World Maritime University

The Maritime Commons: Digital Repository of the World Maritime University

World Maritime University Dissertations

Dissertations

8-22-2020

Research on the development strategy of COSCO shipping lines

Hao Hu

Follow this and additional works at: https://commons.wmu.se/all_dissertations

Part of the Development Studies Commons, Strategic Management Policy Commons, and the Transportation Commons

Recommended Citation

Hu, Hao, "Research on the development strategy of COSCO shipping lines" (2020). *World Maritime University Dissertations*. 1461.

https://commons.wmu.se/all_dissertations/1461

This Dissertation is brought to you courtesy of Maritime Commons. Open Access items may be downloaded for non-commercial, fair use academic purposes. No items may be hosted on another server or web site without express written permission from the World Maritime University. For more information, please contact library@wmu.se.



SHANGHAI MARITIME UNIVERSITY WORLD MARITIME UNIVERSITY Shanghai, China

RESEARCH ON THE DEVELOPMENT STRATEGY OF COSCO SHIPPING LINES

Ву

Hu Hao

China

A research paper submitted to the World Maritime University in partial Fulfillment of the requirements for the award of the degree of

MASTER OF SCIENCE

INTERNATIONAL TRANSPORT AND LOGISTICS

2020

DECLARATION

I certify that all the material in this research paper that is not my own work has been identified and that no material is included for which a degree has previously been conferred on me.

The contents of this research paper reflect my own personal views and are not necessarily endorsed by the University.

Supervised by
Professor Gu Weihong
Shanghai Maritime University

ACKNOWLEDGMENT

I would like to extend my special regards to all those who have contributed directly and indirectly to prepare this thesis. My supervisor, Professor Gu, made a significant contribution to this paper and gave me great support throughout the writing process. Similarly, I am very thankful to my parents, and they gave me meticulous concern and support when I wrote this thesis. Finally, I would like to thank Shanghai Maritime University and World Maritime University for the support and guidance in completing the thesis.

ABSTRACT

Title of research paper: RESEARCH ON THE DEVELOPMENT STRATEGY

OF COSCO SHIPPING LINES

Degree:

MSc

After China acceded to the WTO, China's foreign trade is facing both development

opportunities and fierce competition. This paper takes COSCO SHIPPING Lines Co.,

Ltd as a case study. It makes an empirical study of the case nature of domestic

shipping enterprises, which can more adequately reflect the overall situation of

China's shipping industry through the perspective of enterprise management. It can

also effectively excavate the common problems existing in domestic enterprises and

put forward practical solutions.

This paper discusses the current situation of the company's development, the

shortcomings of marketization, and the weak operating environment. Then, the

strategic environment analysis of the company and the problems of the political

environment, economic environment, social environment, and technological

environment are analyzed.

At last, based on the analysis of the objectives and choices of the company's strategic

planning, this paper puts forward the implementation of cost-control and product

optimization strategies. In order to determine the smooth implementation of these

strategies, this paper also puts forward specific safeguards measures.

KEYWORDS: Development Strategy, Strategic Transformation, COSCO Shipping

Lines

iv

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION	1
1.1 RESEARCH BACKGROUND AND SIGNIFICANCE	1
1.2 RESEARCH STATUS AT HOME AND ABROAD	3
1.1.1 Review of Foreign Studies	3
1.3 RESEARCH CONTENTS, METHODS, AND FRAMEWORK	9
1.3.1 Research Content	9
1.3.2 Research Methods	10
1.3.3 Research Ideas	11
CHAPTER 2 THE DEVELOPMENT STATUS AND PROBLEMS OF COSCO SHIPPING	}
LINES	13
2.1 BASIC INFORMATION OF COSCO	13
2.2 DEVELOPMENT STATUS AND EVALUATION OF THE COMPANY	13
2.3 PROBLEMS EXISTING IN THE COMPANY'S DEVELOPMENT	16
2.3.1 Poor Operating Environment	16
2.3.2 Insufficient Marketization	18
2.4 REASONS FOR THE PROBLEMS OF COSCO SHIPPING LINES	19
2.4.1 The Overall Environment is still not Perfect	19
2.4.2 Lack of Market Understanding	21
CHAPTER 3 STRATEGIC ENVIRONMENT ANALYSIS OF COSCO SHIPPING LINES	22
3.1 Macro Environment of the Company	22
3.1.1 Political Environment Analysis	22
3.1.2 Economic Environment Analysis	24
3.1.3 Analysis of Social Environment	25
3.1.4 Environmental Analysis of Technology	27
3.2 INDUSTRY ENVIRONMENT OF THE COMPANY	29
3.2.1 Competitiveness of Competitors Dimension	30
3.2.2 Intrusion of Potential Competitors in the Market	31
3.2.3 Substitution Forces in the Environment	32
3.2.4 Bargaining Power of Suppliers	32
3.2.5 Bargaining Power of Consumers	33
3.3 INTERNAL ENVIRONMENT OF THE COMPANY	34
3.3.1 Route and Shipping Space	35
3.3.2 Human Resources Status	35
3.3.3 Financial Management Ability	36
3.3.4 Core Competitiveness	37
3.4 SWOT ANALYSIS OF THE COMPANY	39
3.4.1 Advantage Analysis	40

3.4.4 Threat Analysis	46
CHAPTER 4 THE CHOICE OF STRATEGIC TRANSFORMATION	52
4.1 Basis for Strategic Transformation of COSCO Shipping Lines	52
4.1.1 Give Full Play to Its Advantages of Scale	52
4.1.2 Customer Focus	54
4.1.3 Accelerate Digital Construction	55
4.1.4 Innovate Its Own Business Model	56
4.1.5 Reform the System and Mechanism to Stimulate Enterprises to Create Efficiency	57
4.1.6 Adhere to Sustainable Development	57
4.2 STRATEGIC TRANSFORMATION OBJECTIVES OF COSCO SHIPPING LINES	58
4.2.1 Strategic Development Objectives	59
4.2.2 Development Ideas	60
4.3 THE FIRST STAGE OF STRATEGIC TRANSFORMATION OF COSCO SHIPPING LINES	62
4.3.1 Cost Control Development Strategy	62
4.3.2 Product Optimization Development Strategy	64
4.3.3 Follow the Trend of the Information Age and Speed Up Digital Construction	65
4.3.4 Embed into the Customer Value Chain and Explore Customer Groups in Multiple Ways	s 66
4.3.5 Comprehensive Integration of Online and Offline, and Continuous Improvement of OA	0
Mode	68
4.4 THE SECOND STAGE OF STRATEGIC TRANSFORMATION OF COSCO SHIPPING LINES	73
4.4.1 Comprehensively Build "Intelligent Ship"	73
4.4.3 Fully Realize the "Green Ship"	74
CHAPTER 5 IMPLEMENTATION GUARANTEE OF COSCO SHIPPING LINES'	
DEVELOPMENT STRATEGY TRANSFORMATION	75
5.1 Organizational Security	75
5.1.1 Establish and Improve the Operation Mechanism	75
5.1.2 Improve the Governance Structure	77
5.1.3 Strengthen IT Application	77
5.2 Human Resources	78
5.2.1 Staff Recruitment	78
5.2.2 Salary Planning	79
5.2.3 Staff Training Planning	79
5.3 CULTIVATE CORPORATE CULTURE	80
5.4 PRODUCTION SAFETY	81
5.5 Information System Guarantee	82
5.6 INTEGRATION OF DISTRICT AND PORT	83
5.7 Marketing	83
5.8 IMPROVE RISK CONTROL	84
CHAPTER 6 RESEARCH CONCLUSION AND PROSPECT	OF.
CHAI LER U RESEARCH CUNCLUSION AND PROSPECT	ōɔ
REFERENCE	88

Chapter 1 Introduction

1.1 Research Background and Significance

Since 1956, container shipping has been developing continuously, with an increasingly large fleet, larger ships, and more extensive lines, and has become a maritime transport service carrying nearly one-third of the total international trade. Liner conference was the first form of alliance in the container shipping industry. Later, due to its disadvantages, the liner conference gradually disintegrated, and a large number of mergers and acquisitions occurred in the shipping industry. Since the 1990s, alliance mode has gradually become the mainstream mode of the container shipping industry. Up to now, 17 of the world's top 20 shipping companies have participated in shipping alliances, and the three shipping alliances account for more than 90% of the market share. The shipping industry presents prominent monopoly characteristics. By participating in the alliance, shipping companies can expand the route coverage, improve the efficiency of shipping space use, maximize the load rate, use shipping space sharing to serve more markets with less capacity, transfer shipping capacity to open up new routes and achieve economies of scale in reducing costs. In international trade, container shipping is mainly responsible for the transportation of trade terminal consumer goods. Therefore, it responds to the changes in the global economy and trade quickly and directly. Changes in trade fundamentals will directly cause considerable changes in container transport volume and transport prices. So, the container shipping market is closely related to the global economy and trade.

Since China acceded to the WTO, the background of global trade has caused fierce competition in the marketization, and a large number of international capitals have introduced to participate in the competition, which then makes domestic enterprises bear high pressure in the competition. However, international management also undoubtedly brings development opportunities for domestic enterprises. In this regard, strategic management has gained full attention in recent years. As a necessary means for enterprises to enhance their core competitiveness, strategic management shoulders the vital task of improving enterprise operation level, reasonably enhancing profit space, effectively controlling operating costs, and enhancing the core mechanism of products. In this regard, this paper takes COSCO Shipping Lines (from now on referred to as "COSCO") as a case study. As a listed company controlled by China COSCO Shipping Corporation Limited (hereinafter referred to as "COSCO SHIPPING Group"), It is an essential branch of COSCO SHIPPING Group's maritime transport business and has strong market competitiveness. The main business of COSCO is international and domestic maritime container transport, including ship leasing, ship trading, ship materials, and other business-related to maritime transport. Its related businesses have always been the leading ones in similar fields in China. However, since 2008, affected by the global debt crisis, the business of COSCO began to decline, especially the reduction of international transport demand, which severely affected its earning capacity. Not only that, the global offshore Marine areas, the current is also influenced by the overall economic environment, such as the world's seventh Hanjin

Shipping had filed for bankruptcy in September 2016. Even the leading enterprise in the field of MAERSK group (MAERSK), was met by severe business shrinking, only in the third quarter of 2016, the shipping business has lost about 846 million yuan, and now is still in its continuing losses. Besides, some large maritime shipping companies that can rely on local industries are also turning to transformation and cooperation, such as the merger of Germany's Hapag-Lloyd with USAC, and the merger of Kawasaki Steamship, Mitsui Merchant Shipping, and Japan Mail Ship. Not only that, but China's two largest maritime transport companies also formally announced the merger process in 2016. As we can see, the global financial problems have a relatively severe impact on the development of the maritime shipping industry. The research content of this paper is to study the holding company after the merger of two domestic maritime transport enterprises, in the context of the shrinking global maritime shipping industry, to effectively enhance its core competitiveness through the proposal of development strategy.

1.2 Research Status at Home and Abroad

1.1.1 Review of Foreign Studies

With the development of international trade, there are more and more researches on container shipping, the leading carrier of world trade. With the development of strategic management theory, the research on the shipping industry is becoming mature.

Jeffrey J Reuer & Africa Ariño (2007) that their study evaluates the construct validity

of measures of performance.

Many international research institutions and institutions of higher learning have carried out specific studies on the shipping industry, such as the establishment of the Baltic Sea Shipping Exchange and the shipping brokerage firm Clackson, and the relevant industry information released has effectively promoted the strategic development and planning of the entire shipping enterprise.

The strategic development of its research is prosperous. First of all, in 1965, H.igor Ansoff, a famous American economist, and management scientist, proposed the concept of strategic management for the first time. They pointed out that strategic management is the mainline in the business process of enterprises, and all production and operation activities will be carried out around the mainline, no matter whether enterprises have built a clear strategic management plan. Henry Mintzberg, a management scientist, defines the strategic management of an enterprise, which includes five parts: the mission and vision of the enterprise; The relationship between the product and the market; The construction direction of competitive advantage; The way of constructing competitive advantage; A specific plan to achieve business objectives. At the same time, in the 1970s, Michael Porter, a famous management scientist, put forward the Five Forces model on this basis, which is also an essential basis for the current research on enterprise strategy. The content of the Five Forces model will explain in detail in the following theoretical research.

At the present stage, theories related to the strategic transformation of shipping enterprises are still lacking. Many theories developed around the motivation and

specific ways of alliances. Brian Slack studied the strategic alliance of the container shipping industry and pointed out that the characteristics of the strategic alliance are mainly reflected in three aspects: route change, fleet development, and port coordination (Brian Slack, Claude Comtois & Robert McCalla 2002). Relying on cooperative game theory, Dong-Wook Song specifically explores the development situation of the strategic shipping alliance (Dong-Wook Song & Photis M Panayides 2002). Dong Yang studied the economy and stability of the liner shipping alliance based on game theory (Dong Yang, Miaojia Liu & Xiaoning Shi 2011). Theo E Nottteboom has conducted specific research into the relationship between port selection and port participation by members of the Container shipping Alliance (Theo E Nottteboom et al. 2003). Richa Agarwal & Özlem Ergun study transportation networks that operate as an alliance among different carriers and study alliance formation among carriers in liner shipping (Richa Agarwal & Özlem Ergun 2010). Based upon the enforcement and coordination functions of different contractual provisions, Jeffrey J. Reuer & Africa Ariño investigate particular contractual features of strategic alliances, find two underlying dimensions of contractual complexity (Jeffrey J. Reuer & Africa Ariño 2007).

Enterprise development strategy is the key for a company to achieve healthy and sustainable development. The increasingly costly development of enterprises accompanies the development and evolution of strategic management theory. The domestic research on strategic enterprise management began in the 1970s, and the classical theory of strategic enterprise management from Harvard University

introduced at the beginning. In recent years, Chinese scholars have made significant progress in the research of enterprise strategic management theory, and most of them mainly focus on the diversified application. Huang Shunguan believes that alliances between container liner companies lead them to seek access to global markets and make routes denser actively. By building alliances, liner companies can use ship sharing to serve existing markets with less capacity and transfer capacity to new routes, thus opening up new markets and expanding the range of services offered by shipping companies. Wu Qiusheng analyzed the relationship between enterprise development strategy and internal control and believed that ensuring the smooth implementation of enterprise development strategy was the highest goal to achieve internal control. The design and operation of enterprise internal control were closely related to the development strategy of an enterprise, which highlighted the necessity of making a development strategy for an enterprise. Enterprises should formulate development strategies scientifically to implement internal control (Wu Qiusheng 2012) effectively. Taking H company as an example, Xu Mengmeng deeply explored how to rationally formulate, develop, plan and practice enterprise strategies under compliance management and used PEST, SWOT, and other theoretical analysis tools to deeply analyze the internal and external environment and comprehensive strength in market competition. Then, using field investigation and qualitative and quantitative analysis, the corresponding relationship of these factors is studied to form the strategic thinking of enterprise development (Xu Mengmeng 2017). He Yinqi starts by analyzing the background, environment, and existing problems of small and medium-sized

commercial banks. Then, he built a SWOT analysis model, deeply analyzes the existing strengths, weaknesses, opportunities, and challenges. Furthermore, he found effective scientific methods and development strategies and makes reasonable adjustments to the strategic objectives and management direction of commercial banks (He Yingqi 2017). Taking WD International shipping agency as the research object, Li Yang proposed the company's transformation strategy and implementation guarantee of strategic development transformation through the SWOT analysis matrix (Li Yang 2018).

Yang Yan proposed improvement and safeguard measures for M Container Line's shipping alliance scheme (Yang Yan 2016). Taking COSCO as an example, Wang Xianghui proposed that shipping companies should establish a sustainable innovation strategy to enhance their core competitiveness (Wang Xianghui 2006) comprehensively. Taking COSCO as an example, Zhang Qian analyzed the internal and external situation, combined with COSCO's situation, and proposed the measures and countermeasures for COSCO to develop third-party logistics (Zhang Qian 2007). Taking the reorganization and integration of China COSCO Shipping Group as the research object, Ji Haidong constructed an enterprise reorganization and integration financial performance indicator system based on the financial index research method (Ji Haidong 2018). Under the background of the shipping alliance, Li Yihe studied how to optimize the design of container liner routes when liner carriers adopt the mode of space renting and joint ship dispatching (Li Yihe 2017). Xu Lingling emphasized that Chinese shipping companies should focus on optimizing their service networks and improving their ability to collect goods. Shipping companies should strengthen cooperation and form shipping alliances. Port enterprises should actively promote port infrastructure construction. Domestic policies should support to shipping industry(Xu Lingling 2016). Zou Shaoyun analyzed the transport market structure under the development background of the shipping alliance and concluded that the emergence of a shipping alliance presented a monopoly situation in the liner transport market (Zou Shaoyun 2014).

Given China's actual development, apart from some vital maritime universities, many scientific research institutions and media have carried out a series of studies on the operation and development of world shipping and enterprises. For example, such as China's Institute of Water Transport Science and shipping transaction bulletin, it collects relevant information such as freight rate index and shipping policy, and then analyzes the situation of the domestic and foreign shipping market and predicts the later development trend of the industry. China's shipping business operators also according to their own company's development status of the relevant exploration and research. For example, China Ocean Shipping (Group) Corporation and other domestic shipping enterprises have carried out a series of researches on their development strategies in the whole field of the market economy.

1.3 Research Contents, Methods, and Framework

1.3.1 Research Content

The main research content of this paper is to take COSCO as the research object.

According to the overall characteristics of the container shipping market and the current development of shipping alliances, the strategic planning and research of COSCO carry out. There are altogether seven parts to elaborate on the research content in this paper.

Chapter One explains the research background and significance of this paper, as well as the research status at home and abroad. The specific research methods and writing ideas adopted in this paper also introduced.

Chapter Two mainly expounds on the development status and existing problems of COSCO. Based on the introduction of the basic situation of the company, the company's development status, the current lack of marketization, the operating environment is not pleasant, because the lack of understanding of the market environment is still not perfect.

Chapter Three, the environment of COSCO is analyzed, using PEST and five model analysis, respectively, analyzes the external macro-environment, and competitive environment, and then through the SWOT analysis, to further analyze for COSCO provides the basis of the development strategy.

Chapter Four puts forward the strategy of cost control and product optimization and puts forward the strategic transformation of other aspects, such as promoting the company's digital construction, building an E-commerce platform, and improving the level of service marketing.

Chapter five, following the previous chapter, puts forward corresponding supporting safeguard measures to ensure the smooth implementation of these strategies.

Chapter six, research conclusion and prospect.

1.3.2 Research Methods

Literature analysis method: using the Internet and other modern technologies in China Hownet, Baidu library, library online information collection, the search of shipping alliance research literature at home and abroad, in the operation of the alliance case data of reference significance to read and comb, such as the definition of strategic alliance and formation causes of theoretical basis, by analyzing the characteristics of the shipping market and the alliance mode condition and measures the alliance of COSCO at present the implementation of the analysis and argument.

Case method: Take COSCO Shipping Lines as an example, using PEST analysis, Five Forces analysis, and SWOT analysis, combined with the actual situation of COSCO, is analyzed and summarized, useful experience and deficiencies, to find out the currently existing problems and puts forward the company strategic level solutions.

Field research method: To more accurately analyze the problem, this paper combined with field research, thoroughly listened to the ideas and opinions of COSCO, operation layer, and other relevant personnel, and obtained precious first-hand data, which laid a good foundation and direction for the study of this paper.

1.3.3 Research Ideas

Please refer to Figure 1.1 for the specific writing ideas of this article.

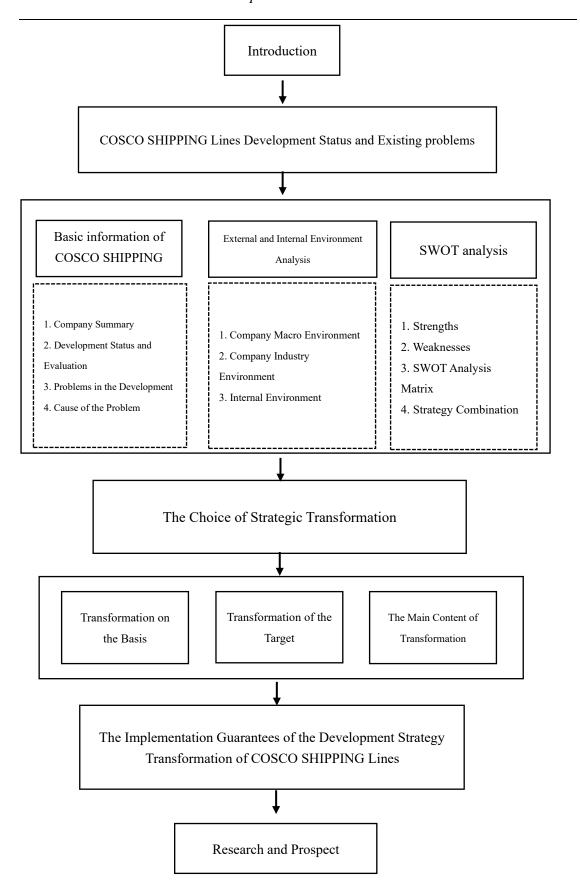


Fig. 1.1 Research Framework

Chapter 2 The Development Status and Problems of COSCO Shipping Lines

2.1 Basic Information of COSCO

On November 18, 2016, "China Ocean Shipping (Group) Company" officially changed its name to "China COSCO Shipping Group". COSCO Shipping Lines Co., Ltd, affiliated with COSCO Shipping Group, is born with the integrated container businesses of CSCL and its predecessor COSCO, which has been up for business since Mar.1st, 2016. The company, headquartered in Shanghai, is mainly engaged in domestic and international maritime container transport services and related business, as the group's core business sector. Its predecessor is the former COSCO Container Lines Co., Ltd, established on Nov. 11, 1997.

2.2 Development Status and Evaluation of the Company

After integration, COSCO Shipping Lines has expanded the business scale, consolidated the position in the industry. Meanwhile, the service network has also further improved. By the end of December 2019, the Company owned and operated 403 container vessels with a total capacity of 2.2 million TEUs (COSCO SHIPPING Holdings owned and operated 507 container vessels with a total capacity of 3.0 million TEUs, ranking the 3rd place in the world in terms of shipping capacity). COSCO operates 401 international and domestic shipping routes, consisting of 255 international

services (including international feeder services), 58 domestic services, 88 Yangtze River and Pearl River shipping services, having anchors in 356 ports covering 105 countries and regions worldwide.

As of March 31, 2020, COSCO Shipping Group operates a fleet with an overall capacity of 105.92 million DWT / 1,310 ships, ranking first in the world. Among them, the size of the container fleet is 3.04 million TEU/495, ranking the third in the world. The dry bulk fleet has a capacity of 41.14 million DWT /424, the tanker fleet has a capacity of 26.12 million DWT /204, and the general cargo special fleet has a capacity of 4.36 million DWT /152, ranking first in the world.

The comprehensive global service of COSCO Shipping Group has built up its network service advantages and brand advantages. A relatively complete industrial structure has formed in the upstream and downstream industrial chains such as docks, logistics, shipping finance, and shipbuilding. The group has invested in 59 terminals worldwide, including more than 51 container terminals, with an annual throughput capacity of 125.85 million TEU, ranking first in the world. The global sales volume of ship fuel exceeds 27.7 million tons, ranking first in the world. Container leasing business volume reaches 3.7 million TEU, ranking second in the world. Ocean engineering equipment manufacturing orders and shipping agency business also ranked the forefront of the world.

Table 2.1 Development of various businesses of COSCO Shipping Lines

Parameter	2018	2019	Growth rate

Chapter 2 The Development Status and Problems of COSCO Shipping Lines

Revenue (1	Million RMB)	913.66	985.63	7.88%
Shipping Volume (TEU)		18,366,108	18,784,961	2.28%
	Trans-	235.92	234.52	-0.59%
	Pacific			
	Asia-Europe	183.52	205.43	11.94%
Revenues	Intra-Asia	185.39	209.67	13.10%
by	Other	123.87	149.20	20.45%
Routes	International			
(Million	PRC	118.45	123.94	4.63%
RMB)				

Data source: Official website of COSCO Shipping Lines:

http://lines.coscoshipping.com/home/About/about/FactFigures

As can be seen from Table 2.1 above, COSCO Shipping Lines saw a 7.88% increase in overall turnover compared to 2018 and a 2.28% increase in overall freight volume. Despite the impact of the global economic environment on COSCO Shipping Lines, it still maintains a good momentum of development. In terms of regional volume, COSCO recorded negative growth of -0.59% in transpacific shipments, mainly due to the fluctuation of spot prices of containers from Asia to the west coast of North America due to reduced service and higher tariffs. In the future, the volume of trade on the route will depend mainly on geopolitical factors. In Asia-Europe transport, 11.94% of the

growth. Elsewhere in Asia, growth was 13.10 percent. It is worth noting that other international transport levels, namely the non-main routes that COSCO has not paid much attention to in the past, only increased by 20.45 percent in 2019. Thus, with the closer cooperation between China and some critical trade zones, there is no doubt that China will gradually improve the construction of new independent routes, which will also be an essential foundation for the future development of international shipping for COSCO. However, it is worth mentioning that in terms of domestic routes, COSCO has constructed 144 routes, but the growth rate in 2019 is not apparent, with a growth rate of only 4.63%. Therefore, there are some problems with the importance of COSCO attaches to domestic routes and the publicity of domestic influence.

2.3 Problems Existing in the Company's Development

The problems of COSCO mainly lie in two aspects. On the one hand, the environment of COSCO leads to its high operating cost for a long time, which is unfavorable to its operating condition. On the other hand, there are problems in market operation, with fewer market customers and a lack of differentiated services.

2.3.1 Poor Operating Environment

The weak operating environment refers to the obstacles caused by the environment to the operation and development during the operation of the middle and open sea transport.

(1) Business Environment

The obstacle of the operating environment mainly manifests in the internal environment and external environment. The problems of the internal environment mainly lie in the relatively low efficiency of the organization and coordination of domestic enterprises, and the backward administrative management system has an impact on the operating efficiency of enterprises. In the external environment, domestic companies are more easily affected by the port environment. On the one hand, the Sino-US trade friction escalated, allows multiple industry pattern of the global supply chain to speed up the restructuring of China's manufacturing industry import and export will be affected by persistent, may cause a regional transfer of the shipping requirements, leading to the supply of goods is uncertain. On the other hand, it mainly manifests in the imperfect infrastructure and inconvenient operation and management of some terminals, which will directly affect the operation efficiency. In terms of management and operation, for example, the newly built Nansha Port requires customers to go through three checkpoints before they can handle the empty container formalities. Also, customs clearance procedures and customs clearance procedures are relatively complicated, which also severely affects the operating efficiency of enterprises. Low efficiency directly restricts the effective control of enterprise operating costs.

Due to the sudden outbreak of COVID-19, companies must take preventive and control measures to respond to COVID-19. This situation has led to the temporary closure of a large number of enterprises, as well as supply chain disruption, transport, and logistics disruption, directly reducing the demand for shipping in the short term. In

the medium and long term, the epidemic will further aggravate the Chinese economy and even the global economic downturn, make it more difficult for the manufacturing industry to recover, shift a large number of industrial chains and orders, and further reduce foreign trade and demand, which may lead to a decline in domestic goods volume and throughput.

(2) Competitive Environment

In recent years, the rapid development of the domestic economy has also led to the intensification of competition in maritime transport. Although COSCO is the most potent domestic maritime transport enterprise with comprehensive strength at present, it still suffers from the situation that customers are dugout. At the same time, the improvement of material cost, the requirement of human resources for their value, and the intensification of competition environment also directly affect the operating cost of enterprises. The above two points mean that effective cost control has become an urgent problem for COSCO.

2.3.2 Insufficient Marketization

COSCO is used to relying on large cargo transportation in the operation process, so it adopts the strategy of "bundling" strong foreign trade enterprises with interests in the operation process, to ensure a relatively stable source of customers and goods. However, with the downturn of the global economy, the former big customers have reduced their shipping intentions, and they have relatively less market feedback

resources, and lack of sufficient market objects (individual customers) that require more requirements for transportation, leading to the loss of a large number of market resources in the operation process. At the same time, COSCO lacks a suitable market regulation mechanism. In the process of responding to the changes in the market environment, it is difficult for the company to effectively adjust itself, which will also affect the service level of the first significant customer demand changes. Also, the marketization of COSCO leads to a lack of understanding of competitors. In the process of market competition, it is impossible to make use of helpful resources to achieve effective competition. As a result, the competitiveness of products and services in the market will continuously reduce. Therefore, it is an urgent problem for COSCO to provide differentiated services and expand market share.

2.4 Reasons for the Problems of COSCO Shipping Lines

2.4.1 The Overall Environment is still not Perfect

(1) Imperfect Operating Environment

From the above problems, the organization and coordination efficiency caused by the internal operating environment of COSCO is low, mainly because the enterprise system is too large. COSCO has 26 departments, 50 all joint venture subsidiary, set by the network at home and abroad a total of more than 450, under such an extensive system, the enterprise is difficult to implement sophisticated management, management prone to the thick line, the specific responsibility with the company's production and

operation pressure not everyone is right in place. Also, it is difficult for different companies or departments to realize the efficiency of organization and coordination, so it is difficult to ensure that the human resources of relevant links can effectively achieve the work set. Otherwise, any problems in any link will affect the overall efficiency.

In the external environment, COSCO faces with the problem of low construction efficiency of the terminal. On the one hand, this problem is related to local investment attraction; on the other hand, it closely relates to the lack of integrated strength of the wharf. At the same time, the two reasons are complementary to each other. Although COSCO is an enterprise with an absolute scale, the overall strength of the terminal may not be able to attract upstream and downstream enterprises to settle in. Therefore, the process of attracting investment will also encounter certain obstacles. Also, in terms of administrative efficiencies, such as customs clearance efficiency, clearance efficiency, especially clearance efficiency of empty containers, it depends on the communication between enterprises and competent local departments and whether emerging technologies can be adopted to ensure clearance efficiency. In the case of two problems not solved, the management efficiency cannot improve naturally.

(2) Lack of Containment of Vicious Competition

Market competition is a necessary condition of the development of The Times, but vicious market competition is the problem that should be solved. In recent years, COSCO has also adopted a specific means of bidding to ensure operating results, that is, to stabilize customers through price advantage. The fundamental reason for the adoption of bidding is the competition among enterprises, especially the price

competition among the world's top shipping enterprises. For example, to gradually occupy China's foreign trade market, some enterprises with international influence have adopted the cutthroat competitive strategy and "not making money" or even "losing money" to compete with domestic enterprises. The existence of this problem will undoubtedly directly affect the cost control of COSCO, and may even cause the loss of existing market share under the influence of foreign capital. Although the contradiction of vicious competition is prominent, there is still no effective means to restrict it in a short time.

2.4.2 Lack of Market Understanding

The marketization of COSCO is not insufficient. The main problem is that they have occupied the dominant resources for a long time, leading to their lack of attention to the market. The so-called helpful resources are the community of interests tied to the cooperative operators mentioned above. However, it is noteworthy that the realization of cross-border E-commerce and the lowering of the threshold of foreign trade, a large number of small and medium-sized shipping enterprises that can provide personalized services, are to some extent dividing the "quota" of the trade market. In this process, COSCO still locks in large customers and lacks differentiated market choices, which will undoubtedly seriously affect its development. Also, COSCO neglectful of differentiated demands in the market is naturally unable to accurately and comprehensively understand market information, so it may lack accurate judgment of

competitors and fall into a weak position due to insufficient understanding in the process of competition.

Chapter 3 Strategic Environment Analysis of COSCO Shipping Lines

3.1 Macro Environment of the Company

The PEST analysis method adopts in this paper to ensure the reliability of the analysis results of the external environment of COSCO. PEST is the abbreviation of Politics, Economy, Society, and Technology, which stands for the study of four dimensions, to show the external environment of an enterprise from multiple angles. From the perspective of its application, PEST is also suitable for the operating structure of COSCO in this paper and can give full feedback on the problems existing in COSCO.

3.1.1 Political Environment Analysis

(1) Port Laws and Regulations

To effectively promote the development of the port economy and realize the stability and safety of its operation, China has promulgated the Port Law of the People's Republic of China, the Law of the People's Republic of China on Production Safety and other laws, thus effectively standardizing port operation. At the same time, coastal cities also combine different geographical and cultural environments, set relevant implementation regulations, to ensure the perfection of details. However, it also means

a significant constraint on shipping and transportation enterprises, including sparse management details, which in turn affects the efficiency of the corresponding work. Strictly speaking, the constraint of the environment has a robust promoting effect on enterprise operation, but the setting of the constraint degree, based on the consideration of different dimensions, may also form an obstacle. For example, COSCO needs to make complex adjustments to its domestic transport work or port transfer requirements.

(2) Port System

China's port management system has been in the stage of need to improve, which is also one of the essential reasons that port economy hindered development. From the perspective of management mode, China's new port management based on the model of "administration + production" to construct the primary system, but the economic environment of this stage was planned economy, so it forced the complicated administrative system. After the opening of the market economy, the management system has adjusted, but it has apparent slowness and lag, and the efficiency is not satisfactory. It was not until 2006 that the pilot system formally established in China, and the pilot Association established in 2008. However, this also means that the port management formally entered the standardized operation. However, after the slow improvement stage, the rapid improvement of the management system will also cause the enterprise in the operation of adaptation difficulties but did not effectively improve management efficiency.

(3) Rising of Trade Protectionism

Uncertainties in the trade relations between major economies have increased, global economic growth has weakened, the trade situation faces many challenges, and container transport demand growth has further slowed down. The company should actively respond to external adverse factors, focus on the changes in the world trade pattern, flexibly adjust the layout of its service network, and seize the opportunities arising from the development of emerging economies and the expansion of China's import market.

(4) Fuel Sulphur Restriction by 2020

To meet the new regulations of the International Maritime Organization (IMO) on fuel Sulphur limit in 2020, various liner companies in the market have taken measures such as using low-sulfur oil or installing desulfurization equipment in advance. The operating cost pressure of liner companies has gradually emerged from 2019 to 2020. For example, to overcome the operating cost pressure caused by the implementation of the new fuel sulfur limit regulation in 2020, The company locks in low-sulfur oil in advance, installs desulfurization towers, and pushes for new fuel surcharge collection.

3.1.2 Economic Environment Analysis

(1) Domestic Economic Environment

Since China's reform and opening up, the macroeconomic adjustment has effectively promoted the growth of the domestic economy, and people's income level

has significantly improved. However, the cost of factors of production, such as oil and water, also began to increase as demand increased. The shipping industry's operating costs have also risen. The domestic economy is a double-edged sword for shipping enterprises. On the one hand, it urges the development of enterprises and brings high tests for enterprises. At the same time, it also provides more ample development space, as well as a large number of shipping needs.

(2) International Economic Environment

Since China acceded to the WTO, the vast population advantage has effectively driven the development of foreign trade. However, after 2008, the subprime crisis occurred, the European debt crisis broke out, the US economy developed slowly, and the global economy was in a downturn. As an economic model dominated by consumption, foreign trade has been weakened to a large extent. As mentioned above, the development of the global shipping industry has encountered problems. The top ten enterprises have gone out of business, the industry giants have suffered losses, and some mature enterprises have begun to seek a merger. Therefore, there is that the operation and development of COSCO have been much hindered.

3.1.3 Analysis of Social Environment

The social environment is a complex whole, which includes culture, folklore, morality, values, and other aspects. It not only includes the influence of the overall environment on enterprise operation but also reflects the influence of individual quality

in operation. Therefore, in the process of similar research, the academic field usually divides the social environment into three levels, that is, the social demand, human demand, and the development demand. Specific for: first, social demand. Environmental protection is the primary social demand of port transportation enterprises, and in recent years, China has put forward a relatively clear definition of environmental management. However, there is still no denying that China's environmental protection cause started late, and the degree of perfection is relatively low. In this regard, a society-oriented environmental demand is formed to restrain the behavior of enterprises through public supervision. For COSCO, the problem it faces is the pollutants such as exhaust gas, dust, and waste products in the transportation and loading and unloading process, some of which are not monitored by the environmental protection department. At the same time, it may produce noise pollution, but the noise pollution of the non-residential environment of the port is mainly related to the evaluation of the enterprise.

Second, human resources demand. Human resources demands are relatively complex, such as benefits, compensation, working environment, and other factors. Moreover, from the current research on the demands of human resources in the social level of enterprises, only by satisfying the reasonable demands of employees, can the stability of internal human resources system be ensured. Then the development of enterprises can be realized. In the case of COSCO, although it is a robust enterprise, its production characteristics also lead to a labor-intensive human resources structure. Therefore, it is undoubtedly an excellent test for COSCO in demand for its diversified

workforce. Third, the demand for development. Development demands refer to whether enterprises' demands for society can be satisfied, including policy environment, administrative efficiency, and human resources. In terms of the policy environment, COSCO has received relatively ideal support and can effectively guarantee its development. However, administrative efficiency is not satisfactory, and the complexity of administrative procedures is one of the relatively huge problems at present. In terms of human resources demands, COSCO headquartered in Shanghai, and its principal transportation business is in Guangzhou and Qingdao. The development scale of corresponding cities can fully guarantee the corresponding number of talents.

3.1.4 Environmental Analysis of Technology

(1) Large Container Ships

With the realization of global economic integration, maritime transport effectively solves the problem of the transportation cost of small goods. In other words, the transportation industry in the past is not centralized enough, leading to high dispersion, so the cost is high. After the global economic integration, no matter whether there is a demand for goods transportation, it can form a perfect global trade chain under the demand for bulk goods transactions. Therefore, the transportation cost of small items has been effectively solved. Therefore, it also means that today's transport is transforming to the upsizing of container ships, and there is a growing trend. For

example, as shown in Table 3.1 below, since the beginning of global trade in 1970, the volume of container ships, namely the number of TEU that can be loaded by a single ship, has been continuously increasing. Since the beginning of reform and opening up, the maximum TEU that can be loaded by a single ship in China has been increased by 25 times. This trend is more and more apparent, which means that the threshold of maritime shipping, especially international trade, will be significantly improved. For COSCO, this is not only an opportunity for development but also a huge test.

Table 3.1 Development History of Container Transport Ships

Stage	Year	Container Carrier Loading Level
First-generation	1970 years ago	The lowest is 400TEU, and the
		highest is only 700TEU
Second-generation	In 1970-1983	2000 TEU appear
Third and fourth	In 1983-1997	2500TEU appeared and generally
generation		entered the era of big ships
Five-generation	In 1997-2001	Upgrade gradually from 5000TEU to
		7000TEU
Ten thousand cases	Since 2001	In 2008, China's first digital display
ship age		of 10040TEU

(2) Internet of Things information technology

The Internet of Things (IoT) is a technological model based on the Internet to realize "things to things" links, which can effectively achieve production efficiency and reasonably save labor costs. To a large extent, the Internet of Things has also promoted the development of commodity transportation. For example, in the process of container loading and unloading, the tag information can be obtained through radio frequency technology to achieve automatic loading and unloading, and the accuracy can be improved to a large extent. Currently, the port of Hamburg in Germany and The Port of Rotterdam in the Netherlands are using this technology. At the same time, the tagging management of the Internet of Things can also achieve the dynamic monitoring of items and define the status of different items, which will be conducive to the realization of all-round supervision of the transportation of goods. However, for COSCO, its current level of port connection is not enough to adopt the relevant technology model, and the lack of understanding of the relevant technology will also affect its competitiveness in the international market.

3.2 Industry Environment of the Company

To COSCO, the analysis of the enterprise environment, in this paper, through a large amount of theory of screening, decided to adopt will use Michael Porter five forces model is solved, that is the competitiveness of the dimensions by competitors, potential competitors in the market of invasiveness, alternative environment power, bargaining power of suppliers, the bargaining power of consumers five dimensions. The

reason lies in that the theory can cover the business environment of the enterprise comprehensively, and it is easier for the theory to obtain accurate results in line with the reality, to avoid the instability of the results caused by too many factors to be analyzed.

3.2.1 Competitiveness of Competitors Dimension

Any enterprise is bound to face horizontal competition. The market environment of an enterprise without competitive pressure itself does not have development potential. As a maritime transport enterprise, COSCO faces competitive pressure not only from China but also from a large number of international enterprises. First of all, from the perspective of location, COSCO mainly relies on the ports of Guangzhou, Shenzhen, Shanghai, and Qingdao. The three cities' maritime transportation ports have a particular foundation, which means that they have to face high competition. While Guangzhou and Shenzhen mainly radiate Hong Kong and Southeast Asia, also, China's westward sea transport, mainly through the Malacca Strait of ships, also from this direction. Shanghai, on the other hand, was mainly traveling eastward through the Pacific Ocean to the Americas. Also, due to the different waters in the north and south of China, the goods passing through Shanghai need to change the different water levels of the ship. Qingdao's leading foreign trade lies in Japan and South Korea, which have strong cultural exports, so the volume of commodity trade is relatively large. From a comprehensive perspective, although COSCO has completed the layout of major ports

in China, it also means that it needs to bear the competitive pressure from all sides. Among them, not only the domestic market needs "cake sharing", such as the Gaolan Port area constructed in Zhuhai and Yantian Port in Shenzhen. The international market also needs to face the competition from Europe, America, Japan, and South Korea and other large enterprises; thus, their competitive pressure is considerable.

3.2.2 Intrusion of Potential Competitors in the Market

From the perspective of the development of things, it can be found that in the market economy, some enterprises will rise rapidly due to specific technologies and talents, thus becoming one of the leaders in the industry. In this case, the "cake" in the industry will be carved up again, and when the total amount is unchanged, it also means that the first enterprises need to bear. Therefore, COSCO has to consider such a competitive situation, namely the monitoring, analysis, and consideration of potential competitors in the market, to ensure that its development process will not affect itself. Considering the characteristics of shipping enterprises, COSCO needs to pay attention to the proposal of new technologies, especially the rapid loading and unloading technology based on the Internet of things. Also, shipping enterprises are capital-intensive and labor-intensive, so it takes a long period for development to ensure the development foundation. In this regard, COSCO should pay attention to the capital raising of similar enterprises, to ensure that the enterprises with corresponding

competitiveness are monitored, and adjust their automated mode according to their advantages quickly, to enhance their competitive strength effectively.

3.2.3 Substitution Forces in the Environment

The replacement of maritime transport products does not mean that the service mode may replace, but based on different port characteristics, there will be competitive substitutes. For example, some bonded areas can take advantage of tax rebates to achieve the core competitiveness of other ports; For another example, the development of Zhuhai port in recent years has dramatically affected the business volume of Shenzhen port and Guangzhou Port, which is also a form of product replacement. For another example, air transportation, railway transportation, and road transportation may be replaced by sea transportation due to cost, tax, and other factors. Therefore, COSCO also needs to consider the substitutability of its products. Although its current port has ensured its advantages, the possible change of policy environment will also pose a threat to its development. Also, it is essential to consider the core competitiveness of its industry, effectively control product costs, and keep it is own irreplaceable, which is also one of the essential ways to deal with the business environment.

3.2.4 Bargaining Power of Suppliers

The supply relationship with port transport enterprises mainly includes loading and unloading equipment and accessories, ship accessories, among which accessories

are the links that port transport enterprises have more contact with suppliers and are easily subject to suppliers. The supply system shows that the cost of large equipment is more stable and less volatile when producing raw materials. At the same time, enterprises have certain periodicity in the purchase of such equipment, and there are few restrictions. In the accessories environment, the companies produce more accessories, the higher the demand for accessories, and the greater the possibility of restraint. Some suppliers usually adopt the way of raising the price to monopolize the benefits, for which the enterprise can only achieve cost control through negotiation. However, other problems may be derived from this. When the profit proportion of suppliers decreases, they may take the way of reducing product quality to regain profits. The situation is also a massive loss for the enterprise. At the same time, the upstream and downstream of COSCO, such as logistics transport, customs clearance, and other enterprises, will also exist in such a situation. Therefore, as far as COSCO is concerned, its business activities will undoubtedly be subject to the bargaining power of suppliers, and it is inevitable.

3.2.5 Bargaining Power of Consumers

In recent years, the market competition in the shipping field has intensified, and the differentiated management enterprises keep emerging, and consumers also have an individual basis for bargaining. That is, consumers have diversified choices, and shipping services have shifted from a seller's market to a buyer's market. Therefore, the change of market pattern will affect the development of enterprises to a large extent. What is more, consumers' bargaining power is not only reflected in their demands but also more likely to give up. So, what companies need to do is to "keep" consumers as much as possible while ensuring their profits. Therefore, the bargaining power of consumers in today's economic environment is undoubtedly a massive test for enterprises. Also, China's industrial model leads to the low cost of transportation of goods, and the consumption level that consumers can provide is minimal. Combined with the continuous intensification of competition, it will undoubtedly further restrict the environment of enterprises.

3.3 Internal Environment of the Company

As for the discussion of the internal environment of the company, this paper does not carry out relevant work based on mature theories. The reason is that the shipping industry itself is a particular business, and the business model of the enterprise has specific characteristics. At the same time, it is difficult to discuss the capital background and development mode of COSCO through mature technology. To this end, this paper will analyze the primary internal environment of its operation and strive to get a relatively complete conclusion.

3.3.1 Route and Shipping Space

As mentioned above, COSCO's main business includes Hong Kong, Southeast Asia, South Asia, Middle East, Europe, America, Japan, and Korea, etc. It can be found that its business covers all areas outside Africa and Antarctica. By the end of 2019, the company operates a total of 274 international routes (including international branch routes), 58 Chinese coastal routes, and 88 pearl River Delta and Yangtze River branch routes. Its fleet is connected to 356 ports in about 105 countries and regions around the world. A total of 10 large container ships will be delivered in 2019, with a total capacity of about 179,000 TEUs. The moderate growth of fleet scale and the global layout of shipping routes have effectively enhanced the company's global competitiveness. According to Alphaliner data, companies continued to rank third in the world in terms of container fleet capacity as of the end of 2019. From the perspective of transportation capacity alone, it can be seen that COSCO has improved its route layout and relatively sufficient shipping space to meet the shipping needs of various types of domestic and foreign trade.

3.3.2 Human Resources Status

What can play a decisive role in human resources in China is nothing more than two factors: first, the company has a large scale, and the listed company has more outstanding talent acquisition ability; The second is that the more developed the city is, the easier it is to get quality talents. COSCO has two advantages at the same time.

Firstly, due to its leading position in the domestic shipping field, COSCO has a distinct advantage in the talent competition, and its main cities, such as Guangzhou, Shenzhen, Shanghai, and Qingdao, can guarantee an adequate talent base. From the perspective of human resource management, in recent years, due to the COSCO restructuring project, talent set adopted a relatively fair mechanism based on openness, fairness, justice, democracy principle of selecting talents and ascension, effectively ensure the quality of human resources of leadership. In general, the human resource management structure adopted by COSCO effectively gives play to the value of human resources and guarantees the development space of talents.

3.3.3 Financial Management Ability

Finance is the core of an enterprise's operation. An effective financial management system determines an enterprise's risk control ability and also ensures the level of risks that should be taken during the operation. In this regard, COSCO adopts the budget system to ensure the financial freedom of each branch through the mode of fund allocation, and then reduces the risk through the management of human resources, and at the same time realizes the supervision by combining with the performance appraisal system. The core advantage of this mode is to reduce the interference of the head office to the branch company. On the one hand, it can effectively reduce the cost of financial management; on the other hand, it can help the branch company to improve the efficiency of financial management. The adoption of the budget system can also

achieve the automation of the review to more efficient through the enterprise financial management system to obtain the core business data.

3.3.4 Core Competitiveness

Core competitiveness refers to the competitiveness of core products in the market, and the products of COSCO are undoubtedly in shipping. The competitiveness of shipping products reflected in the advantages of COSCO in terms of speed, quality, and service. In this regard, the main reasons for the formation of these advantages depend on the enterprise's internal management, core technology, culture, serviceability and consciousness, and other levels. The following will analyze from the outer product ring, namely, direct competitiveness.

(1) Shipping Costs and Rates

Compared with the market environment, COSCO has certain advantages in market operation and remarkable achievements in transportation cost control. The main reason is that as the largest shipping enterprise in China, it has a particular scale effect, which mainly reflects in the self-owned quantity of ships, that is, controllable transport capacity. On the one hand, the large-scale operation will reduce the overall shipping cost. Even if the market is in low season, by selling some shipping space to other shipping companies, the overall loading rate will promote, which can better avoid the vacancy rate of ships and flexibly control shipping costs. On the other hand, at present, for the domestic market, the company occupies the dominant position in most airline

operations, with the market share reaching 40%, which has the practical significance of prioritizing and actively controlling the trend of market freight rates. Then it can be considered that COSCO has strong core competencies in terms of shipping costs and freight rates.

(2) Transportation Quality

The quality of transport mainly reflect in two aspects: first, the safety of goods. Long-distance shipping has always been a problem of goods safety, although the entrusted transport enterprises must ensure their loading and unloading, but still to a certain extent, there will be damage to the goods. The common cause of goods damage is inadequate supervision and even malicious damage to the goods in the process of loading and unloading and transportation. At this level, COSCO has a relatively prominent advantage. It has long-established a nationwide online cargo tracking system to check the goods stacked in warehouses, trailers, and docks, which can effectively guarantee the safety of products. Second, the level of service. For transportation enterprises, the function of transportation is only a part of realizing economic production. Another link is effective communication, that is, service reflected in communication. Excellent communication, can achieve higher profits, and ensure customer satisfaction, improve the quality of service transportation. COSCO has a strong international influence on enterprises such as Maersk, APL, and has a specialized logistics department to serve big customers, which has a relatively distinct advantage in terms of communication services. Therefore, COSCO has a certain level of core competitiveness in transport quality.

(3) Degree of Informatization

The core of informatization lies in the management of the Internet of things and information technology. In the past, COSCO has no relevant technology model (such as the Internet of Thing) was adopted for the port of connection, thus affecting its competitiveness in the international market. In recent years, COSCO has built Xiamen Yuanhai wharf, as the first one in China with fully automated management and operation of all independent intellectual property rights, which makes up for the previous defects. Information technology is a modern means of information management. It can effectively change the previous management mode through digital mode, which can not only optimize the human resource management link but also effectively improve the efficiency of administrative management. COSCO has a relatively high level of information management and has apparent advantages in information perfection and accuracy. Therefore, COSCO has evident core competitiveness in these two aspects.

3.4 SWOT Analysis of the Company

This paper will adopt SWOT technology for analysis to have a more comprehensive understanding of the advantages and disadvantages of COSCO, effectively establish relevant information, and reasonably dig out problems, to achieve a comprehensive display of COSCO. At the same time, it also lays a theoretical foundation for the Suggestions on the following issues.

3.4.1 Advantage Analysis

COSCO has four advantages, namely brand effect, information system, human resources system, and internal and foreign trade transport. The following is the specific content.

(1) Brand Effect

As the second-largest shipping company in the world, COSCO has a significant advantage in popularity. Moreover, its business almost all over the critical domestic ports, covering a large number of business types, in the brand reputation level, has long been well-known. Also, the display of patriotism in the domestic social environment promotes COSCO, a central enterprise, to maintain a relatively significant advantage in the competition with other multinational companies in China, which is also a convenience brought by the culture behind its brand. Based on this, COSCO is widely known, and its brand has become an essential advantage in market operation.

(2) Information System

As mentioned above, although the Internet of Things management of COSCO is not perfect, the information system based on internal management has been able to promote the development of the enterprise effectively. At present, COSCO adopts the information globalization system IRIS2, which is a relatively advanced and perfect information management system at present and even in the world and can meet the management demands of finance, human resources, customers, operation, and other

information. At the same time, considering the development of The Times, COSCO also equipped the system with CORIS, IEIR, and other interfaces, to ensure that it can realize the potential of gradually expanding the information system capacity in the development process. Moreover, the comparison with similar domestic enterprises, its advantage is undoubtedly more apparent.

(3) Human Resource System

As the top shipping and transportation enterprise in China, COSCO is undoubtedly capable of acquiring talents, and its talent base level is much higher than similar domestic enterprises. More importantly, COSCO has a relatively significant advantage in terms of its competitiveness in the talent market due to its business scale, which can ensure its proper development. From the perspective of internal human resources management, COSCO has relatively ideal coordination of human resources system, and has established a unique internal competitive advantage, such as "professional competition", and provides space for the development of outstanding employees. On this basis, COSCO realized the sense of belonging and development of employees and constituted the embodiment of the value of employees.

(4) Domestic and Foreign Trade Transport in the Same Ship

Internal and external trade transport by ship refers to a way in which enterprises make effective use of the turnover of ships in the course of the operation to realize the expansion of production scale with fewer ships. COSCO has relatively prominent advantages in this aspect. Its shipping space adjustment ability and container turnover rate have reached the advanced international level, which can ensure that it can realize

effective cost control in the competitive environment. At the same time, domestic and foreign trade transport also means the realization of efficiency, can complete the dock loading and unloading faster.

3.4.2 Weakness Analysis

COSCO has disadvantages in development, including port, customs clearance environment is not perfect; Insufficient understanding of customers and competitive markets; Lack of understanding of competitors. The following is the specific content.

(1) The Port and Customs Clearance Environment Are Not Perfect

The imperfect environment of ports and customs clearance will form a significant obstacle to the operation of COSCO. The existing problems are mainly in three aspects: first, the release efficiency of empty container inspection is low. The problem with inspection is that the process is overly complicated and requires many formalities to complete, and the empty container itself does not exist its worry problem, and this situation will inevitably affect the enterprise's domestic and foreign trade transport efficiency. Second, the port supporting facilities are not perfect, China's foreign trade treaty port construction carried out after the reform and opening up, and the real high-speed construction period is from the end of the 1990s, this problem has led to many emerging ports in supporting the function of apparent problems. Such functional problems will directly affect the business efficiency of COSCO. Third, the number of customs clearance companies is too small. As a freight forwarder, COSCO mainly relies on the customs broker for customs declaration. The lack of customs clearance

companies will directly affect the efficiency of ships entering and leaving ports. For example, the newly constructed Nansha Port area has only one customs clearance company that meets the relevant qualifications, which shows the severity of the problems caused by insufficient supporting facilities in the business development of COSCO.

(2) Insufficient Understanding of Customers and Competitive Markets

An enterprise in operation should have an understanding of the market conditions and the demands of customers. Only in this way can it provide products that meet the demands of customers and ensure its core competitiveness. However, as the most significant maritime transport company in China, and even the second largest shipping company in the world, COSCO has a noticeable lack of understanding of the requirements under the objective law of market development in its business process. As a result, the specific details do not meet the market requirements in their business process. At the same time, enterprises' lack of understanding of customers also has an impact on communication efficiency for their business activities. In the case that customers' transport demands cannot be expected, the proposal cycle of solutions will be extended, and enterprises themselves will usually bear the cost of communication. More importantly, compared with other enterprises that can understand customer demands, it will also affect their competitive strength and cause the loss of loyal customers.

(3) Insufficient Understanding of Competitors

As mentioned above, COSCO has achieved relatively significant results in the past business, leading to a lack of understanding of the market and consumers in the current operating environment. This situation is not only reflected in the market issues, but also resulted in COSCO's lack of understanding of competitors, including the neglect of domestic emerging enterprises, and even the neglect of strategic policies of famous international enterprises such as Maersk. Therefore, its business activities and plans often lack consideration for competitors, which inevitably fails to achieve the corresponding achievements in the business results.

3.4.3 Opportunity Analysis

From the perspective of opportunities, COSCO currently has two development opportunities. First, the gradual improvement of the collection and distribution transportation network planning in recent years can undoubtedly effectively enhance its own development space; Second, the advantages established by COSCO through its development will also gain more opportunities in the process of promoting its market competition and environmental optimization.

(1) Perfect Distribution Network Planning

Since the reform and opening-up to date, China has been gradually improving the construction of the transportation network and completing the main routes. Although water transport has received positive attention during the period, there are obstacles due to the distribution of goods such as land and railway. Therefore, in the

past development of shipping, there was no ideal space. However, major transportation routes have improved in recent years, and in the process of gradually strengthening the overall transportation network planning, the low-cost transportation advantage of shipping can undoubtedly be more prominent. For example, in the hinterland cities near the port, due to the lack of practical transportation support to reach the port in the past, railway, land, and other transportation modes are often adopted in consideration of the cost. With the improvement of the network, the cost advantage of waterway transport has highlighted. Hinterland goods can be transported by land to the port, and then waterway transport can realize low-cost long-distance transport mode, which is undoubtedly an essential opportunity for COSCO in the future development process.

(2) Opportunities Brought by the Development of China COSCO Shipping Group

As mentioned above, the continuous strengthening of China's collection and distribution transportation network will bring COSCO unprecedented opportunities for development. Moreover, the opportunity also reflects the strength of COSCO. The reason is that the competitive market advantage gained through development can also guarantee a specific competitive strength in the future development process. At the same time, with the continuous improvement of Internet technology and AI technology, COSCO will provide more considerable help to efficiency and cost control. Importantly, the convenience of growth is related to the size of the business. As one of the most potent shipping enterprises in China, COSCO is undoubtedly able to control costs more effectively, to achieve more considerable competitive advantages in the future.

Therefore, its level of development also to future competition played a crucial role in promoting.

3.4.4 Threat Analysis

The main threats COSCO will encounter in the future development are as follows: first, the industry exists vicious competition; Second, the cost increase brought by the policy environment and the overall economic environment; Third, under the existing policies and regulations, the supply of goods has been decreasing.

(1) Threats Brought by Vicious Competition among Shipping Companies in the Industry

In recent years, national economic development has achieved specific results, and shipping, as an essential link in the process of economical transport, has also received relatively extensive attention. At present, a large number of enterprises enter into the competition in related fields, including not only internationally renowned enterprises in China, but also some domestic enterprises with local policy advantages and capital start to seize the market opportunities. However, in the relatively hostile competition environment, some enterprises spared no expense to achieve competition by substantially reducing the freight rate, resulting in the elimination of a large number of weak enterprises by the market. Although COSCO has a particular strength, it cannot survive effectively in the harsh competitive environment, and its current operating profit has been weakened to a large extent.

(2) Continuous Increase in Operating Costs

Increased competition in the market forces companies to maintain existing prices, or risk a gradual exodus of loyal users. Also, in recent years, the cost increase of the raw material market, such as energy, spare parts supply, and other aspects, has led to an increase in business costs. In this background, COSCO is bound to be affected by the profit space, thereby reducing its development efficiency. Therefore, in recent years, COSCO has also adopted a variety of cost control methods. However, due to the changeable environment and the continuous increase of labor costs, COSCO has failed in cost control efforts.

(3) The Reduction of Supply of Goods caused by the Implementation of New Policies and Regulations

The change in the policy environment also has a significant impact on the development of COSCO. On the one hand, the improvement of policy requirements and relevant standards has led to a decrease in the supply of goods available to COSCO. On the other hand, it is based on economic sanctions, resulting in a decline in the volume of international trade. Most notably, more than 280 foreign investors left China in Guangdong province alone in 2011. Therefore, COSCO, in recent years, the total volume of the business began to show a downward trend. Moreover, there is no doubt that the real economy caused by the real estate economy develops slowly, and the industry is challenging to keep up with the development trend of The Times, which then leads to the problem of alternating rupture between new and old customers.

3.4.5 SWOT Strategic Portfolio Analysis

(1) SO strategy (Growth Type)

First, with the development opportunity, the company should effectively adjust and optimize the structure of the fleet and promote the upgrading of the capacity scale, which is in line with the trend of The Times. The state will vigorously promote the development opportunities of Guangdong-Hong Kong-Macao Greater Bay Area and "One Belt and One Road", build super large container ships with more than 20,000 TEU, and further, explore the import and export trade markets of countries along the road. Through leasing shipping space, selling ships, and other means to reasonably control operational risks and enhance profitability.

Second, effectively combine their advantages, promote brand building, enhance market visibility, and strengthen marketing. As the largest shipping enterprise in China and the second-largest in the world, it has won the comprehensive service Gold and silver award issued by shipowners' association many times. Especially in the operation of ocean routes, and it has won the favor and appreciation of many customers. Also, through the sales department linkage of foreign agents, cooperation in developing direct customers based on the primary supply.

(2) WO Strategy (Torsion Type)

First, the managers in leadership need to summarize the development experience in the past, and effectively deal with the possible problems in the future market to avoid in advance. To strengthen the understanding of customers, competitors, and the market, to avoid the unwarranted loss of customer base, through an in-depth study of the market,

to avoid the phenomenon of blindly imitating the strategic decisions of other shipowners, resulting in production and operation risks.

Second, change the port clearance environment. With the maturity of Internet technology and AI technology, customs clearance procedures can be simplified, and paperless customs declaration can be implemented to reverse the low work efficiency and reduce costs.

Third, optimize the route and open up the near route effectively. Accelerating the restructuring of loss-making routes between the US, Canada, and Europe will free up capacity in markets with strong demand growth, such as southeast Asia and the Middle East.

3) ST Strategy (Diversification Type)

First, the company needs to strengthen external cooperation and implement the signature of significant customers. The shipping industry is highly competitive, and it can cooperate with other shipowners to operate routes. For example, Hyundai Merchant Marine achieves strategic cooperation with the 2M alliance as a non-alliance member, to increase the route network available to it and provide customers with choices. To sign the primary customers, while taking into account the needs of individual customers, to ensure the stability of the goods, so far, has signed contracts with several customers, including the world's top ten NVOCC.

Second, promote relevant industrial strategic cooperation to enhance core competitiveness through the joint operation. Provide customers with diversified services to choose from through multiple channels, such as online space booking with

Alibaba's cooperative E-commerce platform and green Express transportation arrangement with Guangzhou Port Group to increase the competitiveness of enterprises.

(4) WT Strategy (Defensive Type)

First, the company needs to strengthen the strict management of production costs to maximize cost savings. In the process of production and operation, enterprises will incur various expenses. Under the premise that the market is in a downturn for a long time, the control of operating costs is crucial to the survival of enterprises.

Second, the business model should innovate to replace the traditional service model with differentiated services to control the operating cost. COSCO has introduced a new operation mode to replace the traditional operation mode. It replaces the original simple maritime transport with trailer door-to-door delivery, sea-rail combined transport, and multimodal transport. Also, through the acquisition of domestic and foreign terminal management rights, warehouses, and other means, COSCO launched a new supply chain model, enhance their market competitiveness.

From the above analysis of the four levels, combined with SWOT matrix analysis, the contents of Table 3.2 can be obtained

Table 3.2 SWOT Matrix Analysis

Internal Factor	Strengths	Weakness
	1. Brand effect;	1.Port clearance
	2. System of Information;	environment;

	3. Human resource System;	2.Market understanding;
External Factor	4. Domestic and foreign trade	3.Customer understanding;
	transported on the same ship.	4.Understanding of
		competitors.
Opportunities	SO Strategy	WO Strategy
1.Opportunities for	1. The fleet structure is	1. Summarize the
environmental	effectively adjusted and	development experience in
development	optimized to promote the	the past, effectively deal
2.Opportunities for the	upgrading of the capacity scale;	with the problems in the
development of	2. Effectively combine their	future market to avoid in
competitive bases	advantages, promote brand	advance;
	building, strengthen marketing,	2. Optimize the route and
	establish core competitiveness.	open up the near route
		effectively;
		3. Change the port clearance
		environment.
Threats	ST Strategy	WT Strategy
1. Vicious competition	1. Strengthen external	1. Strengthen the strict
2. Cost increase	cooperation and implement	management of production
3. Less supply	signature of key customers;	costs to save costs to the
	2. Promote relevant industrial	maximum extent;

strategic cooperation to	2. Innovate the business
enhance core competitiveness	model and replace the
through the joint operation.	traditional service model
	with differentiated services
	to control the operating cost.

Chapter 4 The Choice of Strategic Transformation

In the above analysis, this paper established a cross-strategic direction based on the four dimensions of advantages, disadvantages, opportunities, and threats, and the following content will also be based on cross-contents to realize the research on strategic development strategies. That is to put forward relatively useful strategic development Suggestions from the perspective of Suggestions combined with the environment and its situation of COSCO.

4.1 Basis for Strategic Transformation of COSCO Shipping Lines

4.1.1 Give Full Play to Its Advantages of Scale

COSCO Shipping Lines is an essential part of the core industry of China COSCO Shipping Group, an indirect controlling shareholder. As a listed platform focusing on the development of container shipping service of the supply chain, COSCO has

concentrated helpful resources in container shipping and terminal operation and management and has significant scale advantages. By the end of 2019, the group's self-operated container fleet had a capacity of about 2.97 million TEU, ranking third in the world, according to Alphaliner. Meanwhile, it continues to promote the layout of global terminals. According to the 2019 report of Drewry Shipping Consultants, the group's container terminals ranked first in the world in terms of total throughput in 2018. China COSCO Shipping Group should continue to give full play to its overall scale advantages, continuously improve its service quality, maintain its competitive advantages in terms of standardization, professionalism, and low cost of its service products, and better meet the diversified needs of customers.

In the global network layout, China COSCO Shipping Group needs to continue to adhere to the global vision and international thinking, continue to promote the globalization strategy. COSCO needs to focus on the world trade pattern changes, take flexible adjustment service network layout, grasp the development of emerging economies, and increase import market opportunity. Also, COSCO needs to actively follow the "One Belt and One Road" initiative. COSCO should give full play to the acquisition of Orient overseas international of scale advantage and synergy effect. Ultimately, it can enhance the group's profitability and anti-risk ability.

In the container shipping business, China ocean shipping group to fully integrate global resources, actively respond to the Sino-Us trade friction, flexible regulation of global capacity layout, increase in emerging markets, a third country market and regional market capacity of tilt, continuously strengthened globalization development

foundation, achieve more comprehensive geographic coverage and more balanced network. At present, the company has about 700 sales and service outlets of container shipping covering the whole world, operating a total of 274 international routes (including international branch lines), 58 Chinese coastal routes, and 88 pearl River Delta and Yangtze River branch lines. Its fleet is connected to 356 ports in about 105 countries and regions around the world.

In terms of port business, we will continue to promote terminal business growth and global layout, optimize the global terminal portfolio, and improve port management and operation efficiency. By the end of 2019, the group owned by COSCO Shipping Port Limited have invested 48 container terminal ports in 36 ports around the world, operating 290 berths, including 197 container berths, total design annual processing capacity of 113 million TEU, a terminal network spanning five coastal port group of China, Europe, South America, Middle East, Southeast Asia, and the Mediterranean.

4.1.2 Customer Focus

In terms of centralized transportation service, it adheres to the customer-oriented approach, solves customers' "pain points", continuously improves service quality, continuously optimizes customer service system, and makes full use of global network resources to enhance service and innovation ability. It is committed to promoting the construction of digital shipping, promoting the development of GSBN(Global Shipping Business Network) blockchain alliance, and promoting the digital transformation of the

global supply chain. To realize data connectivity, improve service convenience, enhance interaction efficiency, meet diversified service demands of customers, create value for customers, significantly improve customer experience and customer stickiness, and further expand market influence.

4.1.3 Accelerate Digital Construction

The shipping industry usually gives the impression that digital processes are relatively backward and that physical events are disconnected from digital information. Since the outbreak of the global financial crisis in 2008, due to the impact of the digital trend and the overall downturn of the shipping market, various enterprises have been trying to solve the problem of information asymmetry in the isolated freight management procedures and unusual situations through digital technology innovation.

The main features of blockchain technology are decentralization and security. On the one hand, blockchain technology can solve the problem of how to complete direct transactions by people who do not trust each other, that is to say, it can change the traditional business model in which each party of the transaction needs an intermediary to complete the transaction. Blockchain, on the other hand, the use of distributed database technology, block the transaction data in each client nodes point, mutual authentication mechanism for collective validation) (by consensus, in which anyone node can modify secretly, and any data to a node in the destroyed, will not affect the regular operation of the entire database.

The shipping industry relies on the characteristics of blockchain technology, can achieve two goals: first, it can reduce document circulation and simplify the collection and payment of funds. For example, the circulation of various cargo dynamics, cargo information, and documents among shipping enterprises, ports, and customs can enable all parties to enter the same blockchain platform in a timely and safe manner. Second, it can complete process monitoring, real-time data monitoring for some dangerous goods, and cold-chain goods, so that all parties can see the status of the goods and leave evidence that cannot be tampered with.

4.1.4 Innovate Its Own Business Model

The development of End-to-End business is an essential means for the shipping industry to curb operational risks, broaden profit channels, and build high-quality services, as well as an effective way to create value for customers. The end-to-end process starts with the client's demand end and goes to meet the client's demand to end to provide end-to-end services. The end-to-end input end is the market, and the output end is the market. End-to-End must be fast and effective, reducing labor costs, reducing financial costs, reducing management costs, that is, reducing operating costs.

4.1.5 Reform the System and Mechanism to Stimulate Enterprises to Create Efficiency

Adhere to the principle of mutual promotion and mutual improvement between enterprise development and employee growth, and establish a learning enterprise while promoting the scientific development of the enterprise. Promote the long-term development of the enterprise by improving the quality of the enterprise staff and let the staff enjoy the dividends of development through the long-term development of the enterprise so that the enterprise development and personal growth thoroughly combined. We should attach importance to the principle of "development for employees, development depends on employees, and development results are shared by employees", and promote scientific and democratic decision-making better to reflect the fundamental interests of employees and enterprises.

4.1.6 Adhere to Sustainable Development

In 2015, the Finnish Meteorological Research Institute tracked over 376,000 ships worldwide through AIS and MMSI, and these ships released a total of 9.6 million tons of sulfide throughout the year (Johansson et al., 2015). Sulfur compounds released into the atmosphere can bring acid rain, destroy vegetation and water sources, endanger aquatic species, and cause human respiratory diseases. Therefore, Sulphur restriction on ships plays a decisive role in protecting the environment and safeguarding human life and health.

In October 2016, the 70th meeting of the IMO Committee for Marine Environmental Protection (MEPC) re-evaluated the 2008 amendment and confirmed that January 1, 2020, is the implementation date of the global standard for the Sulphur content of Marine fuel not to exceed 0.50% m/m. By 2020, IMO2020 Sulphur limit order will implement as scheduled, stipulating that ships must use fuels with Sulphur content less than 0.50% m/m, or install desulfurization towers to meet compliance requirements. Meanwhile, IMO stipulates that vessels without desulphurization towers shall not carry non-compliant fuel oil from March 1.

Nowadays, environmental protection and sustainable development have become a global trend. As the largest shipping enterprise in China, COSCO should vigorously develop green shipping, smart ports, and smart ships, and play an exemplary leading role in energy conservation, environmental protection, and technological innovation.

4.2 Strategic Transformation Objectives of COSCO Shipping Lines

Based on the SWOT analysis of COSCO Shipping Lines, the advantages and disadvantages transformed each other, the opportunities and threats also exist, and not just exist in a certain period of a particular enterprise, COSCO, need to combine them, to develop the company's strategic development goals, choose the appropriate transformation strategy.

4.2.1 Strategic Development Objectives

Strategic development goals refer to the development goals set by an enterprise to complete its mission within a specified period, in combination with the changes in the external environment and the adjustment of internal conditions. After 2008, the subprime mortgage crisis, the outbreak of the European debt crisis, the slow development of the American economy, the global economy into a downturn. On the contrary, although the overall foreign trade environment has been right since the realization of "One Belt And One Road", due to the influence of the international environment, foreign businessmen located in the south of China began to move one after another southwards, allowing their production access to southeast Asia, to gain further profits through the advantage of population depression. Therefore, at present, the overall development of the shipping industry is not ideal, and the overall pace of development blocked. In this context, many factors such as policy environment, economic environment, and future development trend must be taken into account in the process of formulating development strategy for COSCO. Therefore, from the perspective of the opportunities and challenges brought by shipping alliances, the strategic plan will be set in three stages, namely the short term, the medium term, and the long term.

Immediate goal: COSCO needs to solve the current problems and ensure the stability of the development foundation. First, COSCO should give full play to the institutional role, stabilize the foundation for our development, respond positively to policy demands, and consolidate policy advantages. Second, the company should

promote customs declaration optimization reasonably, assist relevant departments to achieve rapid customs declaration, and preliminarily achieve operational management efficiency; Third, establish the initial brand image, set up the consumer's objective understanding to the enterprise service.

Medium-term goals: This phase focuses on the achievement of development. First, the company should optimize the port environment, actively enhance service awareness, price service level, and then build the core competitiveness. Second, the company needs to enter the comprehensive logistics market, realize the diversification of service mode, improve the competitiveness of the service market. Third, the company needs to improve brand influence and actively promote the marketization competitiveness of the brand to impress consumers.

Long-term goals: First, the company needs to ensure to seize more than 50% of the market share, gradually change from scale development to return to the essence of shipping, improve service quality, and continue to build a world-class competitive liner company; Second, achieve the total sales of more than 4.5 million TEU to ensure their profits.

4.2.2 Development Ideas

In the above analysis, this paper established a cross-strategic direction based on the four dimensions of advantages, disadvantages, opportunities, and threats, and the following content will also be based on cross-contents to realize the research on strategic development strategies. That is to put forward relatively practical strategic development Suggestions from the perspective of Suggestions combined with the environment and its situation of COSCO. Given the current actual situation of enterprises, on the one hand, due to the weakness of the global economy, the sluggish major trade markets in the world continue to restrict the booming development of the shipping industry; on the other hand, enterprises face with high operating costs, such as fuel costs, box management costs, internal management costs, and other expenses. However, the market is full of enterprises providing similar services, resulting in vicious competition caused by the price war, and continually cannibalizing the market share of COSCO, and ultimately resulting in the loss of corporate benefits. These a series of problems urgently need to COSCO, as soon as possible to solve, therefore, in combination with COSCO, the existing strategic planning goals, COSCO, should choose to control the cost of development strategy and product optimization development strategy as a defensive strategy of building strategic enterprise system. After that, the COSCO should adopt the expansionary strategy, expanding agent business types, and expand the service scope. COSCO around the core client - entity enterprise and logistics terminal customer - manufacturing enterprise's production and operation requirements, actively build owner's service system and the whole logistics service system, a comprehensive, integrated service network, a diversified operating pattern implementation under the background of sustainable development.

4.3 The First Stage of Strategic Transformation of COSCO Shipping Lines

4.3.1 Cost Control Development Strategy

Profit is the only premise to ensure survival and development, and there are only two ways to make a profit, one is to control costs, the other is to raise prices. From the above research, the development environment of the Marine container transport industry now confront with significant problems, and the competitive pressure of the industry is surging at present. The economic environment of shipping enterprises is an essential basis for them to realize their interests. It can be understood that when the economic environment is better, the total volume of domestic and foreign trade will increase, and enterprises can get more orders. As the current economic environment is stagnant, COSCO can only effectively control its costs and reduce its selling price, to meet the demands of the market for the industry and promote economic development to a certain extent. Therefore, raising the price is not a reasonable choice at this time. Therefore, the first choice of the current enterprise strategic development mode is to control the cost. However, to realize the low-cost operation strategy, we must ensure that our conditions can meet the application requirements of the strategy. Blind use of the strategy will seriously affect the operation of the enterprise, and may even cause financial problems due to the substantial reduction of profit space. COSCO is a largescale shipping enterprise with a relatively perfect human resource system, which can effectively control the essential human cost through human resources and further control the operating cost based on talents. Under the reasonable control of costs, it will

no doubt be able to obtain more production profits, and then lay a foundation for its development.

(1) Low-Cost Suppliers

To implement the low-cost strategy, the first thing to do is to solve the cost problem brought by suppliers. As mentioned in Michael Porter's Five Forces model above, red merchants can enable enterprises to deal with significant problems in the external environment of operation, and effectively solve the cost pressure brought by suppliers is undoubtedly a vital basis for realizing low-cost operation. From the perspective of the environment, COSCO's suppliers mainly include external units such as trailer companies, ports and terminals, and fuel oil companies. Such units are independent businesses so that they can achieve cost control through business negotiation. Also, the long-term order cooperation model can be used to reduce the selling price per unit of time to reasonably control the cost of suppliers. Also, in the industrial and commercial management of spare parts, the cooperative maintenance mode can be used to provide long-term maintenance and replacement of spare parts by suppliers to realize unit cost control with periodic cost expenditure.

(2) Low-Cost Internal Operation

The effective control of internal operating costs is the direction of enterprise management. COSCO is a state-owned enterprise, which inevitably leads to its lack of precise control in the process of cost management. In this regard, COSCO can effectively make use of its talent advantages to adjust the management and operation details rationally, such as adopting incentive and promotion methods to promote

internal staff to optimize their work content. Based on this, there will be a one-time expenditure cost, but it can establish a relatively good long-term mechanism. Also, information management can be realized effectively with the help of information technology. Through a multi-level linkage of finance, human resources, operation, and production, communication efficiency of internal operation can reasonably improve, investment of human resources can reasonably save, and efficient operation and production results can achieve.

4.3.2 Product Optimization Development Strategy

The essence of management lies in the optimization of the overall development of enterprises. In this regard, COSCO can achieve in the following ways: First, the company can optimize product design and take advantage of industrial development experience. COSCO is one of the most experienced enterprises in China's maritime container transportation. The vast operation data accumulated by COSCO can undoubtedly become the basis of new product design. Through the design of new products, it can meet the different needs of the market, and optimize the cost of products, so that it has good market competitiveness, and then promote development; Second, it can optimize product production and take advantage of developed airline layout network. Compared with domestic enterprises, COSCO has significant advantages in differentiated operations, which are mainly reflected in its developed route layout. COSCO has established the coverage of the route network covering the national waters

and most parts of the world in the long-term development process and undoubtedly has significant advantages in line planning and transportation efficiency. However, in the past, COSCO adopted a business model dominated by bulk goods, while the current economic environment has led to the gradual reduction of bulk goods. In this regard, COSCO can adopt differentiated management and use its inherent advantages to provide various differentiated services to meet the new demands of the market. Third, optimize product sales, utilize the advantage of high-quality customer service resources, and develop other businesses of the company. High-quality customers are an essential basis for the realization of differentiated management. The reason is that only by accumulating enough high-quality customer resources can we achieve the matching of differentiated management resources in the operation process. Based on a large number of high-quality customer resources, COSCO fully acquires the needs of users under communication, adjusts its business form according to the needs, ensures the efficiency of emerging business supply, and thus actively promotes its development.

4.3.3 Follow the Trend of the Information Age and Speed Up Digital Construction

The development of the shipping alliance brings about shipping reform. Meanwhile, it needs more scientific and systematic analysis, and the critical role of informatization cannot be ignored in this process. The company should develop an intelligent decision support system that can help enterprises to collect business data to make scientific decisions. The system will extract useful information to help enterprises

to make a scientific decision in management and business development. Therefore, at the present stage, the company can extract its business data, build a data warehouse, and form a business intelligence system using big data. In terms of the specific application, can realize precise marketing (such as analysis for a particular owner introduced specific preferential to stimulate the booking shipping space), warn risk (such as box source is expected to be nervous, early warning and prepare enough empty containers), optimize the resources (leadership could adjust management ideas and resources easier), improve the service (customer service system capture and analysis of users' log, optimize function and user experience, iteratively and continually improve e-commerce platform).

Currently, under development, CargoSmart is a blockchain-based digital product of OOCL. He will provide technical solutions and platform operation services to GSBN (Global Shipping Business Network).

4.3.4 Embed into the Customer Value Chain and Explore Customer Groups in Multiple Ways

It is an essential strategy in the first stage to embed the customer value chain and explore the customer group in multiple ways. First, COSCO could develop new customers and increase market share. Second, the company can rely on the existing sales channels, cross the selling to extend scale. Through the establishment of the archives of potential customers, it can adopt various ways to build a relationship with new customers. Third, COSCO extends the life cycle of cooperation with customers,

according to different service needs of customers, further improve the refined service content, optimize the service model and improve the service process, trying to retain customers, reduces customer loss, and cultivates customer loyalty.

In product pricing, product differential pricing can be considered. In shipping alliances, customers have higher requirements for services, and product differentiation should start from the overall concept of products. Enterprises should pay attention to positioning the overall products and implement differentiated pricing according to different product positioning, to form their competitive advantages. The overall concept diagram of the company's product marketing is shown in Figure 4.1.

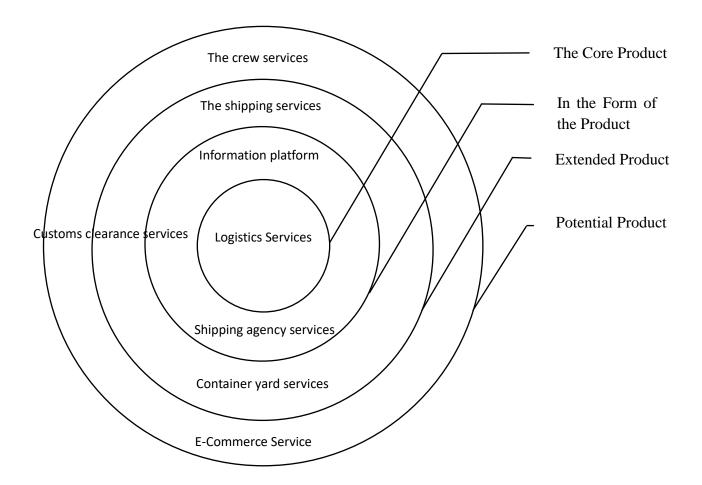


Fig.4.1 Overall Product Marketing Concept Architecture of COSCO Shipping Lines

When the company pricing service products, according to the price of different products is also a reflection of the company's competitiveness. Firstly, the market is subdivided. According to the strength of the subdivided market, potential clients should be fully understood. When charging fees, the cost should take as the premise, and the actual demand of the clients should be taken into consideration. For the container transportation services, the quotation can be appropriately lower than the market price, to maintain a stable business relationship with the majority of customers, to ensure the company's market share; As for the services of extended products, they can be priced accurately according to the professional demands of the entrusting party. At the same time, the company can also make use of the relationship with relevant port departments to put itself in the position of the client, to achieve better profits while obtaining the lowest port handling fee price.

4.3.5 Comprehensive Integration of Online and Offline, and Continuous Improvement of OAO Mode

The company's traditional offline mode operation has been difficult to adapt to the development trend of the era of shipping alliances. Therefore, the company needs to speed up the comprehensive integration of online and offline modes to improve the OAO mode continually. Online, the company should vigorously promote the promotion

and application of e-commerce portal sites, sort out and improve the online sales system of liner business, and sort out and evaluate the online products and prices it has launched. At the same time, the functions of the online shipping center should continuously improve, and the promotion of online box management and online import order exchange module should be intensified, to achieve complete online operation switching, reduce the pressure of offline window operation, and explore new income sources and profit models in the practice of online mode.

In offline, the company should actively promote customer service, strengthen the team management, and ensure that the container traffic resources consolidation and stable. At the same time, the company should make full use of its own resources advantages, management advantages and brand advantages, on the premise of scientific prediction sufficient demonstration and potential mining company, to expand the development of shipping business, looking for new profit growth point. To further build customer-based brand intangible assets, brand strategy is one of the essential strategies to enhance the competitiveness of enterprise products in the market, and the correct choice of brand strategy is a crucial decision for enterprises to do well in marketing and improve economic benefits. Customer-based brand equity refers to the reflection of customer's brand knowledge on customer's brand marketing activities. When the brand is identifiable, and customers respond better to the product and its marketing, the brand has real customer-based brand equity. The brand resonance pyramid is shown in Figure 4.2.

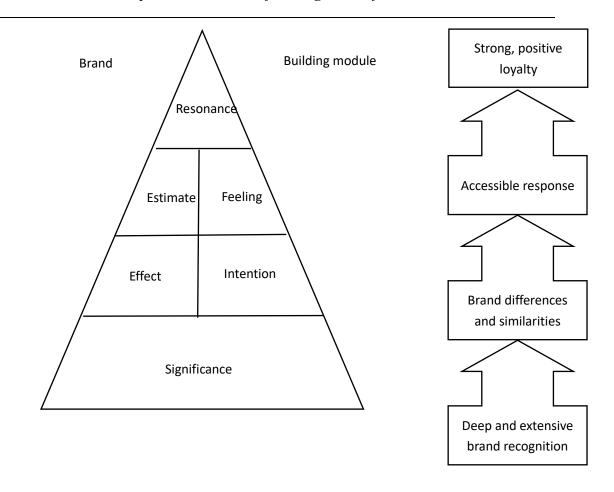


Fig. 4.2 Brand Resonance Pyramid of COSCO Shipping Lines

Fully realize the importance of establishing the brand concept, establish a good brand image in the fierce market competition, and build a pyramid system of brand resonance. First of all, the company has always been committed to providing clients with high-quality agency services, providing clients with accurate agency services in all links, and providing customers with high-quality and satisfactory agency services as far as possible, so that the company's corporate brand image penetrates deeply into consumers. Secondly, the company needs to create the differences and advantages of the brand, so that the company brand stands out among many brands. We also need to gain a high degree of recognition from customers so that many consumers will

remember the company's brand. Finally, the company's products and services will be linked to the expectations of customers, so that customers resonate with the products. Thus customers form a positive, steadfast loyalty, accumulating the company's intangible assets.

4.3.6 Achieve All-Round Excellent Service Marketing

Customer concentration is further enhanced, and enterprises focus more on how to win in the field of service marketing. Successful marketing in the service industry needs to cover a wide range of areas: external marketing, internal marketing, and interactive marketing. External marketing refers to the preparation for customers to improve their services; Internal marketing describes how to train and motivate employees to serve customers better. Interactive marketing emphasizes employees' skills in serving customers. Among them, the buyer and user of customer service is also the embodiment and feedback of service. The three forms of service marketing are shown in Figure 4.3.

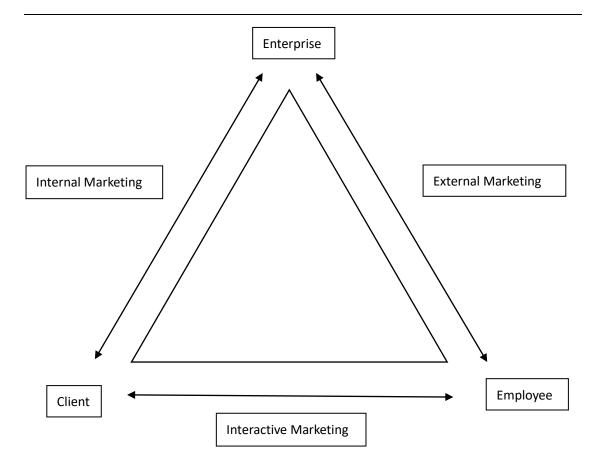


Fig.4.3 Three Forms of Service Marketing

In terms of external marketing, the company should fully pay attention to the service needs of customers and strive for customer satisfaction. It is essential to establish an after-sales service mechanism and a customer relationship network to improve service level because COSCO needs to understand the personalized demands of critical customers for improving the quality of service. For example, in the process of agency business, we take communication with customers seriously, pay attention to the customers' satisfaction through the feedback system. Then, according to customer feedback, the company can make timely adjustments. In terms of internal marketing and interactive marketing, the company should take the initiative to meet the different needs of different customers in the market, set up a highly efficient, diversified and

personalized professional marketing team under the company's human resource management system, and arrange relevant personnel to contact with different customers according to their preferences. At the same time, appropriate staff should arrange to contact with relevant units or institutions in the shipping agency industry, vigorously cultivate staff with their resources conducive to the development of the enterprise, and subtly let everyone in the organization participate in marketing activities. Moreover, the company needs to establish and improve the marketing incentive mechanism to attract outstanding employees, improve the training program, support and reward outstanding employees, strengthen the customer-oriented thinking, and regularly evaluate the job satisfaction of employees.

4.4 The Second Stage of Strategic Transformation of COSCO Shipping Lines

4.4.1 Comprehensively Build "Intelligent Ship"

Open up the comprehensive application of intelligent ship technology engineering, research, and development of high value-added shipbuilding technology, promote the application of digital technology. The operational model is data-centric and relies on integrated solutions for network, software, and data transmission, which will significantly increase productivity.

4.4.2 Use E-Commerce Platform to Build Logistics Service Brand

Using the experience of COSCO Logistics in building logistics brands such as "Wujie" and "Yibutong" of Ningbo Port, the logistics e-commerce service platform is optimized to provide "door-to-door, port-to-door" integrated logistics services for trade and manufacturing enterprises. Comprehensively improve the company's "cargo" side of the business volume, to achieve balanced development of "ship" and "cargo" business. And then gradually build a coordinated and grid port logistics chain from the hinterland manufacturing enterprises to the port, so that the company will become a perfect community-based comprehensive logistics service provider, and then maintain the leading position in the industry.

4.4.3 Fully Realize the "Green Ship"

Under the guidance of big data, management means such as optimizing fleet structure, optimizing route design, and improving vessel operating efficiency in port can effectively reduce fuel consumption, to reduce the impact of business operation on the environment and carbon emissions.

The concept of green ships is the general trend in the future. As a company with the third largest capacity in the world, the discharge of ships must realize the transformation of green ships and low vulcanization. Examples include the use of standard low-sulfur oil and the installation of vessel desulfurization units. To promote higher quality, more sustainable development, enhance core competitiveness.

Chapter 5 Implementation Guarantee of COSCO Shipping Lines' Development

Strategy Transformation

To ensure the realization of COSCO Shipping Lines in the above strategy, this paper puts forward corresponding safeguard measures from the aspects of organizational structure, human resources, corporate culture, production safety, and information reimbursement system.

5.1 Organizational Security

5.1.1 Establish and Improve the Operation Mechanism

COSCO Shipping Lines should first establish and improve the operation mechanism, effectively improve the internal control ability dominated by operation, to actively promote the practice of decision-making and the embodiment of execution, to ensure the efficiency and effect of business activities. This mainly includes three levels. First, the operation behavior mechanism. Through the restraint of staff behavior, effectively improve the work efficiency; Second, business promotion mechanism. Through performance assessment and other ways, strengthen the management of employees, and enhance the constraints of employees on their own, and then achieve stable internal development; Third, operation guarantee mechanism. Establish the reward and punishment system, clarify the responsibility system, ensure that the similar problems after the clear accountability, and with transparent management means to

punish. At the same time, incentives as an incentive, so that employees can be more active in work.

In terms of brand synergy, business synergy should be brought into play, and internal resource allocation should be continuously optimized. By COSCO Shipping and OOCL, the two container transport service brands complement each other in terms of a global network, digital capability, and logistics layout, providing customers with more comprehensive global network support, more differentiated products and services, and more digital customer experience. At the same time, the synergies in such fields as airline network planning, container management, supplier procurement, and information system construction have been continuously released to accelerate the transformation from overall scale advantage to scale benefit.

In terms of port and waterway coordination, the coordination and development of the whole logistics industry chain of container transport services, while developing fleet, actively invest in port and terminal business. By actively promoting the strategic deployment of overseas hub ports, improving the layout and operation management of global terminals, and continuously upgrading the cooperation with ocean alliance, it also provides stable routes, cargo volume support and potential investment opportunities for its container terminals, which is conducive to the growth of terminal business and global layout. Realize the strategic echo between container transportation lines and terminal layout, promote the continuous development of the two business segments and the continuous improvement of profitability, to enhance the group's

comprehensive competitive strength, continuously improve the brand image in the world, and create higher value for customers and partners.

5.1.2 Improve the Governance Structure

COSCO Shipping Lines shall effectively combine its internal management mode, actively promote the realization of internal governance, and effectively manage the corresponding problems. Therefore, it is necessary to clarify the relative independence of the board of directors and the management and establish that the board of directors is responsible for the shareholders while the management is responsible for the operation of the company, to strengthen the supervision ability of supervision in the structure.

5.1.3 Strengthen IT Application

As mentioned above, COSCO Shipping Lines has already attained the international first-class level in terms of information management capability. However, its information management technology still has room for improvement, including strengthening the improvement of management efficiency, effective prevention of business risks. In this regard, COSCO should continue to increase the resource investment in the information management system, on the one hand, continuously improve the information management system for the improvement of enterprise

operating efficiency, and gradually enhance its competitiveness. The other is to optimize the implementation of the function to ensure the security and stability of the function.

5.2 Human Resources

Based on the above, COSCO Shipping Lines has a relatively complete human resource structure and strong talent attraction. However, COSCO is still deficient in the comprehensive management of human resources, mainly due to the lack of consideration for ordinary human resources and the lack of training for employees despite the promotion space and corresponding channels for all employees. In this regard, in the implementation process of low-cost strategy, differentiation strategy and focus strategy, it is also necessary to effectively adjust the structure of human resources to achieve strategic matching to ensure that the corresponding strategies can be realized.

5.2.1 Staff Recruitment

COSCO Shipping Lines should combine its management model, effectively improve the recruitment of employees, reasonably improve the matching between employees and positions, and optimize the improvement of employees' value for the economic creation of the enterprise. Therefore, the following work is required: first, the company needs to reasonably analyze the job demands to ensure that the job is objective

to the operation and production; Secondly, the recruitment standards and selection system should be established to ensure that talents can meet the expectations of enterprises on the value of positions.

5.2.2 Salary Planning

In recent years, domestic economic inflation has become more and more evident. However, the average income level of people has been rising slowly, which means that the income and consumers are gradually becoming unreasonable. In this regard, COSCO Shipping Lines should take into account the income level of its employees, and make practical plans for their salaries, so that they can meet the abundant life resources. At the same time, the planning of salary also helps employees to have a sense of belonging to the enterprise and effectively mobilize the executive force of the enterprise.

5.2.3 Staff Training Planning

For internal staff training, it is necessary to fully consider the work characteristics of different positions and the construction of corresponding strategic management plans to ensure the effective implementation of strategic plans. The specific content is as follows. Firstly, the mentoring responsibility system can be adapted for specific positions, and tacit education can drive new employees to master skills and realize the

transfer of knowledge quickly. Secondly, the rotation mode should be optimized so that employees have enough space for training and learning to promote the construction of employees' abilities actively. Thirdly, the strategic training mode should be established to promote the realization of enterprise strategic planning through human resources.

5.3 Cultivate Corporate Culture

As the third-largest shipping capacity in the world, COSCO Shipping Lines is a leading enterprise in China's shipping industry. It should not only promote its existing brand but also build a service-oriented corporate culture. Excellent corporate culture can well build the cohesion of employees for the enterprise, improve the enthusiasm of employees in the process of work, to help the enterprise achieve efficient development. In this regard, COSCO must effectively adjust its corporate culture orientation in line with its strategic development demands, to promote the realization of strategic plans. At the same time, due to the impact of the environment, different customers will put forward different requirements, which requires employees to react to the unpredictable and uncertain environment. When employees receive the influence of service-oriented corporate culture, they will consider more things for customers and strive to provide customers with the service that best meets their expectations. As an enterprise with shipping agency business as its primary business, the company is an enterprise with service as its product to meet the needs of the internal market and the external market.

Therefore, companies should pay attention to the importance of service orientation and make service culture the core of corporate culture.

The key to promoting the advanced culture of the company is to improve the learning ability of the enterprise so that everyone is a learning person, every place is a learning place, and every place is also the source of learning. In the process of improving the learning ability of enterprises, it is necessary to set up advanced learning concepts, construct a working learning atmosphere for all employees, formulate effective learning mechanisms, continuously optimize the learning system, help and communicate with each other, and form a kind of knowledge sharing of contributions. To highlight the team learning and open communication platform and knowledge community, the company can encourage employees to spontaneous knowledge community, improve the staff's interests, share their knowledge and information to the greatest extent, create conditions to regular maintenance community needs all kinds of resources, such as a web page, BBS, staff interactive learning communities, etc.

5.4 Production Safety

For shipping enterprises, production safety is undoubtedly an essential part of their work, for which COSCO has also established a large number of risk prevention mechanisms and security measures. However, there are still some problems in the safety management of COSCO, which are mainly reflected in the lack of consideration of employee differentiation. For example, in the process of safety training, there is

knowledge training for non-knowledge type jobs, which makes workers unable to define the connotation of safety management and can only restrain their behaviors using slogans and other means. This situation can undoubtedly be considered that security management still exists risks. Therefore, COSCO should effectively clarify the characteristics of its employees and adopt the training methods they can understand to implement the work of safety truly.

5.5 Information System Guarantee

As mentioned above, COSCO Shipping Lines has adopted the information globalization system IRIS2, which can meet the management demands of finance, human resources, customers, operation, and other information. At the same time, the system is equipped with CORIS, IEIR, and other interfaces, so that it has the possibility of upgrading and improvement. Therefore, based on its relatively perfect system, the information system guarantee work that should be taken is undoubtedly the linkage of the Internet of things. The combination of HI, GPS, ITS, and other systems can be set to integrate the mechanism of the IoT into the big data management system to make information more perfect. On this basis, it can also provide decision-makers with a more comprehensive strategic information basis, so that they can have a more comprehensive understanding of the enterprise's operating conditions.

5.6 Integration of District and Port

As mentioned above, COSCO Shipping Lines is currently located in the port, there are severe problems with supporting facilities, so the corresponding resources need to be replenished to ensure the development efficiency. Regional and port integration refers to the deep connection between the port and related areas, such as the logistics area and bonded area, to achieve integrated operation, to reasonably improve operating efficiency. Therefore, this function is undoubtedly a necessary prerequisite to meet the current development. Therefore, COSCO should also introduce various large enterprises into the company, especially the customs clearance agent company, through the linkage of supporting mechanisms, to ensure the perfection of operation, and then effectively improve the business capacity of the enterprise. At the same time, it also provides supporting facilities for the strategic plan of COSCO.

5.7 Marketing

Strengthening marketing, especially brand influence, is an essential basis for COSCO to gain access to the domestic shipping market in the future. In this regard, COSCO should effectively carry out market research, deeply study consumers' consumption intentions and functional needs, clarify consumers' information, and actively build a positive brand image. At the same time, the flexible use of marketing means to ensure that the marketing function of "beating the pain point" can be realized, to attract the attention of consumers with high efficiency.

5.8 Improve Risk Control

In the future, the construction of China's free trade zone will continue to accelerate, and the market will be further open, China's shipping industry will face the risk of further opening of foreign-funded enterprises.

Faced with the risks of the company's future development, the company needs to build and improve the internal control system of the company to enhance the ability of risk control. In terms of optimizing the internal environment, it is necessary to clarify the job responsibilities of different departments and employees and standardize the business process, to ensure that the internal execution and supervision can be carried out in an orderly manner. Further, improve the risk assessment mechanism, and can adequately deal with the risk assessment, reduce the risk to the company's losses; It is necessary to carry out scientific organization and management, strengthen the ability to deal with risks, and reduce risks to the extent that one can bear them. By building a good communication platform and strengthening the communication among internal staff, problems can be found regularly and dealt with on time, to ensure the coordination in the opinion handling and feedback mechanism; It is necessary to strictly carry out the internal supervision and management work in an orderly manner to ensure the self-discipline of the company leaders and the scientific operation of the company.

Chapter 6 Research Conclusion and Prospect

Container transport enterprises need to adapt to the environment, more efforts on the way of operation to make a difference in the market competition. In the context of the business model, how to deal with the imbalanced supply of and demand for the industry itself lead to price wars is the senior management should pay attention to the primary problem. Today is changing market pattern, in the face of internal excess capacity overflow, enterprises blindly reduce prices can produce only temporary relief goods without the demand of the status quo, and reasonable control of internal quality resources is the effective method to solve the problem. In this paper, the purpose of our research is to propose the development strategy transformation of COSCO. Based on the relative theory, we start from the development advantages and disadvantages of COSCO, by using PEST analysis method and "five forces" analysis method, the SWOT analysis matrix for the development strategy transformation of COSCO is constructed, putting forward the development strategy of COSCO transformation. Furthermore, on this basis, the implementation of the transformation strategy is analyzed, and the implementation guarantee for the development strategy transformation of COSCO is proposed from the aspects of optimizing organization and management, strengthening the talent team, and cultivating enterprise culture in the context of shipping alliance. The main research conclusions are as follows:

The development of shipping alliances, mergers, and acquisitions among companies and the upsizing of ships have brought considerable uncertainty to COSCO.

It is found that COSCO has problems such as single business operation, low working efficiency, high operating and management cost, and backward management system. Through the analysis of the above methods, it is found that COSCO is under the pressure of domestic and international competition, especially under the current economic downturn at home and abroad. To achieve rapid development, COSCO must face up to the problems and take effective measures for improvement.

The change of liner alliance leads to the adjustment of airline routes, and the reorganization and merger of the company lead to the loss of original routes or customers. Although the operation cost can effectively control, and the service quality is increasingly improved, some potential customers are losing in providing personalized and professional services.

The strategic transformation of COSCO of the overall thinking is the low cost and differentiation of combined defensive strategy. In the future, we will implement the expansion strategy, optimize the products, expand the scope of services in time, expand the end-to-end business, and comprehensively improve the service competitiveness of the container shipping business. By updating the company's information system, building advanced environmentally-friendly transportation vessels, clarifying internal management responsibilities, improving work efficiency and optimizing business routes, etc., the company can reduce costs, distinguish customer personnel, provide differentiated services based on a new supply chain model, and implement measures for different customers.

To ensure the cost control and product optimization strategy, COSCO should guarantee the organizational guarantee, human resources, corporate culture, production safety, information system, regional and port integration, marketing, and other aspects.

Currently, COSCO in terms of development is stable. However, there are some problems, only to strengthen the attention, to ensure the implementation of the enterprise development strategy, and following safeguards measures in place, strict control of costs, leads the market to continue to launch differentiated services, to promote the COSCO sustained healthy and long-term development.

Reference

Chen Jihong. (2005). Ji Zhuang Xiang Ban Lun Gong Si Zhi Jian Hang Xian Yun Li He Zuo Wen Ti Yan Jiu(Research on the Shipping Capacity Cooperation between Container Liner Companies). [Master's thesis, Shanghai Maritime University].

Clarksons Group. (2019). SRO 2019 Autumn - Section 1 Market Outlook[PDF]. https://sin.clarksons.net/download/DownloadFile?downloadToken=a91d0bd6-8a6d-49e1-9fe3-

ad3ca2429683&friendlyFileName=SRO%202019%20Autumn%20%20Section%201
%20Market%20Outlook.pdf

COSCO SHIPPING LINES. (2020). Cosco Shipping Holding Co., LTD. 2019 Annual Report[PDF].

http://hold.coscoshipping.com/module/download/down.jsp?i_ID=153312&colID=100

Dong Yang, Miaojia Liu, Xiaoning Shi(2011). Verifying liner Shipping Alliance's stability by applying core theory. *Research in Transportation Economics*, 2011,32(1). Huang Shunquan(2004). Hang Yun Lian Meng De Chan Ye Zu Zhi Fen Xi(Analysis on the Industry Organization of Shipping Alliance). [Master's thesis, Shanghai Maritime University]

Fang Huijing(2015). Hang Yun Lian Meng Fa Zhan Dui Ji Zhuang Xiang Yun Shu Shi Chang De Ying Xiang(The influence of shipping alliance development on container transportation market). *Containerization*, 2015,26(10),7-9.

Fu Jia. (2011). Ji Zhuang Xiang Hang Yun Qi Ye Lian Meng Nei Bu Bo Yi Fen Xi(The Analysis of Container Shipping Enterprise Alliance Based on Game Theory). [Master's thesis, Dalian Maritime University].

He Yingqi(2017). L Shang Ye Ying Hang Fa Zhan Zhan Lue Yan Jiu(Research on the Development Strategy of L Bank). [Master's thesis, Jilin University].

He Lijiang(2018). P3 Lian Meng Dui Quan Qiu Hang Yun Ye De Ying Xiang Fen Xi(Analysis on the Impact of P3 Alliance on Global Shipping Industry). *China Economist*, 2018(06),278-280.

Jeffrey J. Reuer, Africa Ariño(2007). Strategic alliance contracts: dimensions and determinants of contractual complexity. *Strategic Management Journal*, 2007, 28(3).

Ji Haidong(2018). Zhong Guo Yuan Yang Hai Yun Ji Tuan Chong Zu Zheng He Ji Xiao Ping Jia Yan Jiu(Research on the Restructuring and Integration Performance Evaluation of China COSCO Shipping Group). [Master's thesis, Dalian Maritime University].

Li Yang(2018). Hang Yun Lian Meng Bei Jing Xia WD Gong Si Fa Zhan Zhan Lue Zhuan Xing Yan Jiu(Research on Transformation Strategy of WD Under shipping Alliance). [Master's thesis, Dalian Maritime University].

Ling Ziyin. & Han Lixin(2019). Xiang Dui You Shi Di Wei Li Lun Shi Yu Xia De Hang Yun Lian Meng Gui Zhi(Regulation of Shipping Alliances from the Perspective of Comparative Advantage Theory).

Research on Financial and Economic Issues, 2019(12),41-48.

Li Yihe(2017). Hang Yun Lian Meng Xia Ji Zhuang Xiang Ban Lun Hang Xian You

Hua She Ji Yan Jiu(Container Liner Service Optimization Design Research under

Strategic Alliance). [Master's thesis, South China University of Technology]

Li Zhenfu(2019). Hang Ye Lian Meng Yan Jin Lu Xian Tu(Industry Alliance Evolution Roadmap). *China Ship Survey*, 2019(05),45-48.

Richa Agarwal & Özlem Ergun(2010). Network Design and Allocation Mechanisms for Carrier Alliances in Liner Shipping. *Operations Research*,58(6), 1726-1742.

Shen Wei. & Han Xiaolong(2018). Ji Yu Fei Dui Chen Yan Hua Bo Yi Hang Yun Lian Meng Yan Hua Feng Xi(the Evolution Analysis of Shipping Alliance based on Asymmetric Evolutionary Game). *China Water Transport*, 2018,18(01),45-47.

Theo E. Notteboom, Francesco Parola, Giovanni Satta, Athanasios A. Pallis (2017). The relationship between port choice and terminal involvement of alliance members in container shipping. *Journal of Transport Geography*, 2017, 64.

Wang Xianghui(2006). Zhong Yuan Ji Tuan Fu Wu Chuang Xin Mo Shi Yan Jiu(The Model Study on Services Innovation of Cosco). [Master's thesis, Wuhan University of Technology].

Wang Xiqian(2018). Ban Lun Gong Si De Zhan Lue He Zuo Mo Shi Fa Zhan Feng Xi(Analysis on the Development of Strategic Cooperation Mode of Liner Company). Logistics Engineering and Management, 2018,40(11),119-120.

Wu Qiusheng(2012). Lun Qi Ye Fa Zhan Zhan Lue Yu Nei Bu Kong Zhi De Guan Xi (On the Relationship between Enterprise Development Strategy and Internal Control). Enterprise Economy,2012,31(10):5-9.

Xu Lingling(2015). Study on China's Response toward Container Shipping Alliances. Logistics Technology,2015,34(22):100-102.

Xu Mengmeng(2017). He Gui Guan Li Zai H Gong Si Fa Zhan Zhan Lue Zhong De Ying Yong Yan Jiu (The Application of Compliance Management in H Company's Development Strategy). [Master's thesis, Capital University of Economics and

Business], 2017.

Xu Lingling(2015). Zhong Guo Ying Dui Ji Zhuang Xiang Hang Yun Lian Meng De Ce Lue Ying Xiang(Study on China's Response toward Container Shipping Alliances). *Logistics Technology*, 2015,34(22),100-102.

Yang Yan(2016). M Ji Zhuang Xiang Hang Yun Gong Si De Lian Meng Gai Jing Fang An Yan Jiu(Research on Alliance Improvement Scheme of M Shipping Company) [Master's thesis, Tianjin University of Finance and Economics].

Yu Yongqi. & Li Haiyan(2017). Hang Yun Lian Meng Fa Zhan Dui Ji Zhuang Xiang Hang Yun Shi Chang Jie Gou De Ying Xiang(the Influence of the Development of Shipping Alliances on the Structure of Container Shipping Market). *Market Weekly*, 2017(01),19-20+31.

Zhang Qian(2007). Zhong Yuan Wu Liu Jing Zheng Zhan Lue De Yan Jiu(The Research of Competitive Strategy of China COSCO Logistics Limited Company) [Master's thesis, Dalian University of Technology].

Zou Shaoyun(2014). Hang Yun Lian Meng Fa Zhan Bei Jing Xia De Guo Ji Ji Zhuang Xiang Ban Lun Yun Shu Shi Chang Jie Gou Fen Xi. (Analysis on the Market Structure of International Container Liner Shipping in the Context of Shipping Alliance

 $Development).\ Containerization, 2014, 25 (08): 8-10.$