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The analysis on third party logistics company K using information technology to enhance their core competitiveness

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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.

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ABSTRACT

Title of dissertation**: The analysis on Third Party Logistics Company K using information technology to enhance their core competitiveness**

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Information technology has become the core of Modern logistics. Information technology integrated various fragmented supply chain part together in order to highlight the characteristics of modern logistics. With information technology, modern logistics can integrate different section such as transportation, storage, packaging, handling, distribution processing, and distribution, facing logistics needs as a total. In the development of Third party logistics enterprises, the role of information technology becomes particularly notable, and even has become a symbol of whether a third-party logistics company has stronger competitiveness over others. The paper focuses on third-party logistics enterprise's core competitiveness and the modern information technology. Though the analysis on the real case of third-party logistics company K who has problems in using modern information technology to access core competence, the author try to figure out the problems they have in all aspects with combination of theory and practical approach. Finally, the paper puts forward some methods and strategies against these problems to show how to use information technology to enhance third party logistics enterprise' core competitiveness.

This paper gives the definition and analysis on information technology and third party logistics enterprise's core competitiveness firstly, and then make further analysis on how could modern information technology enhance third party logistics enterprise's core competitiveness. Then the thesis analyze the company K' information technology application status, this part is largely show Company K'

demand on information technology and their application situations. In this chapter, the author made classification on third-party logistics enterprise information development stage and informatization level. After knowing Company K was in the low level of information application, the author identified the problems they had in their use of information technology to enhance the core competitiveness and analyze the causes of problems. In the last chapter, all the problems raised would be solved and given solution based on some principles, the paper conclude these countermeasure and give recommendations on how to better use information technology to enhance company's core competitiveness for all Chinese third party logistics company whose information application are still in low level

KEYWORDS: Information technology, Third party logistics enterprise, Core competitiveness

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LIST OF ABBREVIATIONS

DSS	Decision Support System
EDI	Electronic Data Interchange
C/S	Client/Server
GIS	Geographic Information System
GPS	Global Positioning System
MRP	Manufacturing Requirement Planning
JIT	Just In Time
DRP	Distribution Resource Planning

MIS	Management Information System

Chapter 1 Introduction and Background

1.1. The background of the problem

Information management is developed in China only in recent years. Currently, the application of information technology is still not widely in the logistics industry. According to the survey[1], Among the China's logistics service companies, only 39% of companies have logistics information system, the vast majority of logistics services company doesn't have the capability to process logistics information with modern information technology. Between logistics enterprises who has already begun the construction of information technology, 80% of them is still at an primary stage, information construction' goal is to achieve timely information, data collection and effective integration; On this basis, a small number of logistics enterprises with high level of information technology (about 15%) began to increase information application level through the promotion of information technology management and business process optimization; while a handful of logistics enterprises (about 5%) entered a phase to create comprehensive supply chain system construction. In and medium-sized logistics enterprises with higher level of information, its corporate Web site still play the role as publicity platform, and a small proportion of these website are constructed as e-commerce platform (about l6%). At the same time, those information systems has built already focused on warehouse management, financial management, transportation management and order management, and customer relationship management applications which related to the survival and development of logistics enterprises are really with small proportion, about 23% or so.

Modern third-party logistics is emerged accompanied by the development of

[1] Wang Zhi Tai. (1999). Literature of modern logistics management. P.236

modern information technology; information technology is becoming the crucial support elements to build core competitiveness for third-party logistics enterprises. There is a long way to go for third-party logistics enterprises to use information technology to cultivate and enhance the core competitiveness, which is the integration of third-party logistics company history, available resources and the core elements and the result of combination of key resources and capabilities of all elements.

1.2. Research Aim

Present, Most of China's third-party logistics enterprises have applied information technology. To a certain extent, they enhance the competitiveness of the enterprises. But during in the development of using information technology to enhance core competitiveness, these third-party logistics companies also encountered many problems. Many third-party logistics enterprises have used of information technology to enhance core competitiveness in the process of enterprise development, but the effect is not significant. Presently, the uses of modern information technology in China’s third-party logistics enterprises are in different level. For some companies, the level of using information technology is still in its infancy, these enterprises basically use information technology mainly for inside use, and there are a bit of confusing issues such as business processes; For some other enterprise, information technology applications are at a relatively high level, but some problems at the strategic level produced certain obstacles to the application of information technology. Based on this situation, I try to do some research on a specific third party logistics company (call Company K for secret reason) which is still at low level of informatization and make the analysis of problem met by this third-party logistics enterprise in the process that they use information technology to enhance core

competitiveness. After this, I will identify and conclude problems they have. Through case analysis, I hope to put forward some solutions and strategies in order to help our countries' third-party logistics enterprises to enhance the core competitiveness through information technology. Through the analysis on this Company K' case, I try to give some advice on all these Chinese third party logistics company whose information application is still at initial stage. So third-party logistics companies in low level can identify their own problems, and more efficiently use information technology to enhance their core competitiveness.

1.3. The background of Company K

Company K is a comprehensive, specialized third party logistics company which has an independent legal entity and registered capital of 12 million RMB. It is located in ShangHai where the economy is strong and traffic condition is convenient. Company K had only 7 staff when it was established at first. After two years of development, the company reached around 140 people. Company K is still in constant development, the number of staff is annually expanding 30 people in the last two years.

Relying on the strength of the parent company（K Central International Group）, Company K has 10 years experience of international freight and domestic transportation, warehousing, operational. The logistics network was set in major cities throughout the country and world; they own 15,000 square meters storage area and can also schedule more than 200 trucks for transportation. They have Beijing Shanghai, Shanghai - Shenzhen and other several long-distance transport lines. In Beijing, Shanghai, Shenzhen, Guangzhou, Tianjin, Jinan, Nanchang, Fuzhou, offices were all settled there. Short-distance transport cover Jiangsu, Zhejiang and other regions; they also establish many cooperative relationship with Shanghai port,

Ningbo port and other ports. They can provide all types of enterprises with overseas freight forwarding, domestic transport, logistics, storage, handling, processing, packaging and other logistics services which give Enterprise logistics solutions with personalized Planning and low cost.

Chapter 2 Literature Review

2.1. The Recent study

The research on the relationship between information technology and enterprise competitiveness had not been involved before 1980s, this proposition began to be concerned by the academic community until the increasing popularity of computers.

Three Decades ago, Leavitt and Whistler predicted that the computer would make the fundamental changes in the organization and society. And now, many of their expectations have been realized. As they predicted, many organizations have flattened, eliminating many middle-management positions. Developments in computer applications have also led the world in directions not foreseen three decades ago. the impact of information technology to enable top managers across the middle managers who had the upstream and downstream linkages in the activities, you can replace most of the middle-level management task. Many decision-making can be automated, and information in organization is easier to access, so IT can basically replace the middle management of information and decision-making functions.

Foreign scholars not only carried out a systematic study of the mechanism on how to improve the competitiveness of enterprises with information technology, but also expounded the impact of information technology from different aspects of business such as production, management and marketing,. Their research in close combination of theoretical analysis and empirical research, their ideas and methods have a profound inspiration. Mukliopadhyay[1] take the United States Postal Service mail sorting process which use the application of visual feature identification and

[1] Tridas Mukhopadhyay etc. Information Technology Impact on Process Out and Quality. Management Science, Vol.43,N o.12,December 1997:1645-1657

bar-code technology to achieve the automation of mail sorting technology as example, found how the information technology influence production process, yield and quality. Research results clearly show that the extensive application of automated information technology significantly improved the e-mail sorting output and quality. A high level of automation has direct influence and indirect effects on quality. A very important discovery is high-quality increasing the output, in other words, information technology improves the quality, and the quality also enhances the output.

In the late 90s, domestic scholars have begun to concern about the impact information technology on the competitiveness of enterprises. These studies have inherited the Western business management theory and get the essence, and closely linked with companies' the economic, technological, market conditions.

Tian Jie[1] use Porter's competitive strategy management philosophy as a guide, Through elaborating information system's service differentiation, market segmentation, data warehouse technology, supply chain management and rapid customer response system and relation between corporate variety of strategic management analyze how to establish enterprises' competitiveness and promoting the development of enterprise by Porter's three basic competitive strategy(cost leadership strategy, product differentiation strategies and Focus strategy with information technology support.

Xie kang[2] By examines the internal and external effects of technology impact on competitiveness, found that, information technology applications has most penetrated effect on enterprise's production, management and organizational structure among all modern high-tech. Through the application of information technology, businesses have formed its different or special mode from other competing companies. This mode is accepted by consumer or international markets

[1]Tian Jie. Competitive strategic management based on information technology. Chinese information news, 2000(2):59—60

[2]Xie Kang, The competitiveness of enterprise informatization. Economic research, 1998(9):64-71

and forms the competitiveness of enterprises finally.

Xie proposed the mechanism and mode that enterprise use information technology to improve the competitiveness, which is derived from an in-depth analysis of internal factors and external competition, explain the internal links and relational structure between information technology and enterprise competitiveness. He believes one of the most important benefit got from informatization is that business investment in technology indirectly turn into the enhancement on quality of human resources and business overall efficiency. Enterprise information technology gains the competitiveness through adding or changing the competition elements, or by upgrading or expanding the quality and competitive elements. Therefore, the crucial problem for enterprises gain a competitive edge is not management but the application of information technology.

Ma Mo Qu[1] pointed out that Enterprise should first understand their special characteristic before apply the information technology and determine the primary objective of information technology. And use information technology to design a Special developing strategy, creating a unique business model. For example, if Enterprises are in service industry, then the goal of informatization should mainly focus on the linkage between different systems within the company, and integrate all customer-facing information Together so that information can flow smoothly and transparently. It Enable customers to get information easily, which make them feel they have their own data Room. Also, decision-making and response is faster. All these things will help achieve the ultimate goal which is improving the customer's satisfactory. In general, the information technology helps companies implement their strategy, and information technology itself is not a strategy.

[1] Ma Mo Qu 2006, Informatization of enterprise, Science Press

2.2. Existing problem

As you can see, the domestic scholars more concerned on the theoretical analysis on how to create a competitive edge for enterprises through information technology, but specific in-depth empirical research is lacked. Most of the researches focus on quantitative analysis of impact of information technology or on whole industry aspects The impact of information technology, quantitative analysis of information systems more in a comprehensive assessment of the level of industry information, social aspects of information technology index measure. Clearly, domestic scholars in the information technology level of the organization's competitive edge on the impact of lack of specific in-depth exploration. The reason for this shortage is the lack on corresponding indicator system, while the relevant data are difficult to obtain is also an important reason.

Conclusion

Clearly, Information technology companies have been regarded as an important tool to gain a competitive edge for a long time. As above said, introduction of information technology will not produce competitive edge. In a production environment, application of information technology must be consistent with organization's process structure, close integrated with the company strategy, and then company can gain a competitive edge.

Chapter 3 Theoretical analysis on how to use information technology to promote third-party logistics enterprise' competitiveness

Before we talking about the Company K' situation, I would like to give the general introduction about the modern logistics information technology and third party logistics company's core competitiveness in order to create the foundation for further analysis in subsequent chapter. Also the correlation between these two concepts will be carried out in this chapter.

3.1. Description of Modern Logistics Information Technology

March 10, 2009, the State Council issued "The logistics industry restructuring and revitalization plan," which provides a golden opportunity for the development of logistics industry in China. In recent years, through the integration of warehousing, distribution, packaging, information, transportation and handling, processing and other business aspects of, logistics has become a hot research topic, and the State Council's plan support logistics industry as the main industries to develop, which shows logistics industry 's pillars role of in our regional economy development.

The formation of Logistics' concept and industrialization trend benefits from the rapid development of information technology. It has always been a product of the development of information technology. Without the strong support of information technology, there is no concept of the modern logistics and industrial development. Upon on this, modern logistics and information technology is a pair of inseparable brother.

3.1.1. The concept of information technology

It has been a long time since the existence and development of information technology. Human beings have different information technology in different historical periods. In Ancient we have Flying Pigeon communication, war warning, paper and printing; in recent time we have telegraph, telephone, radio, etc.; and now we have computers, communications technology. But what is information technology? There is no uniform understanding. Information technology usually refers to the acquisition, transmission, processing, Storage and processing of information.

It is generally believed that modern information technology is based on computer technology and modern communications technology and as high-tech with the function of conducting information gathering, processing, handling, storage and transmission of activities with high-speed, high capacity. It consists of remote sensing technology, modern communication technology, computer technology.

3.1.2. Logistics Information Technology Definition

Robert B. Hadfield and Emest L.[1] Nichels thought that: the current information technology widely used in logistics include e-commerce, electronic data, interchange technology, bar code and scanning technology, data warehousing, Internet technologies, decision support systems. China's scholars thought that the logistics information technology includes three categories, namely, electronic information gathering technology and electronic information carriers, computers and computer networks, information communication systems. And some experts believe that logistics information technology, including bar code, radio frequency technology, electronic data interchange, Extranet / Internet, global satellite positioning

[1] Robert B.Handfield、Emest L.Nichels, Introduction to Supply Chain Management,The University of Memphis,P29-39

technology and geographic information systems.

The author believes that Logistics Information Technology refers to information technology applied in various operating procedures, which is mainly composed by computer technology, network communication technology and other various modern information technology, including the Global Positioning System (GPS), geographic information systems (GIS), computer network technology, bar code technology, radio frequency technology RFID, electronic data interchange (EDI), management of information systems. With the support of Information technology, logistics management has formed an integration modern logistics system which contains mobile communication, resource management, Supervision and Control, automatic storage management, customer service management, financial processing and other modern information technology.

Number	Abbreviation	Name
1	E-mail	Electronic Mail
2	Teleconference	Teleconference
3	EDI	Electronic Data Interchange
4	C/S	Client/Server
5	DB;DBMS;DBS	Data Base ; Data Base Management System ; Data Base System
6	Internet	Internet
7	DSS	Decision Support System
8	GIS	Geographic Information System
9	GPS	Global Positioning System
10	RF	Radio Frequency
11	Bar Code	Bar Code
12	MRP	Manufacturing Requirement Planning
13	MRPII	Manufacturing Resource Planning
14	JIT	Just In Time
15	DRP	Distribution Resource Planning
16	MIS (WMS/TMS)	Management Information System (Warehouse Management System/Transportation Management System)

Table 3.1 the common information technology used by Third Party Logistics Company

3.2. Analysis of third-party logistics enterprise's competitiveness

3.2.1. Third-party logistics enterprise's core competitiveness definition

The core competitiveness of enterprises includes the special resources owned by enterprises and the ability of using such resources that give enterprises long-term competitiveness. Special resources is not easy to learn or imitate from other companies and can provide a competitive edge in the tangible or intangible assets, such as the special natural resources, costly infrastructure, technology and intellectual property, sales network, brand and reputation, corporate culture and customer information. Access to these resources, it may be come from nature, such as the special benefit of the local natural resources or infrastructure of the possession. But more companies acquired it through innovation and management. Because the vast majority of technology and intellectual property, sales network, brand and reputation, corporate culture and customer information was essentially a knowledge-based or materialized, and the knowledge is come through the conclusion of the practical experience. Capability means that the rational combination and optimize the configuration of resources. Moreover, in many occasions, resources and capabilities can not be separated, the outstanding senior management personnel of enterprises is also a valuable natural resource. While on broad sense, management itself is a resource, this is determined by systematic of core competence.

Academia has a big difference on understanding of core competitiveness. The definition is also not very clearly given, main definitions are the following[1]:

(A) C.K.Prahalad and Gary.Hamel thought that the core competitiveness of the organization is cumulative knowledge, in particular on how to coordinate the production of different combination of skills and knowledge of multiple

[1]Li Ping Yuan, The research on enterprise competitiveness，Bei Jing economic science press，2003

technologies.

(B) Coombs (1996) thought that the core competitiveness is a combination of various capacities.

(C) Sanchez (1996) thought that the competitiveness is the coordination of various assets and skills.

(D) U.S. consulting firm McKinsey believes that the core competitiveness is the combination of complementary business skills and knowledge; it has obvious advantage on one or more businesses area.

(E) Leonard-Barton (2000) thought that the core competitive ability is a system, including staff skills, knowledge of the physical system, management system and the four forms of technological competitiveness.

In summary, scholars from various countries make definition for core competences from different angles. They also have obvious limitations. As a new concept, the core competitiveness has important meaning on enterprises competitiveness and strategic decision. Because the core competitiveness has differences on time of dynamic and spatial. From the application point of view, when we defined the concept of core competence, development stage of business and operational changes in the region should be taken into account. National circumstances and the universality of the industry are also had to be considered.

3.2.2. Third-party logistics enterprise's core competitiveness definition

The author thought third-party logistics enterprise competitiveness is the viability and development capabilities that third-party logistics companies demonstrate in the market economy environment compare with their competitors. With China's economic globalization and the extent of opening up, third party logistics companies in china face fierce competition from our internal and

international markets. Enhance their competitiveness become more crucial,

In fierce market competition, survival is third party logistics' prior target. Therefore, the third-party logistics company's core competence is the viability and development ability. The major of them are: logistics information processing capacity, market control, operational capabilities, profitability, business security capacity, capital accumulation capacity, growth capacity, technological innovation, human capital, competitive transportation, storage competitive ability and so on.

But it's hard to make the qualitative and quantitative evaluation on the actual business to judge whether this company have better core competitive ability than other company. In research on logistics core competence, it has not formed a more uniform standard to define the core competitiveness of the logistics business yet. After reading a lot of information, expert's points and seeing a number of logistics companies development process, the author think that there are main five elements that consist of logistics enterprise's core competitiveness namely, the level of enterprise information, integration capabilities, rapid response and flexible capacity, organization and coordination ability, high quality logistics personnel.

（A） The level of enterprise informatization

Informatization is development environment and trends of today's modern logistics enterprise. One of the greatest features of Modern logistics is computer applications and information technologies. E-business and customers' need for efficient, safe logistics services have made the informatization become modern logistics' development trend; at the same time GPS, EDI, GIS, barcode technology and the Internet and various communication technologies makes extensive use of Logistics Information. Modern Logistics Informatization also includes internal management of information. Besides satisfying the customer's needs, Modern Logistics Informatization also used to control operating costs, reduce logistics costs for corporate.

（B） Integration ability

In the process of core competitiveness construction, we must form one or more key part as lead which can be integrated with various elements organically. This integration ability includes critical capacity, effective capacity focus and integration of talent, thinking and management elements. It also eliminates the backward procedures and functions, thus result in the value-added amplification.

（C） Rapid response and flexible capacity.

As in the competitive environment, there are many unknown information. And barriers on people’s cognitive approach and capacity limited enterprise’ real-time information access and understanding. Therefore, enterprises should find the changes and trend in the market, technology and demand so as to introduce their products and service according to market demand and technology development. Such flexibility is the key for enterprises to earn a competitive edge in the complex environment.

（D） Organization and coordination.

The ability to organize and coordinate is a particular importance part of logistics enterprise' core competitiveness. That ability involved in the organizational structure, rights distribution, information dissemination, culture and incentives, and many other factors. Its role is to integrated technical knowledge and operational techniques into the core competitiveness of enterprises through institutionalization and programming. Organizational efficiency also decides how efficiency the company converts their technological advantages to market advantage.

（E） High-quality logistics personnel.

For modern logistics enterprises, planning and implementation of action on logistics, information and cash flow can not do without high-quality logistics personnel. Modern logistics is a system engineering which across the broad of sector, department, region and even country. Therefore, the modern logistics need to people who master the complexities of modern knowledge. Relative to the development of

China's logistics industry, China's logistics talents are quite less to meet the requirements of logistics talent. Thus core competence of modern logistics can not form without the logistics of high-quality talent.

The five elements of logistics above are important factor to build core competence and high-quality logistics personnel is a key element. Since people is the subject of all activities; and logistics informatization is a method to get access to resources; Integration, rapid flexible response and the ability to organize and coordinate are concrete manifestation of using information.

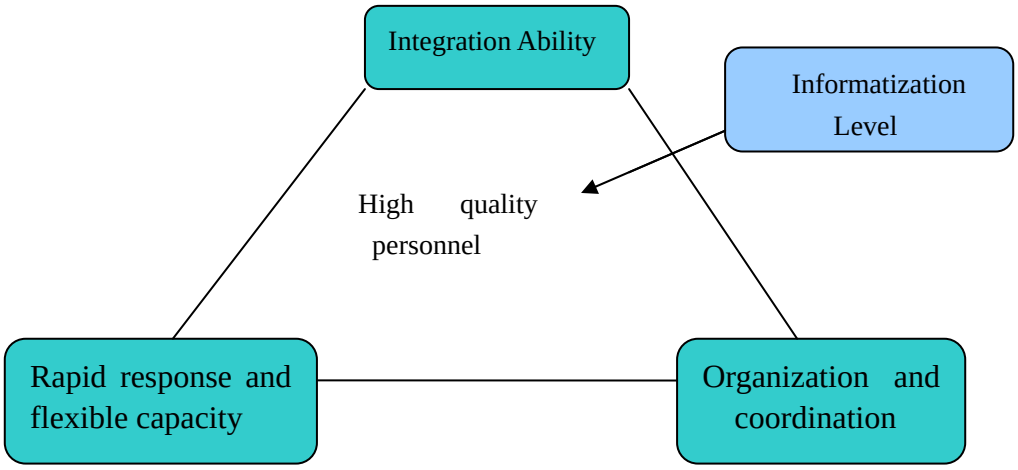

Figure 3.1 Relationship between the factors that build Logistics enterprise competitiveness

3.3. The internal links between Information Technology and third party logistics enterprise's core competitiveness

3.3.1. Basis and conditions that Information Technology builds third party logistics enterprise's core competitiveness

Since the 80s of the 20th century, particularly after entering the 90's,

information technology which have electronic data interchange (EDI), Internet (Internet), radio frequency (RFID) as main body achieve a mass breakthrough, which greatly facilitated the informatization degree of logistics industry. On the one hand, commercialization and widely use of computer and data processing information technology let computer-based information management cover all aspects of the logistics process which includes purchasing, production, sales, thereby increasing the collection capacity and using efficiency of the logistics information, which provide a reliable information technology infrastructure to improve logistics operations and management levels. Thus core competitiveness could be established. On the other hand, the development of data exchange and communication technology make it possible for third party logistics company to do real-time exchange and sharing between different sectors and different enterprises. (Include with its customers and other third-party logistics firms). The complete, comprehensive and timely logistics information enables managers operate logistics activities as a whole system which satisfy the demand from logistics service providers who want to separate their logistics activities from its existing production processes and product sales process, and also convenient the manage and control for logistics service providers, thereby promoting the logistics become an independent and professional economic activities, and gradually formed a series of new logistics concepts such as enterprise logistics integration, third party logistics.

With support of modern information technology, the United States, Europe and other developed countries make a number of logistics revolutions which aims to integrate various logistics functions and elements in this period, making the logistics activities develop from separation to integration. Third-party logistics company in developed countries, (UPS / TNT / DHL, etc.), who has good capabilities of using information technology want to take this advantages to lead the third-party logistics industry which was booming; third-party Logistics enterprises in developing

countries have realized the importance of applying information technologies in logistics activities. They have begun to use information technology to enhance its core competitiveness in logistics industry, in order to have their own place in the rapid development of the global logistics industry.

Third Party Logistics Enterprises' information technology is widely used in business process reengineering, technology development, market development and so on. Information technology is increasingly being identified as a key element to build the core competitiveness by some of the advanced the third-party logistics companies. Advanced third-party logistics enterprises increased the maximum extent of its logistics operations management, decision-making efficiency and reduce service costs, expand the network services, implementation of vertical space diversity through wide application of information technology. Thus establish their competitive position among the same variety companies.

It shows that the logistics' concept has transformed from a traditional enterprise management into a system concept which has a new specialization of activities gradually. This is inseparable with the emergence and rapid development of modern information technology. It can be said that the development and application of information technology let the emergence of modern third-party logistics enterprises while it also constitute a fundamental basis and conditions for third-party logistics enterprise's core competitiveness.

3.3.2. Analysis on how to enhance third party logistics enterprise's core competitiveness by using Information technology

As previously mentioned, logistics informatization is a key element of third party enterprise' core competitiveness constitute. In this limited range, the author using the some conceptual statements to represent how third party logistics use

information technology to enhance core competitiveness of enterprises.

How Information technologies enhance third party logistics enterprise's core competitiveness? After the induction, I concluded there are five main areas:

（A） Improve enterprise efficiency and reduce costs

Logistics operations involved in transportation, storage, loading and unloading, processing, distribution and a large number of complicated operations. In the whole logistics process, the potential to save time and labor is very big. The reasonable set up and arrange on transportation routes, supply network, inventory and shipping method will plays an important role in improving enterprise efficiency and reducing cost. In logistics activities, the information transmission delay and distortion would cause the increase of invalid links and waste of resources, which would reduce logistics speed and increase costs, resulting in poor efficiency and less competitiveness. The application of information technology could achieve fast, accurate information transmission, collection and processing which ensure the quality of the information in logistics operation and enable enterprises to make full use of existing funds, equipment, personnel and other resources, optimizing operation plans to shorten the time from order to delivery. Through this, storage speed become faster while errors and product loss reduced, which improve accuracy and efficiency of operations and accelerate cash-flow speed while the rate for the to provide an accurate basis for calculation of a reasonable inventory. Thus effectively reduce the cost of capital, warehousing costs, management costs and risks cost and other expenses. Also reduce personnel, document processing, inventory and error costs, which tap greater profit margins for third-party logistics enterprises.

（B） Improve rapid response capacity and service quality

With the increasingly fierce logistics market competition, customer’s requirements for service and speed are growing. Rapid response capacity has become an important symbol for high-level logistics management and efficient operation of

logistics system. The rapid movement of goods relies on the information. Traditional practices method which lack of automated information systems can not achieve real-time control and optimization of resources allocation. And without timely response to customer requests, it will become difficult to avoid situation that out of stock of supplies which will affect the corporate image and enable enterprises stay in a disadvantage place in the competition.

Logistics informatization will make whole process tracking and real-time information processing from order to delivery. The speed and certainty of operation can be optimized and improved through informatization which enable enterprises reduce costs at the same time achieving superior quality and service delivery quality. And in business part, suppliers and customers can establish effective and efficient links to reflect the needs of customers timely so that enterprise could change and adjust business strategies in a timely manner to provide customers with differentiated products and fast, quality service which will enhance customer satisfaction and earn a competitive advantage for enterprise.

（C） Improve management level and optimize the organizational structure

Efficient logistics is the result of scientific management. Information management improved the effectiveness of third-party logistics reflected mainly in two aspects:

On the one hand, informatization on third-party logistics management which greatly promoted the company's business process reengineering and organizational structure optimization reduce the management layers so that internal management are becoming flatter while business enterprise’ response rate on dynamic changes in the market speed up and the management efficiency improved.

On the other hand, informatization use barcode, EDI, and GPS and other modern management tools to the change the way that organization collect and process information fundamentally, achieve the automation management of logistics

operations and resource sharing and enable the enterprise use a variety of information effectively in policy-making process and get real-time control of demand, inventory, distribution, thereby greatly enhancing the decision-makers' capabilities of information analysis while uncertainty, arbitrariness and subjectivity in decision-making process reduced. All in all, optimal use of available resources can be achieved.

（D） Conducive to business integration, achieve "one-stop" services.

Third party logistics can provide a variety of logistics services. This is an important difference between traditional transportation which provide single service and modern logistics. Advanced third-party logistics companies usually involved in a wide range of different types service and have a large number of customers. Advanced information technology could help them to handle complex business information and reduce the geographical restrictions to provide customers with comprehensive and efficient logistics solutions so as to enhance the third-party logistics enterprise's core competitiveness.

（E） Improving service quality, operational efficiency and customer satisfaction.

Logistics increasingly put emphasis on time (JIT) and visibility (Visibility). Timely delivery and cargo tracking services relied on the advanced information technology tools. Information technology reduces logistics costs and ineffective logistics, improving order fulfillment rate (fill rates) and more properly handle back order, which improve the quality of logistics services and operational efficiency in large extent.

Chapter 4 The analysis on current information technology application of Company K

After making theoretical analysis on the competitiveness of 3pl Company and modern information technology, I want to show the current information application in Chinese 3pl Logistics Company and pointed out which stage the Company K was at, and get clear of their current informatization situation in order to find out their problems.

4.1. Third Party Logistics Enterprise Informatization Phase

More professional, lower cost, more efficient distribution has become the development trend for international logistics industry. Third-party logistics has become a direction for social division of labor and modern logistics development. Overseas, the third party logistics has been the main body of modern logistics industry. According to extend of information technology application, current third-party logistics enterprise's information construction can be divided into the following three stages:

4.1.1. A single point application stage.

The first phase of logistics informatization aims at individual information processing activities, introducing a variety of software tools to build a variety of single-point application system, such as the Global Positioning System (GPS), geographic information systems (GIS), electronic tag (RFID), automatic recognition software, logistics simulation software and a variety of common software tools, such as office suite, business email, etc.

4.1.2. Process optimization stage.

The second phase of the logistics enterprises informatization aims at individual business process or management functions to achieve the construction of sector-level information system. Through improving information processing activities, the company can optimize and improve its business process and management functions operation. The information construction content of this phase includes: transportation management system (TMS), distribution management system (DMS), EDI, online track and trace system, docking platform between shippers and third party logistics enterprise data; and various common information systems, such as OA system, financial management systems, and human resources management system.

4.1.3. Integrated management phase.

The second phase of the logistics enterprises informatization aims at the integrated management of the whole logistics enterprises, implementing enterprise-class information system. This phase includes various logistics enterprises specialized production management systems, management information systems, customer relationship management systems. In phase III, logistics companies need to cross sector boundaries of various departments to achieve interoperability of data and information, and on this basis, implementing the information focus inquiry and development.

According to statistics, the number of China's third-party logistics had increased at an annual growth of 16% to 25% in recent years. Although China's logistics industry has developed rapidly, but our third-party logistics information application level is relatively low. A lot of information logistics enterprise level remained at a single point of application of the first stage, roughly 75% of the total number of logistics enterprises. China's logistics enterprises, SMEs constitute the majority. Most

small and medium sized logistics enterprises don’t have the ability to use information technology to handle logistics information. Those companies who have information systems businesses, their demand for information is elementary. Basic information system is the main content of information construction. This situation is mainly due to the high cost of logistics information systems, and small and medium sized logistics enterprises ‘s starting point is very low, the market for small and medium sized logistics enterprises information systems are lacked.

Borrowing third party logistics development experience from developed countries; set up public information platform by government departments; good logistics infrastructure work, making extensive use of computer technology and communication technology to enhance third party logistics services, transport efficiency and capacity, and enhance core competitiveness force, has become China's inevitable choice to develop the third party logistics.

4.1.4. Information Technology Application status of Company K

The company uses the logistics management information system, which is based on C / S structure of the logistics information system, to promote the automation and informatization of company's internal business management. System is applies in Information Section, company storage department, car team, import and export department. It was used as a good solution to the logistics business inter-departmental information sharing, but also should be noted that the system can only run for inside use, it still doesn’t have access to the outsiders. It can be said that Company K’ Logistics system is more likely a network with database shared of local area.

Among Company K’ logistics information technology applications, bar codes, electronic radio frequency terminals and GPS satellite positioning system haven’t

been used. Communication with customers is largely through Email / fax / phone, etc.

4.2. The third party logistics enterprise K' informatization requirement

Information technology is the core of modern logistics, while it also the main source for logistics enterprises to enhance its core competitiveness. Then when the third party logistics companies use modern information technology to establish their core competitiveness, they also made a corresponding request. Company K would hope information technology application satisfy the following needs in order to enhance enterprise' competitiveness.

4.2.1. Integration requirements.

Modern third-party logistics is fundamentally the product of the combination on social division of labor and trading theory. The most important point that differ Modern third-party logistics from traditional third-party logistics is integrated logistics services the modern third party logistics had. As a traditional third-party logistics, providing the logistics aspects of service is a kind of transactions; but modern third-party logistics companies provide integrated, one-stop logistics service to customers to reflect their own core competencies, they use their own Specialization edge to integrate social resources so that they can provide better services to increase its customer satisfaction and reduce customer's logistics costs.

Integrated logistics service needs the support of information technology; information technology could help third-party logistics providing quality service across space, time. Through the application of information technology, logistics information can be shared; information transmission can speed up so that Company K can eliminate disadvantages caused by distance and time delays in previous

logistics process.

4.2.2. Transparency requirements.

More and more third-party logistics' customers proposed to get the real-time information during third-party logistics service provider‘s service time so as to strengthen their control of the goods. For example, Remote cargo Inventory situation checking, real-time information access to transport parts. Both of these needs all set a higher requirement to third-party logistics companies. Third-party logistics companies and customers had a sense that the physical state of the goods is their common concern. So Company K had to use information technology as means to meet the transparency requirements of logistics information.

4.2.3. Cost reduction requirements

The whole logistics costs should include all the costs happened from supply of raw materials till goods reach the consumer. The reason why our customers consider outsourcing to third party logistics enterprise, beside taking into account their professional advantages, reduce its logistics costs is more important to be considered. Third party logistics enterprises should do a good job on cost control, which is the only way to make it feasible to customer satisfactory. But in the process of many traditional logistics, costs are buried in all aspects of the circulation process, which frequently resulting in high cost. Therefore, Company K need to have effective cost-analysis tools, data mining function is specialty of management information system which is currently designed based on data mining.

4.2.4. Requirements of enhancing the logistics services quality

The quality of logistics services is reflected in the so-called "6R", that is the

right quality, right quantity, right time, right place, a good impression and the right price. In a nutshell, that is to provide the lowest possible logistics cost of materials needed to the placed needed within the time required, which is called JIT. To accomplish this, the traditional approach is clearly impossible to achieve it. Through information technology, all circulations of the logistics can be connected into a whole, so logistics flow can be achieved in accordance with the unified plan and on time.

4.2.5. Business Process reengineering requirement

According to the development of the logistics business, Company K would like to reengineer their business process through information technology transformation, which make their business processes closer to the market and improve service and quality, thereby enhancing the market competitiveness of enterprises. At present the traditional transport business processes informatization are mostly not yet to start, business process reengineering and service put forward a quite high requirement on information technology.

4.2.6. Provide value-added service requirements

Value-added service is an important tool to integrate logistics resources and enhance the advantages of the logistics industry greatly. Logistics value-added services, personalization, differentiation, diversification, which put forward higher requirements on information technology that develop from single-service to comprehensive multi-service which requires more complex information technology, finance and facilities. Also value-added services are beneficial to improve network utilization, tap the market potential so as to meet the multi-level, diverse information requirements. Through value-added services, a large number of informatization resources are efficiently used and investment is payoff. Therefore, the value-added

service is the inevitable requirements in the development of modern logistics, and information technology is important tools to ensure value-added services can be achieved.

4.3. The level of Company K' information technology application

4.3.1. The third party logistics enterprise informatization classification

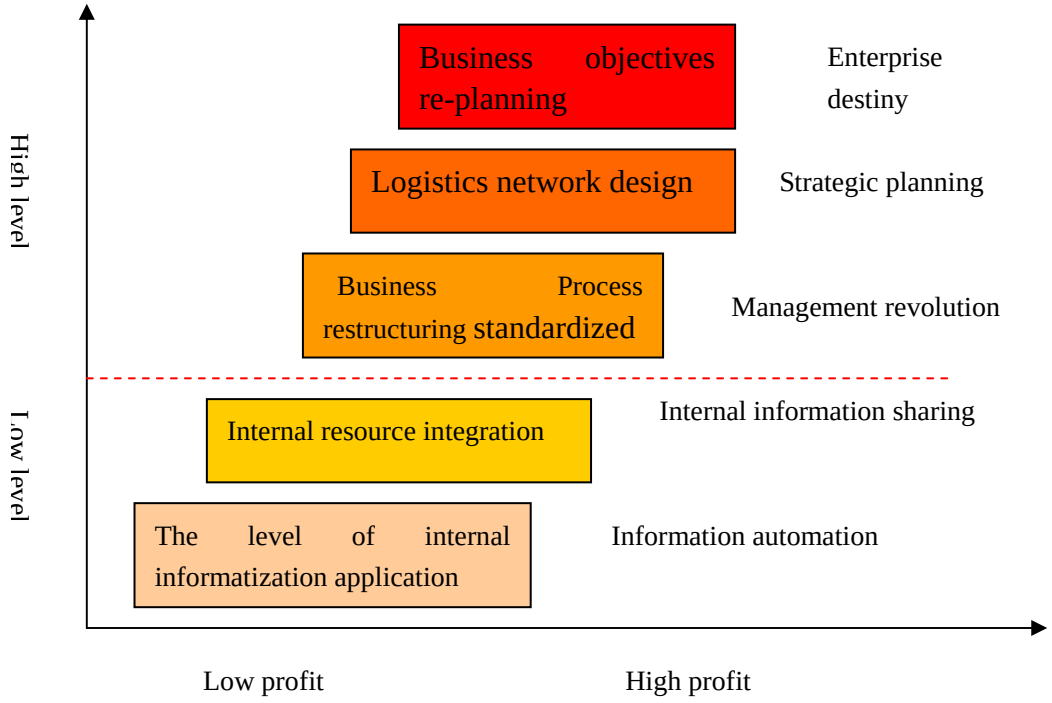

Figure 4.1 the third party logistics enterprise informatization classification

Information Technology in Third Party Logistics Enterprises will be affect the operation and management, organizational change in different degrees, and even affect the company's strategic positioning or change company's mission. Moreover, the extent of information technology application in different logistics enterprise applications will be different. With different sizes or at different stages of development, logistics enterprises' application of information technology will be

different. At present, some scholars[1] divided enterprise information technology application into different level, and make corresponding explanation and evidence. On the basis of the reference, I give the segment on level of information technology the third-party logistics companies' use. Third-party logistics business applications of information technology can be divided into five grade level:

First level: the level of enterprise internal application

At this level, third party logistics enterprise targeted to achieve information automation, local information management applications within the department, which are all simple computer application. Most of these companies use Excel, Word, Email and other common office software, etc. to achieve the information input, output, and query with computer management.

Second Level: Business internal resource integration

At this level, third-party logistics companies taking information sharing as premise, integrated and get full use of the enterprise's internal information resources. These company have internal LAN at least, the information could be put together and to be given appropriate statistical analysis. Internal management information system is the main feature of this phase.

Third Level: Business Process restructuring standardized

At this level, third-party logistics companies pay more attention to their business process restructuring standardized. According to the requirements of information technology, they restructured existing business processes in accordance with the principles of optimizing and strive to establish a standard business operating procedures. Most of these companies analyzed and restructured company's business process in order to establish ERP or integrated management systems.

Fourth Level: Logistics network design

At this level, third-party logistics companies re-positioning its own role in the

[1]Zhao Hong Jun, Third party logistics information technology, 2003, 16-17

supply chain. Relying on advanced information and network communication technology, they want to establish a nationwide logistics network, seek to provide customers with better logistics services. As the use of advanced information and communication technologies, integrated management ability take a more important role in the supply chain of enterprises.

Fifth Level: business objectives re-planning

At the level of third party logistics enterprises pay more attention to start from competitive advantage, more emphasis on business objectives re-planning. Information technology is more frequently applied to serve the enterprise‘s strategic decision. These companies focus on the construction of the logistics platform.

In summary, the first two levels are the basic level for management improvement. The level of third, fourth, five belong to the level of management changes. Some advanced third party logistics enterprises in developed countries have already reached the fifth level; general business can reach the third grade. For third-party logistics companies in China, only a few can reach the fourth, fifth, some can reach the third level, most enterprises still in the first two levels.

According to the previous two sections above, the level of third-party logistics enterprise information is divided into five levels, and I thought five levels can be divided into two kinds: low levels and high levels. The former contains the first and second level, and latter including third, fourth, fifth grade. Whether the present third-party logistics companies at a low level or high level, there are some unresolved issues. The author makes analysis to identify some problems on the basis of classification:

4.3.2. The analysis on status of information technology application used by the company K

Based on the Company K' logistics information technology introduction, the authors believe that Company K' information technology application should be at a low level. Although the company had implemented the internal logistics management information system which strengthens link between the various departments and enhanced cross-sectoral operational efficiency of logistics business while it also improves internal information sharing, it can be said that the use of management information systems enhance their own competitiveness in some extent. However, the reason why level of the Company K' information technology application was low is mainly because current informatization level the company is still in the phase that emphasis on internal application and local resources integration. The use of information technology is basically with the purpose of automation and internal information sharing. According to the level of third-party logistics informatization mentioned in former chapter, Company K is still in the low-level.

4.4. Analysis on the Problems found in the process of Company K' informatization

4.4.1. Problems exist in Company K' informatization

The main problems and difficulties[1] found in the Process of Third Party Logistics Enterprises' informatization are: the high cost of system development. Function is not enough; can not keep up with changes in business processes. According to the survey, the main problems in third party logistics enterprises' information system were: high cost (26.9%), interface difficulties with other system

[1] 2005 The investigation report of Chinese logistics informatization

(23.1%), can not meet the business process change (19.2%), training is not enough (13.5%), function can not meet requirement (9.6%). At the same time, a long period of system construction is also a problem, there are nearly 1 / 4 of those system need more than one year period of construction, quite time-consuming.

Specifically, the Company K' logistics management information system can be only applies in internal business currently. Customers don't have access to company from outside. The company is committed to develop high-tech, so it is a big difficulty for them to dock their internal ERP systems or other management information systems with the customers who had such request. Because Company K' logistics information system is based on C / S[1] (Client / Server) structure which would bring big difficulty for docking, this system which has internal constraints would be a big constraint for company to expand their business to high-end market.

For some advanced logistics information technology, such as bar codes, GPS satellite positioning system, etc., the current Company K is not involved. In warehouse storage operations, input data still have to be taken manually with internal logistics information system in the majority of cases, which significantly reduce the logistics efficiency of storage operations and increase the amount of manual work. For the GPS satellite positioning system, it was meant to get precise location information on the vehicles that doing logistics and transport services. It is beneficial for control transit vehicles and improves quality of transport services. This shortage will be a constraint for Company K logistics to enhance transportation services competitiveness.

In the normal course of business processing, the flow between departments often appear poor, the staff work for the buck, work with the staff to carry out some time to determine their own processing charge, which also affected the efficiency of business development.

[1] C/S：Client/Server

4.4.2. The Analysis on the reason of the problems in Company K

（A） Weak informatization sense

Informatization is a complicated system which needs the perspective of the overall planning, analysis, design and management. Most third-party logistics enterprises' information construction in China is without planning and designing, lacked independent IT department. This problem also found in Company K, they didn’t solved the information collection problems in the operation layer and management layer, which result in insufficient resource of information, which greatly affected the development and utilization of information resources by the enterprise

（B） Lacking of informatization capacity

Information is not only a technology issue but also a management issues. Implementation and management of informatization need scientific and effective methods. Company K are lacked of effective methodology guidance to promote the development of informatization, lacked of clear design, planning ideas and strategies, lack logistics professionals who understand the technology and operation both. Those deficiencies led to difficulty in implementation of informatization.

（C） Business Process confusion

How could Information systems match the business processes enterprise is one of the difficulties to implement information strategy. In particular for those small and medium third-party logistics enterprises which have a low level of application of information technology, their understanding of information systems’ strategic orientation on the whole enterprise is vaguer. Currently, Company K still follows the traditional way of canvassing, handling and transportation. They lack of standards operating procedures, and customers they face don’t have a high degree of information requirements to promote the initiative of information technology application on the corporate strategic level

Chapter 5 Analysis on countermeasures for Company K' informatization problems

5.1. Basic principles for third party logistics enterprises to enhance competitiveness with information technology

Currently, many third-party logistics companies have recognized the importance of information technology application in improve enterprise management level and competitiveness. They hope to establish information management system as soon as possible. However, if the information technology strategy is not found suitable for their own situation, project blindly, expected results is often not achieve after implementation of the project. Therefore, some basic principle on how to use information technology to enhance competitiveness of the logistics company should be followed in the process:

5.1.1. Find individual solution based on real situation

The different China's logistics enterprises vary widely in size of company and mode of operation. They also have different needs in information technology, which requires companies to implement it with consideration on local conditions. First of all, some careful investigation are needed to done on the operation and management of their own state, business, marketing, customer's actual needs, to identify their own development "bottleneck", and then follow the enterprise information actual situation to choose the function. Secondly, cost-effective information system is also an important consideration. When investing in the purchase or development of information systems, enterprises want to get the maximum benefit with minimum investment. High input means greater risks, and therefore the more advanced information technology doesn't equal with the better. Only based on reality and long

term objective, can we build information systems which not only meet the business needs of the existing management but also meet the requirements of the future development.

5.1.2. Process reengineering on logistics business

Third-party logistics enterprise information construction aims to improve management performance and enhance their competitiveness. But some enterprises don’t know how to effectively implement information construction and integrate information technology with business management. They expected to enable enterprises into modern management overnight solely rely on the establishment of an information system. In fact, information is not just a technical problem, its implementation must involve in the organizational structure, management system, business processes, management concepts of change and innovation. Especially since a considerable number of domestic logistics companies have varying degrees of weak management infrastructure, and their organizational structures are too complicated. The importance of the organic combination of information and management are more conspicuous. In this sense, the core of third-party logistics’ enterprise informatization is information management, and its premise is process reengineering on logistics business, which means to reduce management layers through the way of re-design and optimize logistics business processes, so that internal information transfer will be more convenient. And based on this work, with digitalization, networking, the company will reach standardization and scientific management in the end so that overall management level and competitiveness are improved both.

5.1.3. Pay attention on the integration of information system operation and integration

Logistics Information System is a integrated management system of company's cash flow, information flow and logistics, its application has always run through the logistics business activities and across multiple functional departments. Therefore, various management departments and operational aspects of the interface should be fully considered. Otherwise, even if the information systems of the various functional modules promote the automation and improvement of management efficiency in the local logistics operations, the poor communication between departments, transmission distortion, will affect the entire logistics system efficiency.

In summary, third party logistics enterprise information construction is long-term, comprehensive system engineering, logistics information system is the first step in the implementation of information technology. More importantly, the normal system operation can bring benefits to enterprises. But it takes all the staff's innovative thinking and awareness of information technology, information technology skills

5.2. The Strategy of using information technology to enhance core competitiveness for Company K

According to Company K' informatization level applied in business development, I devise some plan which combined with my own experience and make some measures that help company make effective use of logistics information technology to enhance its competitiveness

5.2.1. Suggestion for the enhancement of Company K' logistics information system

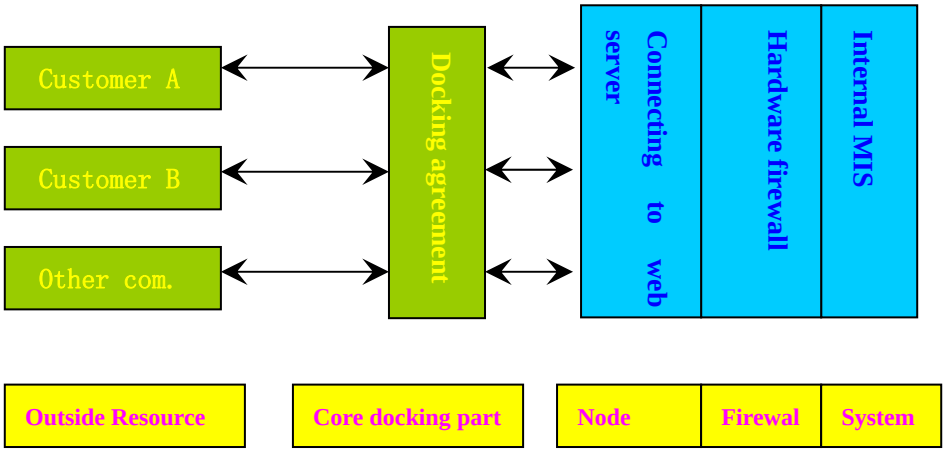

Figure 5.1 the link between outside resource and internal resource

Currently, the biggest problem of Company K logistics information system is that it was designed based on C / S structure, the architecture and docking problem of such systems and external logistics information system has been focused by some logistics software developers for a long time. According to my experience in system development, I put forward some proposals.

Option One:

Step 1: using IT resources, rewrite the code of Shin Tong internal logistics information system that based on C / S structure, changing the system architecture into a B / S[1] structure under the premise that original business module remains the same.

Step 2: set up core part of the docking system is. Core part job includes the following:

1. Communication protocol of docking system, http / ftp protocol is popular selected currently

2. the docking module used during the process that Docking system is set up, the author recommends to use client information to capture module;

[1] B/S：Browser/Server

3. Logistics information systems for internal business data, we designed some docking data format to facilitate data format order after the docking system process.

Option Two:

We can access internal data from the external via VPN connection. Virtual network is primarily set up for those business division or external partners who use virtual private network to visit the internal system through remote dial-up, and at same time internal systems need to set up a virtual remote landing port so that constitutes the VPN between Internet remote users and corporate network. This program requires Company K set up virtual network login port within their system and an external landing account.

Option Three:

Remote control method. Install the remote control software in the computer to allow an external computer get access to internal information systems through remote control of the internal computer.

Program evaluation:

Although option 1 will takes a relatively large amount of work, but it changes the framework of Company K' Logistics information systems fundamentally, which will clear the technical obstacles for docking systems in the future; For option two, information is easily stolen in the process of information transmission, those unauthorized users is likely to find these companies' open ports and attacks internal systems to steal information. Also network speeds will be the constraints when company use the virtual network access, bandwidth restrictions will make it difficult for its implementation in the enterprises; Option three, remote desktop control is essentially a point-based control of communications, which is not suitable for the enterprise level communication. In summary, the author believes that program 1 is the option for current implementation plan.

5.2.2. Establish standard operating procedures

In the beginning of establishment of information systems, business process within the department and between departments is not well regulated. Information transmission model is based on the experience in most cases, which adds some working errors by the subjective factors. Standardization of business processes could regulate business process operations to avoid mistakes and the incident, also establish the foundation for the construction and implementation of management information system.

5.2.3. Learn from large customers to improve the level of information technology application

In Shanghai, there are many super companies who have natural advantages in informatization. Many of them are customers of Company K logistics. It is recommended to carry out inter-firm learning so as to improve Company K' level of information technology application continuously, eventually raise their enterprise core competitiveness.

5.2.4. Introduction of bar code scanners / GPS (mobile) information technology

According to the characteristics of Company K logistics business, the authors believe that the company should be appropriate to introduce bar code and GPS system. As the company's business involves the management of storage and yard, many problems such as storage operating inefficiencies and too many errors would happened in the daily management. The introduction of bar code scanners will let company handle warehouse storage automatically. Thus warehouse operations can be more accurate while amount of manual work lower significantly and efficiency and quality of storage service improve. The introduction of GPS is also based on practice

and many projects they usually involved, customers put forward high requirements on the quality of transport services. But the lack of vehicles monitoring caused low quality of transport services. The author proposed this positioning system GPS which is based on GPS technology could use mobile communication network to position the location of the vehicle. As long as a transport driver was given the phone with positioning function, the company can control the vehicle effectively. The costs of this method is quite low, which means it have a strong feasibility.

5.3. Third Party Logistics Enterprises Strategy on initial stage

Through the case analysis on how third-party logistics in China use information technology enterprises to enhance competitiveness, some solution are made on the problems found in using information technology to enhance its core competitiveness based on the definition, the status of the investigation and classification made.

5.3.1. Identify factors that enhance enterprise' core competence before the implementation of informatization

Third-party logistics enterprises in low-level of information technology application should evaluate enterprise's existing resources and competitiveness before planning the construction. They could list the target to be achieved under current funding arrangements. If companies need to strengthen marketing, customer relationship, corporate websites, e-commerce and other aspects of the building can be taken into account; if they want to strengthen internal management, internal process reengineering should be considered. Corporate management information system required would be introduced. Only clearly adhere to the target of informatization in this phase, can the enterprise rule out all kinds of temptations and handle prospective direction to achieve the original purpose of informatization in the complicated

process.

5.3.2. Business process restructuring, establish SOP

Third-party logistics enterprise information construction aims to improve management performance and enhance their competitiveness. At this level, most third party logistics company failed to establish SOP (standard operating procedures), many business operations are carried out based on subjective experience, which will bring much unpredictability on logistics service quality to companies. Restructuring of business processes, not only standardize the process of logistics services but also create the foundation for logistics management information system construction. Many third-party logistics enterprises don't have this awareness, they simply thought that the establishment of an information system will enable the company become the modern management overnight while ignoring the importance of business processes. Especially since a considerable number of domestic logistics companies have varying degrees of weak management infrastructure or too many organizational structures. These issues tell the importance of the organic combination of information and management. In this sense, third-party logistics at this level should more focus on business processes restructuring and establish standard operating procedures (SOP) within the company. So the fundamental obstacles for such third-party logistics companies to enhance the core competitiveness with information technology can be cleared.

5.3.3. Reasonably introduce bar code scanning equipment / GPS / GIS and other advanced logistics information technology.

In reference to "reasonably", some explanation has to be made. The author does not think all in the third logistics enterprises in this level must adopt these logistics

Information Technology. The premise is that they have fully identified their own competencies and make rational decisions based on that. At the same time, if logistics information technology can effectively improve the efficiency of their warehouse management and transportation management, then some advanced logistics information technology should be introduced with feasibility on the cost of inputs and the corresponding benefits.

The use of bar code scanners can make storage warehouse operation completed more precisely. Bar code warehouse management collects information of goods and process collected data. It could establish database of warehouse storage, transferring and stocktaking. Then warehouse operations can be more accurate while workload in manual would significantly lower and warehouse services could speed up with efficiency and quality. It provides storeroom information for warehouse goods which makes warehousing more accurate. It should be noted here that general warehouse management can deal with error handling only, while bar code warehouse management establish warehouses transport information under the collection of information , directly deal with the actual errors. It enhances the working efficiency not only in operational level but also at enterprise level.. GPS computer information management systems can achieve real-time tracking management on land, marine transported goods by combination of computer networks and GPS. The use of this technology can greatly improve the accuracy and transparency and continue to improve logistics service quality so as to enhance the competitiveness of the enterprises themselves.

5.3.4. Logistics management information system upgrade

On the one hand, the main reason is to improve coordination between the internal logistics management information systems and business processes. The other

hand is the internal construction of the logistics information system interface. In the increasingly fierce logistics market competition, some firms tend to docking internal use MIS with third party logistics service providers to achieve inter-enterprise information sharing which could speed up logistics information flow and the flow rate of funds. Therefore, third party logistics companies should improve their logistics management information system to enhance the competitiveness from a strategic level, developing docking module between internal systems and external systems, which earn a leading edge in the competition with other company.

And some note should be pay attention on docking with two systems:

i. Select system docking protocol, the system docking protocol commonly used now is http / ftp protocol.
ii. Fully communicate with customers to make sure the format of unity of output data from the client system to meet operational needs.
iii. Hub can be used to collect date regularly when data output during docking two systems, or establish client module to capture data information.

(E) Relying on big customers, enhance the level of application of information technology by learning their experience

Third Party Logistics Company improves their information technology level by learning through a number of large customers continually and eventually raises their own competitiveness. Currently, third-party logistics companies in the level can aim to select some major clients to enhance exchanges and communication on using of information technology. They also should learn some large enterprises who apply advanced information technology so as to promote the third-party logistics enterprise informatization process continuously, which will eventually build their core competitiveness.

Chapter 6 Conclusion

The paper defined information technology, especially logistics information technology firstly. At same time the author give the depth analysis on third party logistics core competitiveness and its basic elements and characteristics. In the third chapter, the thesis discusses that the information technology is the foundation and condition which constitute the third-party logistics enterprise's core competitiveness. And theoretical analysis on how information technology enhances third party logistics enterprise's core competitiveness was also made in this Chapter. In Chapter four, the paper made analysis on the status quo of the Company K' information technology application and give classification of different logistics informatization development stage and level of informatization ability. And the paper pointed out which level company K was in. Then the paper carry out the existing problems that company has during using information technology to enhance their core competitiveness and analyze its reason. In next Chapter, based on some theoretical principles, the thesis figures out some solutions and measures to show how company K could use information technology properly to enhance their core competitiveness. Finally, the author summarizes those methods and gives deeper recommendations to all those third party logistics companies that information application was at low level.

In China, use of modern information technology has become an important means for a large number of third party logistics to make innovation on operations and management. However, there is a process for third-party logistics companies to understand the application of modern information technology or a trade-off between cost input and output. Therefore, there are a certain number of cases that domestic third-party logistics enterprises were fail in using modern information technology to

enhance their core competitiveness.

Through the analysis in this paper, we clearly see that the use of information technology can not equal the enhancement of the third-party logistics enterprise's core competitiveness. This article analyzed the Company K' information application status and gives them classification: The use of information technology in general is divided into low-level and high level. And most of third party Logistics Company in China including Company K was in low level. There are certain problems, such as logistics information system only for internal use, the process lack the supporting of standard operating procedures in the information and other issues happened in Company K. After analyze the reason, the paper puts forward a number of measures on problems happened in Company K. From the macro level, it requires the government and relevant departments coordinate to establish the logistics information platform and logistics informatization standard. For the enterprises K whose application of information technology is at a low level, they should be strengthened in the system docking area, combined with their demand to introduce advanced logistics information technology, internal business process restructuring, etc. And based on the case analysis of company K, the author also give some recommendations on all those third parties company who want to use information technology to enhance their core competence. However, on use of these methods and strategies, the logistics enterprises need to analyze element of their core competence composition firstly and make in-depth analysis on how to use modern information technology to promote their core competitiveness. Only under the premise of a clear objective, third party logistics companies can enhance its core competitiveness to the maximum extent with certain informatization cost inputs.

The deepening of the problem

This paper is not the end of the study, but the beginning of study. Through the practice of my own in the future, I hope that I could make in-depth research on how

third-party logistics companies use modern information technology to enhance core competitiveness and find out some methods and strategies which could provide more valuable information and suggestions to third-party logistics development in China

On the problems that how third party logistics in our country using information technology to enhance core competitiveness, the author think that there are still many deepen research could be carried out, mainly in two aspects:

i. As the third-party logistics industry is at the initial period, market conditions vary widely, policy change is also great, and some concepts had to be determined by further discussion and practice. Meanwhile, the statistics of third-party logistics industry are not complete. Data collection is quite difficult to make in course evaluation. These issues had brought uncertainty to the evaluation results of third-party logistics enterprise's core competitiveness in the paper.

ii. About using information technology to enhance core competitiveness of third-party logistics enterprises, there is an input-output analysis of cost and benefits on which I have no quantitative analysis in this paper, which is mainly because that it is difficult to obtain accurate data of how much business benefits informatization could bring from third-party logistics companies. Even if there is data, most of them were estimated and with a strong vague. Thus in-depth analysis of the issue should be made by us in the future.

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