



**THE INFLUENCING FACTORS OF DEVELOPMENT
STRATEGY OF INDEPENDENT COLLEGES- A CASE STUDY OF
SHENGLI COLLEGE OF CHINA UNIVERSITY OF
PETROLEUM**

**ZHANG YONGZHONG
6317195913**

**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE MASTER'S DEGREE OF BUSINESS
ADMINISTRATION GRADUATE SCHOOL OF BUSINESS SIAM
UNIVERSITY
2023**



**THE INFLUENCING FACTORS OF DEVELOPMENT
STRATEGY OF INDEPENDENT COLLEGES- A CASE STUDY OF
SHENGLI COLLEGE OF CHINA UNIVERSITY OF
PETROLEUM**

ZHANG YONGZHONG

This Independent Study has been Approved as a Partial Fulfillment of the Requirement
of International Master of Business Administration

Advisor:*Jidapa C.*.....
(Dr. Jidapa Chollathanrattanapong)

Date:*14*...../*March*...../*2024*

.....*J. Jomphong*.....
(Associate Professor) Dr. Jomphong Mongkhonvanit)
Acting Dean, Graduate School of Business Administration


Date.....*9*...../*4*...../*2024*



**THE INFLUENCING FACTORS OF DEVELOPMENT
STRATEGY OF INDEPENDENT COLLEGES- A CASE STUDY OF
SHENGLI COLLEGE OF CHINA UNIVERSITY OF
PETROLEUM**

ZHANG YONGZHONG

This Independent Study has been Approved as a Partial Fulfillment of the Requirement
Of an International Master of Business Administration

Advisor: 
(Dr. Jidapa Chollathanrattanapong)

Date:14 / March / 2024


.....
(Associate Professor Dr. Jomphong Mongkhonvanit)
Acting Dean, Graduate School of Business Administration

Date:9 / 4 / 2024

Title: The Influencing Factors of Development Strategy of Independent Colleges- A Case Study of ShengLi College of China University of Petroleum

By: Zhang Yongzhong

Degree: Master of Business Administration

Major: Educational Management

Advisor: 

(Dr. Jidapa Chollathanrattana)

..... 6 / April / 2024

ABSTRACT

With the development of mass education, the state's investment in higher education is unable to meet the social demand for higher education. In such a background, private independent colleges and universities as a new force came into being and grew. This paper aimed to study the influencing factors of the development strategy of ShengLi College of China University of Petroleum.

The objectives of the study were 1) To explore the influencing factors that affect the development strategy of ShengLi College of China University of Petroleum; 2) To verify whether business model, talent cultivation mode, discipline construction and team building of teachers affect the development strategy of ShengLi College of China University of Petroleum.

This study adopted the quantitative research method, 378 questionnaires were distributed and 355 valid questionnaires were obtained, with a validity rate of 93.92%. Based on the core competition theory, this paper found that: 1) The influencing factors of the development strategy of ShengLi College of China University of Petroleum included business model, talent cultivation mode, discipline construction, team building of teachers; 2) Business model, talent cultivation mode, discipline construction, team building of teachers, have a positive effect on the development strategy. For recommendations, the development strategies should focus on the following aspects: 1) Implement a diversified business model to fully utilize the strengths; 2) Strengthen the cultivation of applied talents; 3) Strengthen the construction of disciplinary characteristics and realize the differentiation of disciplinary construction; 4) Strengthen the construction of the talent team.

Keywords: development strategy , independent colleges, ShengLi College of China University of Petroleum

Title: The Influencing Factors of Development Strategy of Independent Colleges- A Case Study of ShengLi College of China University of Petroleum

By: Zhang Yongzhong

Degree: Master of Business Administration

Major: Educational Management

Advisor: 

(Dr. Jidapa Chollathanrattanapong)

..... 6 / 1 Apr. 1 / 2024

ABSTRACT

With the development of mass education, the state's investment in higher education is unable to meet the social demand for higher education. In such a background, private independent colleges and universities as a new force came into being and grew. This paper aimed to study the influencing factors of the development strategy of ShengLi College of China University of Petroleum.

The objectives of the study were 1) To explore the influencing factors that affect the development strategy of ShengLi College of China University of Petroleum; 2) To verify whether business model, talent cultivation mode, discipline construction and team building of teachers affect the development strategy of ShengLi College of China University of Petroleum.

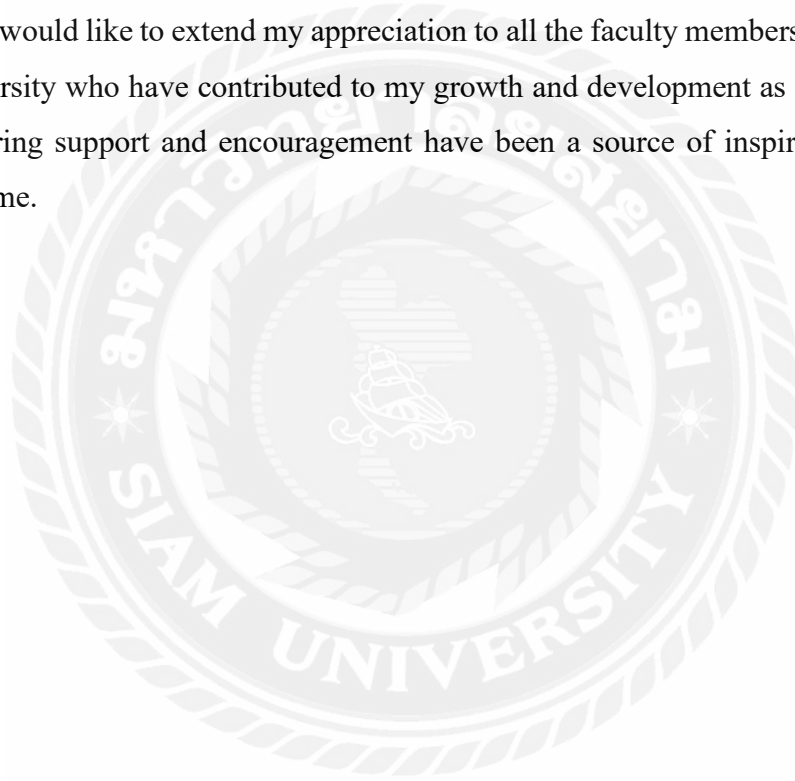
This study adopted the quantitative research method, 378 questionnaires were distributed and 355 valid questionnaires were obtained, with a validity rate of 93.92%. Based on the core competition theory, this paper found that: 1) The influencing factors of the development strategy of ShengLi College of China University of Petroleum included business model, talent cultivation mode, discipline construction, team building of teachers; 2) Business model, talent cultivation mode, discipline construction, team building of teachers, have a positive effect on the development strategy. For recommendations, the development strategies should focus on the following aspects: 1) Implement a diversified business model to fully utilize the strengths; 2) Strengthen the cultivation of applied talents; 3) Strengthen the construction of disciplinary characteristics and realize the differentiation of disciplinary construction; 4) Strengthen the construction of the talent team.

Keywords: development strategy, independent colleges, ShengLi College of China University of Petroleum

ACKNOWLEDGEMENT

I would like to express my deepest gratitude to my advisor, for his invaluable guidance, support, and encouragement throughout my independent study. His insightful comments and constructive criticism have significantly improved the quality of my work. Additionally, I am grateful to Associate Professor Dr. Jomphong Mongkhonvanit, Dean, of the Graduate School of Business, for his support and encouragement throughout my studies. His dedication to the graduate program and commitment to excellence have inspired me to strive for academic excellence.

Finally, I would like to extend my appreciation to all the faculty members and staff of Siam University who have contributed to my growth and development as a student. Their unwavering support and encouragement have been a source of inspiration and motivation to me.

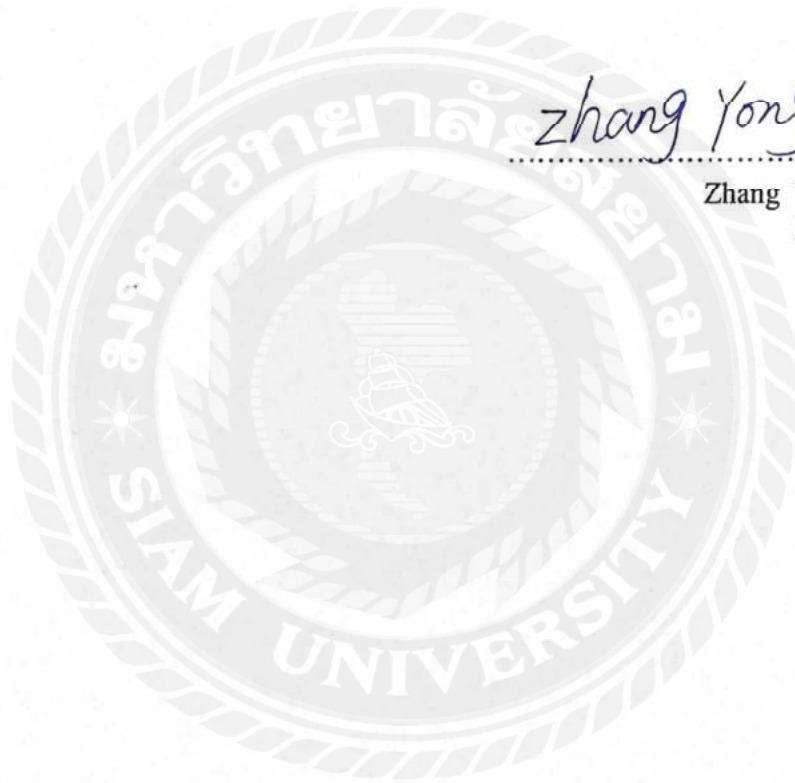


DECLARATION

I, Zhang yongzhong, hereby certify that the work embodied in this independent study entitled "The Influencing Factors of Development Strategy of Independent Colleges- A Case Study of ShengLi College of China University of Petroleum" is result of original research and has not been submitted for a higher degree to any other university or institution.

zhang Yongzhong

Zhang Yongzhong
Jan 1, 2024



DECLARATION

I, Zhang yongzhong, hereby certify that the work embodied in this independent study entitled “The Influencing Factors of Development Strategy of Independent Colleges- A Case Study of ShengLi College of China University of Petroleum” is result of original research and has not been submitted for a higher degree to any other university or institution.



zhang Yongzhong

Zhang Yongzhong
Jan 1, 2024

CONTENTS

ABSTRACT.....	I
ACKNOWLEDGEMENT	II
DECLARATION	III
CONTENTS.....	V
TABLE CONTENTS.....	VII
FIGURE CONTENTS	VIII
Chapter 1 Introduction	1
1.1 Background of the Study	1
1.2 Questions of the Study	2
1.3 Objectives of the Study.....	3
1.4 Scope of the Study	3
1.5 Significance of the Study	4
1.6 Contribution of the Study.....	5
Chapter 2 Literature Review.....	7
2.1 Introduction.....	7
2.2 Literature Review.....	7
2.3 Conceptual Framework.....	16
Chapter 3 Research Methodology.....	18
3.1 Introduction.....	18
3.2 Research Design.....	18
3.3 Hypothesis.....	22
3.4 Population and Sampling	23
3.5 Data Collection	23
3.6 Data Analysis	24
Chapter 4 Findings.....	32

4.1 Introduction.....	32
4.2 Description of statistical variables.....	32
4.3 Results of the Study.....	36
Chapter 5 Conclusion and Recommendation.....	42
5.1 Conclusion.....	42
5.2 Recommendations.....	43
References.....	46
Appendix Questionnaire.....	49

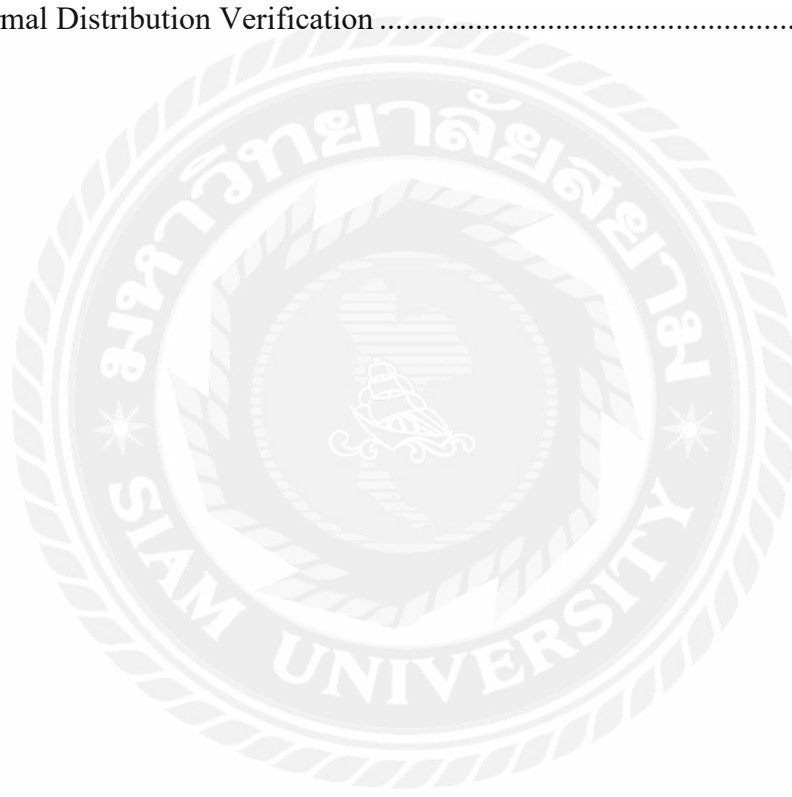


TABLE CONTENTS

Table 3.1 The Business Model Measurement Items.....	19
Table 3.2 The Talent Cultivation Mode Measurement Items.....	19
Table 3.3 The Discipline Construction Measurement Items.....	20
Table 3.4 The Team Building of Teachers Measurement Items.....	20
Table 3.5 The Development Strategy Measurement Items.....	21
Table 3.6 Cronbach's Alpha Standard.....	24
Table 3.7 Variate Reliability Test.....	26
Table 3.8 KMO and Bartlett's Test.....	28
Table 3.9 Rotated Component Matrix.....	29
Table 3.10 Variance Explained.....	30
Table 3.11 Total Variance Explained.....	31
Table 4.1 Distribution of Basic Characteristics of Samples (N = 355).....	34
Table 4.2 Descriptive Statistics.....	35
Table 4.3 Correlation Value Standard.....	36
Table 4.4 Correlation Between Variables (Pearson Correlation Matrix).....	37
Table 4.5 Model Summary.....	39
Table 4.6 ANOVA.....	39
Table 4.7 Multiple Regression Analysis.....	40
Table 5.1 Hypothesis Testing.....	43

FIGURE CONTENTS

Figure 2.1 Conceptual Framework	17
Figure 3.1 Hypotheses	22
Figure 3.2 Parallel Analysis Scree Plots	28
Figure 4.1 Demographic Characterization	33
Figure 4.2 Normal Distribution Verification	36



Chapter 1 Introduction

1.1 Background of the Study

Independent colleges were established between 1993 and 1995 as secondary colleges operated by private institutions within public higher education institutions and emerged on a large scale after the expansion of higher education enrollment in 1999; Its name was determined in Document No. 8 of the Ministry of Education in 2003 With the rapid development of China's market economy, the people's thirst and importance for education continue to increase (Liu, 2022). In 1999, the government decided to expand enrollment in higher education and implement the policy of popularizing higher education. The demand for higher education among the people was incredibly released. Still, the reality is that the existing educational resources cannot meet the education needs of the people at all. The government strongly demands that the country provide higher education resources and enrollment opportunities. Against this backdrop, the people of Higher education emerged as the times required, and secondary colleges operated by private institutions within public higher education institutions emerged. While developing rapidly, there have also been many problems. To create a fairer and standardized institutional environment, the Ministry of Education has issued several opinions on standardizing and strengthening the management of independent colleges in ordinary higher education institutions through new mechanisms and models, resulting in the birth of independent colleges (Tam & Jiang, 2015).

According to Order No. 26 of the Ministry of Education of the People's Republic of China, "Measures for the Establishment and Management of Independent Colleges," independent colleges are essential to private higher education and belong to public welfare undertakings. They are entitled to various rewards and support policies stipulated in the Implementation Regulations of the Private Education Promotion Law (Liu, 2022); The education administrative departments of the people's governments of provinces, autonomous regions, and municipalities directly under the central government are responsible for the work of independent colleges within their respective administrative areas.

With the development of mass education, the state's investment in higher education is unable to meet the social demand for higher education, in such a background, private independent colleges and universities as a new force came into being and grew. As of December 2018, China's Ministry of Education announced that there were 2,914 colleges and universities in China, of which 470 were independent private ordinary colleges and universities, and the proportion of independent colleges and universities to the overall colleges and universities in China reached 16.13%, making independent colleges and universities an indispensable and important part of China's higher education (Becker, 2021). Independent colleges are initially public and private secondary colleges, but due to the lack of funding for education in China as a whole and the unfair distribution of educational resources, the development of higher

education in China is faced with a series of problems, in order to solve this problem, some public institutions actively absorb social funds to run schools, and began the exploration of public and private secondary colleges, China's independent colleges and universities are constantly exploring the road of growth (Becker, 2021).

ShengLi College of China University of Petroleum, located in Dongying City, Shandong Province, is a provincial public full-time ordinary undergraduate school of higher education approved by the Ministry of Education. The school was established in March 2003. With the decrease of population and the influence of internal and external environment, the high tuition fee also makes many students give up attending the school, which is not conducive to the enrollment of ShengLi College of China University of Petroleum and brings serious challenges to the development of the school. ShengLi College of China University of Petroleum is in urgent need of adjustment and transformation in its philosophy, orientation and mode of operation. ShengLi College of China University of Petroleum must reformulate and adjust its development strategy to ensure its development and adapt to the needs of society.

1.2 Questions of the Study

Independent colleges are the product of a special era, but due to the relatively short development time, there are fewer theories and relevant research results in related aspects, and as time goes by, some independent colleges have many problems in the process of development, which have become important bottlenecks restricting the development of independent colleges and universities in China, which is largely due to the lack of a correct development strategy for these independent colleges and universities. Independent colleges came into being to make up for the insufficiency of higher education resources after the national enrollment expansion (Balz & Esten, 1998), which relieved the enrollment pressure of ordinary colleges and universities, provided more education resources, cultivated a large number of application-oriented talents, and made practical contributions to the cause of higher education in China. At the same time, independent colleges have their uniqueness, and the general practice is that the name of the college is preceded by the name of the parent university, but the nature of the college is completely different from that of the parent university. ShengLi College of China University of Petroleum was established under such an external environment.

From the establishment of ShengLi College of China University of Petroleum in 2003 to the present, due to the insufficient area and substandard faculty, the college failed to complete the transition within the transition period stipulated by the Ministry of Education, and did not meet the conditions for conversion required by the Ministry of Education's "Acceptance Rules for Independent Colleges". This paper explores the influencing factors of the development strategy of ShengLi College of China University of Petroleum by studying the history of the development of independent colleges and combining with the development status quo of ShengLi College of China University of

Petroleum. According to the various problems faced by ShengLi College of China University of Petroleum during the transition period, it puts forward a development strategy in line with Jiahua College. In order to better understand the development strategy of ShengLi College of China University of Petroleum, therefore, the following questions are raised in this study:

1. What are the factors influencing the development strategy of ShengLi College of China University of Petroleum?

2. Do business model, talent cultivation mode, discipline construction, team building of teachers affect the development strategy of ShengLi College of China University of Petroleum?

1.3 Objectives of the Study

This paper takes ShengLi College of China University of Petroleum as the research object selected in this paper, combines the background of the development of independent colleges and universities in China and the existing research results on the development strategy of independent colleges and universities, analyzes the development history of independent colleges and universities in China and the problems existing in the process of development, and analyzes the internal and external environments that ShengLi College of China University of Petroleum faces in the period of transition based on the theory of strategic management. Finally, the actual situation of ShengLi College of China University of Petroleum is discussed in terms of the development strategy of ShengLi College of China University of Petroleum in terms of the business model, talent cultivation model, discipline building, team building of teachers and so on. As a result, the following objectives are proposed.

1. To explore the influencing factors that affect the development strategy of ShengLi College of China University of Petroleum?

2. To verify whether business model, talent cultivation mode, discipline construction and team building of teachers affect the development strategy of ShengLi College of China University of Petroleum?

1.4 Scope of the Study

The main research scope of this study is ShengLi College of China University of Petroleum. Combined with the background of ShengLi College of China University of Petroleum and the existing research results on the development strategy of independent colleges and universities, it analyzes the development history and problems in the development process of independent colleges and universities in China. Quantitative methods are used to collect data for analysis. The influencing factors of ShengLi College of China University of Petroleum are analyzed from the aspects of business

model, talent cultivation model, discipline building, team building of teachers, etc., and the development strategy of ShengLi College of China University of Petroleum is discussed. This paper is to study the influencing factors of development strategy of ShengLi College of China University of Petroleum. survey questionnaire is used for data collection in the research process. The questionnaire mainly collects the content including, the first part about personal information, the second part is mainly about the business model, talent cultivation mode, discipline construction, team building of teachers, etc. of ShengLi College of China University of Petroleum. The second part is mainly about the business model, talent cultivation mode, discipline construction, team building of teachers, etc. The period of the questionnaire is from October 1, 2023 to January 1, 2024.

1.5 Significance of the Study

The development of higher education institutions affects the development of national society, economy, science and culture to a certain extent, and independent colleges have an important position in China's higher education system. The idea of strategic management was first applied to enterprise development and management, and with the development of the society, universities took the lead in applying the thinking of strategic management to the strategic planning of university development. With China's opening up to the outside world, many public colleges and universities in China have also integrated strategic management thinking into their development and construction and have made great progress (Olson, 2000). Independent colleges, due to their shorter history, have applied less strategic management methods to study their own development issues. It is of far-reaching significance to introduce the concept of strategic management into the management of private universities to promote independent colleges to walk out of a characteristic development road.

In the existing research results, most scholars have studied the schooling orientation, team building of teachers and talent cultivation of independent colleges, but there are fewer studies on the development paths that individually target the development strategies of independent colleges in the transition period (Liu, 2022). Therefore, the study of the strategic issues and path selection of independent colleges in the transition period has certain theoretical significance and strong practical significance. This paper has a realistic guiding significance for the future development of ShengLi College of China University of Petroleum through the research on the development strategy of ShengLi College, especially the research on the internationalization development of independent colleges, and at the same time, we hope that it can provide a little reference for the development of independent colleges.

The development and transformation of ShengLi College of China University of Petroleum is itself an exploration of the reform of the private education system and a new mode of school running, and the analysis of its current situation, the study of problems, and the improvement of countermeasures are all very important to the reform

and exploration of the cause of private higher education, so it is important to carry out a study on the development strategy of ShengLi College of China University of Petroleum, so as to enable ShengLi College of China University of Petroleum to flourish and truly serve the local society and economy. Therefore, the development strategy of ShengLi College of China University of Petroleum is studied in order to enable ShengLi College of China University of Petroleum to flourish and truly serve the local social economy. By studying the development strategy of ShengLi College of China University of Petroleum, this paper formulates a strategic guarantee for the future development of ShengLi College of China University of Petroleum, and at the same time provides new references and useful thoughts for the transformation and development of independent colleges nationwide.

1.6 Contribution of the Study

This study provides an in-depth examination of the development strategy of independent institutions in ShengLi College of China University of Petroleum by using quantitative methods. First, the business model was deeply analyzed and its impact on the overall development of the school was examined. Second, the talent cultivation model was studied, focusing on the impact of the cultivation model on the employment competitiveness of students and graduates. In addition, the study focuses on discipline construction, examining the development status and potential challenges of the college in different disciplinary areas. The research on team building of teachers focuses on the structure, level and training measures of the teaching staff. These analyses provide a comprehensive view of the influencing factors and provide strong support for ShengLi College of China University of Petroleum to formulate more targeted development strategies.

The research process provides an in-depth insight into the development history of independent colleges and universities. Through the study of ShengLi College of China University of Petroleum, this research provides insight into the development history of independent institutions in China. Comprehensive analysis of the impact of the business model. The impact of the college's business model on the development strategy of independent colleges is examined in detail, providing empirical data and in-depth analysis to understand its impact on the overall operation and development of the school. The role of talent cultivation model on the development strategy of independent colleges. Through quantitative methods, the college's talent cultivation model is explored, focusing on the development of students and graduates, providing guidance for improving cultivation strategies and enhancing students' career development. Research on the role of disciplines in building the development strategy of independent colleges. An in-depth study of the college's construction in different disciplinary areas identifies the challenges and development opportunities facing each discipline, and provides concrete suggestions for the formulation of disciplinary development strategies. Analysis of faculty structure and training measures. The faculty of the college was analyzed in detail, including staff structure, teaching level and cultivation

measures, to reveal the roles and challenges of the faculty in the overall development of the college. Together, these in-depth research dimensions constitute the unique contribution of this study, which provides comprehensive and specific guidance for the future development of ShengLi College of China University of Petroleum.



Chapter 2 Literature Review

2.1 Introduction

The literature review of this study is based on the theory of core competitiveness to analyze the factors affecting the development strategy of ShengLi College of China University of Petroleum. Through the literature review, the factors influencing the development strategy of ShengLi College of China University of Petroleum are clarified. On the basis of analyzing and summarizing related studies, the conceptual model of this study is constructed to determine the influence of business model, talent cultivation mode, discipline construction, and team building of teachers on the development strategy of ShengLi College of China University of Petroleum. Relationship.

2.2 Literature Review

2.2.1 Independent Colleges

According to the statistics of the existing literature, there is very little literature on strategic management in Chinese universities, especially at the level of strategic management in independent institutions, which is mainly due to the fact that the strategic management of Chinese universities is still in the embryonic stage (Dejnaka et al., 2016). The United States is the first country to apply the practical experience gained from enterprise strategic management to the strategic management of colleges and universities. American scholars have analyzed the strategic management innovations of some American universities, and have conducted thematic studies on the elements of university strategy and planning, and the formulation of academic strategy. A certain amount of research accounting found that the vast majority of changes in American universities are triggered by external forces, such as the regulations of the Office of Higher Education, economic depression, changes in population mobility, political changes and changes in the job market and so on. Harvard University's Hosmer, (Doubilet et al., 2004) in his book *Academic Strategy*, outlined the direct application of strategic planning in the theory of higher education, leading to the strategic management of academic thinking, not only to grasp the history of the development of the university, but also to have a clear understanding of the structure of the university's environment, as well as a clear understanding of the project's core points and the close links between the various large and small projects (Mason, 2014).

In the late 1980s, with the implementation of China's Higher Education Law, the management of multi-campus universities and the management of merged universities, academic experts realized that the responsibility of strategic management should not only be borne by the government's macro-departments, but also by the educational institutions of higher education (Petridou et al., 2009), and the majority of academic experts and higher education institutions carried out in-depth investigations into this issue, which was then joined by a large number of scholars in China. The majority of academic experts and universities have conducted in-depth research on this issue, and many Chinese scholars have joined the research team of strategic management of universities one after another. The content of university strategic management covers three major parts: strategic guiding ideology or strategic thinking, strategic planning and policy.

The university strategic management model consists of three elements: strategy analysis, strategy selection and strategy implementation in a specific way. In the implementation of strategic management, it is necessary to coordinate these relationships, which are the relationship between the main body of university development and the external environment and the relationship between the main body of development and the periphery, the relationship between the connotation and extension of development, the relationship between the coordinated development and focus, the relationship between the outstanding characteristics and the improvement of the overall strength of the relationship between the quality of the university and the effectiveness of the university (Kolb & Kolb, 2018), the relationship between the coordinated development of the three social functions of the university, such as teaching, scientific research, and social services, the relationship between the overall planning of the campus, the construction and the social services of the university logistics services. The relationship between campus master planning, construction and the socialization of university logistics services. Entrepreneurship is introduced into university management and reform, and in-depth analysis is conducted to consider how to better utilize entrepreneurship under the new development system to promote the effective and full utilization of corporate resources, and to supply the society with high-quality products by means of competitive university strategic management. The use of entrepreneurial spirit to reform the university should adhere to the double standard of "economic efficiency" and "academic level" to test the success or failure of the university's strategic management (Doubilet et al., 2004).

The competitive environment of the university is analyzed in relation to various aspects such as government resource support and the allocation of quality resources in the market. Scholars on this basis put forward the construction of marketing strategy management system on the development of independent colleges to explore the relevant research is mainly after 2011, independent colleges disadvantage lies in the poor quality of the student source, the social acceptance is not high, we should start from the quality of teaching and improve the level of teaching and research. Starting from the theory of educational economics, combined with the psychological theory model, the power

model of college students' ability development and career development is constructed, and the impact of higher education on students' development is elaborated in terms of college graduates' cognitive ability, social skills and career development, income, and promotion, and it is pointed out side by side that colleges and universities' development strategy should be started from students' development and career planning. Scholars use Porter's Five Forces model analysis to indicate that private universities become the main force in the market competition (Dejnaka et al., 2016), especially at all levels of enrollment, employment, and corporate support, to build a brand and improve the student employment rate, but did not point out the importance of the reform of the management mechanism. With regard to the management system, it is pointed out that the development of private colleges and universities lacks strength, and they should start from government support, enrollment plan, teacher status and schooling characteristics to cultivate multi-level and diversified talents, in addition to giving full play to the advantages of the flexibility of private independent colleges and universities, and creating schooling characteristics of specialties that are compatible with the needs of the society.

Through the current situation, near future and long term of the development of private universities, the planning methodology planning steps are determined from four aspects, namely, manpower demand, social demand, cost-benefit and international comparison, so as to provide a guiding significance for the development of the subsequent private independent colleges. All these articles have their specific time background and have reference value, but the development strategy research of independent colleges at this stage needs to be further explored with the contemporary social background. Independent colleges have been threatened by the Chinese-foreign cooperative schools, and they have started to carry out in-depth reforms on the levels of faculty, professional settings, campus culture, etc., so as to promote students' social competitiveness to a certain extent, but the threat of the Chinese-foreign cooperative schools has not been elaborated in concrete terms, and the status quo of the private universities with huge investment and high tuition fees has not been put forward to effectively circumvent the threat (Lewing & Shehane, 2017). In regard to the strategic management of colleges and universities, the business model of "diversified subject participation and joint collaborative development", optimizing and perfecting the internal control system of colleges and universities and scientific decision-making, and innovating to promote the improvement of teaching quality. Economic development "speed change, structural optimization, power transformation" requires higher education and its matching, the study found that the private independent colleges are faced with insufficient historical accumulation, weak foundation, the system is in the process of exploration, and has not yet formed a stable and shaped management system suitable for its own development, the development of independent colleges should focus on the faculty, talent cultivation mode and improve the internal system. The development of independent colleges should focus on teachers, talent cultivation mode and improving internal system (Morphew et al., 2017).

At the level of government policy, it is proposed that private universities should be guided by government policy, so that the legitimate rights and interests of teachers can be safeguarded, and hybrid forms of school running can be explored in depth. In "The Development Path of Educational Changes in Chinese Private Universities Based on Strategic Analysis", through the analysis of the external environment, explaining the characteristics of the era of "Internet +" and the changes in the world economy, starting from the national strategic pattern, and combining with the ability of China's independent colleges to run their own schools and their own characteristics, it is proposed that we need to change the philosophy of running schools, starting from the teachers, subject system, diversified teaching methods, and make flexible education. Teaching methods to make the flexible education and teaching mechanism more complete. Similarly, it analyzes the advantages and disadvantages of independent colleges from the aspects of external environment, national policy, regional economy, etc., and points out that it is necessary to integrate resources, establish alliances between universities and universities, universities and enterprises, and seize opportunities, which is different from other studies on the strategic development of independent colleges, and is more desirable. Through the above material can be seen in the social environment is changing, the study of independent colleges development strategy needs to be based on the background of the times, in the same industry has been analyzed on the basis of the need to start from their own, to achieve the "introduction" and "go out" of the organic combination of their own positioning, to explore the strategic planning for their own development (Williams, 1972). Explore the strategic planning suitable for its own development.

2.2.2 Strategic Management

(1) Connotation of Strategic Management

Strategic management is the art and science of customizing, implementing and evaluating multifunctional decisions that ensure that an organization achieves its goals. The direction and scope of long-term development of the enterprise is the main content involved in strategy, which tries its best to match the resources with the environment (especially the market) and consumers in order to realize the desired goals of the enterprise. The business scope of the enterprise's operation, how to allocate resources, how to achieve competitive advantage and how to obtain synergistic effects are the contents to be covered by strategic management. The business scope of operation is the area in which the enterprise engages in production and business activities. Resource allocation is the ability and manner in which a firm allocates and integrates its resources and skills (Godet, 2022). Competitive advantage is the favorable competitive position that an enterprise develops in the market through the way it allocates its resources and the decisions it makes about its business scope. Synergy is the overall effect of a firm utilizing the same resources for business decisions at different stages or in different areas.

Strategy is the wind vane that guides its forward movement, the enterprise's expected goals and operations are inseparable from it, the overview of the strategic management of the academic community has a wide range of opinions and thus give rise to different points of view (Petit, 2019). The strategic development of enterprises cannot be separated from the support of expansion and strategic transformation. Academic experts say that financial strategy in the implementation and application of the link, the need for multi-angle study of the relevant causes and development strategies, to start on the future development trend of enterprises, profitability, investment and other levels of in-depth analysis, based on which to customize the development of enterprises in line with the strategic plan.

Strategic management includes strategic planning, strategic decision-making, strategic cost management, human resource management, comprehensive budget and comprehensive performance evaluation system. Enterprise strategic management is the link that causes the whole enterprise production chain to connect, and has a decisive financial activity for the value of the enterprise (Hitt, 2021). The study of the current development status of Chinese universities found that private universities must develop scientific and reasonable corporate strategic objectives according to their own development advantages, their own situation and their competitive potential in the undeveloped market in order to promote the sustainable development of the enterprise. The contradictions and conflicts between the various configurations in the strategic composition are explained, and the in-depth analysis of enterprise strategy is aimed at solving the contradictions in the strategic composition. Colleges and universities, while ensuring their own core competitive advantages, should also assess their own environment, and strive to ensure that their environment is not damaged by the external environment. Based on the basis of profit maximization, the development of the enterprise will be analyzed. Its development should be based on the strategic concept of "customer psychology as the starting point", and formulate relevant development strategies based on customers. Financial management strategy cannot exist alone, it needs to realize and other strategies of organic integration, mutual collaboration, as a cornerstone to promote the vigorous development of enterprises. The strategic development level of the enterprise strategy to explore the impact of different corporate strategy on all aspects of corporate financial information, through in-depth analysis found that if the strategic development of the enterprise and corporate strategy deviation, then the enterprise's net asset value will increase and ultimately remain at the maximum value, but the value of net profit will go down (Johnsen, 2020).

(2) Strategic Management Process

The process of strategic management begins with the identification of corporate vision, mission and goals, followed by the analysis of the internal and external environment of the company, i.e. the analysis of the strategic posture. This is followed by strategy analysis and selection, after which strategy implementation takes place, and finally ends with strategy evaluation and control (Johnsen, 2020). It is worth noting that

strategic evaluation and control is both the end of the strategic management cycle and the beginning of a new strategic management cycle. Strategic management is a continuous and systematic process, and the steps form a cyclical strategic management process in which the organization can flexibly adjust its strategy to the changing external and internal environment in order to maintain a competitive advantage (Zehner, 2020).

- **Environmental analysis:** Before developing a strategy, an organization first needs to analyze the external environment and internal resources. External environment analysis looks at factors such as markets, competitors, and technology trends, while internal analysis focuses on the organization's resources, capabilities, and structure.

- **Goal Setting:** After understanding the environment, the organization clearly sets long-term and short-term strategic goals. These goals should be consistent with the organization's vision, mission, and current environmental analysis.

- **Strategy development:** After clarifying the objectives, develop strategies that will enable the organization to achieve those objectives. This includes choosing the appropriate market positioning, business model, product mix, etc., as well as determining how to allocate resources and capabilities.

- **Tactical Planning:** Translating strategies into practical, executable plans. This may include specific marketing strategies, production plans, human resource planning, and so on. Tactical planning usually involves short- and medium-term decisions.

- **Execution and Implementation:** Putting the tactical plan into practice and carrying out the strategies developed. This requires effective coordination and management of the various departments within the organization to ensure that the entire organization is working toward achieving the strategic goals.

- **Performance Monitoring:** Continuously monitoring the performance of the organization and comparing it to the strategic goals set. This includes tracking key performance indicators and making adaptive adjustments to changes in the market, competitive environment, and internal operations.

- **Strategy Evaluation and Revision:** Regularly evaluating the effectiveness of the strategy and making revisions based on the results of performance monitoring. In a rapidly changing environment, organizations need the flexibility to adapt their strategies to new challenges and opportunities.

2.2.3 Core Competitiveness Theory

Core Competitiveness Theory was developed by Gary Hamel and C.K. Prahalad, which emphasizes that organizations should focus on and develop their core competencies in order to achieve a lasting competitive advantage in the marketplace. Core competencies are the unique capabilities and resources that an organization possesses in a particular domain that are difficult to be imitated or replaced by competitors (Hamel & Prahalad, 1999). These capabilities and resources enable the organization to provide unique value in the marketplace, attract customers and achieve competitive advantage. Rather than being widely dispersed in all areas, core competencies focus on the organization's excellence in certain key areas. This may involve exceptional technology, innovation, brand reputation or other resources. Organizations should meet future opportunities by developing core competencies, not just compete in existing markets. This means continually creating new core competencies to adapt to changing markets and competitive environments (Lavoie et al., 2017). Effective core competency management requires judicious allocation of the organization's resources to ensure that they are directed to the areas that best enhance the core competencies, rather than being dispersed in secondary or irrelevant directions. Core competency theory emphasizes the close integration of core competencies with the overall strategy of the organization. This requires leadership with a deep understanding of markets, technology and organizational capabilities to effectively shape strategic direction. By developing and protecting core competencies, organizations can build long-term market advantage, better adapt to change, and succeed in a competitive environment.

Analyzing the core competency theory in conjunction with the development strategy of independent colleges and universities, it is possible to understand that independent colleges and universities, which are schools with the nature of a business in the higher education system, have characteristics similar to those of a business organization. The main components of core competitiveness of independent colleges and universities include business model, talent cultivation mode, discipline construction, and team building of teachers.

(1) Business Model

In the study of development strategy of independent colleges and universities based on the theory of core competitiveness, there is an impact of business model on development strategy. Resource allocation and core competence of independent institutions. The business model involves the allocation and management of resources, which includes financial resources, teaching facilities, technical support and so on for independent institutions. Through an effective business model, schools are able to focus on investing resources to develop core competencies and improve the level of school operation, thus forming unique competitiveness. The adoption of different business models may lead to different cost structures (Kachaner et al., 2021). Cost leadership

strategy is a business model that improves competitiveness by reducing costs. For independent institutions, a reasonable business model helps optimize the use of resources and improve the cost-effectiveness of educational services. The business model influences the school's subject offerings and curriculum design. By focusing on specific subject areas or offering unique specialties, a school can demonstrate its core competencies in its business model and attract more students and outstanding staff. The business model reflects the school's position in the marketplace. By choosing an appropriate business model, a school can establish a unique brand image, attract its target student population and stand out in the highly competitive education market. A flexible and innovative business model helps schools to adapt to the ever-changing educational environment. By constantly experimenting with new teaching methods and adopting new technologies, schools can cultivate a sense of innovation and improve their ability to adapt in the face of competition. The business model has an important impact on the development strategy of independent colleges and universities. By combining it with the theory of core competitiveness, schools can formulate strategies in a more targeted way and realize sustainable competitive advantages (Gerardi & Dominiquini, 2020).

(2) Talent Cultivation Mode

In the study of development strategy of independent institutions based on core competitiveness theory, talent cultivation is a key aspect, which is closely related to the business model and core competitiveness, and has an important impact on the development strategy. Customized cultivation mode, independent institutions can emphasize students' core competitiveness in terms of professional knowledge, practical skills and industry adaptability by carefully designing cultivation modes to meet the needs of specific fields or industries. Teaching innovation and technology application, utilizing advanced teaching methods and technologies, such as online learning and virtual laboratories, can help improve teaching effectiveness and develop students' innovative thinking and ability to adapt to future career requirements. Industry cooperation and internship opportunities, which help students gain practical experience in the learning process and develop industry-related core competencies by establishing partnerships with related industries and providing internships and real-world work opportunities (Jun & Jing, 2017). Emphasis on comprehensive literacy. In addition to professional knowledge, the program focuses on developing students' comprehensive literacy, including teamwork, communication skills, and leadership skills, in order to enhance their competitiveness in the workplace. Individualized counseling and development plans, providing individualized academic counseling and career development plans so that each student can develop unique core competencies based on his/her own interests and strengths. Continuous assessment and adjustment, regularly evaluating the effectiveness of talent cultivation and flexibly adjusting the cultivation strategy according to the changes and feedbacks of the job market, in order to ensure that students have the core competencies required by the market after graduation. By combining talent cultivation with the theory of core competitiveness,

independent colleges and universities can better meet the needs of the society and cultivate competitive professionals, thus gaining strategic advantages in the education market.

(3) Discipline Construction

Discipline construction is a crucial aspect in the study of development strategies of independent institutions based on the theory of core competitiveness, which is essential for shaping core competitiveness and formulating strategies. Professional Characteristics and Differentiation. Discipline construction is the basis for forming unique professional characteristics. By developing disciplines that are closely aligned with market demand, independent institutions can establish differentiation in their core areas and provide distinctive educational services (Sullivan & Heffernan, 2016). Market demand and talent cultivation. Discipline construction should be closely aligned with market demand to ensure that the disciplines offered are consistent with industry needs. This helps to prepare students with the core competencies required by current and future markets. Discipline building needs to be staffed with high caliber faculty members who have extensive experience and research in the relevant fields. A strong team building of teachers is essential to ensure the quality and reputation of the discipline. Through the development of key disciplines, the university can promote the research and innovation activities of its faculty members. The generation and application of research results helps to enhance the School's reputation in the academic community, while providing students with a richer experience of the discipline. Discipline building can be aligned with the international arena, attracting faculty and students of international caliber and promoting the internationalization of disciplines. At the same time, establishing international disciplinary partnerships helps to enhance the international reputation of the discipline. With the changes in society and industry, discipline construction needs to be continuously developed and adjusted. Flexibility in adjusting the disciplinary settings and focusing on the development of emerging fields help to maintain the vitality and foresight of the disciplines. Through careful planning and implementation of discipline building, independent institutions can form a discipline system with core competitiveness and provide strong support for the overall strategic development of the university (Johnsen, 2020).

(4) Team Building of Teachers

Combined with the theory of core competitiveness, team building of teachers is an important part of the core competitiveness building of independent institutions. Independent colleges and universities implement the development strategy to improve, will inevitably take the team building of teachers as an important task. Whether it is an independent institution or a public institution, the construction of teachers is the core link of its development. The current faculty strength of independent colleges in China relies very much on the combined efforts of adjunct instructors, full-time faculty and external faculty (Sun et al., 2016). According to the assessment data of the Chinese

Ministry of Education, the full-time teachers of independent colleges should account for one-third of the total teaching force. However, from the current actual situation, the full-time teachers of independent colleges have only reached the assessment standard in terms of quantity, but the quality is still far from being enough, and there is an obvious shortage of the existing full-time teachers in terms of both titles and academic structure, and there are fewer teachers with doctoral degree or above, and less research level than part-time teachers. less, and there is an obvious gap between the scientific research level and that of the adjunct instructors or teachers employed by the parent school.

On the other hand, in order to save teaching costs, many teachers in independent colleges and universities in China are external retired teachers from public institutions, who are an important force in the teaching force of independent colleges and universities. However, because they are retired and not official teachers of the school, there are certain deficiencies in their teaching input, energy and responsibility, and they lack innovation in their teaching mode, are not well integrated with the student body, and their teaching methods are old-fashioned, which cannot be closely combined with the current situation of today's time in the process of teaching. The teaching effect is not particularly ideal because it is closely combined with the current situation of today's times. In addition to retired teachers from public institutions, independent colleges also have socially recruited teachers. In the case of insufficient existing teachers in independent colleges, some fresh graduates with certain academic qualifications are recruited to train as young teachers, and most of the teachers in these colleges come from the same class, and although there is the problem of insufficient experience in teaching, their high academic qualifications and strong skills determine their ability to improve. Through a period of training and guidance will be able to become a teacher with high teaching quality, but also in the future for independent institutions to create great wealth (Sun et al., 2016).

2.3 Conceptual Framework

Independent colleges have developed so far, as new educational units, short time of running schools, lack of experience, in the existing educational competition environment and the impact of national policies, many institutions cannot meet the national standardization requirements, there are many problems. Such as independent colleges governance structure problems, development strategy problems, team building of teachers and management problems, specialization and curriculum construction problems, student education and development problems, experimental conditions improvement and construction problems, scientific research problems, policy and funding problems, student source problems, internationalization and other problems. Independent colleges have a certain profit-making nature, and there are corresponding problems in their governance structure. According to relevant regulations, the decision-making body of independent colleges is the board of directors. These governance issues are currently a major problem for independent colleges in China, and how to implement

the development strategy about the inevitable requirements of the actual development of the school. In the process of development, the number and scale of independent colleges have been expanding, and the problems have continued one after another, whether in school orientation, specialty setting or talent cultivation.

In this study, in order to fully analyze the influencing factors of the development strategy of ShengLi College of China University of Petroleum, we take the core competitiveness theory as the research basis, and take business model, talent cultivation mode, discipline construction and team building of teachers as the independent variables, and development strategy as the dependent variable, and constructed a model of influencing factors. The above analysis summarizes the conceptual framework of this study. as shown in Fig2.1.

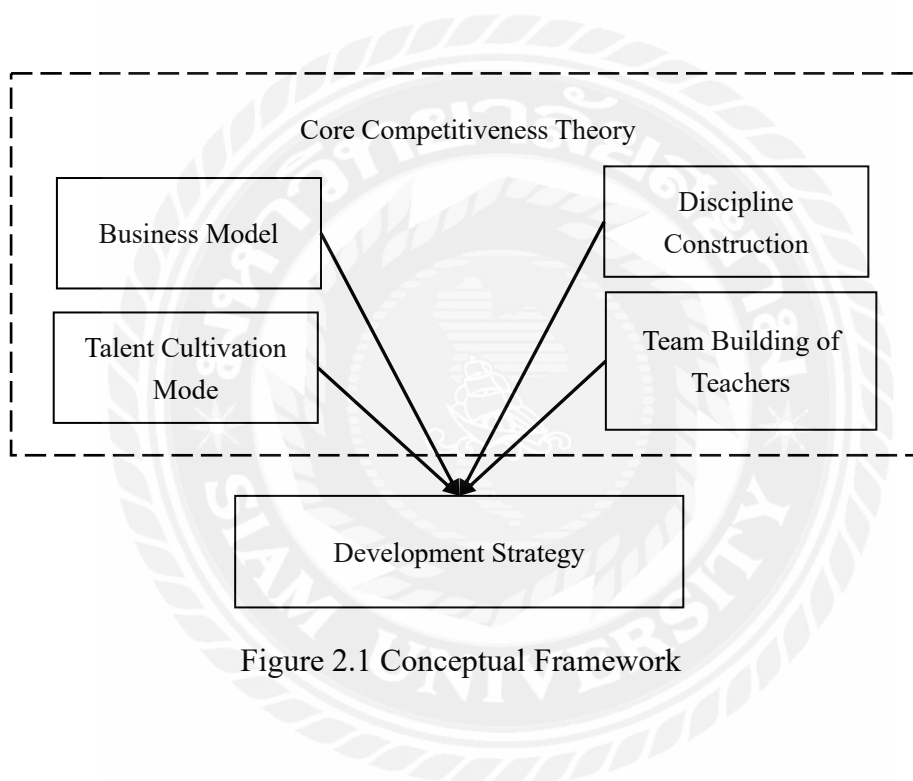


Figure 2.1 Conceptual Framework

Chapter 3 Research Methodology

3.1 Introduction

This study focuses on the factors influencing the development strategy of ShengLi College of China University of Petroleum. Combined with the theory of core competitiveness to determine the independent variables in the research model are business model, talent cultivation mode, discipline construction, team building of teachers, and the dependent variable is development strategy. quantitative research is used. Research. Combined with the development situation of ShengLi College of China University of Petroleum, we set up a questionnaire, put forward the research hypotheses, and test the reliability and validity of the questionnaire, and the reliability of the data was judged by Cronbach's alpha. Validity was judged by Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity. The validity and scientificity of the collected data were ensured. Also, determine the sample size and study population. A survey study was conducted to collect data. Sample data collection was done using Likert 5-point scale.

3.2 Research Design

Quantitative research was used in this study. ShengLi College of China University of Petroleum is taken as the research object. According to the theory of core competitiveness, the important factors affecting the development strategy include four aspects which are Business Model, Talent Cultivation Mode, Discipline Construction, and Team Building of Teachers. Therefore, this study constructs the model of influencing factors.

Questionnaire scale design was conducted based on relevant studies and theories. Measurement question items for each variable are designed. The measurement of each measurement item is based on a five-point Likert scale. Business Model Measurement items are five main items including the following: organizational structure in the business model of independent colleges, the degree of participation, organizational culture and values, the degree of support for teachers in teaching and research in the business model, and the incentive mechanism. See Table 3.1.

Table 3.1 The Business Model Measurement Items

Variate	Measurement Item	NO.
Business Model	1. In your college's operating model, do you believe that the design of the organizational structure contributes to the effectiveness of faculty teaching and research?	BM1
	2. The degree of involvement of the operating model in the decision-making process of the college has an impact on faculty job satisfaction?	BM2
	3. You recognize the organizational culture and values in the college's business model?	BM3
	4. You believe that the college business model is highly supportive of faculty in teaching and research?	BM4
	5. You are satisfied with the incentives related to faculty in the college business model?	BM5

Talent Cultivation Mode measures 5 items mainly including: talent cultivation with full attention to the development of students' comprehensive qualities, flexibility of the education system, curriculum design, integration of theory and practice, personalized guidance and support. See Table 3.2.

Table 3.2 The Talent Cultivation Mode Measurement Items

Variate	Measurement item	NO.
Talent Cultivation Mode	1. The college pays full attention to the development of students' overall qualities, not just the teaching of specialized knowledge?	TCM1
	2. The college's education system is flexible enough to adapt to the ever-changing needs of the job market and to ensure that students can be successfully employed after graduation?	TCM2
	3. The college's curriculum is designed to develop students' creativity, teamwork and problem-solving skills?	TCM3
	4. The college provides sufficient practical opportunities, such as internships and practical training, to help students apply their theoretical knowledge to real work?	TCM4
	5. The College actively provides personalized guidance and support to students in their development process to help them discover their interests, strengths and career directions?	TCM5

Discipline Construction measures five main items including: disciplinary settings and market demand, interdisciplinary research and collaboration, development directions and goals, high-level teaching and research teams, and assessment mechanisms. See Table 3.3.

Table 3.3 The Discipline Construction Measurement Items

Variate	Measurement item	NO.
Discipline Construction	1. The College's current disciplinary set-up is in line with the market demand and the trend of disciplinary development. Has the College considered introducing new areas or adjusting the existing disciplinary structure?	DC1
	2. In the development of disciplines, does the College emphasize interdisciplinary research and collaboration to address complex problems and promote innovation?	DC2
	3. Is there a clear direction and goal in the College's disciplinary development to ensure the competitiveness of the disciplines?	DC3
	4. The College has a plan for team building of teachers to ensure high quality teaching and research teams in each discipline?	DC4
	5. Is there an effective assessment mechanism in the disciplinary development to monitor the development of the disciplines, to adjust the strategies in time and to ensure a balanced development among different disciplines?	DC5

The Team Building of Teachers measurement items are 5 main items including: team structure, support and incentives, degree of internationalization, evaluation system, and communication and cooperation. See Table 3.4.

Table 3.4 The Team Building of Teachers Measurement Items

Variate	Measurement item	NO.
Team Building of Teachers	1. The faculty is well-structured, with high-level young faculty introduced and trained to ensure long-term development of teaching and research?	TBT1
	2. In the team building of teachers, the College emphasizes professional development and academic research of teachers and provides appropriate support and incentives?	TBT2
	3. The degree of internationalization of the faculty is taken into account in team building of teachers by bringing in international faculty or promoting international exchange?	TBT3
	4. Is there an effective evaluation system in place to assess faculty members' teaching and research performance and to promote continuous improvement in their teaching and research capabilities?	TBT4
	5. The college emphasizes teacher-student relationships in team building of teachers, and provides useful opportunities for communication and collaboration to promote a positive teaching and learning environment?	TBT5

Development Strategy measures 5 items mainly including: strategic planning, modernization elements such as science, technology and innovation, digital transformation, international cooperation, goals and plans, social services, industrial cooperation, and so on. See Table 3.5.

Table 3.5 The Development Strategy Measurement Items

Variate	Measurement item	NO.
Development Strategy	1. The current development strategy of the College is in line with the overall trends in the field of higher education and the direction of national development, and is there any in-depth strategic planning for future development?	DS1
	2. Modern elements such as technological innovation and digital transformation are fully taken into account in the College's development strategy to meet the new needs of future education?	DS2
	3. Does the College's development strategy focus on internationalization, and does it plan to promote international cooperation, bring in international talents, and increase the College's influence in the international arena?	DS3
	4. The development strategy has clear goals and plans for talent training to ensure that students have comprehensive qualities and practical skills after graduation?	DS4
	5. Does the college have specific development plans for social services and industrial cooperation to promote close ties between the college and society and facilitate win-win development?	DS5

Each variable was analyzed and organized according to the literature and variable operational definitions. The measurement question items for each variable will be used as indicators and content for the specific collection of variable data. After the questionnaire design, the questionnaire will be distributed according to the requirements, and the main survey population will be the faculty members of ShengLi College of China University of Petroleum. The data collection process will be screened according to the status of the time response to the questionnaire. Invalid questionnaires will be eliminated and valid questionnaires will be organized to lay the foundation for later data analysis.

3.3 Hypothesis

The independent variables in this study are Business Model, Talent Cultivation Mode, Discipline Construction, Team Building of Teachers. the dependent variable is Development Strategy. based on the analysis and relationship between the variables, the construction of the Modeling. The relationship between the variables is set through hypotheses. Therefore, hypotheses are formulated:

H1: Business Model has a significant positive effect on the development strategy of ShengLi College of China University of Petroleum.

H2: Talent Cultivation Mode has a significant positive effect on the development strategy of ShengLi College of China University of Petroleum.

H3: Discipline Construction has a significant positive effect on the development strategy of ShengLi College of China University of Petroleum.

H4: Team Building of Teachers has a significant positive effect on the development strategy of ShengLi College of China University of Petroleum.

Combined with the above analysis, the model of influencing factors for the development strategy of ShengLi College of China University of Petroleum is constructed and the interrelationships among the variables are confirmed. See figure3.1.

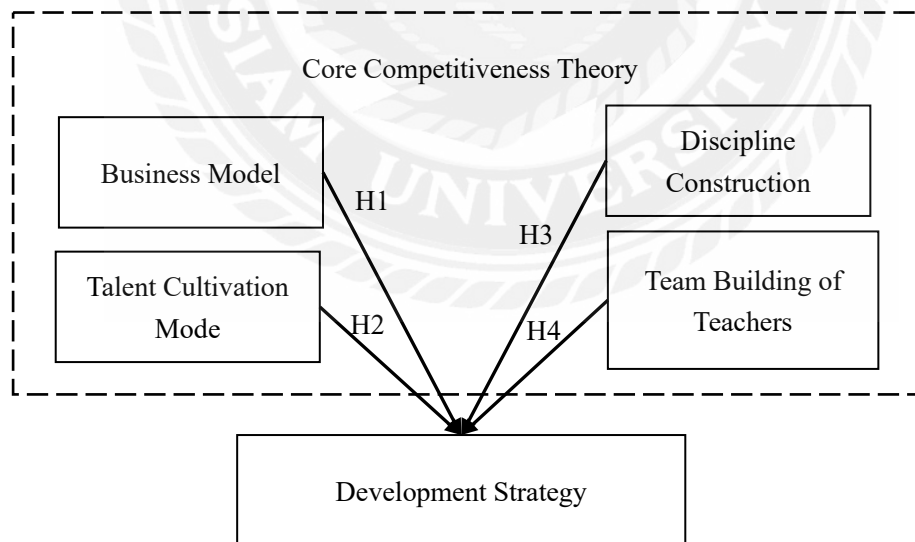


Figure 3.1 Hypotheses

3.4 Population and Sampling

The research population of this study is the faculty and staff of ShengLi College of China University of Petroleum. The official website of ShengLi College of China University of Petroleum in April 2023 shows that there are 604 faculty and staff members in the school, with 475 full-time teachers, of which 180 have senior titles, accounting for 37.9% of the total number of full-time teachers; 453 have master's degrees or above, accounting for 95.4% of the total number of full-time teachers. The university has 7 colleges and offers 39 undergraduate majors, which cover 9 major disciplines such as engineering, science, economics, management, literature, education, art, medicine, law, etc. In order to improve the quality and scientificity of the study, two aspects in order to improve the quality and scientificity of the study, two aspects need to be fully considered in sample selection. On the one hand, it is the object of sample selection; the main content of this study is to study the influencing factors of development strategy of Shengzhen. influencing factors of development strategy of ShengLi College of China University of Petroleum. therefore, this time, the random sampling method is used for sample selection, in which the number of samples is calculated according to.

$$N = \frac{r^2 * \rho(1 - \rho)}{\beta^2}$$

The sample size is 377.84 and Yamane's reliability is 95% ($f = \pm 5\%$) with various errors; the sample size is 378. Therefore, this study requires a random sample of 378 development strategy of ShengLi College of China University of Petroleum to ensure that the difference between the sample mean and the overall mean at the 95% confidence level is not more than 0.5.

3.5 Data Collection

The data collection for this survey was mainly through the Personnel Office of ShengLi College of China University of Petroleum, where a list of the faculty and staff of ShengLi College of China University of Petroleum was obtained. Based on the list and numbered each faculty member to ensure that everyone had an equal chance of being selected. Using a random number generator, a certain number of faculty members were randomly selected from this list to form the study sample. The sample size was drawn as 378. Based on the sample drawn, the selected faculty and staff were contacted via e-mail. Inform the faculty members of the purpose and importance of the study and the contribution of participation to the study. Provide clear survey instructions and a confidentiality statement to ensure that the privacy of the participants is protected. To increase participation, incentives can be used, such as offering a commitment to participate in feedback on the results of the study. Ensure that questionnaires or interviews are designed in a clear and concise manner to minimize the burden on

participants. Distributed from September 1, 2023 to January 1, 2024 Statistically, 378 electronic questionnaires were distributed and 355 were recovered, after screening the questionnaires, 23 questionnaires that were not received were processed according to nullification and 355 valid questionnaires were obtained, with a validity rate of 93.92% for questionnaire recovery.

3.6 Data Analysis

3.6.1 Reliability

Reliability refers to the ability of a measurement tool or questionnaire to produce consistent results over multiple applications. It measures the stability and reliability of the measurement instrument, i.e., whether similar measurement results can be obtained under the same conditions. The main role of reliability is to ensure that the measurement tool or questionnaire is trustworthy and stable in measuring the concept or variable to be measured. In this study, the collected research variables were imported into the SPSS software for in-depth analysis. The reliability and validity of the data was assessed through the application of Cronbach's alpha coefficient, which is designed to determine the stability of the questions in the questionnaire used, as well as to ensure that it possesses the reliability to adequately reflect the validity of the intent and purpose of the survey. Measures of reliability include Cronbach's alpha coefficient, which is one of the most commonly used indicators of reliability. Cronbach's alpha coefficient ranges from 0 to 1, with the closer it gets to 1, the more reliable the instrument is. Maintaining an appropriate level of reliability helps to ensure the consistency and reliability of the measurements and improves the scientific validity and accuracy of the study. See Table 3.6. in general:

- Greater than 0.8: indicates very good reliability.
- Between 0.6 and 0.8: indicates generally acceptable reliability.
- Less than 0.6: may mean that the reliability fails to meet the desired standard and that the design of the questionnaire and the selection of items need to be carefully considered.

Table 3.6 Cronbach's Alpha Standard

Cronbach's Alpha	Value	Reliability
	Exceed 0.8	Good reliability
	0.8-0.6	Acceptable
	Less than 0.6	Weak reliability

The data collected in the study were analyzed and the Cronbach's alpha coefficient of Business Model is 0.898, which is between 0.6 and 0.8, indicating that the reliability of the data collected for the study variables is acceptable. The Cronbach's alpha coefficient of Talent Cultivation Mode is 0.873, which is above 0.8, indicating that the reliability of the data collected for the study variables is good. Discipline Construction is 0.869, which is above 0.8, indicating that the reliability of the data collected for the study variables is good. The Cronbach's alpha coefficient of Discipline Construction is 0.869, which is above 0.8, indicating that the reliability of data collection for the research variable is good. The Cronbach's alpha coefficient of Team Building of Teachers is 0.870, which is above 0.8, indicating that the reliability of data collection for the research variable is good. 0.8 or above, which indicates good reliability of data collection for the research variables. Cronbach's alpha coefficient of Development Strategy is 0.864, which is above 0.8, which indicates good reliability of data collection for the research variables. According to the results of data analysis, the Cronbach's alpha of all variables is above 0.6, which indicates that the reliability of the questionnaire is better, and then can be further analyzed for validity. This indicates that the reliability of the questionnaire of this survey study is very good, as shown in Table 3.7.

Cronbach's Alpha if Item Deleted test was conducted for each question item during the study, if the Alpha coefficient increases more after deleting an item, it indicates that the lower alpha coefficient of the whole scale is caused by this indicator, and it is recommended to modify the indicator, or delete the question item if the sample size is sufficient. If the difference in α is not large, it means that the questions are set up better and the consistency is high. Through calculations, the study found that Corrected Item-Total Correlation and Cronbach's Alpha if Item Deleted, the results show that Corrected Item-Total Correlation are all more than 0.5 and Cronbach's Alpha if Item Deleted are all less than Cronbach's Alpha, which indicates that the reliability of each question item is better see Table 3.7, which indicates that the measurement reliability of each question item is good and cannot be deleted. This also indicates that the reliability of the data collected is good.

Table 3.7 Variate Reliability Test

Variate	Measuring item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Corrected Item-Total Cronbach's Alpha
Business Model	BM1	0.806	0.862	0.898
	BM2	0.728	0.880	
	BM3	0.765	0.872	
	BM4	0.713	0.883	
	BM5	0.728	0.880	
Talent Cultivation Mode	TCM1	0.728	0.839	0.873
	TCM2	0.679	0.851	
	TCM3	0.695	0.847	
	TCM4	0.710	0.843	
	TCM5	0.688	0.849	
Discipline Construction	DC1	0.783	0.820	0.869
	DC2	0.691	0.843	
	DC3	0.651	0.852	
	DC4	0.660	0.851	
	DC5	0.700	0.841	
Team Building of Teachers	TBT1	0.727	0.834	0.87
	TBT2	0.648	0.853	
	TBT3	0.714	0.838	
	TBT4	0.704	0.840	
	TBT5	0.682	0.845	
Development Strategy	DS1	0.741	0.821	0.864
	DS2	0.672	0.839	
	DS3	0.655	0.843	
	DS4	0.702	0.832	
	DS5	0.653	0.844	

3.6.2 Validity

Validity, on the other hand, refers to the ability of a measurement instrument to accurately and completely reflect the concept or phenomenon being measured. If reliability is not met, the items may need to be removed or modified, or the sample size may need to be adjusted. Content validity refers to whether the content of a measurement instrument covers the concept or domain to be measured completely and accurately. Content validity is usually determined by expert assessment or theoretical evidence. Scale validity refers to the validity of a measurement instrument or method, i.e., whether it can effectively predict or measure the target variable. Scale validity is usually assessed using a criterion (i.e., a validity scale) that relates to the target variable, such as other measurement tools that have been shown to be valid, if they are

significantly correlated, or if the questionnaire items show significant differences in the values and characteristics of the criterion, they are valid items. Construct validity refers to whether the factor structure of a measurement instrument is consistent with theoretical assumptions or research expectations. When measuring a complex concept, multiple indicators or questions are often used to capture its different dimensions or factors. The method of measuring structural validity is usually factor analysis. In most practical problems, there is some correlation between variables. In order to reduce the complexity and increase the accuracy of a study, it is desirable to replace a larger number of variables with fewer variables that reflect the relationships of the original variables as closely as possible. Utilizing this idea of dimensionality reduction has given rise to methods such as factor analysis.

Validating factor analysis is when the researcher has already distinguished the data dimensions, at which point the factor analysis is done mainly to verify whether the data conforms to the dimensions that have been categorized, to test the validity of the theoretical model and to check whether the model needs to be improved.

- **KMO test:** KMO test is to determine to what extent the data are suitable for exploratory factor analysis, and its value ranges from 0 to 1. The closer the KMO value is to 1, the stronger the correlation between the variables is, and the weaker the bias correlation is, the better the effect of factor analysis is. In actual analysis, the KMO statistic is better when it is above 0.7, more general when it is 0.6, and unsuitable for factor analysis when it is below 0.5.

- **Bartlett's test of sphericity:** It is used to determine whether exploratory factor analysis is appropriate or not. Bartlett's test of sphericity is used to test the correlation between variables in a correlation array and whether it is a unit array, i.e., to test whether each variable is independent of the other. When the probability value is less than the significance level ($p < 0.05$), it is suitable for factor analysis. On the contrary, it means that there is no correlation between the original variables, and these variables may provide some information independently and are not suitable for factor analysis.

According to the results of the research data analysis, the variables were analyzed for validity, in which the KMO value was 0.945, the KMO value was greater than 0.9, $KMO = 0.945 > 0.7$, the sample size was sufficient, and the test of sphericity, $p = 0.000 < 0.05$, conformed to the test of sphericity. Combined with two indicators, this indicates that the research data of the questionnaire is very suitable. sig significant in Bartlett's Test of Sphericity. After analyzing, it can be known that the constructed variable model can perform Confirmatory factor analysis (CFA). Therefore, CFA was performed on the data.

Table 3.8 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.945
Bartlett's Test of Sphericity	Approx. Chi-Square	4060.608
	df	190
	Sig.	0.000

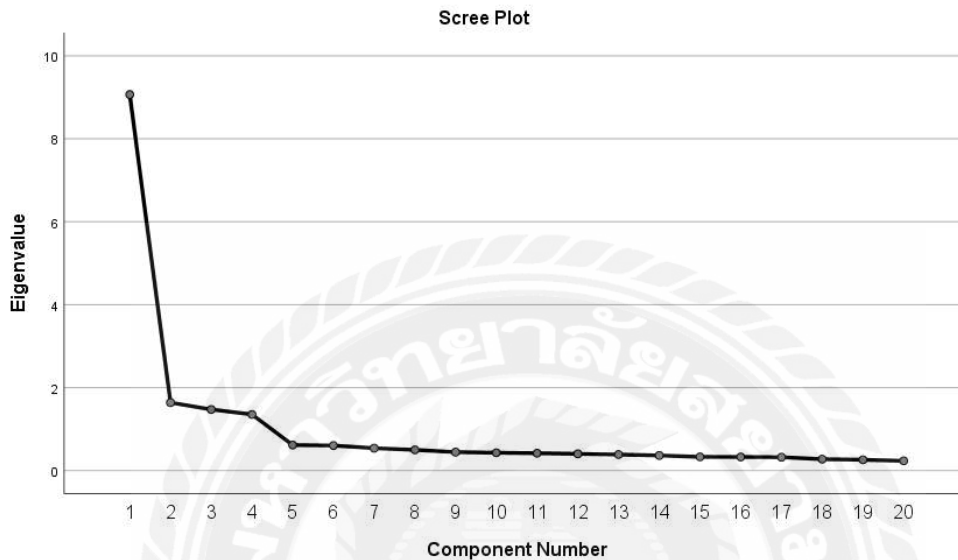


Figure 3.2 Parallel Analysis Scree Plots

Parallel Analysis Scree Plots can be used to assist in determining the optimal number of factors, the factors corresponding to the steeper slopes of the curve contain more information and their number can be determined as the number of factors extracted for the main factor; while the factors on the gentle slopes have very little explanatory power for the variables. According to Figure 3.2, the study found that the number of factors that can be proposed for this data is four. Therefore, the number of factors to rotate the factor loading matrix during data analysis should be 4.

The structure of the factor loading array can be simplified by rotating it so that the squared values of the elements in each column or row of the loading matrix are bifurcated towards 0 and 1. This can make the relationship between the original variables and the factors more prominent, i.e., each variable has a larger loading on only one common factor and smaller loadings on the other common factors, making it easier to clarify the meaning of the common factors and interpret them in a practical context. The maximum variance method is commonly used for rotation. Factor loadings are the degree of relationship between each variable and each factor, and the magnitude of the value indicates the importance of the variable on that factor. Factor loadings usually range from -1 to 1, with absolute values closer to 1 indicating a stronger relationship. It is generally required that the Factor loading coefficient (Factor loading) value corresponding to each measurement item is greater than 0.7. Questions with substandard Factor loading may be considered for deletion or adjustment of the sample

size for re-analysis. According to Table 3.9, it can be concluded that the principal component is 4 and each question item is centralized for the measurement of the variable. The commonality of the questions for each variable is more than 0.6, indicating that the original information contained in each variable can be explained well by the extracted common factor.

Table 3.9 Rotated Component Matrix

Rotated Component Matrix^a				
	1	2	3	4
BM1	0.786			
BM2	0.717			
BM3	0.793			
BM4	0.744			
BM5	0.743			
TCM1		0.764		
TCM2		0.699		
TCM3		0.716		
TCM4		0.772		
TCM5		0.716		
DC1				0.819
DC2				0.718
DC3				0.690
DC4				0.720
DC5				0.737
TBT1			0.788	
TBT2			0.691	
TBT3			0.704	
TBT4			0.762	
TBT5			0.734	

The ability of the common factor to explain the total variance of all the original variables, the higher the value, the higher the importance of the factor. The cumulative variance contribution is the combined influence of all the public factors on the dependent variable. In general, a cumulative variance contribution ratio greater than 60% indicates that the factor has an acceptable ability to explain the original variables, and a value greater than 70% indicates that the factor has a good ability to explain the variables. According to the analysis, we can get the degree of timeliness of the four principal components of the independent variable for the dependent variable is 67.671%, and the explanatory ability of the factors on the original variables is still acceptable, see Table 3.10.

Table 3.10 Variance Explained

Total Variance Explained								
Component	Initial Eigenvalues		Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	45.331	45.331	9.066	45.331	45.331	3.474	17.369	17.369
2	8.198	53.529	1.640	8.198	53.529	3.366	16.829	34.197
3	7.369	60.899	1.474	7.369	60.899	3.348	16.740	50.938
4	6.773	67.671	1.355	6.773	67.671	3.347	16.734	67.671
5	3.083	70.755						
6	3.020	73.775						
7	2.702	76.477						
8	2.496	78.973						
9	2.228	81.201						
10	2.152	83.353						
11	2.093	85.445						
12	2.015	87.460						
13	1.936	89.396						
14	1.826	91.222						
15	1.661	92.883						
16	1.643	94.526						
17	1.613	96.139						
18	1.378	97.517						
19	1.306	98.823						
20	1.177	100.00						

The Common Method Bias test is a method used to check for the presence of common method bias in research data. Common Method Variance (CMV) is an artificial relationship between variables due to the use of the same method (or the same evaluator) to collect data, which affects the accuracy and credibility of the research results. Common method bias may be influenced by the subjects, questionnaire topic characteristics, questionnaire content, and measurement environment. Test: Harman one-way test. All questions will be factor analyzed and finally view the results of data analysis, see Table 3.11, the percentage of variance explained by the first common factor is 13.762%, the percentage of variance explained by the first common factor is 40% smaller, it can be assumed that the common method bias that does not exist.

Table 3.11 Total Variance Explained

Total Variance Explained								
Component			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	41.759	41.759	10.44	41.759	41.759	3.44	13.762	13.762
2	7.844	49.603	1.961	7.844	49.603	3.395	13.581	27.342
3	6.458	56.061	1.614	6.458	56.061	3.383	13.533	40.875
4	5.813	61.874	1.453	5.813	61.874	3.327	13.307	54.182
5	5.475	67.349	1.369	5.475	67.349	3.292	13.167	67.349
6	2.526	69.875						
7	2.474	72.349						
8	2.224	74.573						
9	2.17	76.743						
10	2.085	78.828						
11	2.057	80.885						
12	1.813	82.698						
13	1.73	84.428						
14	1.67	86.098						
15	1.622	87.72						
16	1.561	89.281						
17	1.447	90.728						
18	1.409	92.137						
19	1.328	93.464						
20	1.267	94.731						
21	1.197	95.927						
22	1.12	97.047						
23	1.042	98.089						
24	1.007	99.096						
25	0.904	100						

Extraction Method: Principal Component Analysis.

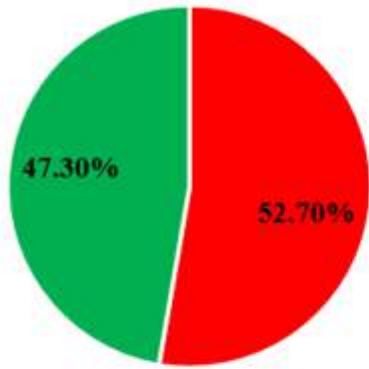
Chapter 4 Findings

4.1 Introduction

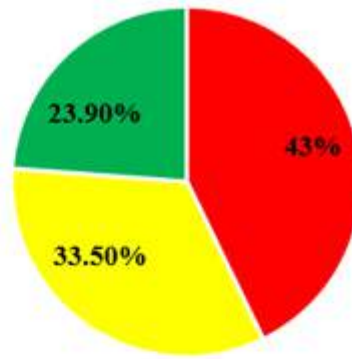
A total of 355 questionnaires were collected from ShengLi College of China University of Petroleum through the questionnaire, and 355 valid questionnaires were finalized based on the questionnaire's answering time and the presence or absence of missing questions answered. The reliability and validity of the data collection was found to be good through the reliability and validity test of the questionnaire. The data collected were analyzed by descriptive statistics through SPSS software to illustrate the basic situation of the survey sample, which includes the gender distribution, age distribution and income status of the survey sample. Each variable of business model, talent cultivation mode, discipline construction, team building of teachers was analyzed by correlation analysis to understand the correlation between each variable and to determine that there is no covariance between each variable. Collecting data through correlation analysis to know, need to regress the data to determine whether the assumptions between each independent variable and the dependent variable are valid, to verify the assumptions, and finally to draw conclusions.

4.2 Description of statistical variables

In the survey, a total of 355 valid questionnaires were collected from ShengLi College of China University of Petroleum. By organizing and analyzing the data of the study, for the gender aspect of the survey, it was obtained that the sample of the study was 187 males, accounting for 52.7%, and 168 females, accounting for 47.3%, Figure 4.1(a). The survey on the age of the sample shows that 18-34years is 151 with 43%, 35-44years is 119 with 33.5% and 45-54years is 85 with 23.9%, Figure 4.1(b). Regarding the educational qualification of the sample, the survey shows that the percentage of Bachelor's degree is 225 (63.4%), Master's degree is 116 (32.7%), and Higher than the Master's degree is 14 (3.9%), Figure 4.1(c). Regarding the survey on job position, Operation is 157, accounting for 44.2%, Manager/senior is 69, accounting for 19.4%, Lecturer/instructor is 39, accounting for 11.0%, and Other is 90, accounting for 25.4%, Figure 4.1(d). Regarding the survey on work experience, less than/or equal to 5 is 53, or 14.9%, Between 6-10 is 127, or 35.8%, Between 11-15 is 163, or 45.9%, 16 and over is 12, or 3.4%, Figure 4.1(e). As shown in Table 4.1, the sample as a whole meets the statistical requirements. According to the demographic analysis of the collected sample, it can be seen that the distribution of the demographic characteristics of the sample basically conforms to the current situation of the enterprise, and the basic characteristics of the sample collection are in line with the actual situation, so the sample data can be analyzed. The basic characteristics of the sample collection are in line with the actual situation, so the sample data can be further analyzed and researched.



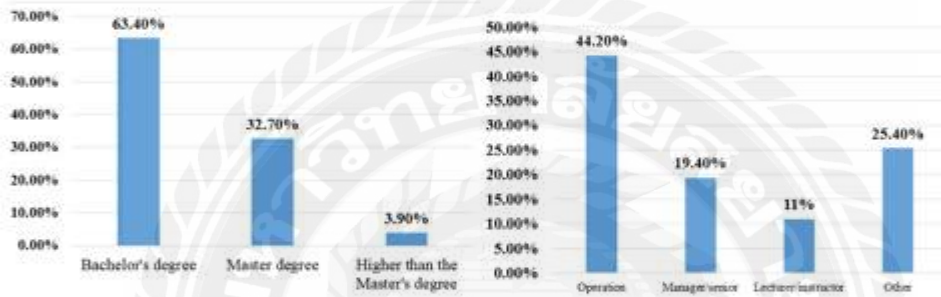
■ Male ■ Female



■ 18-34 ■ 35-44 ■ 45-54

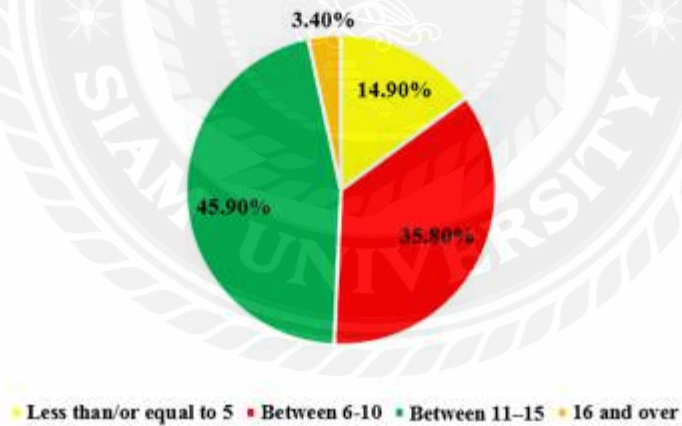
(a)

(b)



(c)

(d)



■ Less than/or equal to 5 ■ Between 6-10 ■ Between 11-15 ■ 16 and over

(e)

Figure 4.1 Demographic Characterization

Table 4.1 Distribution of Basic Characteristics of Samples (N = 355)

Item	Options	Frequency	Percent%
Gender	Male	187	52.7
	Female	168	47.3
Age	18-34	151	43.0
	35-44	119	33.5
	45-54	85	23.9
Education	Bachelor's degree	225	63.4
	Master degree	116	32.7
	Higher than the Master's degree	14	3.9
Position	Operation	157	44.2
	Manager/senior	69	19.4
	Lecturer/instructor	39	11.0
	Other	90	25.4
Tenure	Less than/or equal to 5	53	14.9
	Between 6-10	127	35.8
	Between 11–15	163	45.9
	16 and over	12	3.4
Total		355	100.0

Descriptive statistical analysis aims to summarize, organize, and visualize data to better understand their characteristics and distribution. The primary task is to capture the overall nature of the data set, including the number of observations, the number of variables, and the context and purpose of data collection. This analysis helps to gain a deeper understanding of the data, detect outliers, explore data features, and prepare for further statistical inference and modeling. As the first step in data analysis, descriptive statistical analysis is usually conducted quickly after data collection to ensure the quality and reliability of the data. Its fundamental nature sets the stage for subsequent inferential statistical analyses.

These analyses allow for a better understanding of the data and the selection of appropriate statistical methods to address the research questions. Skewness is used to measure whether the data distribution is symmetrical. A normal distribution has a skewness of 0; if skewness > 0 , it is positively skewed and the long tail is on the right side; if skewness < 0 , it is negatively skewed and the long tail is on the left side. Kurtosis represents how densely the data lies on the mean and is used to describe how sharp or flat the data distribution is. A kurtosis > 0 is a high kurtosis, indicating a steeper, more pointed peak shape than a normal distribution, and vice versa. According to the results of the analysis, the descriptive statistics results, mean statistic meets the requirements, skewness statistic, kurtosis statistic meets the requirements, see Table 4.2. The research data meets the normal distribution and is suitable for correlation and regression analysis.

Table 4.2 Descriptive Statistics

Items	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic	Skewness Statistic	Kurtosis Statistic
BM1	1	5	3.47	1.208	-0.559	-0.573
BM2	1	5	3.48	1.196	-0.605	-0.383
BM3	1	5	3.51	1.143	-0.521	-0.268
BM4	1	5	3.36	1.076	-0.531	0.091
BM5	1	5	3.46	1.089	-0.455	-0.146
TCM1	1	5	3.49	1.118	-0.427	-0.268
TCM2	1	5	3.58	1.063	-0.665	0.201
TCM3	1	5	3.59	1.150	-0.751	0.042
TCM4	1	5	3.68	1.181	-0.799	0.023
TCM5	1	5	3.49	1.168	-0.784	-0.087
DC1	1	5	3.59	1.361	-0.609	-0.767
DC2	1	5	3.55	1.202	-0.790	-0.157
DC3	1	5	3.38	1.078	-0.517	-0.065
DC4	1	5	3.54	1.044	-0.603	0.252
DC5	1	5	3.61	1.143	-0.724	-0.173
TBT1	1	5	3.58	1.249	-0.599	-0.532
TBT2	1	5	3.49	1.165	-0.418	-0.731
TBT3	1	5	3.66	1.293	-0.583	-0.798
TBT4	1	5	3.46	1.130	-0.538	-0.361
TBT5	1	5	3.56	1.188	-0.603	-0.428
DS1	1	5	3.76	1.128	-0.717	-0.168
DS2	1	5	3.68	1.101	-0.481	-0.543
DS3	1	5	3.75	1.139	-0.644	-0.547
DS4	1	5	3.66	1.159	-0.402	-0.964
DS5	1	5	3.79	1.112	-0.635	-0.459

Through the normal distribution histogram test and normal probability plot of the data, it was found that the data collected in this study basically conformed to the state of normal distribution and was verified to meet the requirements of linear regression through the normal distribution plot, as shown in Figure 4.2. Therefore, correlation analysis and regression analysis can be performed for the data collected in this study.

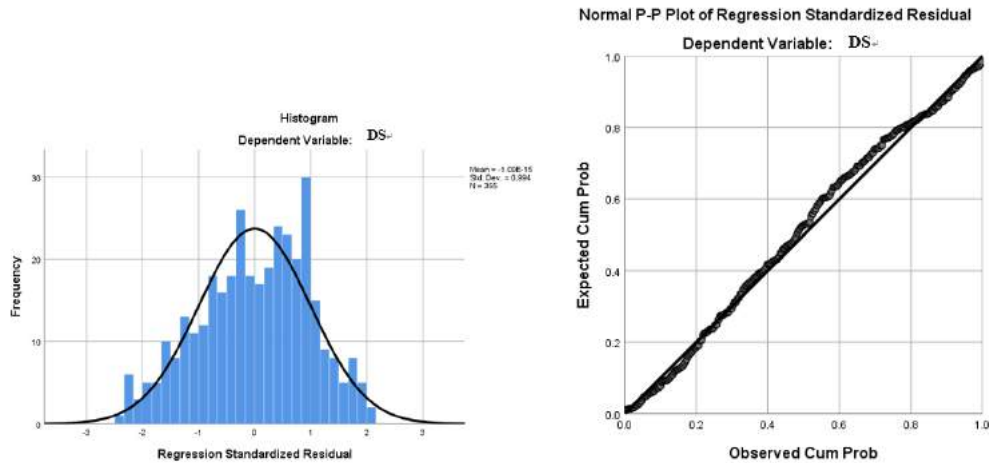


Figure 4.2 Normal Distribution Verification

4.3 Results of the Study

4.3.1 Correlation Analysis

Correlation analysis is an analytical method that examines the relationship between different variables with the aim of measuring the degree of association between two variables. This method of analysis does not make a primary or secondary distinction between variables and emphasizes equality between variables. Correlation analysis is more applicable to variables that conform to a binary normal distribution (see Figure 4.2). It usually involves two variables, both of which are considered ending variables, that co-vary and depend on each other. The correlation coefficient is a measure of this dependence and takes values between -1 and 1. A correlation coefficient of 1 indicates that the two variables are perfectly positively correlated, i.e., an increase in one variable is accompanied by an increase in the other, while a correlation coefficient of -1 indicates that the two variables are perfectly negatively correlated, i.e., an increase in one variable is accompanied by a decrease in the other. In order to ensure the statistical significance of the correlation coefficients, a correlation hypothesis test is usually required. This helps to determine whether the observed correlation may have occurred due to chance. Correlation analysis thus provides a means of systematically assessing the relationship between variables, but needs to be applied with consideration of the distribution of the data, sample size and possible outliers.

Table 4.3 Correlation Value Standard

Correlation Value (r)	Value	Correlation
	$r \leq 0.3$	No linear correlation
	$0.3 < r \leq 0.5$	Low linear correlation
	$0.5 < r \leq 0.8$	Significant correlation
	$0.8 < r$	Highly linear correlation

In the study, r is usually used to indicate the correlation coefficient, when the correlation is less than $r \leq 0.3$, it means that there is no linear correlation between the two variables; when the correlation coefficient is $0.3 < r \leq 0.5$, it means that there is a low linear correlation between the variables; when $0.5 < r \leq 0.8$, it means that there is a significant correlation between the two variables; when $0.8 < r$, it means that there is a high degree of linear correlation between the two variables, see Table 4.3.

Before proceeding to multiple regression modeling, a common practice is to verify the relationship between variables through correlation analysis. First, the data are introduced into the model as independent variables, which can be done by calculating the correlation coefficients of all fields with the dependent variable. In this step, variables with high correlation coefficients with the dependent variable are selected as potential independent variables. Correlation analysis between the independent variables is performed. High correlation coefficients may suggest the presence of multicollinearity, which indicates a strong linear relationship between some of the independent variables. This helps to construct more reliable multiple regression models.

Table 4.4 Correlation Between Variables (Pearson Correlation Matrix)

Correlations						
		BM	TCM	DC	TBT	DS
BM	Pearson Correlation	1	.581**	.546**	.587**	.489**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	355	355	355	355	355
TCM	Pearson Correlation	.581**	1	.581**	.548**	.439**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	355	355	355	355	355
DC	Pearson Correlation	.546**	.581**	1	.540**	.471**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	355	355	355	355	355
TBT	Pearson Correlation	.587**	.548**	.540**	1	.502**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	355	355	355	355	355
DS	Pearson Correlation	.489**	.439**	.471**	.502**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	355	355	355	355	355

NOTE: *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed). BM is business model, TCM is talent cultivation mode, DC is discipline construction, TBT is team building of teachers, DS is development strategy

According to the correlation analysis, it can be seen that the correlation coefficients of business model, talent cultivation mode, discipline construction, team building of teachers and public college development strategy of ShengLi College of China University of Petroleum are all in the range of 0.439 vs. 0.587, indicating that each two variables are significantly correlated, while $p < 0.01$, indicating that the correlation terms are positively correlated see Table 4.4.

The Pearson correlation coefficient between Business Model and Development Strategy is 0.489 with a p-value of less than 0.01, which indicates a statistically significant correlation between the two. Specifically, the correlation coefficient of 0.489 indicates that they exhibit a general degree of association, i.e., to a certain extent as one aspect changes, the other aspect also exhibits a corresponding change. The significance of this relationship further strengthens the confidence of the development strategy of ShengLi College of China University of Petroleum in the correlation between Business Model and Development Strategy.

The Pearson's correlation coefficient between Talent Cultivation Mode and Development Strategy is 0.489 with a p-value of less than 0.01, which indicates a statistically significant correlation between the two. Specifically, the correlation coefficient of 0.439 indicates that they exhibit a general degree of correlation, i.e., to a certain extent, as one aspect changes, the other aspect changes accordingly. The significance of this relationship further strengthens the confidence of the development strategy of ShengLi College of China University of Petroleum in the correlation between Talent Cultivation Mode and Development Strategy.

The Pearson's correlation coefficient between Discipline Construction and Development Strategy is 0.489 with a p-value of less than 0.01, which indicates a statistically significant correlation between the two. Specifically, the correlation coefficient of 0.471 indicates that they exhibit a general degree of correlation, i.e., to a certain extent as one aspect changes, the other aspect also exhibits a corresponding change. The significance of this relationship further strengthens the confidence of the development strategy of ShengLi College of China University of Petroleum in the correlation between Discipline Construction and Development Strategy.

The Pearson's correlation coefficient between Team Building of Teachers and Development Strategy is 0.489 with a p-value of less than 0.01, which indicates a statistically significant correlation between the two. Specifically, the correlation coefficient of 0.502 indicates that they exhibit a general degree of correlation, i.e., to a certain extent as one aspect changes, the other aspect also exhibits a corresponding change. The significance of this relationship further strengthens the confidence of the development strategy of ShengLi College of China University of Petroleum in the correlation between Team Building of Teachers and Development Strategy.

Through the correlation analysis, it is concluded that there is a positive and significant correlation between the business model, talent cultivation mode, discipline construction, team building of teachers and development strategy of ShengLi College of China University of Petroleum. Meanwhile, according to the correlation coefficient, it can be judged that the correlation between the variables is significant, and the correlation coefficient does not exceed 0.8 indicating that there is no problem of covariance.

4.3.2 Multiple Regression Analysis

The process of multiple regression analysis is based on correlation analysis and the data collected can be analyzed by regression analysis. The results of the study show the overall degree of explanation of the dependent variable by the independent variables, the adjusted R-square is 0.734 indicating that all the independent variables can explain 73.4% of the dependent variable; the Durbin-Watson test examines whether the predicted residuals are self-correlated or not, and the closer its value is to 2, the better. The Durbin-Watson value in the study is 1.906, according to the Durbin-Watson value closer to 2, the greater the judgment of no autocorrelation. It indicates that the residuals of the model are not self-correlated and the prediction accuracy is high, see Table 4.5.

Table 4.5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics	Sig. F Change	Durbin-Watson
1	.884 ^a	0.742	0.734	0.842	0.226	0.000	1.906

ANOVA analysis, the significance value of the regression model is 0.00, which is less than 0.05 confidence space, that is to say, it indicates that there is a 95% probability of rejecting the original hypothesis, and the significance of the multiple regression model, p is less than 0.05 indicates that business model, talent cultivation mode, discipline construction. team building of teachers has a significant explanatory effect, $F(4, 350) = 45.394$, $p = .000$. indicates that there is a significant regression relationship between the factors influencing the development strategy of ShengLi College of China University of Petroleum, see Table 4.6.

Table 4.6 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	99.747	4	24.937	45.394	.000 ^b
	Residual	192.269	350	0.549		
	Total	292.016	354			

NOTE: a. Dependent Variable: Development Strategy. b. Predictors: (Constant), Business Model, Talent Cultivation Mode, Discipline Construction, Team Building of Teachers

Through the regression equation R-square and ANOVA analysis, it can be known that the regression equation is statistically significant, but whether the model has accurate prediction or not needs to be further confirmed by residual correlation analysis. If there is autocorrelation in the residuals, the predictive accuracy of the model is not high. According to the results of covariance diagnosis, the VIF values of business model, talent cultivation mode, discipline construction, and team building of teachers are 1.187,1.186,1.077,1.083 respectively, and the VIF values are close to 1, which meets the requirement and indicates that there is no covariance in the data, see Table 4.7.

Table 4.7 Multiple Regression Analysis

Model	Unstandardized Coefficients	B	Std. Error	Standardized Coefficients	t	Sig.	VIF
1	Constant	1.369	0.182		7.512	0.000	
	Business Model	0.487	0.056	0.198	3.336	0.000	1.187
	Talent Cultivation Mode	0.384	0.058	0.086	5.447	0.000	1.186
	Discipline Construction	0.276	0.055	0.184	3.182	0.000	1.077
	Team Building of Teachers	0.423	0.054	0.240	4.138	0.000	1.083

NOTE: *P<0.05, **P<0.01, ***P<0.001

Through the above analysis to determine the statistical significance of the regression model, the residuals are not auto correlated, the residuals meet the normal distribution of the regression coefficients of the regression equation can be obtained, so as to construct the regression equation. Multiple regression analysis was conducted to analyze whether business model, talent cultivation mode, discipline construction, and team building of teachers can effectively explain the development strategy of ShengLi College of China University of Petroleum. The results show that the regression model is significant in general, $F(4, 350) = 45.394$, $p = .000$, adjusted $R^2 = 0.734$.

Among the influencing factors of the development strategy of ShengLi College of China University of Petroleum, Business Model ($\beta=0.487$, $t(350)=3.336$, $p=0.00<0.05$), Talent Cultivation Mode ($\beta=0.384$, $t(350)=5.447$, $p=0.00<0.05$) Discipline Construction ($\beta=0.276$, $t(350)=3.182$, $p=0.00<0.05$) Team Building of Teachers ($\beta=0.423$, $t(350)=4.138$, $p=0.00<0.05$) have a significant explanatory effect on the development strategy of ShengLi College of China University of Petroleum.

Therefore, according to the results of data analysis, Business Model has a significant positive effect on the development strategy of ShengLi College of China University of Petroleum. The hypothesis H1 holds. Talent Cultivation Mode has a significant positive effect on the development strategy of ShengLi College of China University of Petroleum. The hypothesis H2 holds. Discipline Construction has a significant positive effect on the development strategy of ShengLi College of China University of Petroleum. The hypothesis H3 holds. Team Building of Teachers has a significant positive effect on the development strategy of ShengLi College of China University of Petroleum. The hypothesis H4 holds.



Chapter 5 Conclusion and Recommendation

5.1 Conclusion

This paper analyzes and hypothesizes the influencing factors of development strategy of ShengLi College of China University of Petroleum based on core competition theory. A total of 378 questionnaires were distributed, 355 valid questionnaires were obtained, and the effective rate of questionnaire recovery was 93.92%. The factors influencing development strategy and the relationship between the factors were found through SPSS analysis.

5.1.1 Factors Influencing Development Strategy

Through regression analysis and correlation analysis, it was concluded that the influencing factors of development strategy of ShengLi College of China University of Petroleum included business model, talent cultivation mode, discipline construction, team building of teachers. In the study, the collected data met the requirements through reliability analysis and validity analysis. In the process of correlation analysis, it was concluded that

The Pearson's correlation coefficient between Business Model and Development Strategy is 0.489, with a p-value of less than 0.01, which indicates that there is a statistically significant correlation between the two. The Pearson's correlation coefficient between Talent Cultivation Mode and Development Strategy is 0.489 with a p-value of less than 0.01, which indicates that there is a statistically significant correlation between the two. The Pearson's correlation coefficient between Discipline Construction and Development Strategy is 0.489 with a p-value of less than 0.01, which indicates that there is a statistically significant correlation between the two. The Team the Pearson's correlation coefficient between Building of Teachers and Development Strategy is 0.489 with a p-value of less than 0.01, which indicates a statistically significant correlation. Specifically, the correlation coefficient shows that this indicates that business model, talent cultivation mode, discipline construction, team building of teachers and Development Strategy show a general degree of correlation, i.e., to a certain extent with the change of one aspect. some extent as one aspect changes, the other aspect also shows a corresponding change. The significance of this relationship further strengthens the confidence of the development strategy of ShengLi College of China University of Petroleum in the correlation between Team Building of Teachers and Development Strategy.

Through data analysis, development strategy of ShengLi College of China University of Petroleum is significantly influenced by business model, talent cultivation mode, discipline construction, and team building of teachers. The development strategy of ShengLi College of China University of Petroleum is significantly influenced by business model, talent cultivation mode, discipline construction, team building of teachers, etc. The influence of business model, talent cultivation mode, discipline construction, team building of teachers on the development strategy shows a general degree of correlation. The general correlation between the effects of business model, talent cultivation mode, discipline construction, and

team building of teachers on development strategy supports ShengLi College of China University of Petroleum's investment in these areas. This general degree of correlation implies that there is some correlation between business model, talent cultivation mode, discipline construction, and team building of teachers and network marketing strategy, but it is not highly close. Specifically, the correlation coefficients range from 0.3 to 0.6, showing that the influence of these factors on network marketing strategies is statistically significant but not very strong. This suggests that there is no clear dominant factor among these factors, but rather a relatively balanced influence.

5.1.2 Business Model, Talent Cultivation Mode, Discipline Construction, Team Building of Teachers, have a positive effect on Development Strategy

According to the correlation analysis, the influencing factors of the development strategy of ShengLi College of China University of Petroleum include business model, talent cultivation mode, discipline construction, team building of teachers. Combined with regression analysis, among the influencing factors of the development strategy of ShengLi College of China University of Petroleum, Business Model ($\beta=0.487$, $t(350)=3.336$, $p=0.00<0.05$), Talent Cultivation Mode ($\beta=0.384$, $t(350)=5.447$, $p=0.00<0.05$), Discipline Construction ($\beta=0.384$, $t(350)=5.447$, $p=0.00<0.05$), and Teaching Team Building. Discipline Construction ($\beta=0.276$, $t(350)=3.182$, $p=0.00<0.05$) Team Building of Teachers ($\beta=0.423$, $t(350)=4.138$, $p=0.00<0.05$) have a significant explanatory effect.

Table 5.1 Hypothesis Testing

NO.	Hypothesis	Result
H1	Business Model has a significant positive effect on the development strategy of ShengLi College of China University of Petroleum.	Established
H2	Talent Cultivation Mode has a significant positive effect on the development strategy of ShengLi College	Established
H3	Discipline Construction has a significant positive effect on the development strategy of ShengLi College	Established
H4	Team Building of Teachers has a significant positive effect on the development strategy of ShengLi College	Established

5.2 Recommendations

Based on these conclusions, ShengLi College of China University of Petroleum can take the following countermeasures, including business model, talent cultivation mode, discipline construction, team building of teachers and so on. Based on the calculation results, implement diversified business model to seize the opportunity. By adopting these countermeasures, ShengLi College of China University of Petroleum can utilize the key factors in a more targeted way to enhance the effect of development strategies and maintain its competitiveness.

(1) Business Model

Implement a diversified business model to fully utilize the strengths of ShengLi College of China University of Petroleum. Provide diversified educational programs. Increase the number of continuing education programs, such as adult education and self-study exams, to provide different education programs for different groups of students, increase the forms of education, and improve the income from education operations. Provide certification training services. Establishment of vocational appraisal center, expanding the education service business of certification training, with the increase in the number of students, the income from certification training will be a considerable amount of income. Moreover, the development of this business will enhance the school's income while improving the market competitiveness of the school's students, killing two birds with one stone. Make full use of school property and facilities to increase revenue. With the increase in the number of students, the popularity of stores along the school pedestrian street is also getting stronger, the school can appropriately raise store rent. School classrooms, lecture halls, concert halls, etc. can also be rented out when not in use for teaching to increase revenue. Appropriate funds can be invested in the school's infrastructure to improve the school's infrastructure.

(2) Talent Cultivation Mode

Strengthen the cultivation of applied talents. Adapt to the needs of local economic and cultural development in talent allocation. Adhere to the principles of "student-centered, result-oriented, and continuous improvement", and at the same time, ensure the adaptability of the cultivation program to the needs of regional economic and social development, highlight the practicality of operation, and strive to realize the structural balance and benign interaction between the cultivation of talents and the demand for talents. As an engineering-based undergraduate university, ShengLi College of China University of Petroleum should insist on cultivating application-oriented talents, improve cooperation with enterprises, and revise the talent cultivation program together with enterprises according to the employment requirements of cooperative enterprises. The construction of the industry-teaching integration practice teaching mode is conducive to the cultivation of professional applied talents and the realization of seamless employment while enhancing students' vocational ability and core competitiveness in employment and entrepreneurship. This not only improves the employment rate of students, but also gains wide recognition from the society and enterprises.

(3) Discipline Construction

Strengthen the construction of disciplinary characteristics and realize the differentiation of disciplinary construction. Drive the construction of the whole specialty with the quality construction of the key specialty. Give full play to the demonstration role of the specialties of the whole specialty construction project. Increase the construction of first-class majors in ShengLi College of China University of Petroleum, construct them in batches with plans and focuses, formulate a system of merit-based support and open competition, change the phenomenon of poorly planned inputs and insignificant benefits in the past, cultivate a batch

of influential majors, and improve the overall level of disciplines. To plan the adjustment and optimization of the professional layout and the reasonable allocation of human, financial and material resources for school running with the strategic thinking of professional clusters. Strengthen the connotation construction of majors according to the new standard, take the demand of industry and industry as the guide, take the integration of industry and education, school-enterprise cooperation as the path, and actively cultivate the new engineering and business majors to set up majors that are urgently needed by the regional economic and social development, and that the school has the basis for running the school. Optimize the direction of professional development, adhere to the engineering-oriented professional layout, bigger and stronger existing engineering, increase the development of liberal arts and economic majors, strengthen professional characteristics, create professional advantages, and enhance the fit and contribution of the profession to the development of the local and industry.

(4) Team Building of Teachers

Strengthening the construction of the talent team. Strengthen the introduction of high-level talent team. Further optimize and revise the management measures for the introduction of high-level talents. Strive for breakthroughs in the introduction of high-level leaders and high-level scientific research and innovation teams; encourage young teachers to improve themselves, revise the management methods of the college's faculty and staff to improve further training, and further improve the policy support for the promotion of doctoral degrees for in-service teachers. Relevant supporting policies will be formulated to ensure "attracting, retaining, and working well", which will drive and promote the overall team building of teachers in the university. Optimize the incentive mechanism for talents, establish and improve the appointment system and position management system, and establish the competition and incentive mechanism. Promote the reform of the title appraisal system, assessment and evaluation system, clarify the promotion and elimination mechanism, and form the school distribution mechanism of more work, more pay, and better pay for better work. Complete the construction of the salary system and raise the level of teachers' treatment. Introduce skill wages, emphasize incentives for individuals and teams, design a new model in line with the development of faculty and staff, and build a scientific and reasonable salary system that is suitable for the development of the university, satisfactory to the faculty and staff, and higher than the salary level of similar universities in the region.

References

- Balz, F. J., & Esten, M. R. (1998). Fulfilling private dreams, serving public priorities: An analysis of TRIO students' success at independent colleges and universities. *The Journal of Negro Education*, 67(4), 333.
<https://doi.org/10.2307/2668134>
- Becker, G. S. (2021). Investment in human capital: A theoretical analysis. *Journal of Political Economy*, 70(5), 9–49.
- Dejnaka, A., Kulig-Moskwa, K., Łobos, K., Nogieć, J., & Szewczyk, M. (2016). Students' perception of attributes of independent colleges of business profile in the market of higher education in Poland. *Management*, 20(2), 340–359.
<https://doi.org/10.1515/manment-2015-0069>
- Doubilet, P. M., Copel, J. A., Benson, C. B., Bahado-Singh, R. O., & Platt, L. D. (2004). Choroid plexus cyst and echogenic intracardiac focus in women at low risk for chromosomal anomalies. *Journal of Ultrasound in Medicine*, 23(7), 883–885. <https://doi.org/10.7863/jum.2004.23.7.883>
- Gerardi, A., & Dominiquni, J. (2020). Innovating in a recession: A low-cost guide. *Strategy & Leadership*, 37(3). <https://doi.org/10.1108/sl.2009.26137cab.001>
- Godet, M. (2022). Effective strategic management the prospective approach. *Technology Analysis & Strategic Management*, 1(1), 45–56.
- Hamel, G., & Prahalad, C. K. (1999). Reengineering vs restructuring: Vers la conquête du futur, Gary Hamel, C. K. Prahalad, Inter Editions, 1995. *Revue Française de Gestion Industrielle*, 18(3), 63–66.
<https://doi.org/10.53102/1999.18.03.941>
- Hitt, M. A. (2021). Relevance of strategic management theory and research for supply chain management. *Strategic Direction*, 27(7).
<https://doi.org/10.1108/sd.2011.05627gad.001>
- Johnsen, Å. (2020). Strategic management thinking and practice in the public sector: A strategic planning for all seasons? *Financial Accountability & Management*, 31(3), 243–268. <https://doi.org/10.1111/faam.12056>
- Jun, Q., & Jing, X. (2017). Innovation research on the emerging engineering talent cultivation mode in the era of industry 4.0. In *17 International Conference on Industrial Informatics - Computing Technology, Intelligent Technology, Industrial Information Integration (ICIICII)* (pp. 333-336). IEEE.
<https://doi.org/10.1109/iciic.2017.68>

- Kachaner, N., Lindgardt, Z., & Michael, D. (2021). Innovating low - cost business models. *Strategy & Leadership*, 39(2), 43–48.
<https://doi.org/10.1108/10878571111114464>
- Kolb, A. Y., & Kolb, D. A. (2018). Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of Management Learning & Education*, 4(2), 193–212.
- Lavoie, P., Michaud, C., Bélisle, M., Boyer, L., Gosselin, É., Grondin, M., Larue, C., Lavoie, S., & Pepin, J. (2017). Learning theories and tools for the assessment of core nursing competencies in simulation: A theoretical review. *Journal of Advanced Nursing*, 74(2), 239–250. <https://doi.org/10.1111/jan.13416>
- Lewing, M., & Shehane, M. (2017). The institutionalization of service-learning at the independent colleges and universities of the gulf coast region. *Christian Higher Education*, 16(4), 211–231.
<https://doi.org/10.1080/15363759.2016.1254074>
- Liu, L. (2022). Opportunities and challenges for private education in China: A policy review of the revisions to “implementation regulations of the private education promotion law of the people’s republic of China.” *ECNU Review of Education*, 6(1), 209653112211208.
<https://doi.org/10.1177/20965311221120829>
- Mason, G. (2014). Part-time higher education: Employer engagement under threat? *Higher Education Quarterly*, 68(3), 305–327.
<https://doi.org/10.1111/hequ.12053>
- Morphew, C., Ward, K., & Wolf-Wendel, L. (2017). Contingent faculty composition and utilization: Perspectives from independent colleges and universities. *New Directions for Institutional Research*, (176), 67–81.
<https://doi.org/10.1002/ir.20245>
- Olson, D. E. (2000). Agency theory in the not-for-profit sector: Its role at independent colleges. *Nonprofit and Voluntary Sector Quarterly*, 29(2), 280–296.
<https://doi.org/10.1177/0899764000292004>
- Petit, Y. (2019). Advancing project and portfolio management research: Applying strategic management theories. *Strategic Direction*, 28(9).
<https://doi.org/10.1108/sd.2012.05628iaa.004>
- Petridou, E., Sarri, A., & Kyrgidou, L. P. (2009). Entrepreneurship education in higher educational institutions: The gender dimension. *Gender in Management: An International Journal*, 24(4), 286–309.

<https://doi.org/10.1108/17542410910961569>

Sullivan, F. R., & Heffernan, J. (2016). Robotic construction kits as computational manipulatives for learning in the STEM disciplines. *Journal of Research on Technology in Education*, 48(2), 105–128.

<https://doi.org/10.1080/15391523.2016.1146563>

Sun, M., Loeb, S., & Grissom, J. A. (2016). Building teacher teams. *Educational Evaluation and Policy Analysis*, 39(1), 104–125.

<https://doi.org/10.3102/0162373716665698>

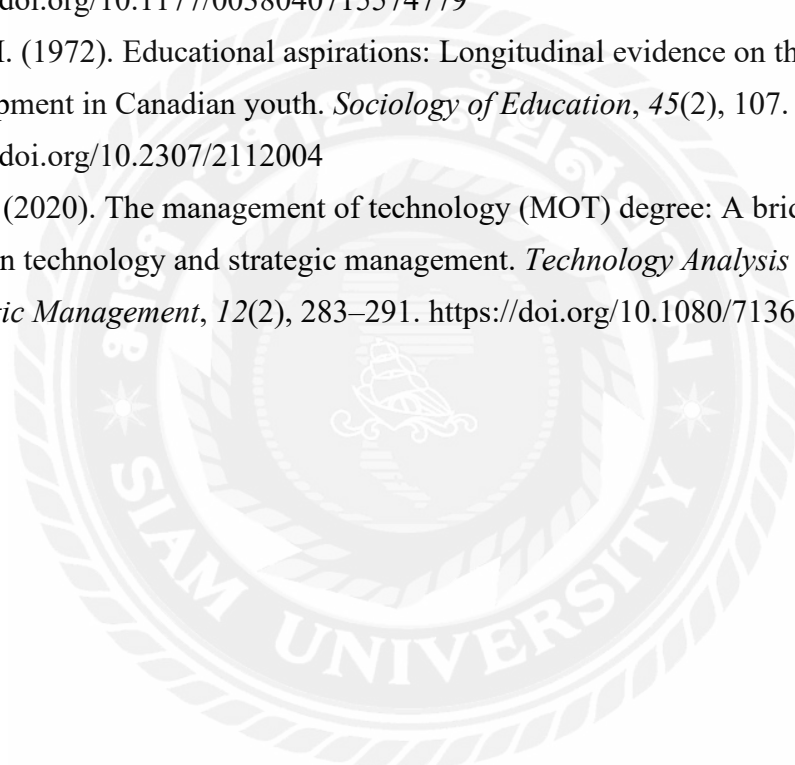
Tam, T., & Jiang, J. (2015). Divergent urban-rural trends in college attendance. *Sociology of Education*, 88(2), 160–180.

<https://doi.org/10.1177/0038040715574779>

Williams, T. H. (1972). Educational aspirations: Longitudinal evidence on their development in Canadian youth. *Sociology of Education*, 45(2), 107.

<https://doi.org/10.2307/2112004>

Zehner, W. B. (2020). The management of technology (MOT) degree: A bridge between technology and strategic management. *Technology Analysis & Strategic Management*, 12(2), 283–291. <https://doi.org/10.1080/713698470>



Appendix Questionnaire

Questionnaire on the Influencing Factors of Network Marketing Strategy of China
Shanxi Wan Sheng Catering Management Company

Dear Ms./Mr.

Hello, in order to better understand the Influencing Factors of development strategy of ShengLi College of China University of Petroleum, according to the development of this questionnaire, thank you for taking the time to fill out this questionnaire, this questionnaire is carried out in an anonymous manner, the entire confidentiality, only for the study of this paper, not for other commercial purposes. This questionnaire data for our research is very important, please fill in according to their own actual situation, thank you again for your support!

Part 1 Demographic information

Remark: Please choose by using ✓.

1. Gender Male Female
2. Age A 18-34 B 35-44 C 45-54 D above 54
3. Education 1. Bachelor's degree 2. Master's degree
 3. Higher than the master's degree 4. Other
4. Position 1. Operation 2. Manager/senior
 3. Lecturer/instructor 4. Other.....
5. Tenure in current position (year)
1. Less than/or equal to 5 2. Between 6-10
 3. Between 11-15 4. 16 and over

Part II. International Marketing Strategy

Please indicate your agreement with each of the following descriptions based on your actual. Please put a tick on the corresponding number representing your level of agreement, with "1" indicating total disagreement, "5" indicating total agreement, and the specific meaning of each number indicating your level of agreement.

The specific meaning of each number is shown in the table below:

Totally Disagree	Disagree	General	Agree	Agree completely
1	2	3	4	5

Measuring item	1	2	3	4	5
Business Model					
1. In your college's operating model, do you believe that the design of the organizational structure contributes to the effectiveness of faculty teaching and research?					
2. The degree of involvement of the operating model in the decision-making process of the college has an impact on faculty job satisfaction?					
3. You recognize the organizational culture and values in the college's business model?					
4. You believe that the college business model is highly supportive of faculty in teaching and research?					
5. You are satisfied with the incentives related to faculty in the college business model?					
Talent Cultivation Mode					
1. The college pays full attention to the development of students' overall qualities, not just the teaching of specialized knowledge?					
2. The college's education system is flexible enough to adapt to the ever-changing needs of the job market and to ensure that students can be successfully employed after graduation?					
3. The college's curriculum is designed to develop students' creativity, teamwork and problem-solving skills?					
4. The college provides sufficient practical opportunities, such as internships and practical training, to help students apply their theoretical knowledge to real work?					
5. The College actively provides personalized guidance and support to students in their development process to help them discover their interests, strengths and career directions?					
Discipline Construction					
1. The College's current disciplinary set-up is in line with the market demand and the trend of disciplinary development. Has the College considered introducing new areas or adjusting the existing disciplinary structure?					
2. In the development of disciplines, does the College					

emphasize interdisciplinary research and collaboration to address complex problems and promote innovation?					
3. Is there a clear direction and goal in the College's disciplinary development to ensure the competitiveness of the disciplines?					
4. The College has a plan for team building of teachers to ensure high quality teaching and research teams in each discipline?					
5. Is there an effective assessment mechanism in the disciplinary development to monitor the development of the disciplines, to adjust the strategies in time and to ensure a balanced development among different disciplines?					
Team Building of Teachers					
1. The faculty is well-structured, with high-level young faculty introduced and trained to ensure long-term development of teaching and research?					
2. In the team building of teachers, the College emphasizes professional development and academic research of teachers and provides appropriate support and incentives?					
3. The degree of internationalization of the faculty is taken into account in team building of teachers by bringing in international faculty or promoting international exchange?					
4. Is there an effective evaluation system in place to assess faculty members' teaching and research performance and to promote continuous improvement in their teaching and research capabilities?					
5. The college emphasizes teacher-student relationships in team building of teachers, and provides useful opportunities for communication and collaboration to promote a positive teaching and learning environment?					
Development Strategy					
1. The current development strategy of the College is in line with the overall trends in the field of higher education and the direction of national development, and is there any in-depth strategic planning for future development?					
2. Modern elements such as technological innovation and digital transformation are fully taken into account in the College's development strategy to meet the new needs of future education?					
3. Does the College's development strategy focus on internationalization, and does it plan to promote international cooperation, bring in international talents, and increase the College's influence in the international arena?					
4. The development strategy has clear goals and plans for					

talent training to ensure that students have comprehensive qualities and practical skills after graduation?					
5. Does the college have specific development plans for social services and industrial cooperation to promote close ties between the college and society and facilitate win-win development?					

