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WORLD MARITIME UNIVERSITY

Shanghai, China

**DALIAN PORT TRANSFORMATION
DEVELOPMENT STRATEGY RESEARCH**

By

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China

Supervisor: Shi Xin

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

2015

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DRECLARATION

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

HUANG WEIYUAN

01 JULY 2015

Supervised by

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Abstract

Title of Integrative paper: **Dalian Port Transformation Development Strategy Research**

Degree: **MSc**

With rapid development of global economy and modern marine technology, more and more port cities will realize adjustment of economic structure and transformation of functions. Most importantly, port upgrading is one of key contents in transformation of social economy. The port transformation development makes various resource factors reconstruct and integrate as a whole, which will promote and improve upgrading of port economy and radiating to surrounding and outside the port. Thus, it will be helpful for enhancing city's comprehensive competitiveness. Under such background, it will be of common significance to research port transformation development.

Based on related theories of port transformation and features of port industry, the thesis conducts analysis on port transformation development.

There are six chapters in the thesis. Chapter one gives an introduction of research background, purpose and significance, main research objects and reviews on related theories, research methods and thinking. Chapter two puts forward related concepts of port transformation development and main modes of development. Chapter three gives analysis on inside and outside environment of Dalian port. Chapter four gives brief comments on responsibilities and missions of ports, enterprises, government with the strategic and management method of SWOT. Chapter five puts forward function transformation strategies for Dalian port. Chapter seven summarizes main achievements of the thesis.

Key words: port transformation; Dalian port; strategy

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1 Introduction

1.1 Research background

After entering the 21st century, the tendency of global integration seems more and more apparent, which leads to close connections of logistics, cities and regions by convenient transportation ways of port economy. Cities along the river and sea hope to develop their economy by regional advantages, and cities' development usually changes due to port transformation. However, the competition among ports is even more severe, providing simple services. Nowadays, the decrease of port traditional business has been the main issue of Chinese port development. Therefore, it'll be natural choice for port transformation development to improve quality of port logistics service and expand variety of port service and enhance the influential scope of port in supply chains.

It's been more than 100 years since Dalian port was built in 1899. In the initial founding of China, Dalian port was the most important one in north China. Situated in the middle of northwest Pacific, it has a good geological position and becomes emerging center of Northeastern Asian Economic Circle. For this region, it's been the sea gate to face the world and enter the pacific. Port broad and water deep, the port doesn't silt and froze all year around. With good natural condition, it's been the most convenient port for transportation of goods from Far East, South Asian, North America and Europe.

At present, Dalian port is facing unprecedented challenges, and it has lost title of the biggest port in north China. As for throughput, it is far less than Tianjin port. Meanwhile, Yingkou port, which has the nearest sea gate of Northeast China and northeast of Inner Mongolia, occupies much market share by its price advantage. From upgrading and transformation of port functions, we can see the condition that

construction of Dalian Transportation center lacks of top-level design, function absence and weak growth of port economic indicators. Comparing with shipping centers like Shanghai and Tianjin, it's a far cry from research application and development of government-guide shipping economy. Besides, construction of Dalian International Shipping Center in Northeast Asia approved by the state has becoming really better.

Accelerating the pace of transformation, Dalian port has developed business like multimodal transportation and water transshipment, actively establishing platforms of information, commerce and trade. Trough exploration and practice in Dalian port transformation, we should realize it is the best opportunity to carefully raise strategies and carry out research on the solution of port transformation.

1.2 The significance of research

1.2.1 The uncertainty of global port's development tendency makes improvement and transformation of port service

It's been 30 years since China implemented opening-up and reform policy, and seaports have achieved a lot in development and construction. Through improving its ability, it initially meets the demand of national economic development. In 2012, the whole carrying ability of Chinese seaports, including Nanjing and ports below it along main stream of Changjiang river, is approximately 6.64 billion tons. The proportion of port through ability and real complete throughput is close to 0.95 : 1. Generally, it can meet the requirement of present transportation, but there are also unbalanced conditions in terminal capacity adaptability of different regions and goods. With the development of massive ships and our industrialization, urbanization and adjustment and upgrading transformation of economic structures,

our ports are also facing urgent demand of upgrading transformation.

According to the research of UNCTAD, main portal ports in the world are having functional features of the fourth generation ports, which not only exist independently in the chain of transportation but also play key roles in parts of supply chains. In the era of global economy and modern management of supply chains, the competition of ports gradually evolves into competitions of supply chains involved. Having many transportation ways to connect land, air and water transportations, ports run through domestic and international markets, combining logistics information of related aspects like the supplier, good agents, land transportation provider, shipping companies, ship agents, storage transportation provider and so on. In the meanwhile, with carrying on the function of transportation, it actively participates in organization and plan of cargo movement. Joining hands with other main enterprises of supply chains and transportation enterprises to develop harmoniously, it then establishes seamless and integrated logistics network of supply chains. The roles of port are changed from static node type to dynamic network type and the services of port are becoming much finer, quicker and softer.

1.2.2 The introduction of global supply chain creates new requirement of port services.

The condition of global supply chains raises much higher requirements for ports. In global supply chains, ports are changed into self-centered roles and become a part of supply chains. Laying emphasis on meeting the requirements of transportation markets for different services of ports, it provides fine work and quick service and develops soft ports, ensuring smooth process of supply chains. Emphasizing interaction of ports and the interactions of enterprises in related supply chains, such environment makes clear that supply chain is an integrated system and

the best choice is the least cost.

In such changeable environment, our ports should take another consideration on their own development directions and confirm the position in global supply chains, and then make up corresponding development strategies. Otherwise, they will fall behind international advanced ports, and even they will be abandoned from supply chains becoming an independent port, which is a disaster to modern ports in the era of supply chain management.

1.2.3 It is much clearer for state policy to promote the transformation of port service and create “One Belt One Road”

On March 28, state issued Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road, pointing clearly that 15 coastal cities including Dalian have their own city positions and highlights of foreign co-operations. Dalian isn't an exception. As the key point of Maritime Silk Road, Dalian Port Group are actively integrating national strategy and initially forming plan of Northeast New Silk Road on the basis of three international land and sea roads like “Dalian-Manzhouli-Europe” road. In this sense, it not only means Dalian Port Group is entering a higher stage but also promoting deep opening of Liaoning and other northeast regions.

1.3 Related theories

1.3.1 Port service concept influenced by global supply chains

In the condition of global supply chains, function of ports develops constantly towards the direction of providing overall additional value services. In 1999, the 19th issue of Port Communication by UNCTAD published an article called The Fourth

Generation Port. In the article, it holds the view that new generation ports which surpass the third generation ports have existed in the world since 1990. The goods it mainly deals with is containers. Its development strategy is to form shipping alliance and international alliance. Its production characteristic is integrated logistics and its key to success concerns some soft factors such as planning, management, promotion, training and so on. Examples of ports illustrated are Los Angeles of USA, Long Beach combination port, Copenhagen of Denmark and Malmoe combination port. It considers that integration and combination of ports in different areas make development of port entering a new stage.

In *Dynamic Study of Port Cities' Development*, Song Bingliang analyzes current tendency of port development in small portion of the thesis and narrates certainty of port network development. Therefore, he puts forward some viewpoints like ports' implementation of merger and concentration, strategic cooperation among ports' network nodes, etc. In addition, it analyzes the realization features of economic duality in scope and amount transferred from realization of scope economy in the tendency of ports' global economy integration. In *On Common Development of International Container Hub Port and Regional Port*, Chen Changgeng puts forward strategies for common development of common development of international container hub port and regional port in combination ports, which means the two will complement each other to establish network of combination transportation and share common economic benefits. Meanwhile, they implement agreement acceptance and restrictions and reach win-win deal of containers' amount and beneficial results. In *Shouldering Responsibilities in Supply Chains and Exerting New roles of Ports in 21st Century*, Liu Wei analyzes the role and position of ports in supply chains and puts forward development strategies of ports in 21st century. The strategies include improving awareness of service,

strengthening close cooperation with members of supply chains, enhancing competitive advantage by outsourcing, etc. In *Strategic Thinking of Ports' Implementation on Innovation of Comprehensive Logistics Alliance*, Qin Tongxun raises important strategies for alliance to enhance competitiveness of ports and analyzes four modes of alliance like port goods alliance, port shipping alliance, port and port alliance and park alliance. Through analysis on the importance of Germany hinterland economy, researcher like Alex Lennane, ISL, Pavle Krumenake and so on point out the development of port will be strong support for future relying on hinterland resources. They also give corresponding analysis on how different ports gain hinterland resources and hub port positions.

1.3.2 Phases and indicators of port business transformation

Guo Qingzhu points that development of international economy demands transformation of ports. Generally, port development in the world has experienced three generations. In the first generation, ports mainly deal with loading and unloading, becoming storage center of marine goods. In the second generation, besides loading, unloading and storage of goods, the ports have been added with industrial and commercial activities, making them service centers with value added effect of goods. In the third generation, the ports are familiar to development requirements of international economy, trade, shipping and logistics. They benefit a lot from development of port shipping information technology, making ports gradually become international logistics centers. At present, divided by their functions, the second generation ports still are mainstream development among main ports in the world. However, the transformation to the third generation has begun. So it is clear to have such common tendency of integration of production, capital,

technology, information and market in world economy.

Zhang Baochen, Dean of Waterborne Transport Research Institute of MOT, points that the development of port is changing from the amount of increase to storage. Throughput hasn't been main indicators of representing the capability of ports and economic effectiveness is the measure.

Former vice minister of MOT, Xu Zuyuan, in his delivery remarks of a forum, points that as for Chinese ports, there are still old situation of co-existing crisis and opportunities, worries and joys. Furthermore, he thinks that firstly, the present economy and trade still keep condition of slight recovery. It's still serious for foreign trade in second half of the year. Investment benefits of seaport still rely on trade development and market still lacks confidence. Therefore, the speed of port throughput is no doubt to slow down and it will be bygone for Chinese port throughputs to keep double-digit growth. Secondly, ship's development tendency of big size, automation and low energy consumption will raise higher request for port service. Ports need to further complete infrastructure and equipment, improving work efficiency and service level to meet the demand of big-size ship and adjustment of new route. Thirdly, ports need further creative service, providing more excellent services and controlling impulse of price competition. Considering constant increase of throughput investment and hesitation of dock business, the ports should really improve service quality and control expenditure and reasonably pursue the increase of throughputs. Thus, it will avoid paying price in low grade competition. It's clear that vicious price war is not the reasonable management for different ports.

As for domestic research on port development and port logistics, scholars believe that ports are the best nodes for logistics system and the completion of such nodes are the crucial points of modern logistics development. Ports, as nodes, have

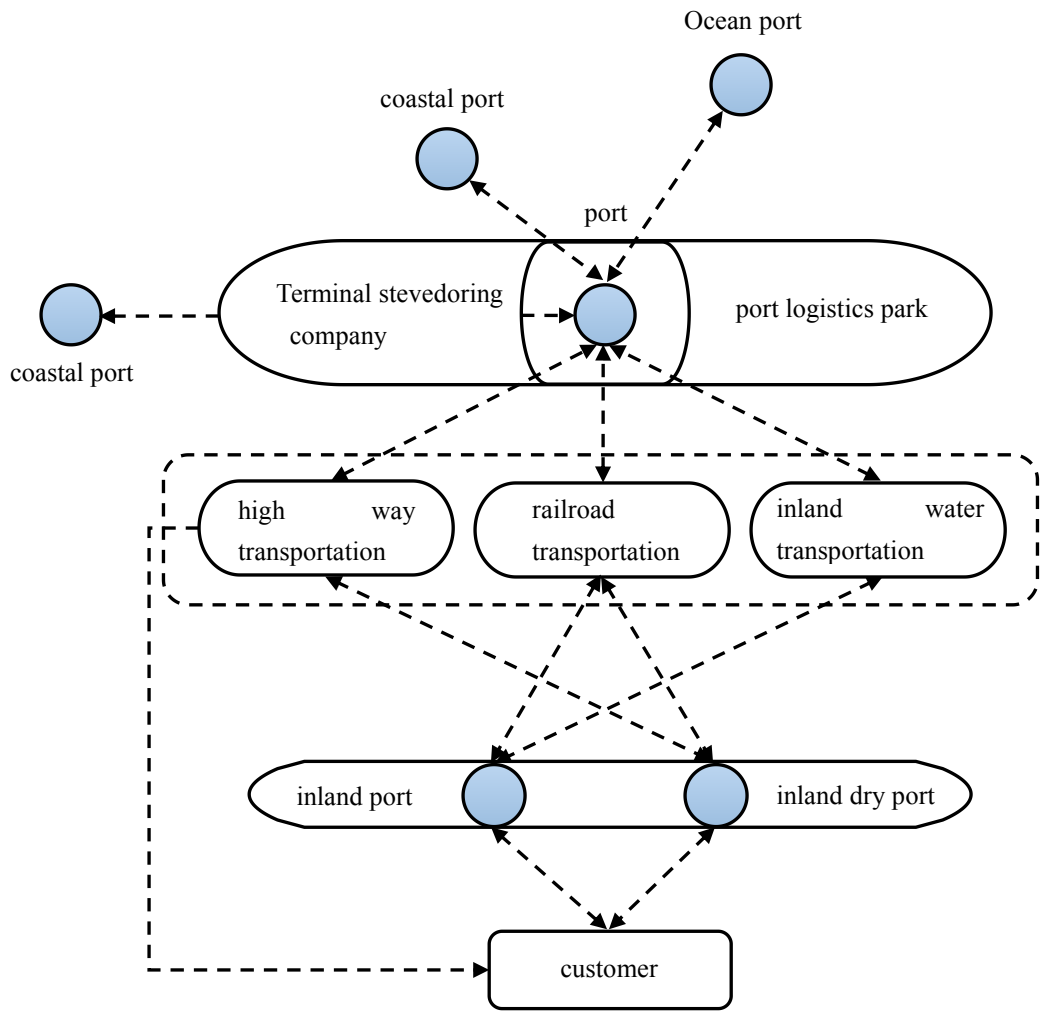
functions of information, management and transition.

2 Mode of port transformation

2.1 Port upgrading and transformation model in the perspective of full logistics

2.1.1 Full logistics service based on port node

Basic connotation of full logistics service based on port node means providing cargo space displacement solution which can be customized with full range, high efficiency, high quality, low cost. Thus, it can realize cargo space displacement. As the chart shows below:



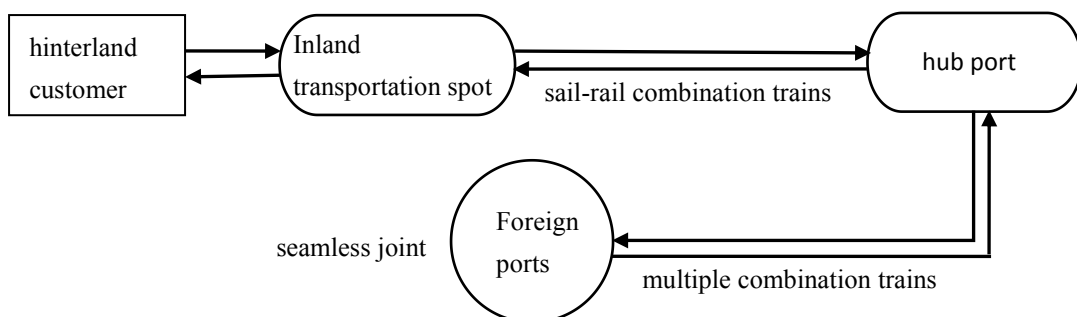
2.1.2 Port regional service on the basis of dry port

Currently, convenient transportation network and whole process logistics organization with high efficiency make port hinterland extend to inland areas, which promote partial traditional port services to inland special lines. In this sense, it leads to development tendency of regional port. Meanwhile, it makes port economic activities and logistics more complicated. With influence of regional port expanding, the concept of dry port has drawn concerns from people. Dry port refers to the terminal center for combining transportation in inland and has transportation ways and railroad of high efficiency with enough through capability among ports. It ensures customers to pick up goods and send goods in dry ports just like in seaports. (Frost, 2010) FDT adopts a broad-sense definition:” As the port in inland, dry port is considered as an industrial or commercial area and connects specific services for dry ports and overseas destination.”

2.1.3 Global further expansion of sail-rail combined transportation

Sail-rail combined transportation refers to a kind of transportation for export goods carried by railroad and then shipping to coastal ports and carrying directly by ships or the goods shipped to ports and then carried by railroad.

The operation mode shown as follows:



Sail-rail combined transportation is a kind of transportation method with low cost and low energy consumption. In the condition of equal transportation, the proportion of energy consumption of railroad, high way and aviation is 1:9.3:18.6. However, when the economic distance of high way exceeds 300 kilometers, railroad has more apparent time and cost than high way. From mature sail-rail combined transportation of Europe and America, they pay less attention to saving administrative expense of shared information of different sections and electronic documents, which will save 30% of average transportation expense in different distribution ways. Therefore, sail-rail combined transportation is warmly welcomed by developed countries.

2.1.4 Water transfer has been an important support for full logistics service mode

Water transportation has been developed to an important way of container transportation and has much more potentials. Comparing to other transportations, water transportation has such features like low expense, high efficiency, and sufficient capabilities of transportation, which is easy for expansion and has higher safety of transportation. It also has the advantage of environment protection.

In China, the amount and proportion of water transfer of Shanghai container is increasing gradually year by year. In 2013, it has reached 45.4%. The explanation of the reason has much concern with perfect water transfer infrastructure, convenient port transfer environment, excellent supporting services and lower transfer cost. In order to promote water transfer, Ningbo port cultivates vigorously internal extension. In 2014, container amount of water transfer was 1,264,000 TEU, which increases to 20% comparing to 2013. In addition, inner feeder container amount of north and

south coast increases to 11.6% and 47.6% comparing to 2013. Trade containers were completed for 965,000 TEU, which increases to 14.2%; Shenzhen port opens South China Barge Express connecting export areas of main commodities in Zhujiang Delta on the basis of developed Zhujiang river system. Providing high-efficient, economic, environmental water transportation for liner companies and goods owners and making strong advantage of Zhujiang river system get a full play.

2.1.5 Establishing organization platform of transportation with the core of port

As an important node of full logistics, ports rely on top infrastructures, advanced information technology and efficient coordinate organization, realizing integration of full logistics operating organization, which has been an important direction for the creative transformation of present port service. The specific representation is as follows:

(1) Taking port enterprises as subject and adopting many ways, we control inland highway of ports and transportation capacity of inland rivers to ensure smooth process of inland transportation capacity. Meanwhile, we should cooperate with railroad transportation cooperation and strengthen sail-rail combination transportation.

(2) With the supporting of ports' full logistics service integrated platforms, taking capital operation, information integration, organization creation as new measures, we form systematic integration of related resources of full logistics service and realize integrated operation of full logistics service operation.

Based on successful operation of railroad container center, Dalian takes the leading role in carrying on "railroad commodity express" mode. Its business has covered 4200 operating agencies in China and realized the aim of "door-to-door" full logistics service customized for goods owners.

2.2 Port upgrading transformation mode in the perspective of comprehensive services

2.2.1 Service mode of “logistics + trade”

In broad sense, logistics trade service means various freedom zones are established on the basis of ports' better transportation and convenient port environment. Spare no efforts to conduct international trade business such as transfer trade, improvement trade, allocation and distribution, bonded storage, freight collection, etc. Then, the port is fully carried on the functions as distribution center of international trade and purchase center of global supply chains.

In narrow sense, logistics trade service means port enterprises carry on trade business on the basis of logistics chains and through self-management or some ways of cooperation with other trade enterprises, having the purpose of “promoting logistics by trade” and “promoting ports by trade” to seek combination of traditional loading/unloading, storage business and trade business. In practice, we should pay special attention to trading platform of ports' bulk commodities and the construction of their supporting system.

Dalian Port Group adopts service platform integrated industry, commerce and trade and full logistics service system, leading sources of goods gathered in the ports. It successively builds many commodity trade platforms such as “electronic commerce + modern logistics” trading platform of Northeast Asia Site Goods Exchange, East Commercial International Auto Trade Center, Grain and Oil Trading Company, Steel Trade Service Co., Ltd, East Commercial Dalian Port Steel Exchange Center, etc. At present, it obtains remarkable achievements. Meanwhile, East Commercial International Auto Trade Center opened the business of national

automobile electronic trade. In 2012, Auto Trade Cooperation obtained trade income of more than 6,000,000 yuan. Grain and Oil Trading Company which hasn't founded for less than three months has realized trade income of 0.374 billion yuan, becoming growth point of new goods and profits in grain business of PDA Corporation. On November 21, 2012, Dalian Port Steel Trade Service Co., Ltd and East Commercial Dalian Port steel trading center formally announced to begin their business and develop gradually to a multi-function center with integration of spot trade, logistics commerce, distribution processing, storage allocation, information, now becoming steel trade center and logistics distribution center in northeast China and even in northeast Asia. Steel Trade Service Company has completed trading volumes of 20,000 tons since it was founded 10 days ago. In Dayaowan core port, which formed to a certain scale, PDA Corporation established many storage houses for goods delivery, trying their best to serve for grain trades. Last year, good throughputs of Changxing Island port have increased to 27.3% comparing to the same month of 2013.

2.2.2 “Logistics + information” service mode

With the support of information technology and through developing ports' comprehensive information platform, “logistics + information” service mode realizes organization and integration of logistics service resources.

(1) Platform mode of ports' comprehensive information service

Ports' comprehensive information service platform takes ports as core node of information transformation and establishes integrated operation platform of supply chain e-commerce through integrating various data and information resources of some units like manufacturing enterprise, goods owners, logistics enterprises (docks,

ship company, shipping agency, goods agency, yard, transportation enterprise, customs broker, storage warehouse, etc), commerce, insurance, port supervision, etc. Meanwhile, it can provide network organization functions of logistics services by realizing electronization of logistics services.

(2) Service mode of ports' international electronic commerce ports' international electronic commerce service refers to integration of offline ports' traditional service and online international electronic commerce. For example, Tianjin port has created O2O business mode of “ international e-commerce+ international commodity supermarket+ North America living experience center”, bringing direct selling mode of bonded warehouse, which has functions of e-commerce supermarket in online e-commerce sale platform and offline real storage supermarket sale functions.

(3) Online cooperation service mode of ports' logistics

Online cooperation service of ports' logistics means, on the basis of standard information criteria, considering ports' information system as the bond, we integrate organically goods owners, shipping companies, agents, inland transportation and port unit. Thus, it can realize information reaction, system integration and data share of whole ports' logistics information.

Functions of electronic commerce platform of logistics information researched and developed by Rizhao port include project management and system management of vehicles, bar codes, assignment bills, etc. Owner unit users can read related goods congestion plan from production system through the platform and conduct data check, vehicle dispatching and assignment bill printing based on the plan. Every production unit users can check planned vehicles entering ports through platform and arrange assignment machines in advance based on this. Meanwhile, the platform has flexible authority assignment function. The rights of users can be defined in time by system managers to ensure information safety efficiently.

2.2.3 “Logistics+ commerce” service mode

The nature of “logistics+ commerce” service mode is to design and provide various logistics commerce products on the basis of practical demands of logistics service, and then realize organic combination of goods flow and capital flow. In other words, it provides targeted logistics commerce service products for target customer and goods owners through business and tools of nonbanking financial institutions such as inventory financing, financial lease, product insurance, assets trust, material futures, risk capital, etc. In 2013, PDA Corporation signed Logistics and Financial Strategic Cooperation Framework Agreement with Dalian Commodity Exchange (DCE) and Dalian Branch of CDB. According to the agreement, PDA Corporation and DCE will carry on their respective advantages in port logistics and commercial market. They conduct full cooperation in some aspects like constructing storage facilities of futures delivery, research on derivatives trading of shipping prices, enhancing interactions of futures and spot goods, realizing coordinate development in shipping, logistics and commerce. Dalian Branch of CDB will actively carry on its development commercial advantage and participate in formation of Dalian port’s long-term development plan. Then it makes up systematic commercial plan with the consideration of ports’ grading and transferring objectives.

In the early month of 2012, Dalian Port Automobile Logistics Plate established Dalian Kingport Auto International Trade Co., Ltd, trying to forming the most complete import automobile trading service platform. On the basis of auto-dock’s resources, it will provide for national automobile businessmen with trade finance of import automobile, agent affairs of ports, etc. In 2013, through completing commercial service platform and inner port agent service platform, it

issued certificates of 5168 vehicles, selling 1872 vehicles and realizing income of 0.72 billion yuan.

3 Environmental analysis of Dalian port

3.1 Analysis on external environment of Dalian port

3.1.1 Speed decrease of world economy and rise of ocean economy

From 2005 to 2007, generally, world economy maintained a rapid growth of 3% to 4%. In 2008, world economy was declining noticeably due to international commercial crisis. China and Southeast Asia had been increase pole of world economy and new economic community played an important role in world economy structures.

Surpassing the USA, EU has enjoyed rapid growth of economy and become the biggest economic community since it was founded in 1993. In EU, after rapid growth, some traditional industrial parks of countries like Germany, France, UK and so on along Atlantic Ocean are facing issues like resource depletion, ecological deterioration, etc. Therefore, governments put forward suggestion of marine industry ecology and make up marine industry development strategy with international competitive advantage and ecological sustainability. Japanese government also values sustainable development of marine industry and makes up successively polices and measures such as Basic Idea and Promotion Plan of Marine Development based on “Long-term Development”, “The Seven-year Plan for 9th Port Construction”, “Proposition of 21st ports”, etc. In this way, it can promote sustainable development of marine industry.

At present, it's been main line for governments at different levels to speed up development method of economy. In 2011, some plans like “Development Plan of Blue Economic Zone of Shandong Peninsula”, “Demonstration Area Plan for Zhejiang Marine Economy”, “Development Plan for Guangdong Marine Economy” successively were approved by central government, which considered three driving

forces for the trial of sea economy development at the beginning of 12th 5-year plan. The world Sea Economy hasn't been mentioned to such high level before and now it has been reached strategic level of national development.

3.1.2 Import and export trade of our country

(1) Stable increase of import and export trade

According to customs' statistics, in 2014, the total value of china's exports and imports was 264,300 billion RMB Yuan, which increased to 2.3% comparing to the same period of previous years. Among the value, export takes up 143,900 billion RMB Yuan, which increased to 4.9%, while import takes up 120,400 billion RMB Yuan, which decreased to 0.6%. Trade surplus is 23,500 billion RMB Yuan, which expanded to 45.9%. In dollar terms, in 2014, the total value of china's exports and imports was \$ 43,000 billion, which increased to 0.4% comparing to the same period of previous years. Among the value, export takes up \$ 23,400 billion, which increased to 6.1%, while import takes up \$ 19,600 billion, which increased to 0.4%. Trade surplus is \$ 382.46, which expanded to 47.3%. After removing arbitrage trading pad high base in 2013, import and export of whole country actually increase 6.1% comparing to the same period of previous years. Export increases 8.7% and import increases 3.3%.

(2) Expansion of trade relies more on processing trade and additional value of export products is very low.

Since 2001, export of foreign enterprises always has taken up more than 50% of China's whole exports. In 2006, it was close to 60%. Later, it seemed to decrease a little, but export of foreign enterprises in 2010 still took up 54.7% of China's

whole exports. Even processing trade of high-tech industry is also dealt with labor intensive processing sections, which has less connection with domestic economy. In such huge amount of trade, there are few products which have high additional value and global competitiveness. More than 90% of profits in some process trade are taken up by foreign counterparts, so the profits are very low and environmental pollution and resource consumption are very serious. It is no continuity of our export commodities with features of “two lows and one shallow”, which means supports of low cost labor, market of low products and systematic support of shallow changes.

3.1.3 Low degree of dependence for foreign trade of northeast economy

Three provinces of northeast China are famous for old industrial base. During the first 5-year plan, there were 156 items of most important projects, among which Northeast took 55 items. In detail, Liaoning took 24 items, Jilin 9 items and Heilongjiang 22 items. The investments in northeast take up more than one third of whole national investments, which has laid the position of heavy industry base in China. Before implementation of opening-up and reform policy, Northeast is always considered as No.1 in our heavy industry and equipment manufacture. Whether absolute value or the ranking among all Chinese provinces, northeast China is still on the top list. After revitalization strategy of northeast old industrial base was implemented, the old industrial base will be risen again. During period of the 10th five-year plan, economy of three provinces in Northeast China is showing a trend of leaping growth. However, due to influence of regional economy and industry structure, foreign trade reliance of Northeast China always is below national average level, which is only 30% or so. However, GDP and import and export of foreign trade still take on a trend of increase. Since world economic crisis broke out in 1998,

the export of traditional bulk commodities in Northeast China is generally declining, which makes great impact on some pillar industry products such as steel, refined oil, agricultural products, etc.

3.1.4 Dalian's specific advantage of port economy and export-oriented economy

Located in the south of Liaodong peninsula, northwest to Bohai Bay and southeast to Huanghai Sea, Dalian city has coastal line of 1906 kilometers looking at Shandong peninsula across the sea. On the north, it is close to three provinces of Northeast China and hinterland of East Inner Magnolia. Besides, it is neighboring Japan, South Korea and Far East of Russia. Situated in overlay of Northeast economic zone, Bohai rim zone and Northeast Asia economic zone, it is main sea gate of Northeast China, and an important port, city of trade, industry and tourism in North China and Northeast Asia.

(1) Location of city benefits the rise of port economy

According to overall plan of Dalian from 2009 to 2020, city development strategy of Dalian considers it as the leader and promotes the development of other industries. One Center means establishing Dalian to international shipping center of Northeast China while Four Bases means building big stone industry base, modern equipment manufacturing base, electronic information and software industry base and shipping industry base. Through key breakthroughs and further strengthening Dalian's radiation function and influence, it forms economic interactions of ports and hinterlands, promoting profound participation in international labor division and cooperation for Dalian and Northeast China. In this way, it will improve attraction of international capital, technology and talents, driving the force of regional economy and enhancing international competitiveness. As for Dalian city, such strategic

position fully shows fundamental and important position of Dalian port in future development.

(2) Strong industrial base of Dalian

There are some big manufacturing enterprises in Dalian such as New Shipyard, Dalian Heavy Industry, Dalian Locomotive, Northeast Special Steel, Ocean Clothing, etc, and big petrochemical enterprises like Dalian petrochemical, Sinopec Seven Plant, Hengli Petrochemical, etc, and main industrial products like clothing, crude oil, gas, metal pressing equipment, antifriction bearing, hoisting equipment, automobiles, etc. From the products, we can see Dalian have obvious competitive advantages. At present, it tries to establish new industrial system with support of four industrial bases like big petrochemical industry, electronic information industry, software making industry and ship manufacturing, which will enhance further development of neighboring port industries such as shipping, oil, petrochemical, fishery and so on. Establishing industrial parks with modern advantage and promoting resources to gather in competitive industry, it cultivates more than 10 industrial clusters with 50 billion RMB Yuan including Development Zone Petrochemical, Development Zone and Free Trade Zone Vehicle, Garden New Material, etc and more than 10 industrial clusters with 20 billion to 50 billion RMB Yuan including Songmu Island Petrochemical, Sanshilibao Shipping Supporting, etc.

(3) Larger proportion in export-oriented economy

In 2010, the total value of Dalian's exports and imports was 52.11billion RMB Yuan, which increased to 23.5% comparing to 2009. Among the value, import takes up 24.72 billion RMB Yuan, which increased to 23.3%, while export takes up 27.39 billion RMB Yuan, which increased to 23.6%. In the same year, the total value of Liaoning and Northeast hinterland's exports and imports was respectively 80.67 and

123.016 billion dollars. The proportions of it takes up are respectively 64.6% and 42.36%. Then it plays an important role in service of export-oriented economic development. In 2010, whole city actually applied foreign capital of 100.3 billion dollars, which increased to 66.7% comparing to 2009. Sum of foreign capital it used took up 48.3% of whole province, which used 20.75 billion dollars.

3.1.5 Analysis of shipping industry

(1) International commercial crisis accelerates integration of shipping industry and port industry

Entering this century, with tough competition in the market of global shipping industry, some big ship companies like Maersk, Msc, Cosco, ChinaShipping and so on have accelerated the speed of combination and integration of same industries. To illustrate, Maersk purchased P&O with 2.3 billion Euros in cash in 2005. Big regular ship companies like Maersk and Msc have increased their direct investment in the field of coastal docks worldwide and container logistics of inland cities. Through investment of port management to extend and integrate whole logistics chains, it consolidates overall competitive advantages. In a few years to come, there will be a rising tendency that shipping industry and port industry will join hands together.

(2) Shipping enterprise and capital market will have a win-win development

Changes of shipping market usually follow changes of world business cycles and shipping index has been one of indicators of world economy changes. The booming of staple commodity matters the rising and decline of shipping market. Moreover, investors of futures, shares and bonds always focus on the booming of shipping economy, and then they will judge future tendency of capital market. Meanwhile, shipping companies also participate in the game of two management

modes which are prompt delivery and long-term contract, establishing strategic partnership with big businessmen. At present, there is a trinity management mode combined with identity of ship-owners, ship charterers and brokers. The shipping management mode is changing a lot and cooperation among enterprises is implementing profound “win-win” and “all-win” concepts

3.1.6 Analysis of main competitive ports

Due to similar conditions such as location, weather condition, navigable channel depth, the distance from main navigable channel, port comprehensive service and so on, the services they provide have the same features. Therefore, the competition among ports becomes fiercer and the competitions of hinterland ports are much fiercer. We have planed 20 coastal main hub ports. In Bohai Rim, including 5 main hub ports like Dalian, Yingkou, Qinhuangdao, Tianjin and Yantai. So market competition constantly happens. From the competition condition of Dalian port, we can see there are international transfer competitions from Busan of South Korea and Tokyo of Japan, domestic transfer competitions from Tianjing and Qingdao, hinterland competition from Yingkou and Jinzhou.

(1) Busan port of South Korea

Situated near the main navigable channel of North America and Europe, Busan port is the third biggest transfer port following Singapore and Hong Kong. Besides, it is the biggest container port in South Korea. Since 2007, Busan port attracted more than 30 branch lines from main line ports such as Qingdao, Tianjin, Shanghai, Ningbo, Shenzhen, Dalian, etc. Among annual handling capacity, there are nearly 350,000 TEU carrying from or sending to Dalian port. At present, Busan port is trying to keep a cooperative relationship with China, Japan and USA, expanding their trade transfer. In 2010, whole capacities of South Korean ports are 1.203 billion

tons, which is 11.8% higher than 2009 and sets a new record in history. Considering every big ports, we can see that capacities of Busan port is 0.26 billion tons, which increases to 16.2%. The capacities of Gwangyang port is 0.21 billion tons, which increases to 14.7%. The capacities of Ulsan port is 0.17 billion tons, which increases to 1.2%. The capacities of Inchon port is 0.15 billion tons, which increases to 12.5%.

The competitions between Dalian port and Busan port are mainly about international transfer of foreign trade containers. Containers transfer of Bohai Rim ports mainly are chosen in Busan port, which requires improvement and perfection of port management, port policy and service level in Dalian port.

(2) Yingkou port

As one of main hub ports in coast China, Yingkou port is the nearest access to the sea for city groups of middle Liaoning province, which is the developed area in northeast China. It's also an important access to the sea for three provinces of Northeast China and east of Inner Mongolia, connecting to hinterland of northeast China with Shenyang-Dalian express high way, Yingkou-Panjin express high way, Harbin-Dalian high way and Changchun-Dalian railroad. Situated in the middle of Shenyang and Dalian, it is 200 kilometers away from Shenyang in the north and 190 kilometers away from Dalian in the south. The business of Yingkou port is mainly about carrying containers, iron ores, oil, steel, coal and grains. Since 1990, throughput of the port has been increased at the average speed of 20% every year. In 2010, it completed goods throughput of 0.225 billion tons and annual increase is as high as 28.3%, which is at the top of all ports in Liaoning. The container throughput is 3.338 million TEU, which increased to 31.6% comparing to last year. Thus, it has been the biggest container port in domestic trade of coastal areas in China.

(3) Tianjin port

At present, Tianjin port owns more than 140 various kinds of berths. In

addition, Tianjin Port Group Company owns 85 public berths, and the coastal line they use is 18,162 meters. There are 78 berths for production, whose through capacity is designed for 21,399 tons.

As Tianjin port is an artificial deep water port, Tianjin Port Group Company uses the natural coastal line for only 10 kilometers or so. The depth of main channel is 19.5 meters, which ensures ships of 25 tons to enter and leave the port around the clock and ships of 30 tons can enter and leave the port with waves. Tianjin port has carried on trade with more than 400 ports in over 180 countries and regions. Every month, there are 400 voyages for containers. The direct hinterlands include Beijing, Tianjin, Hebei, Shanxi and so on, while indirect hinterlands include Inner Mongolia, Shaanxi, Gansu, Ningxia, Qinghai, Xinjiang and so on.

(4) Qingdao port

Qingdao port is made up of Qingdao old port area, Huangdao oil port area and Qianwan new port area. It has 16,000 employees, 15 docks and 72 berths. In the meantime, there are 6 berths for ships of 50,000 tons and 6 berths for ships of 100,000 tons and 2 berths for ships of 300,000 tons. The port mainly deals with loading and unloading services of importing and exporting goods like containers, coal, oil, iron ores, grains. Besides, it is also engaged in passenger service from home and abroad. It has carried on trade with more than 450 ports in over 130 countries and regions.

3.2 Analysis on internal environment of Dalian port

3.2.1 Plural operation subject of Dalian port

(1) PDA Corporation

Located in the south of Liaodong Peninsula, as one of the comprehensive port

and transfer hub in northeast Asia and north coast, Dalian port is at the center of emerging Northeast Asia Economic Circle and the nearest point for coastal ports of Bohai Rim and Liaodong Peninsula to foreign countries. PDA Corporation is the core and market operation subject of Dalian port. In 2003, China carried out structural reform and the former Dalian Port Authority was transferred to Dalian city, forming PDA Corporation. Dalian Port Company limited was founded in November of 2005 and inherited the advantage of big port management with capacity, specialty and location in modern and tradition times.

(2) Beiliang Port Group

Beiliang Port Group was founded and opened to public on May 10th, 2002. It has realized automatic control in all sections like loading and unloading, transferring, storing, measuring, checking, grain supervision and so on, now becoming one of modern bulk grain import/export ports with the most advanced management and the grandest amount and the most perfect functions. In addition, it has realized automatic and mechanic grain storage and transportation in bulk, amount and digital. With high efficiency and perfect function, it adapts to bulk grain operation. Beiliang Port can unload import grain ship with carrying capacity of 80,000 to 100,000 tons. Besides, bulk grain loading capacity is 4000 tons per hour and unloading capacity is 2000 tons per hour. For a whole year, unloading capacity of bulk grains is 12,000,000 tons and storage capacity is as many as 1,500,000 tons.

(3) Dalian Shipping Group

Founded in 1952, Dalian Shipping Group is a key local big shipping enterprise which some comprehensive industries mainly dealing with international far or near scattered groceries and containers, coastal passenger and cargo transportation, port loading and unloading, economic and technological cooperation with foreign countries, expatriate labor, harbor project construction, dredging engineering of port

project, hotels,etc. The existing assets are nearly 1 billion RMB Yuan. More, there are about 2300 employees, among who are 850 sailors, which take up 37% of whole staff. There are 29 different ships including break-bulk carriers, container ship, passenger and cargo ship, oil ship,etc, and the route covers all the regions of Southeast Asia. There are 7 large passenger ships, shipping along Dalian-Yantai Route and land to island route of Changhai County all year around. The Group has its own docks, shipping company, Dalian-Yantai Route, land-to-island passenger ship and passenger transportation station.

3.2.2 Superior hardware facilities and port business with international competitiveness

With broad port and deep water, Dalian port isn't silted or frozen. The core area of port is about 18 square kilometers with 194 production berths, among which are 74 berths of 10,000 tons with throughputs of 0.24 billion tons. At present, there are more than 149 kilometers existing special railroad in port and 319,000 square kilometers storage house and more than 3, 200,000 square kilometers cargo yard and more than 1000 loading and unloading machines. It has 82 modern specific berths including containers, crude oil, refined oil, grains, coal, bulk coal, chemical products, passenger cargo ships and so on. The basis of hardware strengthens competitive advantages of three kinds of deep water transformation.

(1) Container logistics center

Presently, Dalian port is the most important container hub port in Northeast China, owning 92 container routes from home and abroad. The shipping density is more than 400 times per month and more than 90% of containers for foreign trade are transferred in Dalian port. The depth of container port is 17.8 meters and can

hold container ships of more than 12,000 TEU. The annual through capability is 5,050,000 TEU.

Container docks are mainly concentrated on the south bank of Dayaowan port and classified as three rounds and 13 berths. The first round of containers is operated by PDA Group and DCT together invested with Singapore. The second round of containers is operated by PDA Group and COSCO, Singapore Port Group and DPCM together invested with Maersk. It has planed 6 berths, of which 4 are put into use. The third round of containers is operated by PDA Group and China Shipping, DICT together invested with NYK. It has planed 5 berths, of which 2 are put into use.

(2) Reservation and transformation center of oil and liquid chemical products

Dalian New Port is one of the biggest transformation bases for crude oil and refined oil in China with world-class transformation facilities of bulk liquid chemical products. At present, there are 19 berths for oil and liquid chemical products in the port. Capacity of oil storage tank is 399 cubic meters and the through ability of berths is over 76,900,000 tons. It owns the biggest and most advanced crude oil dock of 300,000 tons in China. The water depth of wharf apron is 25 meters, which ensures annual through ability to be over 22,000,000 tons. In 2010, the depth of new crude oil dock is 27 meters, which can ensure to hold super oil ship of 450,000 tons. New port has service functions of loading, unloading and storing crude oil and liquid chemical products with modern comprehensive port of distribution system quaternity of water way, channel, railroad and high way. In New Port, there are China national strategic reserve base (the first round) of 3,000,000 cubic meters, CNPC International bonded depot of 1,850,000 cubic meters, Sinopec Oil Commercial Reserve of 1400,000 and Sinopec International Crude Oil Reserve of 4,200,000. The total capacity has been 10,000,000 cubic meters in all.

(3) Bulk and general cargo transit center

Dalian port general cargo wharf is a specialized marine terminal of all kinds of bulk and general cargo transportation such as iron and steel, wood, large equipment and etc., which possesses four operating regions such as Dalian bay, Grand Port, Heizuizi, Changxing island, and it makes a leasing management of Zhuanghe Newport District. At present, it possesses 33 production berths, and among which, 9 of Dalian bay area, 12 of Grand Port, 6 of Heizuizi port area, 3 of Zhuanghe Newport District, and 3 of Changxing island.

(4) Grain transit center

Dalian port is an important port of Chinese grain's import and export. Dalian port bulk grain terminal mainly engages in the handling business such as grain, cement, coal, steel, and groceries and etc.; it possesses 5 production berths, and its annual transit capacity is 7.2 million tons; it possesses 0.815 million cubic meters' bulk grain silo and 1000 bulk grain special vehicles, which administers two operating regions of Dayaowan and Ganjingzi.

(5) The port's value-added service and collecting and dispatching system

Dayaowan bonded port area is the second state-approved bonded port area, which planning area is of 6.88 square kilometers, and phase one's starting area is of 3.06 square kilometers. On June 28, 2007, the phase one project of Dayaowan bonded port area passed the acceptance check of the relevant ministries and commissions under the state council and the general administration of customs; on August 20, 2007, it had been officially put into the customs sealing operation, and to construct the northeast China's bonded logistics network which takes the Dalian Dayaowan bonded harbor area as bibcock, and the hinterland bonded logistics center as node.

Dalian possesses the perfect inland collecting and dispatching system of railway and highway and etc. Dalian and northeast economic hinterland have been closely connected by Haerbin-Dalian railway, Shenyang-Dalian highway, Dandong-Dalian highway; railway container trains of Dalian port to the northeast inland are more than 50 a week; each main logistics node city inland dry port of the hinterland extends the ports' function to inland, and the co-transportation of shipping and railway of container is China's first.

It is the basic conditions of superior sea location advantage, deep sea-water resource advantage, city function advantage, bonded port policy advantage, as well as the regional transshipment port status of oil products, containers, ore for Dalian Port Corporation to construct the Northeastern International Shipping Center, and to build an important international hub port of Northeast Asia area.

(6) Air route and volume situation

Dalian port has established shipping economic and trade relationship with more than 160 countries and areas, and over 300 ports around the world.

In 2014, Dalian Port Corporation completed 351 million tons cargoes loaded and unloaded, which year-on-year increased 17.56 million tons, and achieved 5.5% annual growing rate; the container handling capability was 10.01 million standard containers, which firstly broke through "10 million". The main cargo such as oil, steel, coal, cars and others were substantial increased.

Two super big crude oil wharf annual unloaded 100 VLCC tanks, which year-on-year increased 11%; it completed 19.39 million tons crude oil transfer amount, which year-on-year increased 35.5%; it firstly realized oil shipping technology which is simultaneously proceeded by two "ship ship lightering" operations. Ore terminal completed 3.74 million tons turning hydromarchite, which year-on-year increased 2.84 million tons. It has successfully created the service

brand of "coking coal unloaded"; it extends the market to Shandong Peninsula for the first time and establishes the trade new model of "the whole logistics+financial support".

4 SWOT analysis of Dalian port's commercial and trade development

4.1 Advantage analysis

(1) Dalian port economy possesses the remarkable superiority for promoting the regional economic development

In 2013, the passenger and cargo handling capacity of Dalian Port Corporation and Dalian port have respectively promoted Dalian city's GDP of 74.23 billion yuan and 99.81 billion yuan, which have respectively accounted for 14.4% and 19.4% of Dalian city's 15 billion yuan GDPS; the increased revenues respectively are 12 billion yuan and 16.13 billion yuan, which have respectively accounted for 23.9% and 32.2% of the 50.08 billion yuan fiscal levy of Dalian city; it has respectively driven the urban employment of 0.344 million and 0.462 million, which have respectively accounted for 13.2% and 17.7% of Dalian city's 2.605 million employed population. In 2013, the total import and export value of Dalian city is US \$52.11 billion, which have respectively accounted for 64.6% and 31.5% of the total import and export value of US \$80.67 billion of Liaoning province, and the total import and export value of US \$165.461 billion of northeast hinterland, and it plays an important role for service area's extroversion economy development.

(2) The advantages of traditional port-surrounding export processing and foreign trade of direct hinterland

Dalian port undertakes 64% cargo quantity of the international shipping's import and export of northeast China, which provides Dalian port's container a large amount of supply of goods and development drives. According to the international current conversion mode, each additional container contributes RMB 6000 to the local economic benefit, and the direct and indirect contribution of port business to GDP is up to 1:37.8.

(3) The scale advantage and container's airline and flight advantage of port's hardware facilities

Currently, Dalian Port Corporation's container terminal berth alongside 14000TEU container ship berthing capacity, and it possesses more than 90 domestic trade and foreign trade container liner airlines; monthly airlines are nearly 300; the airline network covers more than 100 ports of domestic and overseas, which is the biggest container pivotal port of northeast China. Foreign trade container handling capacity accounts for 97% of northeast port, and it has become the second national container transit port. It is the national largest and fastest growing port of railway container. Comparing to north big ports such as Qingdao port, Tianjin and etc., Dalian port possesses deep water transshipment advantage to the bottom of the Bohai gulf.

(4) The advantages of the perfect collecting and distributing logistics system and value-added services

On the aspect of logistics construction, Dalian city has built three layer node model of "integrative logistics base- special logistics center- direct logistics to the distribution nodes", which is the main logistics infrastructure advantage. The basic conditions of logistics are that it possesses four comprehensive logistics parks such as Ganjingzi integrative logistics base, Dalian inland port logistics base, Leather town fort means of production logistics park, and eight professional logistics centers and logistics direct distribution nodes such as Northeast Asia international grain trading center, Northeast Asia international coal trading center, Lvshun international trading center of agricultural and sideline products, Dalian aquatic products trading center and etc., and more than 3500 all kinds of logistics company. Dalian port possesses the advanced port IT operation system and port service platform, national highest sea-railway combined transportation coverage rate, and impeccable

collecting and distributing system. The sea-railway combined transportation network is constantly improving, which has already opened up the main logistics node cities' 11 container high-quality regular trains of Dalian to the northeast China. In recent years, Dalian port has purchased shipping to carry out the domestic feeder transit and to unite shipping corporation to carry out the international transit.

(5) The capital strength advantage of future development

Port is the typical capital concentrated industry, and it needs a huge amount of capital to support its development. Since “fifteen”, it has been carried out strategic cooperation with more than 40 customers such as PSA, NYK, ODFJELL, COSCO, CSCL, Sinopec and etc.; it has been actively constructed the whole process of logistics service system, and it possesses nearly 50 main joint and cooperative enterprises (exclude the foreign investment enterprises and the joint ventures established between subsidiaries); the foreign capital is actually used about 2.8 billion yuan, and domestic capital is used about 2.0 billion yuan. Currently, Dalian Port Company Limited engaged in port management has already been listed in Hong Kong, and has returned to a stock market; the establish and operation of group company finance corporation, financial logistics company, and real estate company has developed financing channels of group development, and the capital operation system is being gradually perfection.

4.2 The analysis of disadvantages

There is a lot of decisive factors of port's development direction and model, and the factor possesses decisive meaning is three elements of the port's regional advantage, the social development stage of port economy, and the port area's functional orientation of global social economic development in future multiple

decades.

(1) Restricted by regional factor, the inland collecting and distributing method is relatively single, which affect Dalian port's core function radiation

It mainly embodies in the following aspects: Dalian port's railway transportation is far more than 180 kilometers than Yingkou Port, and its above 80% cargo relies on railway collecting and distributing; secondly, comparing to sea transportation logistics cost, land route transportation logistics cost possesses obvious rigidity characteristic, which is the main factor affecting the domestic trade container of Dalian port.

(2) The cognition deficiency of city to port's economic value and development model

Port economic development relies on hinterland economy, and port is a part of city function, and the bridge and link to communicate world trade; port and city and hinterland economy are closely connected. Same with most coastal ports, in recent years, Dalian port's survival pressure is prominent, market share declines, vicious competition comes, and the port has gone through the unprecedented challenges. The function upgrading and transformation development of port is related to the orientation of national strategy and urban strategy; the deficient cognitive concept of ports, government departments and the people to port's economic value is the deadly influence to port's transformation and upgrading, thus lead to the Dalian shipping center's construction lacks of top-level design, function disorder, and slow growth of port's economic indicators. Comparing to Shanghai and Tianjin which are also the shipping center positioning, the relative research project and application and development of government leading shipping economy are at opposite poles. The national approved Dalian northeast Asia international shipping center construction is without a substantial improvement.

(3) The port's environment needs improvement

China's port services include port logistics integrated services, integrated shipping services, one customs three inspections supervision service, public security, fire control and other security services. The “ big customs clearance policy” model is still without promotion, and it still needs some days for port sectors such as customs, inspection, outer tube, port administrative affairs to become an efficient and smooth customs clearance “big chain”. Insufficient electronic customs clearance, paperless regulatory means, and barriers for 7 days 24 hours customs clearance; meanwhile, the problems of decentralized foreign trade cargo shipping dock, limit customs ability, the service can't keep up with demand also exist in Dalian; comparing to Tianjin, Qingdao and Busan, Dalian's shipping service elements is decentralized, and the information software used to communicate with customers exists a certain difference. The basis of the agile port, lean port and the whole port's supply chain competitive advantages purchased by the port rely on fully sharing and usage of the port's internal business process's connecting information and all aspects information of port supply chain, while port's all service function need collaborative operation, and it also need to build on the basis of information integration. All professional systems' information construction of Dalian port are basically completed, but the customs information system always builds on its own, and there exists shortcoming in both parties information integration.

(4) Insufficient senior human resource of Dalian port

Port is a large-scale functional zone of high convergence port and shipping factors, meanwhile, it a comprehensive planning area of city and port. The function adjustment of planning construction of port need to adapt with the hinterland economic development requirement. It is indispensable for the talents of senior logistics planning professional capacity, integrated comprehensive development

ability, internationalization strategic vision ability and capital operation ability. In addition, the internal salary distribution system is not enough to motivate the enthusiasm of most ports' business, management, service personnel.

4.3 Opportunities analysis

(1) National strategies

The national development and reform commission, the ministry of foreign affairs, the ministry of commerce jointly issued "Promote the vision and action of jointly build the silk road economic belt and the 21st century marine silk road". It involves into 15 coastal port, and Dalian port is on the list to have become the key node of marine silk road. The "one belt and one road" construction is the grand vision of along line's countries opening cooperation. Silk road economic belt will emphasize on unblocking China passing through the middle Asia, Russia and Europe (Baltic Sea); China passes through the middle Asia, West Asia to the Persian gulf and Mediterranean sea; China to Southeast Asia, South Asia, the Indian Ocean. "Vision and action" has made each province location and foreign cooperation key direction clear, and it focus on 18 provinces such Xinjiang, Shanxi, Inner Mongolia, Heilongjiang, Jilin, Liaoning and etc. The positioning of three provinces in the northeast China is an important widow for building the opening to the north. The 21st century marine silk road strives hard to direct the trade from China's coastal port through the South China Sea to the Indian Ocean, and extending to Europe; and from China's coastal port through the South China Sea to South Pacific. To realize this objective, the file puts forward that to take the key port as code, and mutually construct clear ,safe and efficient transportation channel. It emphasizes on strengthening 15 coastal city ports' construction such as Shanghai, Tianjin, Ningbo

to Zhoushan, Guangzhou, Qingdao, and Dalian and etc., and makes it to become the vanguard and the main force of “one belt one road”, especially the 21st century marine silk road’s construction.

As an important port of northeast China’s opening to the outside world, Dalian port undertakes the important responsibility of actively participating in “one belt one road” construction. On the process of implementing “one belt one road” construction, it achieves the new progress on the development of the branch road transportation of yellow sea ring and Bohai sea area by relying on the international trunk line network. The container’s branch line transit service network covers 13 ports of Liaoning, Hebei, Shandong Huang Bohai two domain, which provides the important safeguard for forming shipping hub. In 2013, Dalian Port Corporation cooperated with Cosco Group to mutual promote the development of the arctic northeast passage. This airline starts from Dalian port, and passes through the Bering strait, arctic ocean to European port of Rotterdam; its whole journey is 7800 nautical miles, and it has shortened 2800 nautical miles comparing to traditional airline. In addition, it focuses on the global shipping network building, and complies with the tendency of upsizing of ocean shipping low carbon energy saving, resources federalization; it further strengthens the opening up of foreign trade airlines, and expands the maritime trade channels such as Japan and South Korea, southeast Asia and etc. The cooperative pivot of “one belt one road” planning puts forward that, it will promote infrastructure construction, expand trade area, deepen financial cooperation, and promote emerging industry cooperation and etc., which will bring new opportunity to Dalian port’s development.

(2) Northeast Asia shipping center construction promotes the function grade and development level of Dalian port

In the development of Liaoning coastal economic zone, Dalian’s goal is to

construct Northeastern International Shipping Center, regional financial center and logistics center. International Shipping Center is an international shipping hub which is centralized by the shipping market of developed financial industry, abundant logistics, a large amount of airlines, and relies on international trade, financial and economic center. Dalian possesses the regional advantages of surrounding Bohai sea and northeast Asia and the first mover advantage of located in China coastal port. Especially, it possesses natural advantages in sham shoreline, low cost of channel maintenance, and it is one of the four domestic advantage port, which is widely reputed in shipping industry and port area. Recent years core port area construction, bonded port area construction, regional port construction, collecting and dispatching system construction have strengthened ports' hardware service function advantages.

(3) Liaoning port's resources integration has entered in a new leap-type development stage

Provincial government requires Liaoning port's resources integration to take Dalian Port Corporation as principal part, which has pointed out the direction of transformation and upgrading development of Dalian port's future, and has provided a good opportunity for Dalian port's function transformation. It must avoid resources waste and internal competition which are caused by province port's independent development for the effective implementation of Liaoning coastal economic zone's strategy. Start from the province's ports' overall benefit, all ports face with the same hinterland, and the homogeneity development of each port's scale, function, and service will lead to cutthroat competition, and its results is the decline of whole province's ports' overall strength, meanwhile, it will not bring a higher return for each port. In addition, the transit competition between surrounding Bohai area, and Tianjin and Qingdao and other ports. Therefore, regional port must form complementary advantages, play mutual strength, and promote the hinterland's

economic development through function division of labor, reasonable use of resources.

(4) Undeveloped core port and unique deep water coastline resources

Dalian port Dayaowan north shore is still in the stage of container hub port construction; the involved shipping elements gathering, shipping resources integration and spatial layout adjustment of port supply chain system construction are the most appropriate stage; it is the best opportunity at present for proceeding strict planning, and gradual advance by the dis-behindhand standard. In addition, the Wafangdian Taipingwan port, Jinzhou Longxiwan port, Huludao Suizhong port, Dandong Marine red port, Changxing island port leading developed by Dalian port are on the starting-up stage; Dalian port and the local government has the heavy responsibility for the infrastructure construction of Liaoning economy turning to sea.

4.4 Challenge analysis

(1) The extrusion and challenges of other cities and ports of Northeast Asia

Firstly, Korean Busan port fights for North China international transit cargo. Secondly, the ports of Hebei, Shandong and other places continuously conduct the large-scale port construction under the support of government. Thirdly, the competition comes from Liaoning main ports; with the ability improvement of the ports near hinterland ports, the supply of goods more distribute to the ports near hinterland.

(2) The challenges brought by the insufficient cooperation mechanism of Dalian port and the surrounding ports

The investment volume of the general large-scale ports is billions or tens of billions yuan, the payback period is for decades, and its investment risk is huge. One

city one port, one city many ports, the competitiveness between cities is undertaken too much by ports, and the problems of redundant construction and excess capacity are severe, which leads the overall competitiveness decline. With the development of regional economic integration, the uncertainty of port's excessive investment returns is gradually exposed with the quicken of administrative region integration. Division of labor cooperation, mutual participation of ports between neighboring cities and adjacent ports can solve the problems of the un-popularized repeat construction, the future un-avoiding ports' close range's competitive, the insufficient overall strategy planning of government management higher levels departments to port industry, disordered examination and approval administration, weak supervision, and insufficient coordination mechanism are very unfavorable to the development of modern port's intensification.

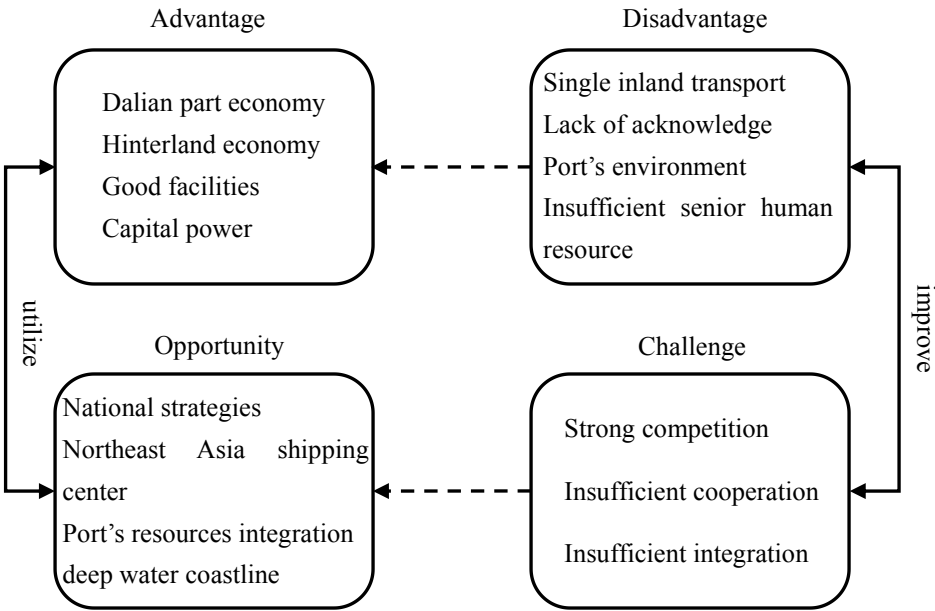
(3) The challenges brought by insufficient integration development

Dalian port needs improvement in many aspects. The port-city's integration is multiple managed by government, and the problems of excess production capacity, excessive competition, safety and environment caused by one city many ports are prominent; on the aspects of port area integration, the regional segmentation phenomenon of development zone, bonded zone and port-surrounding industry is serious, which is contrary to the development of free port integration; on the aspect of port area integration, coastal areas within region select the strategy of thriving city through port, and to develop the large-scale port, port-surrounding industry, form the homogeneity of the industrial cluster, and lead to the assimilation development strategy of coastal areas within regional; on the aspect of port group integration, it lacks cooperation between regional port and city, and striving hard for the development of local port leads to the repetition of port function, unbalanced designability of port construction, which did not form the port network layout of

complementary advantages, the competitiveness between ports is larger than cooperation, and can not form mutual forces, thus lead to the overall competitiveness of regional port decline.

4.5 SWOT matrix of Dalian port transformation strategy

Although challenge and opportunity exist at the same time, the survival pressure of Dalian port is huge, however, opportunity is bigger than challenge. Port growth model of pure quantity expansion can not realize port's function transformation, and Dalian port the promoted port function quality's intrinsicness growth. Therefore, Dalian port must perfect its strategy in the future development. It forms the SWOT matrix of the fourth port development strategy of Dalian port; it forms the different corresponding strategy through systematic analysis of the advantages, disadvantages, opportunities and threats of Dalian port transformation and upgrading.



(1) Aiming at the characteristics of Dalian's port city brand, economic strength, export-oriented economy, and with the help of Liaoning coastal economic belt's strategy, Dalian northeast Asia international shipping center strategy, Shenyang economic zone strategy, Dalian port cooperating with Dalian municipal government discuss on the problems of layout construction of the early development stage's Dayaowan north shore container terminal, port-surrounding industry and port-surrounding community, and they suggest to conduct the construction according to the fourth generation port, constantly perfect bonded port policy in practice, track other domestic try-first and do-first strategy of shipping center construction, conduct investment, construction and integration development to north shore port area with international vision. Carry out the necessary adjustment of container logistics center of Dayaowan south shore in real time, and to form the development layout of the overall integration.

(2) Well Playing the multivariate industrial advantage, brand management advantage, and the bonded port policy advantage of Dalian port, speeding up the planning construction of port-surrounding logistics park, well engaging in the double platform services of government and enterprise.

(3) Create the port environment of the comparative advantages, and unite the public security, customs, commodity inspection, quarantine, frontier defense, logistics companies, trade companies, agents and other departments to improve the service level, and conduct "a game of chess" resource integration to Dalian international shipping center construction, and to improve the service efficiency and service level through logistics shipping building and central office form.

(4) It takes combination co-opetition strategy to the surrounding ports' similar cargo. On the one hand, it utilizes the advantages of the domestic feeder, railway collecting and distributing, large transit and others of Dalian port to conditional

completely open to the opposite party, and to conduct service convergence by taking win-win cooperation strategy. The purpose is to gradually cultivate container cargo kinds' business advantage and port-surrounding industrial system construction, and to provide the good development condition for future core port area's transformation and upgrading.

4.6 Strategic positioning and strategic objective

The development positioning of the fourth generation port of Dalian port is the future target of Dalian port's future transformation, and the important strategic task for the China, Liaoning province, Dalian municipal government's jointly constructing of shipping center hub port of international competitiveness. The strategic positioning of the fourth port of Dalian port is that: serve global trade, boom the surrounding Bohai regional economy, and construct the Northeast Asia shipping center hub port of international competitiveness.

Strategy objectives :international pivotal ports, international logistics center of northeast Asia, industrial agglomeration operators.

4.7 Strategic emphasis

According to the first two chapters' internal and external environmental analysis and SWOT analysis of Dalian port core port area's transformation and upgrading, Dalian port's core port area's function transformation's strategic emphasis are as follows: firstly, mutual promote port's shipping center construction with government, implement the national strategy of port-city's integration of Northeastern International Shipping Center; secondly, promote the construction of

shipping center's informatization and standardization of logistics; thirdly, promote the cluster development of Dalian high-end port-surrounding industry and global urbanization industry; fourthly, cooperate with regional inside and outside's resource-based enterprises, port and shipping, port and railway, road and railway to make win-win development.

5 The implementation of Dalian port's function transformation strategy

5.1 Speed up the development of sea-railway combined transportation

The main import and export freight locations of Dalian port are Heilongjiang, Jilin, Liaoning and Inner Mongolia autonomous region, while Dalian port's main competitor Yingkou port is the nearest marine exit of these four provinces. Dalian port should play the anhydrous port advantage and vigorously develop sea-railway transportation to win the competition. After the cargo arrived at coastal port by shipping through sea-railway transportation, and the cargo transported by railway only needs "one declaration, one inspection, and one release" to complete the whole transportation process, thus largely decreased transportation time, while the relative long distance road transportation possess the huge cost advantage, therefore, Dalian port needs to speed up the development of sea-railway combined transportation.

5.1.1 Strengthen the infrastructure construction and moderate advance planning of sea-railway combined transportation

The national 18 railway central station planned by the ministry of railways, among which, 3 stations locate in Northeast China. In the early stage of planning construction, the relative departments stated clearly that Dalian port in charges of the specific operation of these three railway central. However, in currently, only Dalian railway central station has been come into service. Shenyang and Harbin central have been planned and completed, and passed the examination of the government and railway competent department, they will be constructed after two to three years, but the main subject of operation is no longer Dalian port. Because the railway central station is the highest level of railway container handling agency, and after the

construction of Shenyang and Harbin central railway stations, the sea-railway combined transportation channel and service ability of Northeast China will get a qualitative promotion. Therefore, for Dalian port developing sea-railway combined transportation, beside having controlled the operations management right of Dalian railway central station, it should also consider to participate in the operation and management of Shenyang, Harbin railway central station through all kinds of methods such as capital operation, thus to extend Dalian port's first mover advantage and dominant position in the sea-railway transportation of northeast China, and to make itself take a key dominant position in the future competitiveness.

Currently, first and second phases container wharf in Dalian port area operate the railway operation and small business operation of Dayaowan port station through Dalian port railway corporation (hereinafter referred to as port railway), and perform vehicle hand-over procedures with national railway; third phase container wharf carries out this operation through Dalian railway central station. In the actual operation, because of the limit of geographical location and line conditions in port area, and a serious shortage of vehicle passes ability and marshalling operation ability, Dayaowan port station becomes a highlight bottleneck of sea-railway combined transportation in Dalian port. Therefore, it should conduct an in-depth integration and optimization of this part of facilities. Considering to conduct union operation with Dalian railway central station, namely, after the marshalling through railway central station of all container trains driving in and out port, it will respectively push them to each wharf apron. The pass ability and marshalling operation ability of railway central station will be fully played in this way, and it also can avoid the defect of scarce capacity of Dayaowan port station.

5.1.2 Enhance the timeliness of the container trains

Through ten years development, Dayaowan port has already successfully opened more than 10 container trains, however, at present, the container trains operation situation is generally unstable, and the timeliness and efficiency of running is generally slow for having been restricted by the factors of the asymmetric import and export supply, insufficient railway wagon guarantee ability, as well as the unbalanced shipping company shipping date and etc. Taking “Dalian to Shenyang container train” as an example, the density of schedule reaches 6 to 7 trains per week of both way at present. However, because of the import shipment of the import core supplies Brilliance BMW, Shanghai gm is imperfect match with the export shipment of the export core supplies Shenyang Yuanda, LG electronics, it leads to most of the dispatching trains of Dalian port are centralized to arrive at Shenyang inland port in the section of Saturday and next Monday. While because of the necessity of matching export shipment, most of the trains dispatched from Shenyang should be dispatched from Wednesday to Friday, thus, Shenyang station can’t effectively utilize the trains wagons from Dalian station when dispatching trains. One the one hand, it causes extra wastes of time and organization for assembling trains wagons from other place; on the second hand, it causes a huge waste of the already limited railway wagons for the trains wagons centralized arriving at Shenyang inland port are forced to empty row after uploading. Finally, for the customers, it sacrifices the efficiency and timeliness of trains operation. Currently, this phenomena is fairly common in the opened container trains in Dalian, it has objectively restricted the market competitiveness of sea-railway combined transportation.

Therefore, for developing sea-railways combined transportation in-depth, and increasing its market competitiveness, it should further optimize the operation scheme of Dalian port container trains to form the shortcut transportation routine of

container's sea-railway combined transportation. Operating "five scheduled trains" and "land-port direct connection mode" will be the development direction of Dalian port to optimize container trains.

Namely, "five scheduled trains" is the container trains operated in the model of "fixed time, fixed location, fixed routine, fixed freight, and fixed marshalling". Because "five scheduled trains" possesses five characteristics and advantages of "high-speed operation, simple procedure, guaranteed shipment date, safe and high quality, competitive price", it should implement preferential allocation of vehicles, preferential loading, preferential pull transportation, preferential discharged, forbidding stop limited car, forbidding pick in boundary mouth, forbidding reserve, forbidding disintegration in the midway, forbidding alter the arriving station, drive strictly according to the map, and ensuring transportation deadline's direct arriving freight trains are Star level's logistics products of railway. From practice, the smooth operation of "five scheduled trains" needs delicacy management on the aspects of supply organization, wagon organization and operation organization, especially, it needs to solve the problems of balance dispatching and operation of both way supply and both way trains wagons.

5.1.3 Create the logistics cost advantage of sea-railway combined transportation channel

The process of sea-railway combined transportation is relative complex and multiple logistics links. The corresponding constitute of logistics cost is relative complex, and the basic constitute includes the ground freight and ocean freight. One the aspect of railway trains freight, in the fixed price executed by railway presently, beside trains' freight, it also includes extra expenses of self-owned container

management fee and handling charge, CY Charges and etc. of sea transportation containers; meanwhile, under the condition of without suitable goods supply, railway container transportation generally exists “empty return” problem, and it needs to pay extra empty return freight. Secondly, on the aspects of inland cost and port cost, although these two ends of inland and port of Dalian port’s sea-railway combined transportation basically are operated by Dalian port subordinate enterprises, it does not possess integration consideration on the aspects of charging items and rate, instead of the situation of respective charges.

Therefore, Dalian port should actively coordinate with each stakeholder to strive for reducing the logistics cost of the whole process of sea-railway combined transportation, and to create the sea-railway combined transportation logistics cost’s relative advantage in transportation market, thus to ensure the sustainable competitiveness of sea-railway combined transportation in transportation market. It should specifically start from the following aspects:

(1) Dalian port should actively promote the railway pricing department to start from supporting industry’s development, and provide a more favorable policy for the reduced railway freight, especially for dominant area’s large supply of goods, it should provide the special supporting policy. Moreover, railway rate should establish combined transportation mechanism and carry out floating rate of transportation with transportation market to strengthen the market strain capacity.

(2) It should set the special organization of Dalian port interior to conduct the special item’s overall plan of sea-railway combined transportation’s whole process’ logistics cost. On a macroscopic level, it should start from the strategic level, taking the overall benefit of Dalian port as the final starting point instead of signal operating unit to proceed the cost accounting and pricing of the whole process of sea-railway combined transportation, and truly make sea-railway combined

transportation possess the market price's competitive advantage. On the microscopic level, the special organization also possesses the function of coordination and supervision; it should coordinate and supervise each relative operating unit of sea-railway combined transportation to strive for reducing the operating links and logistics cost, and execute the integration of charging projects and standards which are overall formulated by Dalian port, and truly achieve the planning of giving benefit to market and terminal customers.

5.2 Further innovate and promote the function construction of “water-water transit”

The “water-water transit” is the main collecting and distributing method for most global container hub port, and its the most economic and environmental protection transportation; the scale of “water-water transit” decides the status of container hub port in a considerably degree.

5.2.1 Optimize and perfect port's customs clearance environment and improve port's customs clearance efficiency

Optimize and perfect port's customs clearance environment, improve port's customs clearance efficiency, ensure port's safety and smooth. Specify and optimize administrative procedure, and provide port operation an open and transparent, convenience and efficiency administrative service. Establish centralized customs clearance service place to convenient for handling customs clearance's declaration and the relative tax, foreign exchange, finance and other businesses. Promote port's informatization level, and integrate the customs clearance's businesses process and

the relative information data into electronic port information platform; promote the compatible with shared of customs clearance's information. Strengthen the coordinate service of customs clearance; promote each unit of port to strengthen all links of customs clearance's collaboration and cooperation; timely coordinate and handle all problems of affecting the ordinary operation of customs clearance, and promote Dalian port's soft environment.

5.2.2 Develop international transit box's disassembled and combining business, and further extend the logistics function

The present policy limit of port to international long-distance LCL business seriously weakened Dalian transit trade, stopover trade and international logistics function. Explore the international transit container demolition LCL business, and alter the only allowing whole box' in and out status of international transit container in port area. Actively create the favorable shipping development environment, and carry out a more opened port policy to provide more logistics value-added services for the shipper and the shipping company; further extend Dalian port's logistics, develop international container's transit, and promote transit volume are the important symbol for world port fighting for the international shipping status.

5.2.3 Actively promote the modification of law

Article 28 of "The People's Republic of China's rules on international ocean shipping" regulates that, "do not allow foreign international shipping's transportation operators operating the shipping transportation business between China's ports, and do not allow them to utilize the leased Chinese vessels or

shipping space, or operate the shipping transportation business between China's ports in disguised form by the models of slot exchange and etc.", in this way, the foreign liner corporations can not centralized transit its contracted foreign trade cargo in China's coastal ports through its own international trunk line. Therefore, foreign liner corporations bring a lot of Chinese foreign trade cargo to Busan and Singapore to transit, which has seriously affected the market competitiveness of China's ports with the foreign ports such as Busan and Singapore. The promotion of the modification of this law will greatly improve the competitiveness of Dalian port's "water-water transit".

5.3 Actively develop port's extended service

Promote the development of high-end services such as modern logistics industry, finance and insurance industry, international trade, information platform which are relied on port, and etc., further optimize the industry structure; form the perfect port industry chain and industry system; improve the industry's level.

5.3.1 Port's commerce and trade

(1) Resources integration, and develop the concentrating effect of port's resources

It has gathered a large number of world famous companies in the port, which can provide the enterprises' all kinds of services. At present, the enterprises should conduct multiparty coordination in the operation process. It should improve the commercial logistics's service ability for the integration development of port and commercial logistics, integrate the services of hinterland transport, customs

declaration, inspection, packaging, inventory management, distribution, finance, insurance, and other aspects; simplify the service procedure, and improve the operation efficiency. Therefore, it is the urgent affair of integrating the existing resources and playing the accumulative effect of port's resources for port to develop commercial logistics.

(2) Establish market, and energetically develop the commerce and industry

Establish port logistics' relevance with hinterland industry, and make the interactive development of port logistics with hinterland industry. It establishes specialized trading center according to the characteristics of hinterland industry and logistics requirement. Specialized trading center is the service industry of high added value, which possesses the characteristics of growth potential, less pollution, less energy consumption, and large output value, and obvious economic benefit. Rely on port's advantage, speed up the business flow's concentration, thus to form the scale effect to lead to the rise of import and export volume of specialized trading center, extend the radiation scope, and reduce the cost. Meanwhile, the connection with hinterland industry will be further enhanced.

(3) Matched service, and develop production service industry

Energetically develop the production service industry, enlarge the construction input of public information platform, e-commerce platform and financial services platform; complete the logistics service, information service, financial service system matched with port's development, and open up the new dimension of the interactive development of port and production services industry. Encourage the upstream and downstream extension of commerce and trade circulation enterprises services, actively explore the modern industrial organization model which has integrated "centralized purchasing, centralized trading - unified logistics services", and deepen its integration with hinterland industry.

5.3.2 Port information

Complete the port's information platform, improve the port's informatization level, promote the port services' high efficiency and convenient

(1) Learn from the foreign ports' advanced concepts and patterns

Closely follow up the world ports' technical development trend, promote the informatization connotative development of port. Profoundly analyze the new situation and requirement faced by domestic port industry's development, fully play informatization's role positioning and status function on promoting the port's development and dissolving the "bottleneck" restriction. Closely track the newest situation of port industry's IT development, fully understand the nature and connotation of informatization port. Aim at the advanced concept and successful model of world ports' development with international vision. Find out some advanced ports (such as Singapore port, the port of Rotterdam and etc.) to conduct the comparative standard analysis, and to analyze the difference and deficiency. Promote domestic ports' informatization connotative development through concept innovation, technology innovation and the industrial modality innovation, gradually realize the transformation from closed to open, ruggedness to intensive, and efficiency to the potency.

(2) Promote the informatization in-depth development of port

Incorporate port's informatization work into the total strategy frame; establish the "big information pattern" concept which is characterized by integrated sharing, intensive application, cooperation and linkage, standard specification, and open and compatible; strengthen top-level design and strategic layout from the ecological angle of port logistics supply chain; strengthen the deep integration with port's

management mode, strategic objective; enhance the systematic, holistic and strategic of port's informatization, and promote the in-depth development of port's informatization. Improve the scientific and modernization level of port management and services through the implementation of informatization strategy to play the roll booster and benefit acceleration effect for its to take the advantage status and sustainable development in market competitiveness.

(3) Actively create port's information hinge

Fully play the port's logistics hub status effect, and actively create port's comprehensive informatization hub to extend the services. To create the integrative informatization environment and service platform through information resources integration and integration application, and coordinate each link of the process of port's supply chain, to better satisfy the customers' service requirement to the port's differentiation and refinement. Fully play the role of key leading port enterprises, promote the integration and conformity of port logistics' public information resources, optimize port's business procedure and improve operation and production efficiency to form the organic cohesion between port with port, port with owner of cargo, port with common carrier.

(4) Promote the application of new generation of information technology

Scientific and technical means create a more flexible, more intelligent, and more green "intelligent port" to take it as an effective way to promote the port's comprehensive soft power. Faced with new situation and new requirements, it should vigorously promote the in-depth application of new generation of information technology such as internet of things, cloud computing, big data, mobile internet, and others in each link such as port's production, management, operation, decision-making and services. Speed up the construction and promotion of port's logistics information network, e-commerce platform, and etc.; promote the extension

of port function, port of entry function, comprehensive bonded service function to inland hinterland; realize an intelligent port service system which is integrated with logistics collaborative operation support, customs clearance supervision information service, financial trade service, logistics trading service, and value-added information service, and etc.

5.3.3 Port financial

Port financial service utilizes the port as the location advantage and resource advantage of bulk commodity's collection and distribution center to assist the port establish capital link with port enterprise, and to increase the overall revenue of port logistics chain. Through increasing the strength of support of credit class financial businesses such as port's finance, trust, financial leasing, and etc., as well as increasing the strength of support of key port projects or enterprises matched circulating fund business, port financial business not only can solve the capital bottleneck problem of small and medium-sized port enterprise, promote the transformation and upgrading of port enterprises and even the entire port industry, but it is also benefit to the long and steady cooperation relationship between banks and logistics enterprises, thus to attract the owner of cargo to create regional open-type port economy.

(1) Complete the financial service system

It is the important step to strengthen port logistics' financial service ability by gradually constructing and completing banking financial institutions system and auxiliary institution system which are adapted with port's development. Firstly, at the time of actively striving for the state-owned commercial bank institution to strengthen and complete the support of port's development, it should encourage and

promote the local financial institutions to establish facilitating agency in port, and expand the total financing service volume, and optimize the structure of financing service; secondly, it should speed up the construction of port logistics' financial services platform, and bring a variety of auxiliary institutions such as accounting, auditing, assessment, investment consulting, brokerage firm, insurance actuarial, data processing, financial information and others into port logistics' financial market system; finally, it can introduce some possessed with a certain financial strength, management experience and risk control ability's non-bank financial institutions such as insurance companies, trust investment companies, credit cooperatives, securities companies, leasing companies, enterprise group finance companies, and others into port logistics' financial market; although the financial resources of non-bank financial institutions is smaller than bank, the capital supply of non-bank financial institutions is relatively flexible and convenient, and it can provide some financing services for enterprises.

(2) Strengthen the construction of port financial market's environment

Well port financial market's environment is the important guarantee for the harmonious and healthy development of port logistics finance and port economy. Strengthen the application of modern information technology, construct port financial information platform, practically improve port logistics' financial informatization level, strive hard for shrinking the information gap of port financial institutions, port logistics company, owner of cargo enterprises and each link of the entire supply chain, avoid all kinds of potential risks; strengthen the construction of credit environment, construct port financial credit reporting platform, mutually promote the standard operation of intermediaries such as the credit reporting system, guarantees rating with strengthening and improving the development and financial service of port, and realize the benign interaction and harmonious development of

port's development and financial; strengthen the management of port logistics' financial market, regulate the behavior of market main body, and the government competent department should complete laws and regulations system, loan policy, pledge and pledge right release policy which are related to port logistics' financial market as soon as possible, improve the legal maneuverability, strengthen law enforcement, seriously investigate violation behavior; strengthen the management of the innovation of financial institutions' port logistics financial product, pay equal attention to it with the specification of each link of logistics financial operation, to improve the overall risk prevention level of financial institutions, thus to further strengthen and perfect the port logistics' financial market, and strictly keep a lookout to the risks caused by incomplete delivery procedures and halfheartedness on the operation process.

(3) Further play the guidance role of government to market

As an new pattern industry, the port logistics' financial industry is still in the preliminary stage of development, which needs the active guidance and policy support of government department. Firstly, it can lead by the relevant department of government to form the special leading group by attracting banks and non-bank financial institutions, industry associations, the typical port logistics enterprise, and then, it conducts a wide range of research and debate on all kinds of problems of the development process of port logistics finance, and forms the comprehensive coordination mechanism and solution to provide a strong support for the unveiling of follow-up policy; secondly, the government competent department can unveil the relevant preferential policies and management rules by aiming at the operation characteristics of port logistics' finance thus to encourage the introduction of banks and non-bank financial institutions into port logistics' financial market, and establish the relative loose port logistics credit and loan platform, which makes the port

logistics enterprises and the owner of cargo enterprises to enjoy more and loose monetary policy.

6 Conclusion

With the rise of the Asia-Pacific economy, the new emerging forces centralized by China will profoundly affect the world's political and economic pattern. Influenced by the variation of economic structure, it is further obvious for the tendency of the international shipping center transforming to Asian-Pacific region. The whole cargo and container handling capacity of China's domestic port cities have been increased year by year; port economy has achieved a rapid development, and at the time of having achieved the achievement, we should also be soberly aware of the shock brought by rapid urbanization, the integration of global trade. The issue of transformation and development of port has been paid attention by all walks of life. The port development presents a tendency of increasing; a large number of port shoreline and public space have been occupied; the waste of resources, infrastructure's redundant construction and the resources' competitiveness of import and export have been intensified; the rational allocation strategy of port's resources has not been effectively implemented, and it still has a long way for the overall planning construction of port.

The coming ten years are still the rapid development period for world's port economy. The implementation of the transformation and development strategy of port needs the strong support dominated by government. Regional advantage is the decisive factor for the rapid development of port cities' economy. It is the inevitable choice of superior natural condition and the construction of port and city's integration for the development of port economy to comply with the transportation requirement of domestic and overseas. Port economy involves into the various interests such as processing trade, financial transactions, information technology, and etc. Therefore, the transformation and development of port more needs the constantly analysis and summing up of the experience and lessons. It should grasp

the correct direction of the development of port, constantly solve the difficulty restricted the development of port, and brave to explore and innovate with systematic thinking, scientific approach, and firm confidence.

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