational learning: linking values, knowledge, and behavior. *Journal of the Academy of Marketing Science*, 25(4), 305-318.
- Sirmon, D. G. & Hitt, M. A. (2009). Contingencies within dynamic managerial capabilities: interdependent effects of resource investment and deployment on firm performance. *Strategic Management Journal*, 30(13), 1375-1394.
- Stebbins, L. & Dent, E. (2011). Job satisfaction and organizational culture. *The Journal of Applied Management and Entrepreneurship*, 16(1), 28-52.
- Sun, H., Ruan, P., Zhang, X., & Liu, X. (2017). Research on dynamic capability measurement of service enterprises. *Journal of Beijing University of Technology(Social Science edition)*, 17(02), 68-74. (in Chinese).
- Takahashi, T. (2018). *Quality Improvements and Cost Reductions In Healthcare: Accountable Care Organizations from the Perspective of Collaborative Dynamic Capabilities And Leadership*. Cham: Palgrave Macmillan.
- Tallon, P. & Pinsonneault, A. (2011). Competing perspectives on the link between strategic information technology alignment and organizational agility: insights from a mediation model. *MIS quarterly*, 35(2), 463-486.
- Tan, B. (2019). In search of the link between organizational culture and performance. *Leadership & Organization Development Journal*, 40(3), 356-368.
- Teece, D. J. (1982). Towards an economic theory of the multiproduct firm. *Journal of Economic Behavior & Organization*, 3(1), 39-63.
- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319-1350.
- Teece, D. J., Pisano, G. & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Teece, D. J., Pisano, G., & Shuen, A. (1999). Chapter 6 - Dynamic capabilities and strategic management. In M. H. Zack (Ed.), *Knowledge and Strategy* (pp.77-115). Boston: Butterworth-Heinemann.
- Thomas, J. B. & McDaniel, R. R. (1990). Interpreting strategic issues: effects of strategy and the information-processing structure of top management teams. *Academy of Management Journal*, 33(2), 286-306.
- Upadhyay, S., Weech-Maldonado, R., Lemak, C. H., Stephenson, A., Mehta, T., & Smith, D. G. (2019). Resource-based view on safety culture's influence on hospital performance. *Health Care Management Review*, 45(3), 207-216.
- Wade, M. & Hulland, J. (2004). The resource-based view and information system research: Review, extension, and suggestions for future research. *MIS Quarterly*, 28(1), 107-142.
- Wang, C. L. & Ahmed, P. K. (2007). Dynamic capabilities: a review and research agenda. *International Journal of Management Reviews*, 9(1), 31-51.
- Wang, G., Zhang, S., & Shao, L. (2006). Research on measurement of corporate culture: Improvement and demonstration based on Dension model. *China Soft Science*, (3), 145-150. (in Chinese).
- Wang, H. & Xiao, Y. (2014). Current situation and strategies of private hospitals in China. *Sci-Tech and development of Enterprise*, (22), 34-36. (in Chinese).
- Wang, Q. & Bao, G. (2004). A review of organizational resources theory. *Economic Research Journal*, 2(9), 6-11. (in Chinese).
- Wang, X. H. (2007). Learning, job satisfaction and commitment: an empirical study of organizations in China. *Chinese Management Studies*, 1(3), 167-179.
- Weerawardena, J., Mort, G. S., Salunke, S., Knight, G., & Liesch, P. W. (2015). The role of the market sub-system and the socio-technical sub-system in innovation and firm performance:

- a dynamic capabilities approach. *Journal of the Academy of Marketing Science*, 43(2), 221-239.
- Wernerfelt, B. (1984). The resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180.
- Wernerfelt, B. & Karnani, A. (1987). Competitive strategy under uncertainty. *Strategic Management Journal*, 8(2), 187-194.
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24(10), 991-995.
- Wu, L. (2010). Applicability of the resource-based and dynamic-capability views under environmental volatility. *Journal of Business Research*, 63(1), 27-31.
- Xiang, B. (2003). Analysis of enterprise resources and capability. *Enterprise Management*, (2), 79. (in Chinese).
- Yang, Y., Xue, W. & Liu, J. (2020). Evaluation of service capacity of county-level public hospitals in Hainan Province. *Chinese Rural Health Service Administration*, 40(8), 579-582. (in Chinese).
- Zahra, S. A. & George, G. (2002). Absorptive capacity: a review, reconceptualization, and extension. *The Academy of Management Review*, 27(2), 185-203.
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: a review, model and research agenda. *Journal of Management Studies*, 43(4), 917-955.
- Zhang, J. & Sun, T. (2019). Dynamic capability of public hospitals in an uncertain environment: a conceptual framework. *Chinese Hospital Management*, 39(6), 3-6. (in Chinese).
- Zhang, R. & Zhang, Y. (2010). Measurement of corporate culture based on Denison model: a comparative study in the Chinese context. *Science of Science and Management of S.&T.*, 31(6), 160-165. (in Chinese).
- Zhou, K. Z., Li, J. J., Zhou, N., & Su, C. (2008). Market orientation, job satisfaction, product quality, and firm performance: evidence from China. *Strategic Management Journal*, 29(9), 985-1000.
- Zhou, P., Mei, L., & Chen, Y. (2018). The effect of collectivization reform of Shenzhen Luohu Hospital based on employee survey. *Chinese Journal of Health Policy*, 11(06), 29-34. (in Chinese).
- Zhu, Z. (2013). International medical combination model. *China Hospital CEO*, (16), 62. (in Chinese).
- Zollo, M. & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13(3), 339-351.
- Zott, C. (2003). Dynamic capability and emergence of intraindustry differential firm performance: Insights from a simulation study. *Strategic Management Journal*, 24(2), 97-125.

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Other References

- National Health Commission. (2019). *Notice on Promoting the Construction of a Compact County-level Medical and Health Community* (No.121). Beijing, National Health Commission. (in Chinese)
- The General Office of Henan Provincial Government. (2016). *Opinions on Further Promoting the Accelerated Development of Social Medical Services* (No.29). Zhengzhou, The General Office of Henan Provincial Government. (in Chinese)
- The General Office of Henan Provincial Government. (2019). *Implementation Opinions of the General Office of the People's Government of Henan Province on Integrating the Basic Medical Insurance System for Urban and Rural Residents* (No.173). Zhengzhou, The General Office of Henan Provincial Government. (in Chinese)
- The Henan Provincial Government. (2014). *Opinions on Further Improving the Payment Policy for Social Medical Services* (No.30). Zhengzhou, The Henan Provincial Government. (in Chinese)
- The National Development and Reform Commission. (2014). *Notice on Issues Concerning the Implementation of Market-Regulated Prices for Medical Services in Non-Public Medical Institutions* (No.503). Beijing, The National Development and Reform Commission. (in Chinese)
- The State Council of China. (2010). *Opinions on Further Encouraging and Guiding the Establishment of Medical Institutions by Social Capital* (No.58). Beijing, The State Council of China. (in Chinese)
- The State Council of China. (2012). *Notice on the Main Work Arrangements for Deepening the Medical and Health System Reform* (No.20). Beijing, The State Council of China. (in Chinese)
- The State Council of China. (2013). *Several Opinions on the Promotion of the Development of the Health Service Industry* (No.40). Beijing, The State Council of China. (in Chinese)
- The State Council of China. (2015). *Planning Outline of National Medical and Health Service System (2015-2020)* (No.14). Beijing, The State Council of China. (in Chinese)
- The State Council of China. (2017). *Guiding Opinions on Promoting the Construction and Development of Medical Treatment Partnership* (No.32). Beijing, The State Council of China. (in Chinese)

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Annex A: Relevant Tables

Table a.17 Definitions of resources

Definition	Reference
Anything which could be thought as a strength or weakness of a given firm; more formally, a firm's resources at a given time could be defined as those (tangible and intangible) assets which are tied semi permanently to the firm.	Wernerfelt and Karnani (1987)
All assets, capabilities, organizational processes, firm attributes, information, and knowledge, controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness	Barney (1991)
Stocks of available factors that are owned or controlled by the firm", including know-how that can be traded (e.g., patents and licenses), financial or physical assets (e.g. property, plant and equipment), and human capital.	Amit and Schoemaker (1993)
Corporate assets as well as potential and skills	Wang and Bao (2004)
Resources generally refer to those explicit, static, tangible, and passive "objects" that can be fully mastered by managerial staff	Xiang (2003)
Inputs into the production process, including items of capital equipment, skills of individual employees, patents, brand names, finance and others.	Grant (1996)
A resource that is valuable in a particular industry or at a particular time might fail to have the same value in a different industry or chronological context	Collis and Montgomery (1995)

Table a.18 Definitions of dynamic capabilities

Definition	Reference
We define dynamic capabilities as the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments.	Teece, Pisano, and Shuen (1999)
Dynamic capability is the capacity of an organization to purposefully create, extend, or modify its resource base, and consists of patterned and somewhat practiced activity.	Helfat et al. (2007)
The firm's processes that use resources—specifically the processes to integrate, reconfigure, gain and release resources—to match and even create market change. Dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die.	Eisenhardt and Martin (2000)
Dynamic capabilities are the abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by its principal decision-maker(s).	Zahra, Sapienza, and Davidsson (2006)
The four organizational capabilities of knowledge acquisition, assimilation, transformation, and exploitation build on each other to yield ACAP—a dynamic capability that influences the firm's ability to create and deploy the knowledge necessary to build other organizational capabilities(e.g., marketing, distribution, and production).	Zahra and George (2002)
Dynamic capability is a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness	Zollo and Winter (2002)

Agility defined as the ability to detect and respond to opportunities and threats with ease, speed, and dexterity, has emerged, next to alignment, as a key business imperative. Tallon and Pinsonneault (2011)

Organizational agility is an organization’s ability to (pro)actively detect signals in its environment, to ‘sense’ and evaluate these as relevant cues and categorize them into threats or opportunities and then formulate an adequate organizational response. Dove (1999)

Table a.19 Dimensions of dynamic capabilities

	Dimensions	References
Based on overall organizational behavior	Sensing capability, seizing opportunity, resource re- configuring	Teece (2007)
	Resource integration, learning, resource reconfiguration change the firm’s resource base, sense opportunities and threats, make timely decisions, make market oriented decisions	Wu (2010) Barreto (2009)
	Adaptive capability, absorptive capability, innovative capability	Eisenhardt and Martin (2000)
	Capability of exploration and exploitation	O Reilly and Tushman (2007)
	Product development, alliance, strategic decision- making	Wang and Ahmed (2007)
Based on specific strategic process	Customer value orientation, technology and its support system, organizational support system, institutional support mechanism, strategic isolation mechanism, organizational change and organizational learning ability.	He et al. (2006)
	Market-focused learning capability and marketing capability, network learning capability and internally focused learning capability	Weerawardena et al. (2015)
	Marketing and R&D second-order competences	Danneels (2008)
	Resource acquisition, resource allocation and resource utilization	Dong and Ge (2012)
	Perception recognition, coordination and integration, flexible management and improvisation ability	Zhang and Sun (2019)