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**WORLD MARITIME UNIVERSITY**

Shanghai, China

**Research of Logistic Development Strategy in Wuhu Port**

By

**GAO CHENG**

**China**

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

**MASTER OF SCIENCE**

**INTERNATIONAL TRANSPORT AND LOGISTICS**

2009

## DECLARATION

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

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

(Signature): .....

(Date): .....

**Supervised by:**

Prof. Zhen Hong

Professor of Shanghai Maritime University

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Furthermore, sincerely thanks should be given to my classmates and friends. It is their assistance and support that make my life in Shanghai Maritime University an enjoyable experience.

Finally, but certainly not least, I would like to send my indebtedness to my beloved parents, who offer both financial and emotional support to me. I am fortunate to have their eternal love and encouragement as I go forward.

## **ABSTRACT**

Title of Dissertation: **Research of Logistic Development Strategy in Wuhu Port**

Degree: **MSc**

With the development of Chinese economic, a prosperity never seen before appeared in the development of Chinese ports. At the same time the internal competition has become more and more fierce. Yangtze River as the third largest and first busiest inland river many ports located on both sides of the river. These ports should keep pace of the development of economics, make the most of the role of the logistic centre, extend the function of the ports.

Wuhu port as the important port in Yangtze River plays an important part in regional development. The essay uses the SWOT analysis to get the development situation and existing problem of Wuhu port to illustrate the requirement of logistic development in Wuhu port. Then using the polynomial function forecast the throughput of Wuhu port. After that the essay put forward the marketing strategy on the basis of port logistics. According to the analysis of the whole essay the author point out the port should make full use of its own advantage to develop the logistic service in order to promote the statue of the port.

**KEY WORDS:** SWOT analysis, logistic, strategy, marketing, port

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- Figure 7      Comprehensive logistic centre**

## **LIST OF ABBREVIATIONS**

SWOT Strength, Weakness, Opportunity, Threat

WTO World Trade Organization

## **Chapter 1 Introduction**

### **1.1 Background**

Pacing into the 21st Century, with the development of economic of China, the total amount of import and export trade have increased a lot which bring about many opportunities to Chinese ports. What's more the hinterland of Yangtze River has also developed very fast which lead to the progress of the construction of the ports alongside the Yangtze River. And in few years later the Chinese government will have invested 4.3 billion RMB to construct and develop the transportation channels of Yangtze River as a consequence the ports alongside the Yangtze River will face the opportunities more than ever.

The combination of a large number of big, moderate and small scales of ports has formed in the mainstream of the Yangtze River which composing the layout of hierarchical scheme and complementary of main ports and district ports. And the function of the ports extent from the tradition sense of loading, discharging and transshipment to high value added services such as packaging, warehousing, distribution and information providing.

Anhui province located in east central part of China which is very close to the Yangtze River Delta economic zone. Yangtze River traverses the province and five main ports located alongside the river which are Maanshan, Wuhu, Chizhou, Tongling and Anqin. Heavy industry are very developed in the province, such as steel products in

Maanshan, coal industry in Huainan and Huaibei, cooper industry in Tongling and car industry in Wuhu. So these districts not only have the advantage of rich natural resources but also have the big economic scales, the development potential is very big and a large amount of cargoes should transship from these areas, which means the ports system in these areas have the functions of “water---water” transshipment, “water---land” transshipment, and “water---rail” transshipment. So port system alongside the Yangtze River in Anhui province will play more and more important part in future economic development.

Tracing the river upward, Wuhu port as the last deep-water port has the biggest exporting dock and the most modernized transshipment dock of coal in Anhui province. The total throughput of the cargoes is the top of that of all the ports in Anhui province. With the Zhujiqiao logistic centre, Xijiang automobile logistic centre and the Yuxikou coal distribution centre putting into use, the comprehensive service in Wuhu port will be progress rapidly. The function of exporting transportation, warehousing and business service will be improved a lot, which make Wuhu port to keep the leading position in comprehensive strength among all the ports in Anhui province.

## **1.2 Literature review**

It has great significance, both theoretically and practically, to study the change of the spatial structure of port system, Cao Youhui(1999) calculates the Gini-coefficients of the port system in eight based years through the 24 principal ports along Yangtze River so as to get the conclusion that there are four dynamic features of spatial structure of port system. Further more the author carry out a systematic analysis on the formation of causes of the change of the spatial structure of port system along Yangtze River. Finally the author believes that from now on the basic trend will be continued toward the concentration in the spatial structure but the developing velocity will be slow down, Nanjing Wuhan and Chongqing will grow faster than other ports

along Yangtze River.

With the “T” strategy being carried on and making the best of golden channel in order to develop well the ports along Yangtze River, port logistics along the Yangtze River have made great progress. Cao Weidong, Cao Youhui, Li Haijian(2004) adopts the fuzzy analysis method studying the integrated evaluation of 41 cities and towns along the lower Yangtze River and get the conclusion that the spatial difference of regions base on the lower Yangtze River port system is distinct. They also indicate that the qualification of the port development of some big cities is much better than small ones, south shore's excels north, Shanghai and Jiangsu's excels Anhui's, the reason for that is the big difference of regional economic level, economic structure and local government support.

Zhanbin(2006) base on the analysis from the aspect of administration system, juridical person management, organization for port enterprise, shore planning and usage, port capacities, etc in order to give us the suggestion that integrate the resources, reform the administration system and promote the mutual complementarily and common development among main ports along the Yangtze river and so on which can make the best of golden channel.

As a separated port system, Cao Weidong, Cao Youhui and Liang Shuangbo(2007) study 5 ports in Anhui province and use 15 indexes to reflect the comprehensive competition of port logistic so as to get the conclusion that port logistic in Anhui province can divide into three types: one is rising type which is the Chizhou port, another is falling type which is the Tongling port, the third is fluctuation type including Wuhu, Maanshan and Anqin ports. Further more, the author analysis the spatial competition among the 5 point. Finally according to the difference of the hinterland economic, infrastructure and superstructure of ports and government policies authors forecast the logistic development and spatial competition of different ports in next few

years.

In terms of financing market, Huang Xingzhou(2001)point out that the ports along the Yangtze river have the characteristic of high risk, low return and shortage of funds, so under this circumstance the enterprises should adopt diversified channels to finance. The author set Wuhu port as an example, introduce the Wuhu port issuing the stock to finance in order to raising funds to construct the new container port. Then he introduces 2 steps to make the enterprises to get listed on the stock market. First, reorganize the good assets to establish the joint stock company and then get listed. Second, affiliate the potential assets into the listed company in terms of correlating trade.

Zengqin(2006) analysis the weakness of the construction of the channel, the usage and planning of the coastline, lacking the legal management and so on. What's more the author gives us the suggestions that the ports along the Yangtze River should deepen the reform of port management system, intensify the construction of the channel and build the strategic alliance.

Zhangyi(2006) make a concrete analysis of the automobile and the car component market. Further more the author proposes a designation plan about the automobile and its component market of the ports along the Yangtze river, based on the features of selling of automobiles and forecasting about the distribution market of automobile and its components. And then analysis the case of Wuhu port to put forward the tactics about the market of automobile and its components.

In view of the trend of the container throughput in Wuhu port and the overall planning about the port in the next few years, Liuzhu, Zong Jinhong and Li Xingguo(2008) use the GM model to forecasting the growth of the container throughput in the period of 2009-2012. The author believes that the container throughput will keep sustaining development but the speed will not so faster than before.

Li Yimao(2008) introduce the development and management of the Wuhu port in recent years, and focus on the container terminal development and analysis the existing problems, he points out that the capability of the container throughput is inadequate, the container yard is too small, the supporting facilities can not meet the demand for future development and the container terminal have the tendency of decentralized management. Further more the author gives us the suggestion that first the port should accelerate the construction of the specialized container terminal, integrate the resource of shore line in order to keep sustenance development and intensify the development of information technology.

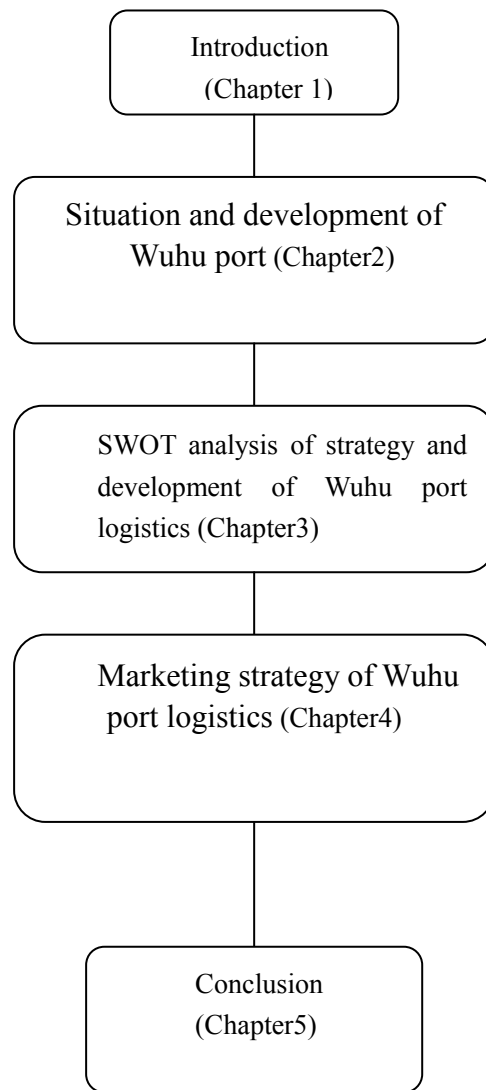
Lijian(2002) formulate the marketing strategic for Wuhu port in terms of the third part logistics. The author analysis the advantage and disadvantage of the shipping and logistic market in Wuhu port so as to make a plan for Zhujiqiao container logistic base, Yuxikou coal logistic base, Xijiang automobile logistic base in aspect of brand strategic, construction of logistic base, information technology tactics and alliance strategic.

### **1.3 Structure and research methods**

Chapter 1 is the introduction. Chapter 2 is the situation and development of Wuhu ports. Chapter 3 uses SWOT analysis method to emphasize on the strategy and development of Wuhu port logistics. Chapter 4 put forward the marketing strategy of Wuhu port logistics. Chapter 5 is the conclusion.

The structure of the dissertation is displayed in Figure 1 as follows





**Figure 2 Structure of the Dissertation**

Source: Drawn on my own

## **Chapter 2 Situation and development of Wuhu port**

### **2.1 The transportation, economic and logistic development of Wuhu city**

Recent years has been witnessing the booming and flourishing of economical development in the hinterland of Yangtze River Delta, the further betterment of channel navigation conditions in golden watercourses of Yangtze River, drastic surge in throughput at major ports of Yangtze River, then a big stride has been taken in port construction with unprecedented port mechanization and scale level, and in the meantime the functions at harbor tend to shift from the business focusing on loading and unloading, transshipment in the past to integrated logistics service with high added value featuring packing, manufacturing, warehousing, distribution and information. Clearly layered port layout has taken shape characterized by an integrated batch of large, medium and small port along the main stream of the Yangtze River, pivoted upon the major ports and supplemented by regional key ports and complemented by other ports, and with the formation of the regional port clusters covering almost the whole Yangtze River Valley which includes the Three Gorges Reservoir Area, the middle reaches of Yangtze River and Yangtze River Delta, which forms the systematic transport setup focusing on the transportation of bulk cargos such as petrochemicals, coals, ores, containers, interchangeable parts and general goods as mainstay.

Wuhu, seated in the west of Yangtze River Delta, is the transport interchange connecting the eastern region and mid-west region along the river, which features location advantages linking east and west and has a strong attachment to the coastal

regions with wider marketing radiation scope. With its location as transport hub, Wuhu has naturally been entitled as the materials collecting and distributing center and the logistics service area in Anhui Province as well as the key transport hinge along the lower reaches of Yangtze River. In terms of railway, it connects between HuaiNan, WuNing, WuTong, XunaHang and WanGan; In the highway, it connects between HeWu, WuHang, Wu Ning Highway and WuTong and WuHuang Highway; In waterway, it connects between Qing Ge River, YuXi River and Yangtze River. Wuhu port is the strategic passage linking the north and south in Anhui Province and one of the keys ports of waterways transport in Yangtze River; with its air transport linking Nanjing International Airport via WuNing Expressway and Hefei Airport via HeWu Highway. In particular, after being open to traffic at Wuhu River Bridge and connection between north and south of the Yangtze River, an integrated transport network made up of the multimode transport like roads, railways, Yangtze river shipping and air transport has just taken initial shape in Wuhu city. Advantageous geographic location facilitates the rapid development of Wuhu's economy, especially replying on ports it has formed the Wuhu Economic Development Zone with location advantage and attracted 155 foreign investments from 18 countries, among which the well-known processing enterprises at home and abroad such as Knauf Germany, GE, Formosa Plastics Group, Chai Tai Group, Mannesmann AG, VOD corporations, Lucas into the economic development zone.

Around 20 large-scale enterprises(groups) and listed companies such as China First Automotive Works Group Corporation, Shanghai Cherry, Media Corporation, START Corporation, CONCH Group, Kelon Group have already established factories and representative offices in Wuhu. Step by step Wuhu has already become the production base for the multinational companies to advance into the middle market and large-scale companies at the coastal areas to march into the middle-west market. Wuhu economic development zone has formed garden converging high-tech industries and become the industrial base attracting large-scale enterprises at home and abroad to launch the grafting development there. Presently, three pillar industries

like automotives and auto parts industry, new-type construction materials industry and electronics industry have been taking initial shape and growing stronger increasingly. With the economic and technological development and the construction of Wuhu Yangtze River Economic Development Zone, without doubt the economic development in Wuhu area will take a great stride. And modern logistics industry in Wuhu is a sunrise industry. The traditional logistics service, relying on Wuhu port, rail and road, undertakes the forwarding transport task for the production enterprises and trade enterprises in the middle region of Anhui province. The utilization rate of storage facilities at ports and stations tend to be high, while that of storage facilities at business and enterprises, distribution firms in traditional sense tend to low, and only a small portion of retail enterprises has carried out the regular distribution service in terms of distribution operation in chain businesses, and the purchase, sale and storage of subsidiary agricultural products are still under planning and construction, and as a matter of fact, the logistics service in Wuhu city still lingers in the traditional sense with the features such as one-fold service items.

## **2.2 The introduction of Wuhu port**

Wuhu port, involved in the passive storage and transportation operation scope, is located at Wuhu city, the lower reaches of Yangtze River and the intersection of the economically developed region in the east and inland region in the west. Wuhu port, as the center of inland transport network together with QianLiu, QingGe river, ShuiYang river, YunChao river and Zhang river, is key link of communications at Anhui province and junction of water and land transport, one of the important ports, first class port nationwide and the radiating surface of the port can reach East China and provinces of Middle and South China. With a wide surface of the river and straight shoreline, Wuhu has an amicable climate and the shoreline of the port area reaches 25.4 kilometers. And all the year around 5000 DWT sea ships can be anchored at port and 10,000 DWT sea ship can be as well in middle and long term.

During the lower water season at Yangtze River, the ideal port for materials transfer transport between Sichuan, Hubei and Jiangxi and the last deep-water port in Yangtze River as well. Wuhu port has a long history that can be traced back to Ming Dynasty, at that time Wuhu port nicknamed as the No.1 city in Eastern Yangtze River and big port along the Yangtze River, and was established as treaty port in 1876. After the founding of the People's Republic of China, central government threw a big investment for the construction of Wuhu port, mechanized coal dock of YuXi and Foreign Trade Port of ZhuJiaqiao and the ports' openness to the foreign ships, which makes Wuhu port become one of the key junction ports in inland river and the important dock and energy export port in the lower reaches of Yangtze River.

Wuhu port is the key link of north and south in Anhui province and hinge of water-land transport, covering the following area: north shore, up to TuQiao Bridge, down to XiLiang Mountain, with overall length of 119 kilos; south shore, up to HuangXingping, down to DongLiang Mountain, with overall length of 71 kilos and the total length of the natural shoreline is 190 kilos. And the shoreline put into use is 23.95 kilometers and there are 51.2 kilometers of shoreline still to be used. Besides, there are 127 berths in different sizes at port area, among which 42 berths belong to harbor bureau, 85 berths belong to regional port and cargo owner's wharf and the annual total through capacity is 23 million tons. The storage yard area at port is 160,800 square meters, with 1.56-kilometer-long special railway line and 103 loading and unloading machines and 24 harbor boats.

YuXi kou, one of three coal export ports along the Yangtze under the domination of Wuhu port, is mainly engaged in the transfer operation and distribution of coals giving consideration to transfer of materials in middle and northern region of Anhui province as well. YuXikou has a total of five productive berths and storage yard of 84,400 square meters with the maximum berthing capacity of 5,000 tons. ZhuJiaqiao port area of Wuhu port is the largest foreign trade dock and one of the foreign trade docks opening up to the outside in the middle and lower reaches of Yangtze River

with its main business on foreign trade and container transport. The total length of the dock is 402 meters. The dock has a total of six productive docks covering the storage yard of 62,500 square meters with the designed berthing capacity of 5000 tons and maximum berthing capacity 10,000 tons. Wuhu harbor bureau had a cargo throughput of 9,025,000 tons in 2001, coal throughput of 4,493,000 tons, foreign trade throughput 293,000 tons, container throughput 29,000 TEU. In actual fact, in terms of the throughput the export usually is in excess of import in previous years, which as a result of abundant coal resource in Anhui province, besides, construction materials and cement industry is the pillar industry locally, that is, export of raw materials accounts for the absolute proportion in the throughput of Wuhu port. Foreign trade transport started from scratch in 1980 to 29,000 TEU in 2001, and container transport in Wuhu port is sub-liner container transport between Wuhu and Shanghai and the import commodities are raw materials and construction materials while the export commodities are electronic appliances, local product, mechanize product. Wuhu harbor storage and transport company Ltd was initiated by Wuhu harbor bureau in Nov, 2000 and commonly invested by Wuhu Yangtze River Bridge Company Ltd, Wuhu Economic and Technological Development Company, Wuhu Hi-Tech Entrepreneurship Service Center and Wuhu Foreign Shipping Agency Company, among which, Wuhu harbor storage and transport company Ltd is the largest share-holder with an investment of 72,120,000 RMB accounting for 98% of the total registered capital. Wuhu harbor bureau is established in 1952, whose predecessor is representative office of Yangtze River Shipping in Wuhu. It is under subjection of the local government and is the wholly state-owned enterprise mainly focuses on the cargo loading and unloading, storage and transfer service, port mechanization facilities, ship repairs, equipment, release. Wuhu Harbor Storage and Transport Company Ltd (listed no. 600575), with a current asset of 177,000,000 RMB and five docks, has a total storage yard of 110,000 square meters and 41 large loading and unloading facilities. Meanwhile, it still has special railway line of 11.6 kilometers and employees of 1,265 and the annual income reaches close to 100,000,000 RMB, which symbolizes a bright future for its development. The establishment of Wuhu Harbor

Storage and Transport Corporation is the optimization grouping between structure portfolios and social assets, which lays a good foundation for the development, exploitation and innovation of Wuhu harbor. Soon after its establishment, the company put forward the idea to take full advantage of regional superiority of Wuhu city and Wuhu harbor in terms of its communications hinge and cargo collection and distribution site to build Wuhu harbor modern logistics park and develop modern logistics service.

## **Chapter 3 SWOT analysis of Wuhu port**

SWOT analysis is the matrix analysis on the basis of strength, weakness, opportunities and threats of industry in its development. The analytical method can serve as the yardstick for the enterprises to lay out the development strategy. And the following is the analysis into the strength, weakness, opportunities and threats of logistics development at Wuhu port.

### **3.1 Strength of logistics development of Wuhu port**

Wuhu is one of the important port cities alongside the Yangtze River, and the main foreign trade port in Anhui province and the window of opening up to the outside in Wuhu city as well. Wuhu port, located in Nanjing and Wuhan, is the ideal logistics transfer city connecting various provinces in the upper reaches and lower reaches in the riverside.

Wuhu, as an urban complex, has formed stronger complementarily and logistics distributives together with MaAnshan city focusing on steel industry in lower reaches, TongLing city focusing on copper processing industry, Anqing City focusing on petrochemical industry as well as Xuancheng city and ChaoHu city in the east and west respectively. For the time being, Wuhu port has initially developed into an important complex port which focusing mainly on energy, raw materials and container transport, giving considerations to passenger and cargo transport as well as the trade at home and abroad. And the direct hinterland is the Wuhu area and its indirect hinterland is the middle and Southeast of Anhui province, and the second passage in East China railway. With the formation and development of regional economic integration, and to give the favorable economic location advantage and



transport facilities to fully play and to play a better role of regional complex transport hinge and distributives effect as core city in the region as well as the natural logistics advantage in Anhui province and the surrounding areas centering around Wuhu, which necessitates the Wuhu to offer integrated logistics service port and actually it is the regional competitiveness of Wuhu port.

### **3.1.1 Convenient transport**

Wuhu port is an important transport hub connecting waterways and land along the shores of Yangtze River. Five rails named WuNing, WuTong, HuaiNan, YiHang, WanGan intersect with one another at Wuhu, and the Wuhu combined bridge's open to traffic integrated the transport northwards to JingJiu, LongHai and southwards to Zhejiang, Jiangxi, Fujian provinces, making Wuhu an important rail junction connecting North, East, Middle and South of China. In terms of land transport, the road in Wuhu city connects with WuNing, WuHang, HeWu highways, forms the logistics network together with Jiangsu province, Zhejiang, Jiangxi, Shanghai and expands nationwide. As for air transport, Wuhu connects with Nanjing and Hefei airport through WuNing, HeWu highways.

### **3.1.2 Backing for good regional economic development**

Wuhu city, seat of Wuhu port, is the economic hub and key foreign-oriented city along the shoreline of the Yangtze River. Based on the economic growth in various regions during "Ninth Five Year plan" and the year 2006, the growth of national economy in Wuhu has been witnessing the stable momentum and adjustment of economic structure is accelerated as well as the improved investment environment, which obviously will give a further impetus to the economic growth of the whole province. Compared with coastal cities, the comparative competitiveness of economic cost has been one of investment hot spots by the customers at home and abroad. The

stable economic growth in Wuhu city and increase in industrial and agricultural production will inevitably bring the gigantic demands for the logistics market, which is actually the good and healthy economic and market surroundings of the logistics industry development in Wuhu city.

### **3.1.3 The focus of reform and opening has shifted from the coastal region to riverside of Yangtze River**

With the development and opening up, the construction of Three Georges Project, which symbolizes the focus shifting of China's reform and opening up from the coastal regions to Yangtze River Valley, which signifies that the coastal regions and the Yangtze River valley has both been the strategic focus of China's economic development.

### **3.1.4 Macroscopically backing by government**

Anhui Province has initially laid out the planning of advancing modern logistics and the relevant policies, and put forward modern logistics system with Wuhu as the center in Anhui Province. Actually this is the important premise and policy backing to build up modern logistics service network at Wuhu port.

### **3.1.5 Strong Demand of Logistics Service**

The sizzling advancement of foreign-oriented economy in Wuhu and its surrounding areas and the gradual expanding dynamics of economy bring about enormous demands for the development of logistics at Wuhu harbor. Presently, Wuhu Development Zone has already attracted some 10 multinational corporations, 24 listed companies and famous large-sized enterprises domestically to establish investments, and its investment scale and market share ranking first 30 nationwide are 13

companies just as following: Shanghai Automotive, HaiLuo, ZhengDa, Kelon, Midea. And there are five large-sized cement factories like NingGuo, BaiMaShan, DiGang, ChaoHu, DongGuan with an annual production capacity of 6 million tons within 100 kilometers centering on Wuhu. HaiLuo Group is the largest construction materials enterprises nationwide with annual production capacity of 7 million tons cement. Besides, WuHhu is the trial city for the production and scientific research of new-type construction materials and its products as well. And the products that have already possessed the annual production capacity are: 100,000 tons PVC type materials, 30,000 PVC pipe materials, 20,000,000 cubic meters, durable plasterboard, 110,000 tons calcium bicarbonate and 100,000 tons electrolytic copper and 370,000 tons pig iron by HengXin Group,etc.

Industries that have taken initial shape in Wuhu are just as followed:

- (1) Wuhu No.1 Automotive Yangtze Auto has already formed the capacity of annul production of 30,000 light weight car chassis;
- (2) ShiDa Computer company has already formed the capacity of annul production of 300,000 computers;
- (3) Midea Group has already formed the capacity of annul production of 350,000 air conditioners;
- (4) Oriental Papermaking Co. Ltd has already formed the capacity of annul production of 80,000 tons top grade brown paper and specialty paper;
- (5) ZhengDa Group has already formed the capacity of annul production of 180,000 tons feeding-stuffs.

### **3.1.6 A key link of Wuhu Yangtze River Bridge in the development of logistics supply chain at Wuhu port**

After Wuhu Yangtze River Bridge's openness to traffic, the indirect hinterland scope of Wuhu Port is expanded accordingly, which naturally widened the logistics supply

chain at Wuhu Port and intensified these supply chain network. With the improvement and intensification of transport conditions, economic development in Wuhu will surge with momentums and logistics volume will be increased drastically, for instance, the annual freight volume by road is expected to increase by 10-30%, and that by rail will be increased by 20% or so. Rail-and- water through traffic will gradually be increased. Although the development of foreign-oriented economy is lagging behind that in coastal areas of the East, with the strengthening trend of the opening of the Yangtze River Valley to the outside and development of foreign-funded enterprises and development zones, especially after China's accession to the WTO, the development of foreign-oriented economy enters into the international cycling and the stage of rapid advancement against the backdrop that domestic and international markets together with the implementation of Middle-West Development Strategy by the central government. And likewise the impact on the development of Wuhu port is just as followed: the steady increase in coal and mineral resources, accelerating increase in mine construction materials and cement; marginal increase in foreign materials especially the containers and the ratio of water-and-rail transfer will be increased.

### **3.1.7 Good infrastructure and facilities for the development of logistics**

Wuhu port has a comparatively complete communications facility, storage facilities, which is material base for the development of third party logistics service by Wuhu Port.

### **3.1.8 Entrepreneur spirit forged with passage of time**

The spirit through years of blazing new trails and forging ahead in the development of Wuhu port by leaders and staffs, which has already played an important role in the fight against many and various hardship. Without doubt, this entrepreneur spirit of blazing new trails and forging ahead, down-to-earth attitude of scientific integrity will

play an imperative role in the next round of port development in future and serve as a powerful backing and guarantee for the development and construction of the third party logistics system at Wuhu port. In a word, there do have the competitive edge for the logistics development of Wuhu port.

### **3.2 Weakness of logistics development of Wuhu Port**

#### **3.2.1 Impact of Nanjing Yangtze River Bridge**

With Nanjing Yangtze River bridge open to traffic, the headroom limitation restraints the put-in of above 10,000 ton ocean-going vessels, which put Wuhu port in a disadvantageous position compared with Nanjing port and influenced the scope for the development of container transport and river-to-sea transport to a large extent as well.

#### **3.2.2 Yangtze River waterway transport is conspicuously weaker in contrast to land transport**

Yangtze River cannot be compared with land transport in terms of speed. In 21<sup>st</sup> century, timeliness is the target by more and more people and inland water transportation always tend to bite off more than one chews. In the meantime, the transport route in inland waterways transport is limited by the water area and the through transit can be done independently. As for portion of customers, the throughput transit cannot be completed by waterway transport, that is, door-to-door transport by waterways alone and besides in the process of transportation the increase of reloading times will extend the estimated time.

### **3.2.3 Still weak compared with infrastructure in some ports**

Wuhu port (including the ports in the middle and upper reaches of the Yangtze River), compared with coastal ports in China and the ports below the Nanjing Yangtze River Bridge, the infrastructure of Wuhu port is worse. And there are two reasons for this: one is that no large ocean-going ships put in the Wuhu port and then the requirements of barges operation are low. The other is the administration authority of the industry in the past laid emphasis on the coastal ports and ports below the Nanjing Yangtze River Bridge, then the backing offered to Wuhu port is relatively lower.

Thus, at present the facility-sustaining efficiency is not high and the modernization level of the dock is weak.

### **3.3 Opportunities for the logistics development of Wuhu Port**

#### **3.3.1 The 3<sup>rd</sup> party logistics is more popular with each passing day**

In China, it takes some time for the people to accept the 3<sup>rd</sup> party logistics and naturally we can't offer effective logistics service that conforms to modern logistics demands and covers the whole supply chain, which results in that a number of enterprises still seek solutions to logistics by themselves and as a matter of fact the logistics scale and quality of some large-scale enterprises most often exceed that of potential 3<sup>rd</sup> party logistics suppliers. Then the question whether the third party logistics can meet the demand of society has been raised, which more or less put a dent in the marketing activities of third party logistics in China. However, with the gradual introduction of modern logistics concept into China, a considerable number of advertisements on logistics and supply chain knowledge as well as introduction of advanced experience abroad make it possible for the acceptance of socialization trend of logistics. Some cargo owners and enterprises start to try the third party logistics

service, which evidently lays a better foundation for the development of the third party logistics service by port.

### **3.3.2 Opportunities after China's entry into WTO**

China has been officially accepted as the member of WTO on Dec. 11, 2001, which fully manifested the determination of furthering reform and widening the opening up policy as well as the proactive attitude to vigorous participation in the international competition and cooperation. After China's entry into WTO, China has already honored its commitment in the opening up of waterway transport. Among them, the relevant ones concerning the ports are just as followed:

#### 1) International Marine Transportation (including passenger transport and freight)

There is no limitation for foreign businessmen to be engaged in the liner and non-liner transport; foreign businessmen are allowed to set up joint enterprises to be engaged in shipping, in ships with Chinese national flags, but the proportion of foreign investment is no more than 49%; and the joint enterprises can be granted national treatment.

2) support services in marine transportation (loading and unloading, container yards, shipping agency) Foreign businessmen are allowed to set up joint enterprises to be engaged in shipping agency but the proportion of foreign investment is no more than 49%; Foreign businessmen are allowed to set up joint enterprises to be engaged in loading and unloading of cargoes and container yards services; and the joint enterprises can be granted national treatment.

#### 3) Port Service

The following port services can be used by foreign ships in the reasonable and non-discriminatory circumstances: piloting, towage, food, fuels, freshwater supply,

refuse collection, sewage disposal, shipmaster service at port, navigation aids service, shore-based processing necessary for operation of ships (including communications, water and power supply), emergency repair service, anchorage ground, berthing and mooring service, etc.

#### 4) Storage Industry

Since China's entry into WTO, foreign businessmen are allowed to be engaged in storage service but the proportion of foreign investment is no more than 49%; One year after China's entry into WTO, foreign businessmen are allowed to become the majority shareholders; Three years after China's entry into WTO, foreign businessmen are allowed to run the enterprises wholly foreign-owned; and the joint enterprises and wholly foreign-owned enterprises can be granted national treatment.

#### 5) Shipping Survey

Since China's entry into WTO, foreign businessmen are allowed to set up joint inspection body but the proportion of foreign investment is no more than 49%; Two years after China's entry into WTO, foreign businessmen are allowed to become the majority shareholders; Four years after China's entry into WTO, foreign businessmen are allowed to run the enterprises wholly foreign-owned; and the joint enterprises and wholly foreign-owned enterprises can be granted national treatment.

#### 6) Water carriage infrastructure

Since China's entry into WTO, foreign businessmen are allowed to set up joint enterprises with majority shareholding by foreign businessmen, Three years after China's entry into WTO, foreign businessmen are allowed to run the enterprises wholly foreign-owned, and the foreign-undertaken projects allowed is just as following: (1) Projects or construction projects by wholly foreign invested, granted;(2) Projects by loans from International Finance Organizations and international bidding; (3) Sino-foreign joint venture and cooperative projects with 50% above (including 50%) shares by wholly foreign investment and Sino-foreign joint venture projects



with less than 50% shares by wholly foreign investment and technologically unavailable by domestic enterprises; (4) Domestically invested projects cannot be completed independently by domestic construction enterprises and allowed to general contracted or subcontracted with domestic construction enterprises after approval by provincial construction authority; Three years after China's entry into WTO, the joint enterprises and wholly foreign-owned enterprises can be granted national treatment.

Internationalization of resources brought about by the accession into the WTO, will give much wider scope for the development of foreign trade import and export in China. Export of labor-intensive products and import of capital-intensive products in a traditional sense will be increased drastically as products of investments and middle-way. Thus, after China's entry into WTO, cargo volume imported and exported in China will be soared gigantically. Likewise, the demands for transport will be increased as well, which inevitably give an impetus to the growth of cargo transport in foreign trade and demands of more container cargoes transport at Yangtze River port.

Generally speaking, China's entry into WTO will bring about new opportunities for WUHU port to attract foreign trade and develop logistics industry and increase its throughput in foreign trade.

### **3.3.3 Growth momentum in Yangtze River Transport**

There are lots of setbacks in the development of Yangtze River shipping in China, but its development is still witnessing growing momentum. Table 1 indicates the changes of cargo throughput by hinterland transport in recent 5 years, which basically can reflect the change of port cargo throughput in Yangtze River and the change of cargo structure for the throughput of ports in Yangtze River accounts for overwhelming majority of them. The data in the chart can fully reflect the steady and continuous

growth in Yangtze River transport

Unit: 10000 tons

Year	2003	2004	2005	2006	2007	Increase rate in 2007
total	66224	86414	101418	117510	138208	17.6%
Oil and its products	8009	10188	10700	9046	8315	-8.1%
coal	10585	14914	17223	20192	24394	20.8%
metallic ores	6331	11331	15489	16147	20944	29.7%
nonmetallic ores	3375	4121	4659	5375	6213	15.6%
Building materials	12569	15378	25056	31157	37008	18.8%
grain	1463	1786	1669	1480	1678	13.4%

**Table 1 The statistics of main cargo throughput in the port of inland rivers.**

Source: China Port Yearbook(2007)

Table 2 is the data of foreign trade throughput change at various ports in the Yangtze River in recent 5 years, among which we can see Wuhu port is the port along the Yangtze River with the third fastest growth of foreign trade cargoes

Unit: 10000 tons

Year	2003	2004	2005	2006	2007	Increase rate in 2007
Nanjing	929	913	786	709	726	2.4%
Nantong	491	694	776	966	1882	94.8%
Zhenjiang	638	793	1012	1216	1351	11.1%
Jiangyin	228	320	649	888	1082	21.8%
Taizhou	134	188	322	448	399	-10.9%
Wuhan	84	122	132	171	262	53.2%
Chongqin	88	106	119	188	217	15.4%
Wuhu	49	57	73	104	154	48.1%

**Table 2 The statistics of foreign trade throughput in main ports in Yangtze River**

Source: China Port Yearbook(2007)

Internal trade container transport tends to surge in the development of the

international containers feeder service. Table 3 is the circumstances of internal trade container transport undertaken by ports at coastal areas and Yangtze River in 2007. After the initial stage of 2000-2006, currently the internal trade container transport witnesses a good momentum in its development towards normalization and large scale. the total slots exceed 25780000 TEU. The network of trunk line and sub line has already been formed and the specialization at piers has been drastically improved and the average shipping space of transport ships conspicuously increased.

Unit: 10000TEU

Port	Position	Total	
Coastal ports	Total	2190.2	
	Guangzhou	1	593.4
	Shanghai	2	341.0
	Tianjin	3	181.6
	Qingdao	4	143.3
	Yinkou	5	123.9
	Quanzhou	6	96.9
	Shenzhen	7	91.3
	Zhoushan -ningbo	8	88.8
	Yantai	9	86.7
Lianyungang	10	80.3	
Inland river ports	Total	227.1	
	Suzhou	1	80.4
	Nanjing	2	67.2
	Xintang	3	33.8
	Jiangyin	4	26.1
	Zhenjiang	5	20.6

**Table 3 Internal trade container transport undertaken by ports at coastal areas and Yangtze River in 2007**

Source: China Port Yearbook(2007)

The steady development of shipping industry in Yangtze River is the important guarantee and base of advancing the third party logistics as well as the business opportunities of third party development.

### **3.3.4 Opportunities of Listing**

At the end of 2000, Wuhu port authority, together with other four companies, start up and establish “Wuhu Port Storage Incorporated Company” with registered asset of RMB 70,360,000 by operating assets and relevant liabilities of its YuXikou and Zhujiqiao port area, among which 96% of the shares controlled by Wuhu port. The listing of Wuhu Port Storage Company will bring about the advantage of asset in terms of distribution operation for the company can attract the idle funds in the society and do investment in improvement of the port software and hardware as well as expand the business scope and volume.

## **3.4 Challenges by the development of logistics of Wuhu port**

### **3.4.1 Influences by competition of surrounding ports**

Nanjing logistics area and Nanjing metropolis circle relying on the Nanjing port will throw much pressure on Wuhu port in the process of competition. Thus, Wuhu port takes an proactive attitude to this pressure in the “Tenth Five-Year Plan” and try every possible means to do a good job in the preparation of link-up with Nanjing port in the industrial project. With the further construction of railways and highways, the land transport connecting the Yangtze River area and some mid-China provinces such as Anhui Province, Jiangxi Province and Hubei Province will be more convenient and swift, on the other hand, in order to attract more resources, Shanghai has taken a variety of measures to reduce the cost of land transport, besides, the density of container liner service between Shanghai and Nanjing is relatively higher, then in the future a portion of source of goods will be transferred at Shanghai port and Nanjing Port by land.

Wuhu port overlaps with its surrounding port economic hinterlands, and likewise container transport, infrastructure planning and construction were taken as the

important growth points at Maanshan port, Tongling port, Anqing port, Chaohu port, for instance, container pier under construction at Zhengpu, Chaohu port. With the consummation of infrastructure at these ports, expansion of its scale and increase of liners, the competition for grappling with the resources in the common hinterland will be fiercer. And the higher land transport cost will put a dent in the attraction of Wuhu port to resources in Northern Anhui province.

### **3.4.2 Expansion of land transport towards the logistics industry**

Like how to carry out the third party logistics by ports, the road and rail transport is mapping out the plan of third party logistics as well, moreover, to some degree the development of logistics service in land is earlier than waterways and also have the unique conditions of door-to-door service. Competition with road and rail that have the function of substitution will possibly alter the trend of logistics supply chain and sever the supply chain structure formed at ports, which is a serious issue to ports.

Based on the above-mentioned SWOT analysis into the third party logistics in Wuhu port development, we can generalize into the situation analysis chart in figure 2, from which we can see that the advantages for the development of third party logistics in Wuhu port is evident and the opportunity is once in a blue moon, and of course its weakness and possible challenges are supposed to be taken into consideration.

<p><b>Internal Environment</b></p> <p><b>External Environment</b></p>	<p><b>Strength</b></p> <ol style="list-style-type: none"> <li>1 Regional Strength at Wuhu port</li> <li>2 Convenient Transport</li> <li>3 Rely on the good and healthy economic development in the local area</li> <li>4 The Focus of reform and opening up shifts from the coastal area to the Yangtze River</li> <li>5 macro-support from the government</li> <li>6 Strong demand of logistics service</li> <li>7 Wuhu Yangtze River bridge is key link to the development of supply chain in Wuhu port</li> <li>8 good infrastructure and equipment for the development of logistics</li> <li>9 the spirit of pioneering for progress</li> </ol>	<p><b>Weakness</b></p> <ol style="list-style-type: none"> <li>1 Impact from Nanjing Yangtze River Bridge</li> <li>2 There is conspicuous weakness for waterways transport in contrast to land transport</li> <li>3 Compared with some ports the infrastructure is still poorly equipped</li> </ol>
<p><b>Opportunity</b></p> <ol style="list-style-type: none"> <li>1 The third party logistics is more popular</li> <li>2 Opportunity after China's entry into WTO</li> <li>3 The continuing growth momentum in Yangtze River Transport</li> <li>4 Vigor and Flexibility by the reform of port system</li> <li>5 Opportunity after listing</li> </ol>	<p><b>SO</b></p> <ol style="list-style-type: none"> <li>1, Make full use of the advantage of listing, its regional strength as well as government supporting to promote the level of the logistic service,</li> <li>2 Extend the business market to attract more transshipment of cargoes.</li> </ol>	<p><b>WO</b></p> <ol style="list-style-type: none"> <li>1, Collect money from the share market to promote the construction of infrastructures and substructures</li> <li>2, Make the most of the advantage of hinge in Yangtze River to become the hub of Shanghai port</li> </ol>
<p><b>Threat</b></p> <ol style="list-style-type: none"> <li>1 Impact from the competition of neighboring ports</li> <li>2 Adjustment of Cargo Transport in Yangtze River</li> <li>3 Outward Development of land transport towards the Logistics industry</li> </ol>	<p><b>ST</b></p> <ol style="list-style-type: none"> <li>1, Make the preferential policy and make full use of its advantage to participate in the competition among the ports in Yangtze River,</li> <li>2, Strengthen the cooperation with other ports to get the win-win situation.</li> </ol>	<p><b>WT</b></p> <ol style="list-style-type: none"> <li>1, Optimize the structure, publicize the corporation</li> <li>2, Connect with the cargoes owner companies in active way to improve the benefit of the port.</li> </ol>

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### **Figure 2 SWOT analysis**

Source: Drawn on my own

### **3.5 Strategic choice based on the SWOT analysis**

Based on the SWOT analysis we can get four strategic combinations.

1. SO strategy: Wuhu port should make full use of the advantage of listing, its regional strength as well as government supporting to promote the level of the logistic service, extend the business market to attract more transshipment of cargoes.
2. WO strategy: The port should collect money from the share market to promote the construction of infrastructures and substructures and make the most of the advantage of hinge in Yangtze River to become the hub of Shanghai port.
3. ST strategy: The port should make the preferential policy and make full use of its advantage to participate in the competition among the ports in Yangtze River, in the mean time Wuhu port should strengthen the cooperation with other ports to get the win-win situation.
4. WT strategy: The port should optimize the structure, publicize the corporation and connect with the cargoes owner companies in active way to improve the benefit of the port.

## Chapter 4 Wuhu Port Marketing Strategy on the basis of port logistics

### 4.1 Tendency forecasting of the throughput in Wuhu port

#### 4.1.1 Tendency forecasting

This method should find some historical dates and draw these dates to a trend line, then using mathematical function to forecast the tendency. This paper use polynomial function to forecast the tendency.

#### 4.1.2 Forecasting of the throughput in Wuhu port

Unit: 10000 tons

	Total throughput	Actual tons	Throughput in Zhujiacao	Throughput in Yuxikou	Actual tons in Zhujiacao	Actual tons in Yuxikou
2000	829.5	677.44	136.14	380.74	111.46	454.23
2001	902.5	768.29	153.99	447.36	131.77	521.23
2002	1138.23	944.51	217.64	637.32	202.77	635.88
2003	1410.09	1169.39	362.45	761.05	250.73	756.52
2004	1830.58	1578.56	491.24	873.73	459.09	873.35
2005	1850.48	1582.85	508.72	907.97	476.26	930.23
2006	1533.06	1456.06	499.14	827.32	465.58	813.23
2007	1455.65	1438.56	493.77	672.19	477.39	672.6
2008	1519.39	1545.18	465.97	657.24	465.24	680.62

**Table 4 The throughput in Wuhu port between 2000 and 2008**

Source: Wuhu port



Unit: coal, bulk 10000 tons

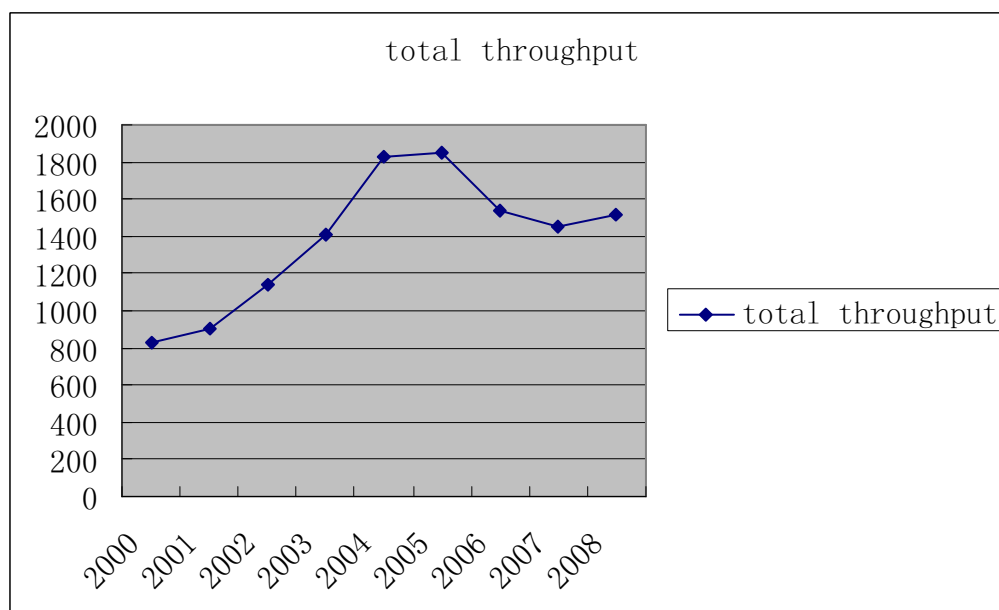
container 100000TEU

	coal	container	bulk	
2000	435. 02	1. 77	808. 32	
2001	500. 05	2. 91	873. 15	
2002	610. 91	3. 70	1099. 92	
2003	720. 60	4. 83	1360. 99	
2004	835. 60	5. 71	1773. 46	
2005	905. 29	6. 42	1228. 76	
2006	786. 20	10. 01	1432. 78	
2007	756. 36	16. 5	1296. 95	
2008	953. 00	16. 41	1344. 99	

**Table 5 The throughput of different kinds of cargoes**

Source: Wuhu port

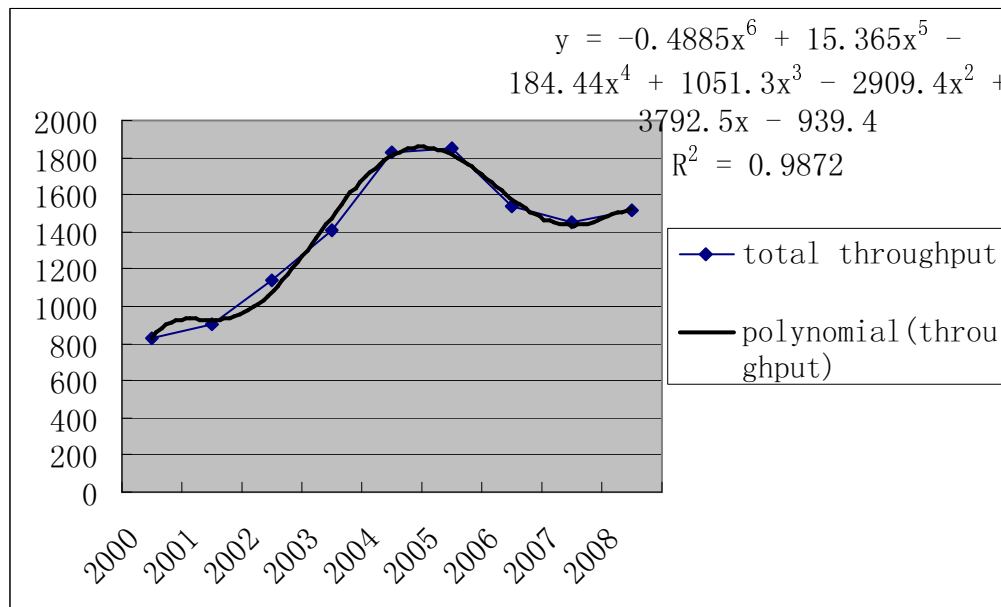
According to figure 3 we put all the figures in the line chart (4-3)



**Figure 3 Figures of throughput between 2000 and 2008**

Source: Drawn by Microsoft Excel

Then using the polynomial line chart gets the curve and equation (seen figure 4)



**Figure 4 Polynomial line chart**

Source Drawn by Microsoft Excel

According to the equation we can forecast the total throughput of Wuhu port in 2010 and 2015 are 18671100 tons and 22417600 tons. And using the same method we can get the throughput of Zhujiqiao quay in 2010 and 2015 are 5365000 tons and 6101600 tons and in Yuxikou quay these figures are 7330500 tons and 7037000 tons. From result of the forecasting we can see that the booming period of throughput at port is the past tense and for the time being the only thing they can do is to acquire the new economic growth points through the extension of logistics industry chain at port. Each quay will make up the strategy to promote the economic growth.

#### 4.2 Positioning strategy of Wuhu logistics marketing

In light of the market analysis of commodity categories in Wuhu, the characteristics of logistics volume in Anhui Province and Wuhu area, and the economic development

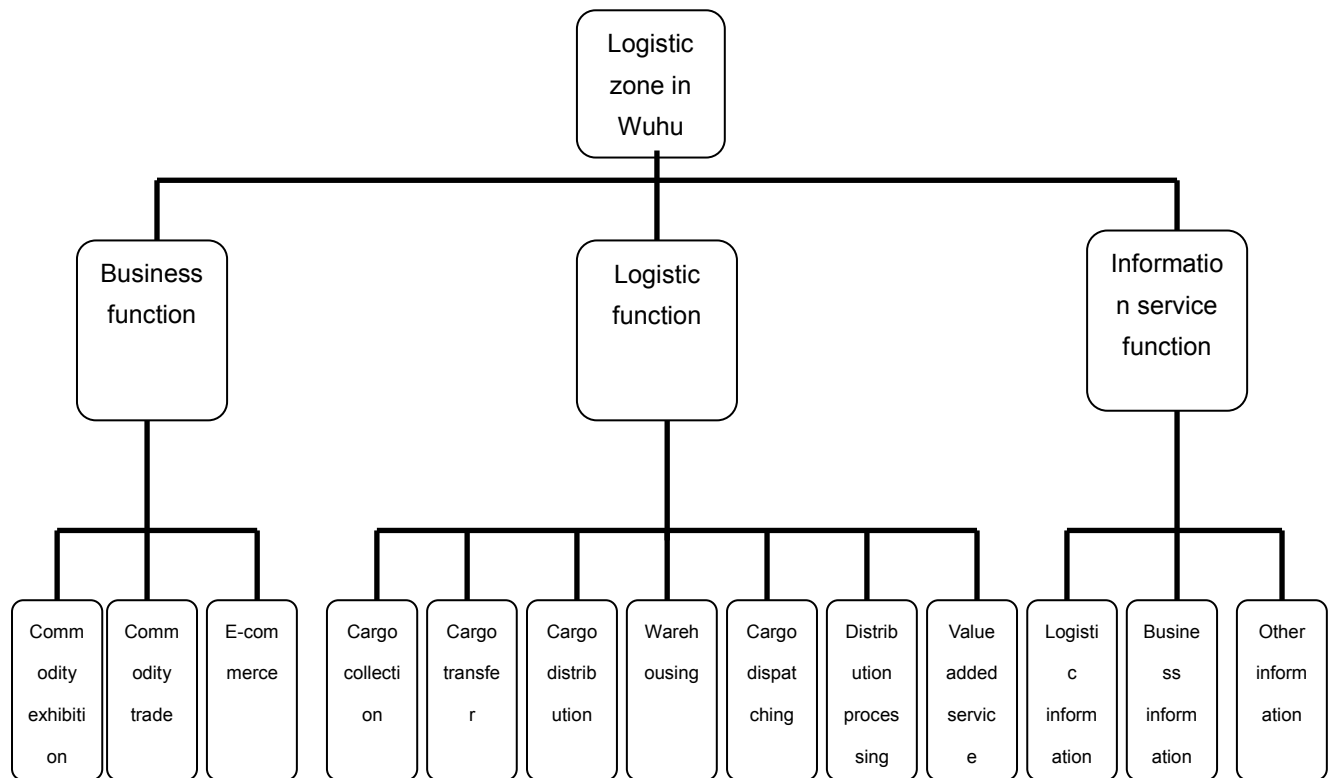
tendency in Yangtze river area, the marketing of logistics development in Wuhu area is positioned as: focusing mainly on the offering of the logistics service such as coal, cement, mine construction materials, home electronic appliances, autos together with its parts and components, new-type construction materials, consumer goods and petty commodities, and take the inter-modal transport and supply chain information service as the main characteristics, standardized management as the image, logistics added value service (circulation processing, after-sales service and e-business) to attract the customers and provides speedy and flexible logistics service with lower prices than that of the surrounding areas

#### **4.2.1 Marketing Position of Logistics of Wuhu port**

Marketing position of logistics of Wuhu port is: mainly focusing on the integrated logistics service of autos and its parts and components, home electronic appliances, general merchandise, electronic products, coal, construction materials, and take advantage of port advantages and the characteristics of port distribution, inter-modal transport and information service to provide the customers the integrated logistics service like import distribution, cargo warehousing, first-grade distribution, value added logistics , logistics management.

#### **4.2.2 Functional localization of logistics development of Wuhu port**

Wuhu Modern Logistics Zone, with its main functions including logistics function, information function and business function (figure 5)



**Figure 5 Function of Wuhu Modern Logistics Zone**

Source: Drawn on my own

### (I) Logistics service function

The features of the logistics service is to provide the customers with the integrated made-to-order logistics services in accordance with the demands of the customers, including the collection and distribution of cargoes, transfer and through transport of cargoes, cargo distribution, warehousing, distribution, cargo distribution processing and other added value of logistics, etc.

### (2) Information service function

On the basis of up-to-the-minute information technology and network technology, all-dimensional, high-efficient, reliable and secure information support can be offered to the logistics enterprises and business operations in the zone.

### (3) Business functions

Business and e-business enterprises can be attracted into the logistics park by complex

logistics edge and make it possible to become the exhibition center of transaction at Wuhu. It mainly includes the display function, transaction function and e-business function.

#### **4.2.3 Object of logistics service**

(1) Variety of cargoes includes: autos and its parts and components, construction materials and decorative materials, electronic product and general merchandise, home electronic appliance, costumes, coal, etc.

(2) Composition of customers

The healthy development of logistics enterprises is supposed to be based on the stable source of goods, and modern logistics park at Wuhu port should be engaged in the establishment of the closer cooperative partnership with large and medium-sized manufacturers in key service sectors, brand distribution firms and e-business enterprises to form its customers segment, customers segment mainly includes: manufacturers, wholesale trade industries, freight enterprises and e-business enterprises.

#### **4.2.4 Scope of service**

Distribution service area: Wuhu city and its surrounding area, and the radius of service does not exceed 400 kilometers; service area of inter-modal transport: major cities and regions nationwide; service area of cargo transport by land: Anhui province, Jiangsu province, Hubei province, Jiangxi province, Zhejiang province and its adjacent areas to Anhui province, and the nationwide

### **4.3 Brand Strategy of Logistics Marketing at Wuhu port**

In the marketing process of logistics at Wuhu port, one thing must be ascertained, that is, what is the core competitiveness of enterprises and how to underscore its own service brand to get double the effect with half the effort in terms of logistics development. Then what is the brand of logistics service marketing by Wuhu port? The essay indicates that Wuhu port can exert itself to promote develop the logistics brand based on the following aspects:

#### **4.3.1 Logistics dispatching of coal**

Coal throughput at Wuhu port accounts for 54.896% of the port throughput in 2001, and coal is the most important cargo resource at Wuhu port and then maintaining the supply of coals will be of great importance to Wuhu port. Meanwhile, coal transport is the traditional brand at Wuhu port as well with a reputed service prestige and relatively steady customer segment. Therefore, in the process of carrying out the logistics service at Wuhu port, coal transport is one of the important brands. Thus, Wuhu port is supposed to do something in the logistics development of coal. In view of this, Wuhu port can accelerate the construction of YuXi modern coal distribution center and offer more extension service to customers. For instance, the concrete implementation of selection and distribution service of coals will be discussed in the following logistics bases construction.

#### **4.3.2 Auto Equipment and Accessories Distribution**

Auto industry has already become the pillar industry in Wuhu and the automobile production capacity ranks top in Anhui province including the hundreds of automobile enterprises whose products are parts and components, which has formed the larger logistics volume of automobile parts and components as well as truck-load

transportation. Wuhu port is supposed to avail itself of its opportunity to develop automobile industry and pro-actively advance the extension service of logistics, offering distribution service to hundreds of automobile and auto parts manufacturing enterprises widespread in the hinterland, forming the auto logistics service brand to grab the logistics market share. To be more exact, XiJiang logistics base will be established Wuhu city offering the distribution service of the automobile parts and components. The concrete content will be discussed in the part three.

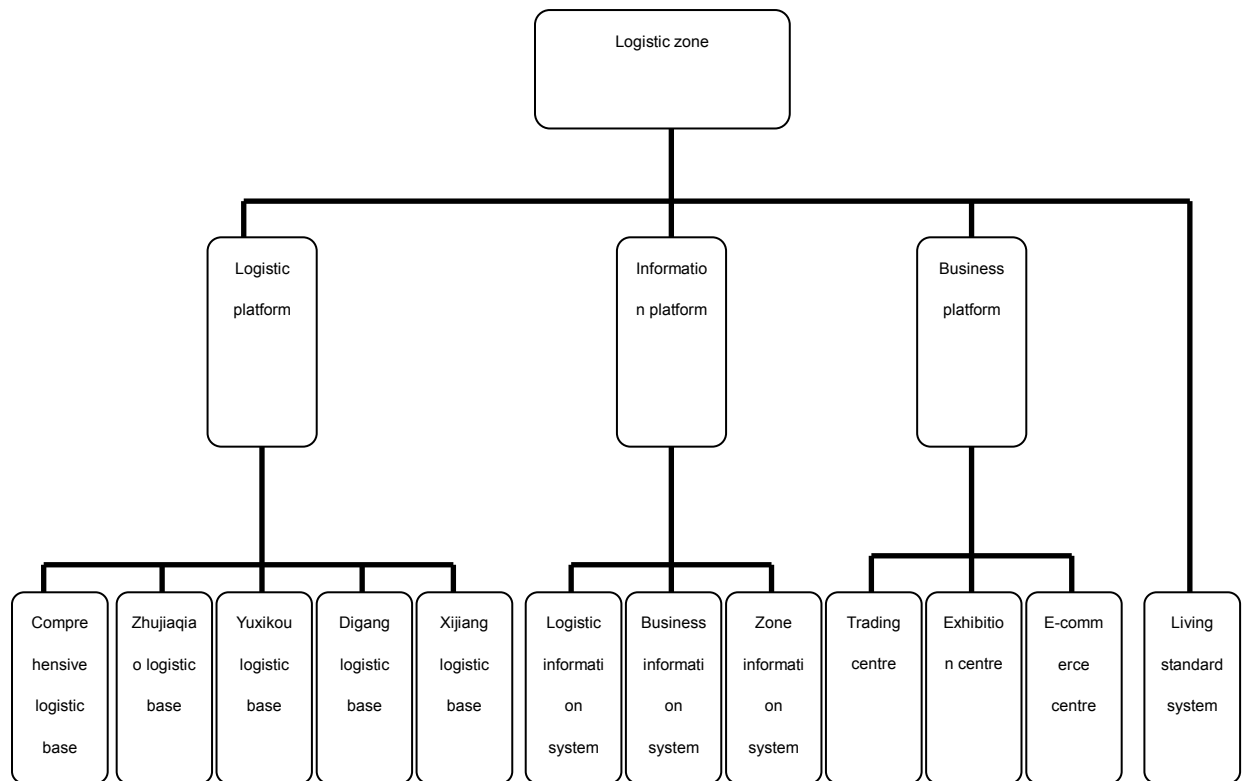
#### **4.3.3 Distribution processing of foreign trade cargoes**

With China's entry into WTO, the international trade volume will be drastically improved, then we can see that the number of foreign trade cargoes in Yangtze River shipping will be sharply increased. And actually it is the building of logistics base at foreign trade zone of Zhujiqiao, Wuhu port that meets this kind of developmental trend. Thus, Wuhu port is supposed to avail itself of this golden opportunity to advance the container transport enthusiastically making possible for the drastic increase of the container throughput that is still low presently. In order to attract the foreign trade cargoes towards Wuhu port, more consummate logistics service for consignors is a must, in particular, the distribution processing in logistics service. For instance, offer consignors simple assembly, packing, labeling, disposable before incasement, etc. Distribution processing is the field with high added-value and solution of employment for labor forces in the logistics industry. Thus, as far as the Wuhu port is concerned, it is imperative to expand its businesses.

#### **4.4 Port Marketing Strategy driven by the logistics zone construction**

The area under the administration of Wuhu port includes: upward to TuQiao bridge and downward to XiLiangshan in the north with a total length of 119 kilometers; upward to HuangXingping, downward to DongLiang Shan in the south with a total

length of 71 kilometers. The natural shoreline is 190 kilometers long and there are 127 big and small berths in the whole port area. According to the above-mentioned analysis into the status quo of the Wuhu port, the initial envisage is to set up five logistics bases within the Wuhu port area and its surrounding areas, and it includes: integrated logistics bases, ZhuJiaqiao Logistics base, YuXi kou Logistics Base, DiGang Port Logistics Base and XiJiang Logistics Base. And the composition of the whole Wuhu port logistics park is just shown in figure6. And the following is the initial envisage into the construction proposals of respective logistics bases.



**Figure6 Construction of Wuhu port logistics zone**

Source: Drawn on my own

#### 4.4.1 ZhuJiaqiao logistics base

ZhuJiaqiao logistics base is situated in the section between GuangFufan and SiHeshan at Wuhu, right rank of the Yangtze River with a total length of 2.6 kilometers, and it is an integrated public pier mainly focusing on the foreign trade, general merchandise, container and cement transport and meanwhile covering the transport of goods in



Middle and Northern Anhui province as well. ZhuJiaqiao logistics base currently has a total of 7 berths, among which there are 6 productive berths and 1 non-productive berth with a total coastline of 800 meters, Besides, the depth on land is 300 meters and there is a total of 62,500 square meters in storage warehousing, among which 25,000 square meters are allowed for warehousing and container yard 37,500 square meter. In recent years, the transport volume of containers has been increasing drastically. For the time being, there is no specific container pier at Wuhu port, and after the expansion of No.3 berth, foreign trade pier, ZhuJiaqiao port area, the container throughput capacity is merely 50,000 TEU and cannot meet the actual needs, which demands the setup of a new container berth. The newly built pier is located in the lower reaches of No.3 Berth, foreign trade area, ZhuJiaqiao with two container berths whose level is 4,000 tons. Container yards are mapped out along the riverside in between flood prevention dyke and the planned local rail line and special rail line directly affiliated to state, and the production and supplementary facilities to production is arranged at the place behind the land, east of the left side of the rail line. Cargo-handling technology of ports is equipped with two riverside container bridge cranes, and container semi-trailer is used for horizontal transport and rail container gantry crane is used for container yard and the container disassembly and assembly house is the platform pattern. Before 2006, there are 2 berths with annual container throughput of 100,000 TEU and the level of two berths is 4,000 tons. The container yard has an area of 54,000 square meters with container loader-unloader, gantry crane, transport machinery and its supporting set of project. The container pier project with 100,000 TEU will be consummated by the midterm and long-term investment and the expansion to pier berth, container yard and corresponding project with annual container throughput of 300,000 TEU has already been set about.

#### **4.4.2 YuXikou Logistics base**

YuXikou logistics base, seated in CaoHe River, YUXiKou, Wuhu City, the left side

of Yangtze River, is 1.7 kilometer long. The base is mainly focusing on the transfer of coals as well as one of the large-sized coal transfer ports closest to Yangtze River Valley covering Middle and Northern Anhui Province. The base has a total of 8 berths with a total shoreline of 1,000 meter and harbor land area of 500 meters deep. And meanwhile the total storage yards cover 84,400 square meters, among which 2,400 square meters for warehousing and 8,200 square meters for storage yards. At present the authorized production capacity of the port is 6 million tons. YuXi port area, Wuhu port is one of the key coal export ports, in recent years, great change taken place in the consumer market of the coal, that is, coal consumption enterprises are paying more and more attention to the production cost and environmental protection, then they have higher requirements of the coal quality, and on the other hand, due to restraint of some conditions, coal production enterprises cannot meet the needs of coal consumers. Then, coal transfer enterprises, that is, building up of modernized coal allocation center at ports and docks, optimizing the allocation of resources to gain the enterprises good economic benefits and social effects have become the urgent task to deal with right now. Thus, YuXi Kou Modernized Coal Allocation Center is supposed to have the function of coal allocation, offer allocation services of mixed coals with precise proportion in accordance with the demands of customers and in the meantime to improve the supplied coal quality, reduce the hazard to the environment as well as increase the economic benefits of the enterprises to meet the demands in the coal market. Besides, the center should have the function of coal transaction to provide the transaction platform for spot market and futures market.

The conception of construction is to arrange the coal yard on the basis of the data concerning General Layout of Extension Project of Coal Dock YuXikou, Wuhu and technological requirements of coal allocation yards as well as coal transport mode. Coal allocation storehouse is put in the northeaster corner of the coal storage yard and coking coal is pulled out at the east side of the coal storage yard and transported to the coal allocation storehouse. Coal storage yard is laid at the south of the current coal yard with its long axis from east to west. Before 2004, on the basis of integrating coal

storage, coal allocation, technology and management of the current YuXi port area, a coal allocation center with the capacity of stowage and detection as well as the supporting coal transaction market and coal information system to realize the precise allocation of coals and produce the branded products. And the construction scale is the precision coal allocation yard with annual production of 3 million tons, the volume of the storage yard is 290,000 tons, the volume of coal allocation warehouse is 1,400 tons. Besides, the related facilities of coal allocation transaction is supposed to be consummated by the mid-term investment and presently a extension project to elevation of coal allocation capacity to 6 million tons annually is under construction and put into use as soon as possible.

#### **4.4.3 XiJiang Logistics Base**

Cherry Automobile Company and No. 1 Automobile Yangtze Company situated in Wuhu proper, a couple of provincial key auto factories with a stable source of goods and convenient and speedy waterways export. The auto production capacity in Wuhu tops Anhui Province, which has around a hundred of auto manufacture enterprises including auto parts and components factories and 78 categories are listed in the national product catalog and the throughput is close to 150,000 cars. Cherry Automobile Company Ltd. Now has the annual throughput of 300,000 engines and 50,000 cars. It is forecasted that the total volume of import and export will reach 206,400 cars in 2010; 360,000 cars in 2020. From the analysis of above-mentioned throughput and traffic volume, it can be seen that the development of auto industry and convenient transport as well as the development of Wuhu auto logistics necessitates auto roll-on and roll-off quay at Wuhu port.

The conception of construction: the site selection is Funan Old Station, Wuhu city economic and technological development zone with flood control banks, and JiangXin dockyard quay is seated in the upper reaches of water areas and HaiShehu

container handling & transport corporations is seated in the lower reaches, between which the distance is 420 meters. On the land there are port area and auto trade center. The floor space is 166.2 mu, among port area is 144 mu and car trade center is 22.2 mu. In 2004, a roll-on-roll-off berth with the annual berth capacity is 200,000 cars leveling 5000T, together with matched storage yard, and car commerce and trade center with a floor space of 55,421 square meters were built. Auxiliary rooms for production and life including auto exhibition hall is 4,533 square meters with service function of car transaction and display. From the perspective of mid-term and long-term construction, the berth with capacity of 300,000 cars, storage yard and auxiliary project will be built.

#### **4.4.4 Di Gang Logistics Base**

Di Gang township, under the authority of FanChang County, situated 49 kilometers west from Wuhu city in the right shore of Yangtze river, has a 7.5-kilometer-long deep-water stretch of coast and has the potential for construction of 10,000 tons deep-water port. DiGang township abounds in rich mineral resources, among which limestone reserves has a larger volume and can be exploited for hundreds of years. And at the present the cement production capacity reaches 2 million tons, and production capacity of limestone, iron ores and mine construction materials reaches close to 3 million tons. HaiLuo Group built a large-scale cement factory in a big investment with 3.1 million tons annual production of clinkers. DiGang township has the advantages in terms of location, resources and communications. From “tenth five-year plan period” until 2005, the annual cement production have reached 2 million tons in township run cement factory and 3.1 million tons in HaiLuo Group respectively, besides, the total output including the output of other cement factories have reached 6 million tons.

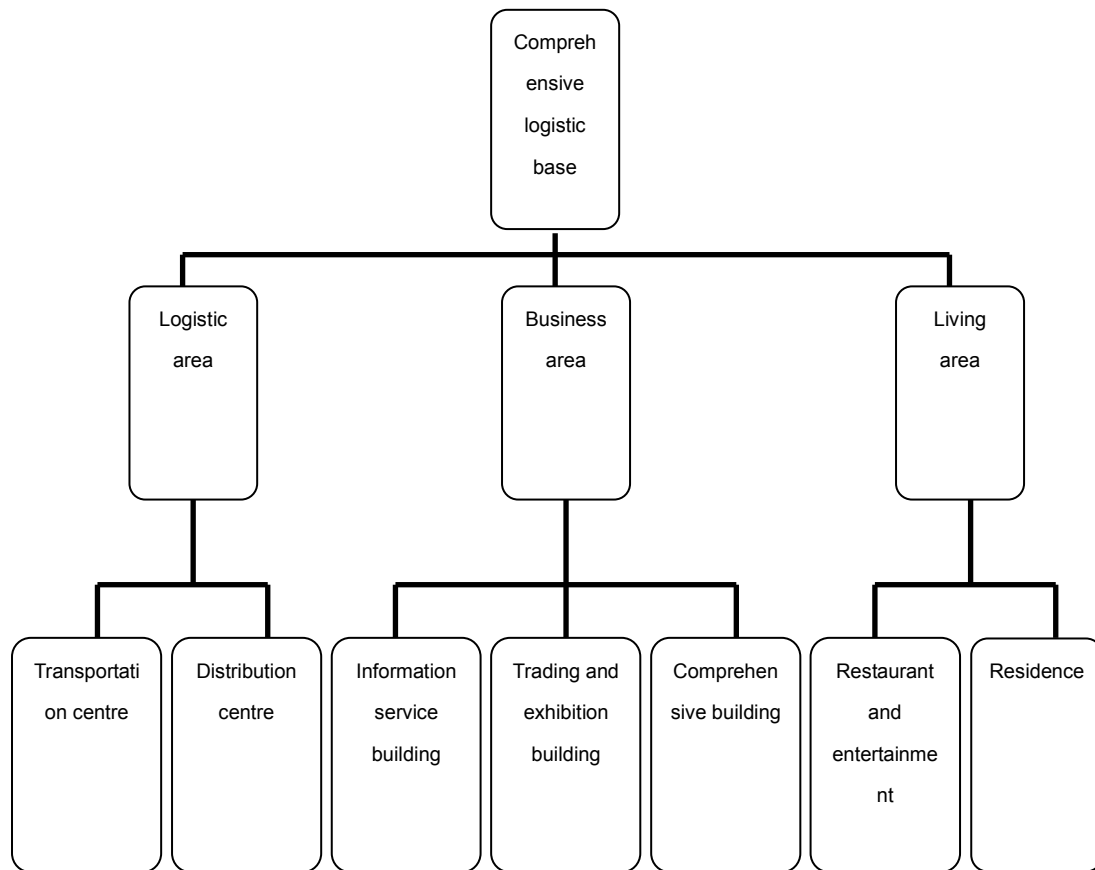
Building of Digang Complex Base is a must for the construction and development of

Digang port.

Conception of construction is that dock is planned to constructed in the upper reaches of HaiLuo dock including a bulk cargo and a break bulk cargo berth respectively, break bulk cargo berth is arranged in the upper reaches of bulk cargo berth, and a straight line portable-type ship loader is set up at the dock. And the carrying capacity built 1.8 million tons per year (among which bulk cargo 1.4 million tons per year and break bulk 0.4 million tons per year) and with 5000 tons bulk cargo berth and 3000 tons break bulk berth respectively and the front and back yard on the dock and its supporting delivery facilities. as for the future (after 2011), the annual throughput capacity will be expanded to 5 million tons.

#### **4.4.5 Comprehensive Logistics Base**

Complex logistics base built in Wuhu city, east to ChangJiang Road, west to ChangJiang Levee, South to the northern end of sewage treatment plant, north to west GangWan Road, and the total floor space is around 1,326, 000square meters, among which 740,000 square meters is reserved for complex logistics bases, 350,000 square meters for shorelines and 236,000 square meters for container yard. Complex logistics base undertakes the tasks of storage, sorting, processing and allocation, transportation and logistics service of containers, general merchandise, home electronic appliance, auto parts and construction materials, and other services like the logistics information, e-business, commodity display, inter-modal transport and cargo dispatching by land. Complex logistics base is made up of three parts: logistics work zone, business zone and living quarters. The logistics work zone includes: cargo dispatching center, freight center; business zone includes: information service building, transaction display building and complex office building; living quarters includes: canteen, entertainment and residential quarters.



**Figure 7 Comprehensive logistic centre**

Source: Drawn on my own

#### **4.5 Informatization strategy of logistics marketing by Wuhu Port**

Informatization is the paramount characteristics that modern logistics differs greatly from traditional logistics, the bolstering by modern information technology is a must for both integration of logistics and supply chain management. Thus, WuHu port must establish an information platform that can meet modern logistics needs then we need to tackle it in the following aspects:

##### **4.5.1 Develop EDI service**

EDI ( Electronic Data Interchange) refers to electronic data interchange, and from the perspective of commerce and trade EDI refers to the information concerning the transport, insurance, banks and customs that relates to trade and work out these

information in accordance with internationally accepted standard formula and realize the transmission and disposal of data between relevant departments or companies or enterprises through computer communications network to finish the entire business process centered on trade. The first thing we need to do for realization of the EDI is enable computers in all relevant organizations to identify and deal with business documents such as orders, invoice, waybill, receiving notice, bill of lading, etc, which demands all documents have unified format. Therefore, EDI must compile all kinds of business materials in accordance with the unified standard. Second, business materials are transmitted electronically. The electronic method is strikingly different from fax, telex and email. Third, connection between computer application software must be adopted to the realization of the whole business process centering on trade.

EDI service bridges the information flow in various links of the logistics process and makes true the sharing of the information, and actually it is the popular information-based standard of transaction in international port trade presently. Implementation of EDI in a big way is one of the important jobs that China undertakes in terms of communications and trade. Then, one of the most imperative tasks for building of logistics information at Wuhu port is to establish the EDI information service platform and build the good environment for information communication.

#### **4.5.2 Establish the sound Information infrastructure**

The other important mission of establish the information platform is to consummate the information infrastructure at the logistics bases. It is a project with a big investment, on one hands, it needs substantial support from the government. Meanwhile, it can attract foreign investment as well so that information facilities volume can be enlarged, and security and reliability of faster information transmission can be improved within the short period of time.

## **4.6 Corporate strategy of Wuhu Port Logistics Marketing**

In modern logistics times, the competition between ports has actually converted into competition between supply chains. If a port has a willing to take foot and stand head and shoulders above others, it must build its own supply chain system and be aware that port is merely a link of the supply chain, then the survival and development of port itself will be impacted to a large extent if the supply chain on which ports rely severed. To preserve the completeness and soundness of the supply chain, port should extend its logistics service and unite with other logistics organizations to make up for the possible missing links in the supply chain. In the development process of logistics in Wuhu port, the corporate strategy is focused on the following targets:

### **4.6.1 Yangtze River transport undertaken by shipping enterprises**

Shipping enterprises in the Yangtze River is the logistics enterprises directly bound up with Wuhu port, and the setup of shipping line directly impacts on the marketing capabilities and throughput of Wuhu port. Thus, Wuhu port should establish a kind of close alliance relationship with shipping enterprises by means of traditional connections between ports and shipping industries and merge together economically to consolidate its supply chain structure.

### **4.6.2 Large-scale consignor enterprise**

Large-scale consignors is the survival basis of ports, and satisfaction and value of the customers can be elevated through the effective extended logistics service to consignors and logistics expenditures of consignors can be reduced through the simplification of logistics service links. For instance, offer service of packing, sorting and distribution to consignors. As a matter of fact, these extended services play an important role in making up for the missing link of the supply chain and important



move to fortify the supply chain as well.

#### **4.6.3 Some powerful land transport enterprises connected with the supply chain of Wuhu port**

Just like the idea that we advocate logistics should be distributed to the third party while carrying out logistics activities, then port does not need to undertake all the logistics activities but learn to do outsourcing while engaging in the third party logistics. In particular, in the cargo transport service from the port to consignors, port is supposed to join hands with the reputed and powerful road and railway enterprises to form the supply chain with concerted efforts.

#### **4.7 Talents Strategy of Logistics Marketing in Wuhu Port**

Port service belongs to the logistics industry, but the real development of integrated logistics service in modern sense has just taken initial steps and understanding of logistics by many staff still linger around the category of traditional transport, not to mention the innovative idea involved in modern logistics. Therefore, Wuhu port should pay more attention to the instill of the modern logistics mentality into the staff if Wuhu Port want to carry out the marketing activities by means of logistics concept, which really builds a marketing concept based on modern logistics to facilitate the innovation of the port marketing. Then, the following methods adopted by Wuhu port are just as followed:

##### **4.7.1 Intensify the cultivation of the logistics mentality of the sales staff**

A team of sales staff with modern logistics concept is needed for the launching of the logistics service, and they need to have the concept of supply chain in mind and get an understanding that the market competition has already evolved into the competition

between supply chains. Then, the regular training for the marketing staff of the port enterprises is imperative. The training pattern tends to be short-term and long-term, but mainly on short-term.

#### **4.7.2 Bring in the logistics talents**

Obviously mere training of current staff at port is far from the target to establish a team of marketing staff with modern logistics concept, and the direct introduction of relevant talents is necessary in order to accelerate the transformation. Of course, there is another option, that is, hunting for talents from foreign-invested companies or seeking students with logistics background from the universities and colleges.

#### **4.7.3 Vigorously promote the development of the logistics service and cultivate the talents in the process of work**

Through the practical activities of logistics service by port enterprises, it can help the staff to experience and get the understanding of modern logistics in work a lot, learn from the past mistakes to avoid future ones, which is actually a shortcut for the enterprises to cultivate the salesmen with modern logistics concept. In conclusion, Wuhu port will advance the logistics service programs enthusiastically on the basis of competitive edge at port, which is the golden opportunity for the staff to build up logistics supply chain. Wuhu port should take advantage of chance of developing port logistics to cultivate its own logistics marketing team.

## **Chapter 5 Conclusion**

The essay put forward the basic demands of launching logistics in Wuhu port on the basis of the status quo and existing problems in the development process of Wuhu port. Through the analysis into the experience of port logistics development at home and abroad, and the forecast of future logistics development in Wuhu port and the probe into its strengths, weakness, opportunity and challenges in the development process, a conclusion has been drawn just as the following:

1. Wuhu Port has the major unique advantage as well as the weakness for the development of logistics. Meanwhile, opportunity and challenge coexist during the development of Wuhu port. The essay raised the idea that Wuhu port should avail itself of this golden opportunity to advance the third party logistics in a big way to exalt the position of port and promote the marketing of port business.
2. There supposed to be the right orientation or positioning for the logistics development in Wuhu port, that is, Wuhu port should center on logistics service such as coal, cement, mineral construction materials, home electronic appliance, autos and its parts and components, new type of construction materials, consumer goods and petty commodities, which is featured by inter-modal transport, supply chain information service, and build new customer market with logistics added value service such as circulation processing, after-sales service and e-business to offer speedy and flexible logistics service with logistics service prices that do not

exceed that in surrounding ports and area.

3. In the process of carrying out the third party logistics marketing, Wuhu port should pay attention to its brand and characteristics and grasp its core competitiveness to exalt the logistics business drastically within the short period of time through the effective and pointed marketing activities, thus, Wuhu port should lay emphasis on the development of coal logistics distribution service, distribution service of parts and components of automobiles and circulation and processing business of foreign trade goods.
4. An industrial area should be established on the basis of port, which make it possible to build the basic surroundings for the third party logistics service and forms the good and healthy market atmosphere for logistics marketing. Thus, it is suggested that corresponding logistics park should be built based on the logistics service demands. And the logistics park is composed of five logistics bases: integrated logistics base, ZhuJiaqiao Logistics base, YuXikou Logistics base, Di Port Logistics base and XiJiang Logistics Base.
5. Enthusiastically build the supply chain system which Wuhu port is involved in to make up for the missing links in the process of supply chain and intensify the connections between links of chain from the perspective of the whole supply chain instead of the perspective of pure competition between ports. Therefore, Wuhu port should extend its logistics services to conglomerate with other logistics businesses to forge a strong logistics alliance.

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