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**THE CURRENT SITUATION CHINESE
THIRD-PARTY LOGISTICS COMPANIES ARE FACING
--- AN EXPLORATORY STUDY**

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ABSTRACT

The fast development of the Chinese economy has brought tremendous impact on the growth of logistics industry in the country. China has become the hottest market for both Chinese and foreign third-party logistics companies (3PL providers), and more and more foreign and domestic 3PL providers are being involved in the Chinese logistics industry. To understand the current situation Chinese third-party logistics companies are facing and the competitive strategies they are pursuing, an exploratory investigation was conducted in the study.

A multiple case-study approach was adopted as the main strategy and guidance for the study. Under the principle of multiple case studies, multiple instruments (questionnaire, telephone interviews and archive searching) were used in the data collection among three selected case study companies. Also, within-case analysis and cross-case analysis were chosen as the overall framework of data analysis, and content analysis was selected as the main method for qualitative data analysis.

Through investigating a variety of aspects of the three case study 3PL companies, the study has identified that all the case study companies have established country-wide logistics networks, have provided customers a range of logistics services, and have adopted different information technology systems in their operations. All the case study companies have achieved constant increase in their sales in recent years.

Generally, the competition in the Chinese 3PL industry is fierce, and sometimes chaotic, unfair, and even illegal. Foreign 3PL providers have been considered as major competitor by Chinese 3PL providers. All the case study companies have developed and pursued a number of competitive strategies to gain competitive advantages in both cost and service. The main competitive strategies addressed include distribution network developing strategy, information technological strategy, and long-term partnership strategy.

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CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

The present study aims to understand the current status of Chinese domestic third-party logistics (3PL) providers, in particular focuses on the competitive strategies they are pursuing. As an introductory chapter, this Chapter starts with an explanation of the development of the Chinese logistics industry, which provides an overall background about the Chinese 3PL industry. Based on the discussed background and some literature related to the Chinese 3PL industry, the motivation of the study is revealed, and the objectives and research questions are generated. Finally, the Chapter presents the overall outline of this thesis.

1.2 LOGISTICS IN CHINA

With an annual GDP (gross domestic product) growth rate of about 10 percent, China became a significant economic entity in the world in the last decade. For most multinational companies, China means a great market and opportunity. By the year of 2003, more than 80 percent of Fortune 500 companies had already invested in China to share this great market potential (Bolton & Wei, 2003). Also, by the year of 2002, China had become the most attractive country for foreign direct investment (FDI). China is becoming a major manufacturing and consuming region in the world. The increasing expansion of manufacturing and high consumption level requires sufficient support from an effective logistics system. As a result, the logistics industry in China has gained rapid growth in recent years. According to Wang et al. (2006), from 1992 to 2004, the average annual growth rate of the Chinese logistics industry was 22.2 percent, and logistics costs were about 21.8 percent of GDP on the average during that period.

Before the mid-1980s, Chinese manufacturing was under the planned economic system that was based on central-planned economy rather than the market demands. All the production and related logistics activities were controlled and planned by the central government. The state-owned transportation companies shipped different products to different regional warehouses which were owned by the government as well. These logistics services were simply transport and storage, and the additional margins were added by different tiers of these logistics operations as reasonable costs. That was so-called the era of “big-bowl-meal” when production and logistics were all facing no market pressure (Jiang & Prater, 2002).

In the mid-1980s, the Chinese government launched the economic reform to open the gate of the country to the world. The economic system was changed from planned economy towards marketing economy, which resulted in the shift of sole state-owned production to private-owned, joint ventures, and even foreign companies. The reform also led to the development of the logistics industry in the country. More and more private logistics companies emerged in the market. Although the services they provided were only some simple transport, warehousing and distribution, they formed the foundation of today’s logistics industry. While their sizes were small then, most big logistics companies today came from those original small private logistics providers (Jiang & Prater, 2002).

Prior to China’s joining World Trade Organization (WTO), the notion of logistics was not familiar to the Chinese government and market. What comprised the Chinese logistics industry were those single logistics service providers, such as transportation and warehousing companies. During that period, there were few foreign logistics companies in China. A number of studies have attributed this situation to the restriction imposed by the Chinese government, because the government strictly prohibited foreign companies from providing logistics or distribution services during that time (Naughton, 1996; Brecher and Gelb, 1997). Some researchers, like Goh and Ling (2003) found that foreign logistics service providers’ (LSP)

intending to provide a full range of logistics services would face further challenges, as they had to apply for a multitude of licences from different government agencies. Actually, this was not a regulation restricting only foreign logistics providers; it was a licensing rule of the Chinese government affecting Chinese LSPs as well. During that time, what a full logistics provider needed was not a simple logistics license but a series of different licences, such as: licences of transportation, warehousing, manufacturing. Overall, considering logistics as a formal industry was a very new concept in China.

Since China became a member of the WTO in December 2001, logistics in China has improved tremendously. On the one hand, the government has tried its best to provide better environment through reinforcing construction of infrastructure and logistics networks, such as railways, highways, and regional logistics parks. For instance, according to Goh and Ling (2003), during the year of 2000, the total length of highways was 1.4 million km, but till the end of 2005, the amount increased to more than 1.9 million km (China Statistical Yearbook 2006); the annual increasing rate was about 7 percent. On the other hand, the Chinese government has eased the procedures for both domestic and foreign logistics providers to be involved in the industry. For foreign investors, the new rules and deregulation allow them to gain licences for a full range of logistics services. As a result, foreign logistics companies have gained deeper, wider, and more flexible involvement in China's logistics industry.

The entering of foreign third party logistics providers (3PLs) has brought direct impact on the improvement of Chinese logistics industry and the development of Chinese domestic 3PL companies. Experienced foreign 3PLs introduce advanced logistics concepts, high level technologies and new management systems into Chinese markets, which enable firms in China to access not only full logistics services, but also modern logistics concept. With the development of logistics in China, more and more companies have realized the importance of logistics, and consider logistics outsourcing as their main strategy to achieve competitive

advantages.

Although China's logistics industry has achieved a significant development in the last decade, it is still in the starting stage, just like Trunick (2003) describes that the 3PL industry in China is still regarded to be in its infancy. Compared with western developed countries, China's 3PL industry still has great gaps to fill and also has potential. For example, the total logistics costs are 20% of China's gross domestic product (GDP), but in the United States, logistics costs are about 10% of its GDP (Trunick, 2007), also the usage of 3PL is much lower than that in developed areas. According to a survey conducted by the China Supply Chain Council (2005), the 3PL usage rate is 56 percent in China, which is much less than that in North America (79 percent) and in Western Europe (76 percent). It is clear that there are great opportunities in the Chinese logistics industry, and to achieve further improvements in logistics industry requires great efforts from those Chinese domestic 3PL providers.

Today, the situation here is that both foreign and domestic 3PL providers are playing important role in Chinese 3PL industry, and both of them are clearly facing great challenges and opportunity in the Chinese market. On the one hand, international 3PL leaders, such as Maersk, UPS, DHL, who have mature international networks and sophisticated logistics specialists, provide all aspects of logistics services for Chinese and international companies. The international 3PL providers mostly focus on satisfying the needs of international business, business of international companies in operation in China, or providing a special line of logistics service such as express and cargo transportation. On the other hand, traditionally, Chinese domestic 3PL providers are the main domestic logistics service providers for most companies in China. While the domestic 3PL have benefited from the entering of foreign 3PL companies, they are certainly facing the competition from those foreign competitors.

1.3 RESEARCH PROBLEM GENERATION

From the researcher's personal understanding, Chinese 3PL providers should be still in an undeveloped state, which means that it might be fairly difficult for them to survive in today's Chinese market where there are more and more foreign players. The main motivation of this investigation is the desire to know the reality occurring in the Chinese third party logistics (3PL) industry, and what competitive advantages those Chinese 3PL providers are using in competing with their competitors.

A number of researchers have investigated the Chinese logistics industry from different perspective. Jiang and Prater (2002) have conducted a study about the distribution and logistics development in China, which focused on the whole China's logistics system. The study reviewed the traditional Chinese distribution system, and analysed the contemporary situations of both Chinese and foreign companies. In anticipation of future effects on the development of Chinese logistics industry, the study identified three main factors: the booming economy, entering the WTO and e-commerce.

Goh and Ling (2003) have conducted a similar study on logistics development in China. They present the main changes in China's logistics industry between the time periods of pre-WTO and post-WTO. With massive secondary data, the study has examined the aspects of transportation networks, telecommunication system, warehousing facilities and customs procedures, and concludes that despite the improvements and advancements undertaken by the Government, the logistics infrastructure at that time were still insufficient in China.

Dai et al. (2002) have conducted a China logistics provider survey among 33 Chinese and foreign 3PL providers, in which, services, marketing and employee situations were investigated from a provider's perspective. Dai et al. (2003) conducted another survey among Chinese logistics as a complementary study, which focuses on how

satisfied these 3PL users are on a variety of issues, including value, effectiveness, information technology capability, geographical coverage, and cost. Dai, et al. (2005) conducted another survey about China logistics industry which focuses mainly on the understanding of the situations of transportation companies.

The China Supply Chain Council (2005) has conducted a survey among manufacturers and retailers, focusing on the trends towards logistics outsourcing and 3PL usage in China. Wang et al. (2006) carried out the first study relating to strategic aspects of 3PL providers in China. The study used survey instrument and quantitative method in investigating contemporary and future business objectives, operations priorities, business performance, and concerns of the 3PL provider. The study provides a relatively new and unique viewpoint to 3PL providers in China.

Overall, the Chinese 3PL industry has attracted a number of researchers' attention and has been investigated in different ways. The previous studies, to some extent, undoubtedly provide sound understanding of 3PL industry in China. However, none of these studies focus on investigating competitive strategies pursued by Chinese 3PL providers through a qualitative research method.

1.4 RESEARCH OBJECTIVES AND QUESTIONS

The purpose of the study is to understand the current situation of Chinese 3PL providers. However, unlike previous studies investigating the 3PL industry in China, this research focuses only on Chinese domestic 3PL providers, especially the competitive strategies pursued by these Chinese domestic 3PL companies. Overall, the objectives of this study can be summarized as:

1. To understand the current situations of Chinese domestic 3PL providers
2. To discover the competitive strategies pursued by the Chinese 3PL providers

Meanwhile, the following research questions are designed for the achievement of the above research objectives:

1. What kinds of distribution systems do the Chinese 3PL providers have?
2. What kinds of logistics services are Chinese 3PL providers providing?
3. What kinds of information technologies have been adopted by the Chinese 3PL companies?
4. What competitive situation are the Chinese 3PL providers facing?
5. What kinds of competitive strategies are the Chinese 3PL providers pursuing to achieve competitive advantages?

1.5 THESIS OUTLINE

This thesis is organized into six Chapters. This chapter presents a background of the research. It discussed the motivation of the research problem, and stated the research objectives and related questions. **Chapter Two** presents the literature review of logistics and third-party logistics, providing a conceptual framework insight into how companies can achieve competitive advantages through the logistics function or through using a 3PL provider. On the basis of conceptual principles, the literature review grants a rational guideline for the whole research.

Chapter Three describes the methodologies and techniques that guide the whole research process, such as the case study strategy selection, the data collection methods, the data analysis method, and the consideration of validity, reliability and ethical issues.

The case study results are presented in **Chapter Four** and **Chapter Five**. **Chapter Four** provides three individual case study reports, in which the results of individual case studies are summarized and presented. Through describing, understanding, and explanation, the Chapter presents what has occurred in the individual case study

companies. Based on the within-case study results, the findings of cross-case analysis are presented and discussed in **Chapter Five**. The Chapter summarizes and discusses the common similarities and differences between the companies, and identifies what has occurred across these Chinese 3PL providers studied.

Chapter six, the final Chapter of the thesis, reviews the study objectives, and summarizes the overall conclusions. Also the limitation of the current study and future research suggestions are presented.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

As an important business function, logistics has drawn attention of business operators as well as academic and scholars. Logistics has been a frequently studied area, and a great number of studies and discussions have contributed enormously to the overall development of logistics.

This Chapter starts with defining logistics, which aims to familiarize readers with the fundamental concepts of logistics. Then, the correlation between the objective of logistics and competitive advantages, logistics and customer service are reviewed. Porter's (1980) generic strategy framework proposes that cost leadership and differentiation are the two main sources of competitive advantage. Stock and Lambert (1992) identify that logistics can be used as an offensive weapon for companies to gain a differentiation and create a sustainable competitive advantage. Christopher (1993) emphasizes that the impact of customer service leads to longer term relationships, and results in greater profitability. Taylor (1997) identifies the fundamental objectives of logistics are customer service and logistics costs. These ideas from above authors implied the rationale that logistics services and cost strategies contribute to the achievement of competitive advantages.

Based on the correlation between logistics services and cost strategy with competitive advantages, the Chapter presents the concepts of 3PL, the most direct logistics service provider. To understand what a best logistics provider should be, the reasons driving to and against using 3PL are also reviewed. Further, some critical elements in successful third-party relationships are summarized.

Under the conceptual framework related to third-party logistics, the final part of the Chapter provides a sound understanding of China's third-party logistics industry. Through the analyses of the opportunities and challenges 3PL providers are facing, the section shows what could be the current situation of China's 3PL industry.

2.2 LOGISTICS

Logistics has been a vital function in today's business environment, but the notion of logistics is not a new idea in human society. Logistics activities were carried out by individuals thousands years ago, and the logistics management idea was involved in trading from ancient time. As Ballou (1992) mentioned:

“Although coordinated logistics management has not generally been practiced until recently, the idea of coordinated management can be traced back at least to 1844. In the writing of Jules Dupuit, a French engineer, the idea of trading one cost for another (transportation costs and inventory costs) was evident in the selection between road and water transport” (p.2).

Nowadays, the increasing complication of the business environment, in particular the growth of globalization drives more and more organizations to move their attention back to logistics management. Effective logistics management has been considered as a key opportunity to improve both the profitability and competitive performance (Lambert et al., 1998). Obviously, understanding the concept of logistics management would be an essential factor for companies to manage their logistics efficiently and effectively.

2.2.1 Define Logistics Management

There are a number of definitions of logistics management, and it is not easy to tell which one is the most suitable one. While these different definitions have arisen from different perspectives, they all try to explain the realistic logistics.

Actually, logistics is a term deriving from military. According to Webster's Revised Unabridged Dictionary (1913), logistics refers to the branch of military, through which the details of moving and supplying armies are arranged. A recent dictionary expands the definition of logistics as: “the branch of military science having to do with procuring, maintaining, and transporting material, personnel, and facilities (Webster’s New Encyclopedic dictionary, 1993, p.590). Clearly, from the military perspective, logistics refers to “the management of troops’ movement, equipments and supplies from one location to another” (Stroh, 2001, p.1).

In general, after this military term ‘logistics’ was introduced into the field of management. It is defined mostly as to manage the movement of products or items, and services in business environment. Stone (1968) refers logistics as the art and science of materials or products requiring, acquiring, distributing and maintaining in an operational ready condition for their entire life. The definition parallels logistics management with art and science, and it focuses on the requirements which are initiated from customer. Further, logistics activities are to acquire, distribute, and maintain the requirements, until the requirements are fulfilled. Also, it is concerned with ‘an operational ready condition’, which means to keep the whole process to be smooth through art and science management.

Some studies translate the fulfillment of requirements as managing the relationships between supply and demand. One definition defines logistics management as “the management of all activities, which facilitates movement and co-ordinates the supply and demand in the creation of time and place utility” (Hesket et al., as cited in Rushton et al. 2000, p.5). This definition focuses on supply and demand relationships. The purpose of logistics management is to smooth the progress of supply and demand, also to co-ordinate supply and demand according to the requirements of time and place. In other words, supply activities should be managed to meet demand requirements at the right time, and at the right place. Similarly,

Ballou (1992) defines logistics as the process to “get right goods or services to the right place, at the right time, and in the desired condition, while making great contribution to the firm” (p.6). Besides time and place utility, Ballou introduces ‘right goods, desired condition, and contribution to the firm’ in the definition, which clearly implies the involvements of quality and cost management in logistics management.

Recent studies focus on managing the flows of both material and information, as Christopher (1998) presents the definition of logistics management as

“The process of strategically managing the procurement, movement and storage of materials, parts and finished product inventory (and the related information flows) through the organization and its marketing channels in such a way that current and future profitability are maximized through cost-effective fulfillment of orders” (p.4).

The most attractive point of this definition is the introduction of flow concept and information management. The definition puts emphasis on managing the flows of material and related information as well as logistics activities. The flows would be managed throughout the organization and its marketing channels. Meanwhile, the definition points out that the objectives of logistics management are to maximize profit through cost-effective fulfillment.

To standardize the definition of logistics management, the Council of Logistics Management summarized logistics management as: “the process of planning, implementing and controlling the efficient, cost-effective flow and storage of raw materials, in-process inventory, finished goods and related information from point-of-origin to point-of-final consumption for the purpose of conforming to customer requirements” (Lambert et al., 1998, p.3) As a summary, the definition highlights the main features of logistics: firstly, it is concerned with managing flows

of materials and information; secondly, its scope spans from point-of-origin to point-of-final consumption, which means that the flows are managed from raw materials to finished goods; thirdly, the definition identifies the objectives of logistics management, i.e., to gain cost-effectiveness and achieve high levels of customer service.

With the development of logistics and supply chain management (SCM), the logistics definition has developed from a standpoint of logistics to an overall supply chain perspective. For the purpose of differentiating the definitions of logistics and supply chain management, The Council of Supply Chain Management Professionals (CSCMP), originally the Council of Logistics Management (CLM) redefines logistics management as: “a part of the supply chain process that plans, implements, and controls the efficient, effective flow and storage of goods, services, and relative information from the point-of-origin to the point-of-consumption in order to meet customer requirements” (The Council of Supply Chain Management Professionals, n.d., para.3). The definition summarized the similar contents as that of previous studies; the only difference is the emphasis that logistics is a part of SCM, which clearly tells the difference between logistics and SCM.

To clarify the boundaries of logistics, CSCMP also summarizes the typical activities of logistics management in the following list, inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfilment, logistics network design, inventory management, supply/demand planning, and management of third-party logistics services providers. The logistics function also includes sourcing and procurement, production planning and scheduling, packaging and assembly, and customer service. Logistics management is an integrating function, which coordinates and optimizes all logistics activities, as well as integrates logistics activities with other functions including marketing, sales manufacturing, finance, and information technology. Obvious, logistics management is involved in all levels of planning and execution, from strategic level, to operational and to tactical

level (The Council of Supply Chain Management Professionals, n.d.).

The above definitions of logistics management are introduced at different time periods and from different perspectives, and it is hard to tell which of them is most appropriate, as these definitions represent the different phase of logistics development. However, the same objectives inbuilt in these definitions are to maximize the total profitability through reducing logistics costs, improving customer service by meeting customer requirements. Overall, logistics management means to transfer the materials or goods efficiently from the source of supply to the place of demand, which focuses on cost-effectiveness and customer service.

2.2.2 Objectives of Logistics Management

Based on the different definitions of logistics, it is not very difficult to find that logistics is responsible for managing the flow of materials and information through a supply chain. Effective logistics management can help companies to achieve three objectives: cost reduction, capital reduction and service improvement (Ballou, 1992). Logistics was viewed as a narrow function in business, in which the activities involved are only simple storage and delivery, having no connection with business success. However, this mindset has changed today. With the development of the economy and globalization, companies are facing more competitive pressure than ever before. Trying to maintain their competitive position among their competitors, companies have to reevaluate the role of logistics. Like Stock and Lambert (1992) point out that as the levels of domestic and international competition and customer demands have increased, firms have searched for ways to gain cost and differential advantage. As a result, logistics has been recognized as not only a critical business function but also effective competitive strategy.

Companies have realized that logistics can be used as an offensive weapon to create a sustainable competitive advantage in the marketplace (Stock & Lambert, 1992). Attitudes towards logistics have changed dramatically in recent years. It has been

recognized that logistics provides a very positive contribution to the value of products. Rushton et al. (2000) emphasize that logistics becomes increasingly important these days, because many products would not be sold on the basis of their brand name alone but also on the basis of availability and price.

Having realized the importance of logistics management, a number of authors have concluded logistics objectives in different terms such as: objective, mission, and aim. Christopher (1993) appropriately summarizes the objective of logistics as a mission “to plan and co-ordinate all those activities necessary to achieve desired levels of delivered service and quality at lowest possible cost” (p.15). Taylor (1997) simply and directly identifies that the fundamental objectives of logistics are to improve customer service and reduce logistics costs. Through these two objectives (improved customer service and reduced supply chain costs), logistics can be the main factor contributing to corporate performance. Waters (2003) claims the overall aim of logistics is to achieve high customer satisfaction, which means providing a high service with low costs.

Obviously, the objectives of logistics have significant affect on competitive advantages achievement. The ultimate purpose of any logistics system is to satisfy customers (Christopher, 2005). Companies can achieve competitive advantages through providing desired customer service at lowest cost.

2.3 LOGISTICS AND CUSTOMER SERVICE

Customer service is a broad concept in the business environment, and it has been viewed as an essential factor in marketing strategy. Customer service has been defined as “a customer-oriented philosophy which integrates and manages all elements of the customer interface within a predetermined optimum cost-service mix” (La Londe & Zinszer, 1976, p.5).

Customer service has been an increasingly important focus for management, as it

creates added value for both the companies and their customers (Christopher 1992). Effectively utilized customer service is a primary variable that brings significant impact on creating market demand and retaining customer loyalty (Ballou, 1992). The impact can be enduring, leading to longer term customer relationships, improved customer retention and finally greater profitability (Christopher 1993). For many companies, customer service is likely to be a key way to gain competitive advantage (Fuller et al., 1993). The customer service discussed here is a business process or philosophy rather than an activity only. It refers to the efforts initiated by sellers, added value to buyers, and increased customer satisfaction and loyalty (Donaldson, 1995)

After evaluating 16 variables of customer service which are rated as most important by end users, Sterling and Lambert (1987) discover that ten of the variables are physical distribution customer service variables. Further, they conclude that logistics customer service (distribution customer service) is an integral and necessary component of the marketing mix, which offers a significant opportunity for companies to gain differential advantage. Customer service in logistics management mostly refers to the speed and dependability of dealing with an order from customer, and made products available for the customer (Ballou, 1992). The customer will be satisfied through the provision of 'time and place utility' in the process of delivering products or services from seller to buyer (Christopher 1993). Time utility is the value added by having a product or service when it is needed; and place utility means having the product or service available where it is needed (Stock and Lambert, 2001).

Based on the definitions and objectives discussed above, it can be found that logistics affects the time utility and place utility directly. The primary task of logistics customer service is providing and delivering products and services to customer (Sadler, 2007). In other words, through logistics management, companies can get right products needed by customers to the right place at the right time. To sum up, Sadler (2007) defined logistics customer service as "the process of providing goods,

information and services to customers in a way that both creates customer satisfaction and is cost-effective to the supplier” (p.71).

Customer service is the major output of the logistics system (Stock and Lambert, 1992). Different companies have different customer service requirements, which results in different customer service levels. A proactive logistics strategy often begins with the business goals and customer service requirements (Ballou, 1992). In other words, the starting point for any logistics project should be a clear definition of the customer service standards (Taylor, 1997).

Good logistics customer service supports customer satisfaction, which is the output of the entire marketing process (Lambert et al., 1998). Obviously, from the perspective of logistics management, customer service is the measure of how well the logistics system is performing in providing time and place utility for a product or service (Stock & Lambert, 2001). To be a ‘world class’ corporate, companies must provide high levels of logistics service to their customers. The knowledge of customer expectations and an understanding of the firm’s performance on logistics service are vital to the achievement of excellent service (Stock & Lambert, 2001).

While there is growing concern about logistics customer service, managers find it difficult to determine the level of service to provide (Levy, 1981). “One approach to setting customer service standards is to determine the importance of a number of services as perceived by the customers and then provide better service on those items considered to be most important” (Levy, 1981, p.87). The idea of customer service levels was developed by Gilmour afterwards. Based on a survey conducted among a range of manufacturing companies, Gilmour (1993) identifies the nine most important aspects of customer service as follows:

- On-time delivery;
- Order accuracy
- Price

- No product damage
- Ease of order placement
- Customer enquiry handling
- Quality
- Availability
- Order status information

However, the achievement of service excellence does not mean to achieve 100% customer service levels. As logistics customer service is the net result of the overall performance of all logistics activities, simply pursuing high service levels will be compensated by high logistics cost (Ballou, 1992). Regarding the high levels of customer service, Sadler (2007) suggests that: “The economic aim point of customer service level is a little below 100%, beyond this level, the extra benefit to customers is vastly outweighed by the huge extra cost of inventory, hours of opening, staff training and salary, etc” (p.72). Obviously, the exact service level to be achieved must be separately decided for each group of services or products, and different groups of customers.

In reality, however, motivated by cost reduction and efficiency improvement, many companies adopt a ‘one-size-fits-all’ service level when providing logistics services, which means to adopt an average service level to all customer. This average logistics service results over-service some customers while under-servicing others. As customers come in all shapes and sizes and have diverse logistics needs, companies should understand the differences in customer requirements and line up their logistics operations with customer segments based on these differences (Gattorna, 1998).

2.4 LOGISTICS AND COMPETITIVE ADVANTAGES

From the above literature reviews, it can easily be concluded that logistics can be an effective way helping companies to achieve competitive advantages. Firstly, the

objective of logistics management is to assist companies in achieving sustainable competitive advantages, through improved customer service and lower costs. Secondly, logistics customer service has been proven as an integral and necessary component of the marketing mix, which offers a significant opportunity for firms to gain differential advantage in the market place (Sterling & Lambert, 1987). Overall, logistics management “can provide a major source of competitive advantages -- in other words a position of enduring superiority over competitors...” (Christopher, 2005, p. 6).

Porter (1980) classifies competitive strategies into four types: pure cost leadership, pure differentiation, cost and differentiation and no competitive advantage. According to this well-recognized theory model, there are two central sources of competitive advantage: differentiation and cost. The cost leadership strategy focuses only on cost reduction. Trying to gain cost advantages, the pure cost leaders may offer only some basic services, which easily results in stronger competition, leading to less profit among the competitors. In contrast, companies adopting a differentiation strategy strive to differentiate their products or services from their competitors. Mostly, comprehensive and value-added services are provided to generate higher levels of customer service rather than providing simply basic services.

To implement Porter’s theory in logistics management, similar competitive strategy concepts have developed in logistics area. Shapiro (1984) suggests two generic modes of logistics operation: full service mode and low cost strategy. A ‘full service’ strategy attempts to provide full logistics services, in which one-stop and differentiated services are provided. On the other hand, a ‘low cost’ mode emphasizes competitive price achieved by disregarding offering customized services.

Rushton et al. (2000) also propose that companies can achieve competitive advantages through logistics. First, companies may compete as a service leader,

which means to gain an advantage over their competitors by providing a number of key logistics service elements to differentiate itself. Meanwhile, the companies may compete as a cost leader where it is trying to utilize its logistics resources to offer the service or product at lowest possible price. Some logistics leverages for pursuing the two competitive advantages have been summarized and are showed in Table 2.1.

To achieve value/differential advantage	To achieve cost/productivity advantage
The logistics leverage <ul style="list-style-type: none"> • Tailored service • Distribution channel strategy • Reliability • Responsiveness • Information • Flexibility 	The logistics leverage <ul style="list-style-type: none"> • Capacity utilization • Asset turn • Co-makership/schedule integration • Low inventory • Low waste

Table 2.1 *The two different approaches to gain competitive advantages.*

Based on: Rushton et al. (2000, p33).

Likewise, Christopher (2005) summarizes that “the source of competitive advantages is found firstly in the ability of the organization to differentiate itself, in the eye of the customer, from its competition and secondly by operating at a lowest cost” (p.6). The differentiation here refers to value differentiation or value advantage that means to add additional value to the products or services, so that companies can be distinguished in some way from their competitors. Low cost advantage here is addressed also as productivity advantage by the author. This implies that logistics management may provide a variety of methods to improve efficiency and productivity and therefore contribute to reduced costs.

Competition is always at the core of the success and failure of a firm. A company’s

competitiveness can be derived from achieving either a cost advantage or a value advantage, or ideally, both of them. The relationships of cost and value between a company, its competitor, and its customers, named the “Three Cs” relationship is illustrated as Figure 2.1

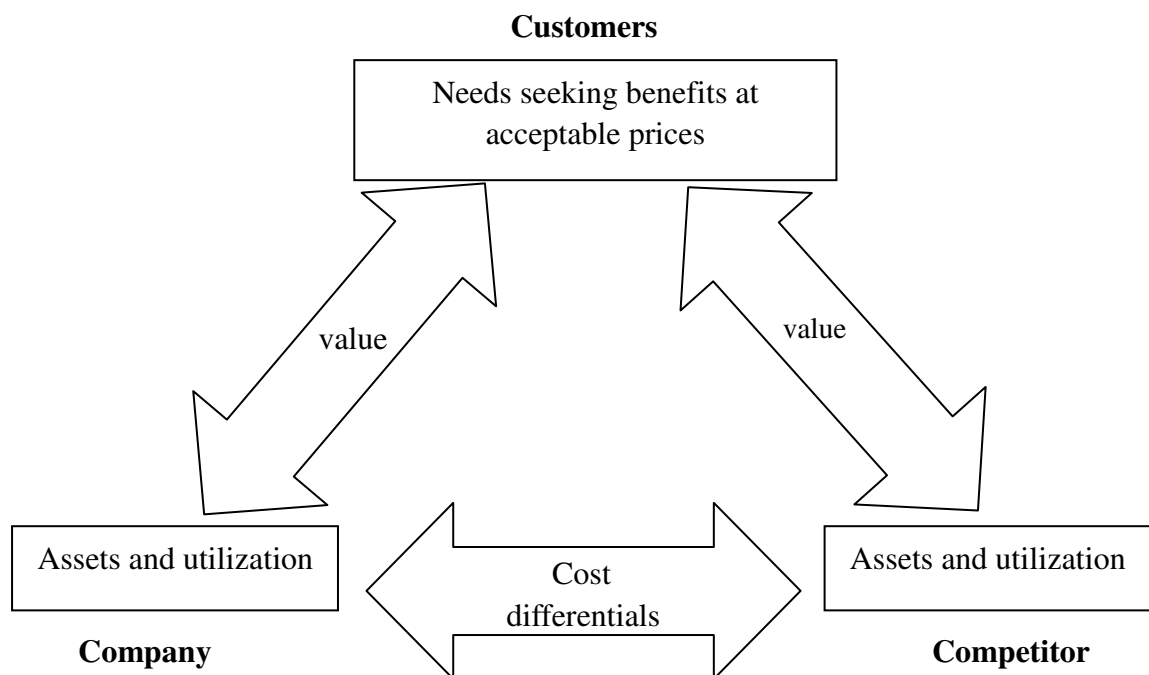


Figure 2.1 Competitive advantage and the ‘Three Cs’

Source: Christopher (2005, p.6).

Obviously, companies can gain competitive advantage through being a cost leader or a service leader. However, a most successful company would seek a competitive position depending on attaining both cost and differentiation advantages. Christopher (2005) creates a simple matrix that is illustrated in Figure 2.2. The implied method of the matrix can be a useful way for evaluating the possible options to gain cost and value advantages. In the matrix, commodity market refers to the companies, the products which are “indistinguishable from their competitors offerings and have no cost advantage” (Christopher, 2005, P.10). For companies in this category, the strategy that can be adopted is to move to the right of the matrix, to be a cost leader; or move upwards to be a service leader. However, the strategic aim of

those cost leader or service leader is to move to the top right corner of the matrix, to be a cost and service leader. Christopher emphasizes the last step that how to take the company to the top right of the matrix can be the biggest challenge to logistics management. The occupation of the position of 'cost and service leader' means the company has achieved both service and cost advantages.

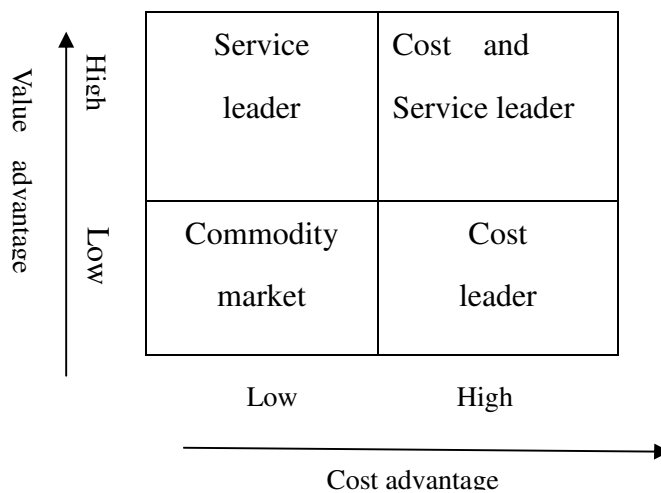


Figure 2.2 Logistics and competitive advantage

Source: Christopher (2005, p.10).

Having realized the strategic trend, companies also need to choose a suitable way leading them to the anticipated destination. Lewis (1990) proposes three possible ways for companies to accomplish their competitive strategies moving, namely, internal activities, acquisitions and strategic alliances. This means that companies can perform the activity internally to fit them competitively in both cost and service, but this may be hindered by limited internal resources. Also, the acquisitions of other possible business may meet their competitive strategy requirements. However, it needs great capital investment in general. The last choice is to set up alliances and partnership with these possible companies, which has been approved as an effective way of reducing cost and gaining opportunities to improve customer service.

From the viewpoint of logistics management, strategic alliances also offer a preferred

option for companies that have limited resources of logistics management and are eager to gain competitive advantages through logistics. The major participants in the logistics alliances are manufacturers, retailers and logistics service providers or third party logistics providers (Bowersox, 1990). A strategic alliance allows a company to take advantage of what it does well and enables it to seek partners who have strengths in other areas (Bagchi & Virum, 1998)

2.5 THIRD-PARTY LOGISTICS (3PL)

2.5.1 Define third-party logistics

The growth of intensive competition and complex business conditions force organizations to pursue competitive advantages and re-engine their business constantly. Outsourcing logistics to a 3PL provider has been viewed as an effective strategy for companies to achieve high service performance and lowest operating cost.

In a general sense, logistics outsourcing and third party logistics or contract logistics all mean the same business phenomenon that involves using external companies to perform logistics functions that have traditionally been performed within an organization. The functions performed by third parties can encompass the entire logistics process or any selected activities within the process (Bowersox, 1990; Lieb, 1992; Leahy et al., 1995).

On the basis of above definition, Lieb and Randall (1996) widen the definition to a more detailed extent, in particular, the term ‘third-party’ has been explained more clearly. The third-party logistics is defined here as:

“A company which supplies/coordinates logistics functions across multiple links in the logistics supply chain. The company thus acts as a ‘third-party’ facilitator between the seller /manufacturer (the ‘first-party’) and the buyer/ user (the ‘second-party’)... The functions performed by

the third-party can encompass the entire logistics process or selected activities within that process” (p.51).

Meanwhile, the authors refer to the third-party logistics as a new industry, and explain the differences between third-party logistics providers and ‘single function’ specialists such as carriers or warehousing companies. Generally, services offered by third-party logistics providers are much broader and typically involve some managerial responsibility. Also, these outside contractors perform logistics functions which in many instances, have historically been performed within the organization.

Widely usage of third-party logistics has drawn more and more attention from organizations. Fast changing business environment has placed higher expectations on third-party logistics. The usage of 3PL has to move from transactional stage to strategic level. Consequently, strategic logistics outsourcing has been considered as an effective way to rationalize business operations and improve the overall competitive position. This has been identified as the development of 3PL.

This new level of usage of 3PL has been defined as logistics alliances. Bagchi and Virum (1998) define logistics alliances as: “a long-term formal or informal relationship between shippers and logistics providers to render all or a considerable number of logistics activities for the shipper” (p.193). Under this arrangement, 3PL users and providers treat each other as long-term partners. Perhaps, these alliances may start with a narrow range of activities, but there is a potential for much broader cooperation and a set of value-added services.

Much literature has revealed that 3PL industry has developed on the basis of both time span and services expansion. By identifying the characteristic of 3PL providers in different period, Berglund et al. (1999) suggest that there have been three waves of the development of the 3PL participants. The first wave started from the 1980s or even earlier, with the appearance of traditional logistics providers, the activities usually involved only transportation or warehousing. The second wave dated from

early 1990s, when a number of network players, such as: DHL, TNT and FedEx started their logistics services. The third wave started from the late 1990s when a number of players from other areas, like information technology, management consultancy and even financial services started working with the original logistics providers.

Based on the services expansion, Aghazadeh (2003) concludes that 3PL originally appeared during the 1970s as public warehousing, when managers of warehouses began to sell space to business organizations during busy seasons. By the 1980s, 3PL has expanded into not only selling space but also offering physical distribution management for those who wanted to improve customer service (Tompkins, 1999). Since 1994, logistics services offered by 3PL providers have been changed dramatically in response to the needs of users. Most 3PL providers have expanded service scale and made relative decisions based on the particular customer needs, capital available, and what is available in the marketplace (Lieb, 2005). In recent years, with the dynamic changing and development of supply chain management, 3PL providers have moved their focus to strategy development (Hertz & Alfredson, 2003). 3PL providers have started to support logistics operations through value-added services and supply chain solution service, which creates abundant opportunities for companies to reduce costs and improve customer satisfaction (Knemeyer et al., 2003; Lieb, 2005).

These days, Third-party logistics providers currently provide a variety of services, ranging from basic logistics services to value added services. Rushton et al. (2000) identifies that the basic services offered by third party logistics providers vary from hiring a provision of single vehicle or a fleet of vehicles to complete single functional logistics operation, including storage, transport, management services, order processing and stock control. In addition to those basic services, other services offered by 3PL providers, are known as value-added services. Value-added service in logistics refers to the services that “add a lot of additional value to the products

being distributed” (Rushton et al. 2000). The major value-added services have been summarized by the authors as follows:

- Specialist or niche service, where the operation is specifically designed for a particular products
- Time reliable services, which are set up to support the just-in-time operations of major manufacturers
- Assembly, which is fulfilled by third-party distributor
- Repacking, which is another area of value added development, like a torch together with battery
- Refurbishment: in the light if current environmental legislation many manufacturers have endeavored to re-engineer their products so that parts from some used products can be reused in new products
- Packaging return: collect packaging for reuses or disposal (p. 62).

2.5.2 Drivers for 3PL Usage

Logistics outsourcing or 3PL usage has been identified as a common distribution channel and an alternative of logistics management (Rushton et al., 2000), and it has become an increasingly popular business strategy. Evidently, the current trend in logistics outsourcing or 3PL usage has grown dramatically. For instance, as shown in Figure 2.3, the 3PL providers industry in America has doubled from \$56.6 billion in 2000 to \$113.6 billion in 2006 (Anon, 2007).

The increasing trend towards logistics outsourcing implies there are numerous benefits driving organizations to be involved in this practice. One important reason for the growth of use of 3PL services is that all companies compete in logistically distinct businesses due to diverse customer needs. Such tailored or distinct services are provided more efficiently by integrated logistics services providers (Fuller et al., 1993)

During the 1980s, many organizations recognized that they could not effectively and

efficiently “do it all” themselves and still remain competitive. They began to look for third party specialists to perform those non-core business activities. This process is known as outsourcing, in which an organization hires an outside organization to provide a product or service which traditionally have been provided in-house. Logistics outsourcing may involve one or several 3PL providers, which offers opportunity for organizations to use the best logistics providers available to meet various needs (Lambert et al., 1998).

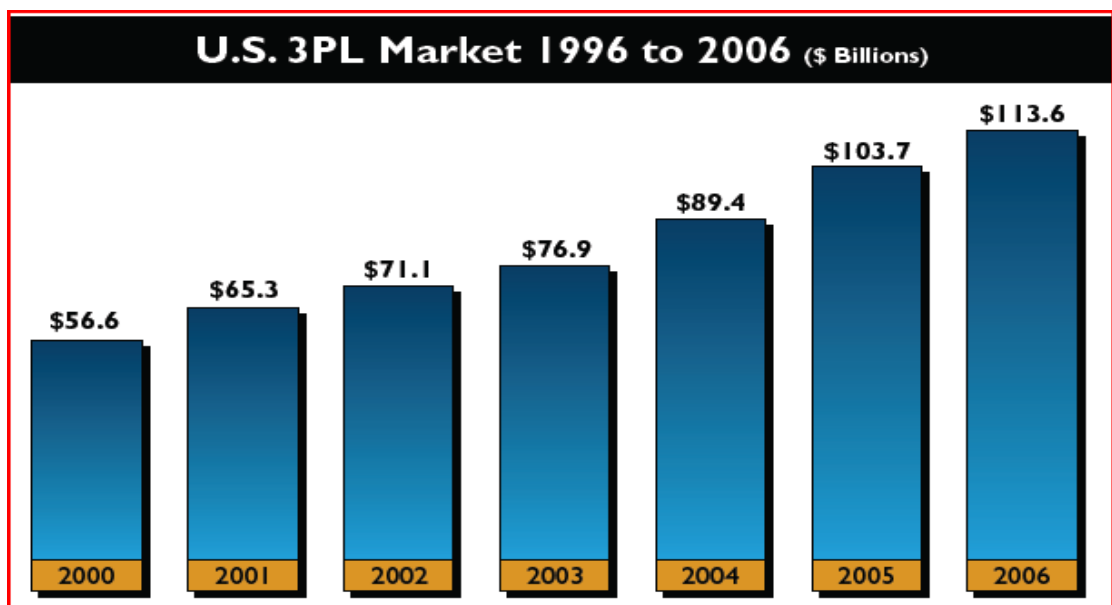


Figure 2.3. U.S. 3PL Market 1996 to 2006 (\$ Billions)

Source: Anon, (2007, p52).

A strategic logistics outsourcing or effective use of a 3PL allows a company to take the advantage of what it does well and enables it to seek partners who have strengths in other areas (Bagchi, et al., 1998). The purpose of using third party logistics services is not only for cost reduction, but also to gain a combination of service improvement and operation efficiency. While the primary drivers previously were to reduce costs and release capital, the driving forces today have a more strategic intent: to increase market coverage, improve the level of customer service or increase flexibility towards the fast changing customer expectation (Skjoett-Larsen, 2000).

From the viewpoint of benefits, Ballou (1992,) summarizes the general drivers for

3PL usage or logistics outsourcing:

- Reduce cost and lower capital requirements
- Access to advanced technology and management skills
- Improve customer service
- Gain Competitive advantage such as through increased market penetration
- Increase the accessing of information for planning
- Reduce risk and uncertainty.

Increasing growth in logistics outsourcing and 3PL usage has attracted great attention of researchers. The researchers from all over the world have conducted a number of studies regarding the reasons driving companies to choose 3PL service providers.

In America, Sheffi (1990) claims that the main motivations of US 3PL users include: the need to focus on core businesses, better transportation solutions, cost savings and improved services, access to necessary technological expertise and systems, and professional logistics services. Similarly, Zubrod (1990), Richardson (1990) and Foster and Muller (1990) also summarise a series of reasons for why companies choose logistics outsourcing, such as: focusing on the core business activities, gaining sophisticated technology, reducing resources utilizations, reducing facility investment, using the logistics expertise, receiving customized service, reducing overall inventory, penetrating new markets, and using logistics to gain competitive advantage.

In Europe, Gooley (1992) identifies gaining flexibility as one important reason for contracting logistics to a 3PL, which may result from the uncertainty in social environment. The uncertainty of environment also implies another driver of 3PL usage that is sharing and reducing risk and uncertainty. Dapiran et al. (1996) support the reason of 'gaining flexibility' from different point of view. Here, the flexibility means to gain mixed (partially owned) logistics system. They point out that partly outsourcing logistics functions can help the company to gain benefits in cost and customer service, provide a balanced and controllable operation, and thus

reduce the risk of loss of control.

Bhatnagar et al. (1999) identify the most important factors among Singapore 3PL users. The most important reasons for making decisions of outsourcing logistics are: cost savings, customer satisfaction and flexibility achieving. Also, some other reasons are viewed as substantially important in their decision-making process, including: improve productivity, focus on the core business, and access to up-to-date techniques and expertise.

According to a study from THIRD-Party Logistics (Organization) (2004) with regard to 3PL usage, the most obvious finding is the increased usage of 3PL providers. Meanwhile, the reasons for the need of using 3PL providers are mainly from the challenges faced by supply chain managers, such as: focus on improving supply chain management and customer service, a strong need to expand/improve service to new markets, continuously need to keep up with new logistics technology, and to reduce costs the ultimate concern.

In Saudi Arabia, based on a 3PL users' survey, Mohammed and Obaid (2005) conclude that through using contract logistics services companies experience multiple benefits. From their point of view, the main benefits, also the drivers for using 3PL providers are: cost reduction, improved expertise, and reduction in capital employment, improved customer service and more effective utilization of human resources.

Different from previous research on common uses of 3PL, Lieb and Bentz (2005) conduct a research about the drivers for reuse a 3PL provider among those who have used 3PL providers. The authors conclude that three most important reasons to drive American companies to renew their 3PL contracts are: service consideration, cost consideration, and reliability.

Furthermore, in India, Sahay and Mohan (2006) classify the reasons that drive Indian organizations to outsource logistics into three factorial categories. The first and the

primary factor is cost concern that focuses on logistics cost reduction. The second category related to the strategic intent for using 3PL providers, encompassing: focus on core competencies, access/expansion to unfamiliar market, and corporate restructuring. The third group is associated with improving supply chain efficiency, which covers the reasons like: improving customer services, increasing inventory turns, driving productivity improvements, achieving more flexibility in operations, and improving return on assets.

In contrast with the perception that cost reduction is the priority driver for 3PL usage, Arroyo et al. (2006) argue that cost reduction is not always the most important reason for the use of 3PL providers. This does not mean cost reduction is unimportant; at least, their investigation about Mexican firms shows that “improving the firm’s flexibility, customer service and the ability to focus on core activities seem especially important” (p. 658).

To sum up, the above literature has revealed the main reasons that drive organizations to outsource their logistics to 3PL providers. However, with the development of 3PL industry and the increasing demanding from end users, 3PL providers are facing significant challenges. These days, the expectation from 3PL users is not only simply to cut logistics costs, but also to integrate the 3PL services into their supply chain and reduce overall costs (Harrington, 1999). The new complex situation requires that 3PL providers must equip themselves with the ability of creating supply chain solutions. Hindson (2007) emphasizes that increasing logistics costs, international sourcing and production, combined with a growing sophistication in forecasting and planning techniques are changing the role of 3PL providers.

2.5.3 Drivers against 3PL Usage

Third-party logistics industry has exploded significantly due to the ability to deliver cost savings, improved customer service, flexibility, expertise and other benefits. Most companies today more or less use 3PL services, but there are still some nonusers and those who were 3PL users but have abandoned the usage. Rushton et

al. (2000, p. 65) present some reasons why some companies do not choose to use a 3PL provider:

- The third-party distribution leads to a loss of control over the delivery operation.
- The use of third-party leads to a loss of control over the company's logistics variables (this means that the company is no longer in a position to define the number, type or size of depots, or vehicle types and sizes etc.).
- 3PL may lack the experience of client companies' products and markets, although the growth in specialist distribution companies has helped to change this point of view.
- Service levels are poor among third-party distributors.
- The balance of power is shifted away from the user in favour of the contractor, as the contractor owns the systems and the distribution resources.
- There can be a problem trying to co-ordinate 3PL delivery service with a client company's sales service.
- The loss of direct influence at the point of delivery because the driver is delivering a number of different companies' products.
- A third part cannot guarantee brand integrity.
- There may be a problem with the confidentiality of information when using a third-party distribution service.
- There may be an issue with cultural incompatibility between contractor and client.

Mercer Management Consulting (2003) has conducted a survey among those who do not want to expand their uses of 3PL services. The survey focuses on identifying the reasons why the participating companies do not want to make further expansion of the 3PL usage. The survey results show that one-third of these companies believe they have necessary capability within their own company. Other reasons include: no confidence in service level, good service provider not available, not convinced of

benefits, too expensive, bad experience in the past, wrong concept/mindset, and lack of IT capabilities.

Since the fast development of third-party industry, many commentators and researchers have moved their attention to studying the reasons why some companies are against logistics outsourcing. Richardson (2004) identifies that organizations do not outsource logistics function because 3PL providers do not have the necessary comfort service level, and they fear lack of control over their logistics operation. Also, a study about logistics in UK conducted by Jaafar and Rafiq (2005) shows insight into the reasons against logistics outsourcing. The identified reasons include: logistics functions still manageable, fear of losing control, service not suited to product, service not suited to company's structure and size, costs are too high.

Moreover, the China Supply Chain Council (2005) and Arroyo et al. (2006) claim that 3PL usage is more popular in developed countries, such as in European countries and America, than in developing countries such as China and Mexico. In addition, Arroyo et al. (2006) identify the direct reason that companies do not use 3PL providers in Mexico is because the 3PL services in the country are expensive. Further, the authors disclose that lack of competent 3PL providers is the main root of such situation.

Furthermore, based on the 11th annual study of third-party logistics, an extensive study about 3PL usage in North America, Western Europe, Asia-Pacific, and Latin America, Langley et al. (2006) identify the most prevalent reason that prevents companies from using 3PL providers is that 'logistics is viewed as core competency at the respondent's company'. Some other reasons are: cost would not be reduced, control would weaken, service level would not be improved, having more expertise, logistics is too important to outsource, corporate philosophy reject logistics outsourcing, 3PL providers lack global capabilities, hard to form trusting relationships, and shipment security issues.

Langley et al. (2007) have conducted their 12th annual study of third-party logistics, and similar results are concluded about why companies do not use 3PL providers. Among the reasons, that ‘logistics is viewed as a core competency at our firm’ is still the most popular reason for the non-users. However, for those current 3PL users, the authors identify that although there is respectable level of success in 3PL using, some current users still complain about the use of 3PL providers. The list of frequently reported problems is shown in Table 2.2. Among the problems, service level improvements not realized, lack of ongoing improvements and achievements in offerings, and cost reductions not realized are the three most encountered problems. Obviously, these problems will hinder the development of 3PL industry, and directly affect the use of 3PL. To achieve high customer satisfaction and gain further development in logistics outsourcing, 3PL providers should focus on how to prove that they can do what they say they can.

Problem with 3PL Provider	All Regions	North America	Europe	Asia Pacific	Latin America
Service Level Commitments Not Realized	46%	43%	46%	46%	50%
Lack of Continuous, Ongoing Improvements and Achievements in Offerings	40	37	41	41	43
Cost Reductions Have Not Been Realized	35	37	37	34	32
Information Technology Capabilities Not Sufficient	35	38	31	38	33
Lack of Project Management Skills	33	31	35	36	31
Unsatisfactory Transition During Implementation Stage	30	34	28	33	21
Ineffective Management of Key Performance Indicators (KPIs)	30	28	27	31	39
Too Many Human Conditions Related Problems	29	30	23	32	34
Lack of Consultative/Knowledge-Based Skills	26	22	23	34	27
Lack of Global Capabilities	19	16	19	20	21
Lack of Business Process Integration Across Regions and Supply Chain Services	20	21	18	28	12
Inability to Form Meaningful and Trusting Relationships	13	15	13	13	12
Poor Post-Merger Integration of Acquired Companies	13	12	13	21	3
No Problems	13	17	16	5	15

Table 2.2. Continuing problems with 3PL providers as reported by customers

Source: Langley et al. (2007, p.38).

The above discussion about drivers against 3PL usage does not mean that the use of 3PL is a negative practice, in contrast, it indicates that there is plenty of room for 3PL providers to improve their services and strategies. Through providing more effective logistics services, 3PL providers will be the most important strategic partner of different business organizations.

2.5.4 Elements for Successful 3PL Relationships

Logistics outsourcing has developed dramatically and attracted more and more attention from organizations worldwide. A number of important factors are behind the growth of the phenomenon. The most critical driver for 3PL usage is the achievement of massive benefits. However, the precondition of achieving these benefits from using 3PL is the successful third-party relationships between providers and their users. Leahy et al. (1995) state that an impressive growth in logistics outsourcing is obvious; however the ability to sophisticatedly manage these third-party relationships will become a major factor of successful logistics outsourcing. Tate (1996) suggests: “A successful partnership is like a marriage” (p.7), which requires constant hard work from the parties involved. Both parties must understand each other’s needs, and must be compatible with shared values. With the growth of 3PL usage, how to successfully use third-party logistics has attracted many researchers interest.

After studying the development of third party logistics service in Europe, Virum (1993) identifies that information sharing is a crucial factor to successful relationships between providers and users. Through a thorough literature review of both academic and practitioner journals, Leahy et al. (1995) generate a list of twenty-five major factors which are mentioned frequently throughout the literature. From the authors’ perspective, these factors positively affect the successful third-party logistics relationship between providers and their clients. Among these twenty-five potential determinants of successful third-party relationships, the authors summarize that

customer orientation and dependability are rated as the most importance factors; in contrast, sharing human resources and exit provisions exist were assigned to the lowest importance. The list of these twenty-five factors along with appropriate definitions is shown in **Appendix 1**.

Likewise, Tate (1996) summarizes the main elements of long-term successful logistics relationships, including compatibility, a deep understanding of a partner's business needs, open communications, commitment, fairness, flexibility, and trust. Gulisano (1997) identifies the number one reason of unsuccessful third-party relationship is failure to include appropriate resources to manage the 3PL relationship. Other reasons the author addressed include no definitive statistics, 3PL providers is not delivering expected or promised results, and poor communication and information sharing between the parties.

Under an increasingly complicated and competitive business situation, it is becoming more common that the 3PL provider and its customers enter into a complex, strategic partnership. According to Bagchi and Virum (1998), as companies focus mostly on core competence and rest the logistics function on third parties, logistics partnerships or alliances will be the main driver to successful logistics outsourcing. Striving for an effective logistics alliance and excellent logistics partnership, companies have realized that cooperation based on mutual needs and expectations and clear communication are necessary. In other words, there must be an openness atmosphere, mutual trust, and a clear line of communication between customer and 3PL provider. Further, based on case studies, Bagchi and Virum (1998) identify six factors that are critical to the successful third-party relationships:

- Customer satisfaction is the heart of the relationship and should be the focus of all efforts. Customers need to articulate clearly their needs and wants. Providers have to understand these needs and acquire the necessary capabilities

- People are the most important assets in making an alliance work. They should be well-trained and motivated individuals dedicated to rendering excellent service and empowered to act
- Communication should be clear and preferably on-line. Expectations should be shared and surprises minimized. Cooperation between the parties for developing seamless communication is essential
- Continuous improvement should be the guiding philosophy
- Logistics providers must develop value-adding capabilities ultimately if they are to take over complete logistics responsibilities
- Alliances must achieve finite, measurable results. Alliances must achieve superior results. Results must be periodically benchmarked. (p. 211)

Obviously, 3PL providers are no longer viewed simply as commodity services providers. They have moved beyond that transactional level of relationship in which reducing warehousing or transportation costs is the main objective. Now, they have started to be involved in users' strategic level, and integrate their services into supply chain management and reduce overall costs throughout the whole supply chain. That elevates the 3PL-customer relationship to a strategic stage (Harrington, 1999). For 3PL users, simply putting 3PL providers between themselves and their customers is not enough, particularly in the era of increasingly changing demand from end customers, the willingness to collaborate with their 3PL providers seems necessary. The complex business environment drives logistics outsourcing; the real benefit, however, comes in a long-term and collaborative relationship. Simply speaking, it requires at least two or three years, when the service provider starts to understand client business and addresses further opportunities (Cooke, 2004). Similarly, the study from THIRD-Party Logistics (Organization) (2004) identifies the desire to move from tactical towards more strategic and collaborative relationships results in successful logistics outsourcing.

From the supply chain perspective, Langley et al. (2007) define the collaboration

between the 3PL provider and user as follows:

“Supply chain collaboration between a 3PL and a customer occurs when both organizations work toward a common set of goals and objectives, and when there is a meaningful exchange of information relating to planning, management, execution and performance measurement” (p.18.)

According to the authors, this kind of collaborative relationship thrives on the devotion of involved parties to share responsibilities of people, process and technology so that the overall business relationship can improve. The authors also emphasize that, to be effective, the collaboration process should involve not only 3PL providers and their customers, but also the customers’ customers and suppliers. The reality is that, 3PL providers are likely to be in a superior position in facilitating collaboration between a customer organization and its supply chain partners.

Further, based on their survey, Langley et al. (2007, p.24) also identify the main elements of this successful collaboration:

- Well-understood goals and objectives
- Trust and commitment
- Corporate compatibility
- Communication
- Shared decision making and ability to reach consensus on matters of importance
- Equitable sharing of gains, losses and investments
- Overall benefits to involved parties greater than could be obtained alone
- Effective measurements and dedication to process improvement
- Strategic plan for collaborative relationship

Having realized the critical situation and the new relationship requirements, 3PL users also need to make efforts to contribute to the success of the third-party relationships. Lieb and Butner (2007) identify the main barriers to collaborative third-party relationships as: a lack of top management commitment at using company; a common perception that the 3PL company is only a service provider, not a strategic partnership; a transaction based seller and buyer relationship, lack of necessary resources to support real collaboration; the problems associated with multiple contact points within the organization involving different organizational levels, geographies, or business units; lack of consensus on the importance of collaboration; lack of willingness to share sensitive information with the provider; change in leadership at user's organization; and lack of willingness to spend the time to develop such relationships.

2.6THIRD-PARTY LOGISTICS IN CHINA

With its Massive market opportunities and low labour cost, China has become the most attractive country for more and more foreign investments, manufacturers, and retailers from all over the world. This might be one of the major reasons that results in the fast growth of the Chinese economy. Rapid growth of manufacturing has been spurring the development of third-party logistics in China. The booming economy, entering the WTO and e-commerce, would affect significantly the development of the Chinese logistics industry (Jiang & Prater, 2002). China has become the hottest market for third-party logistics companies (Knee, 2003). A survey conducted among manufacturers by Lieb (2004) reveals that the most impressive growth in 3PL usage in China (46% in 2003; 63% in 2004) reflects the rapid economic growth of the country. The author also emphasizes that 3PL industry has achieved significant improvement in China.

At present, 3PL users in China encounter fewer problems in finding or using 3PL providers, while 3PL providers must deal with more and more price pressure,

increased customer expectations with respect to IT support, increased customer interest in outsourcing a broader range of logistics services, and formation of business alliances to strategic service offerings. Obviously, China's vast territory, the huge market and complex business environment present both enormous potential and immense challenges for logistics companies (CILT world, 2007).

2.6.1 Challenges in Chinese 3PL Industry

Although 3PL industry has developed drastically in China, there are still great gaps compared with that in western developed countries. For instance, the logistics infrastructure is still lacking, despite of the fact that Government has put great effort in its improvements and advancements (Goh & Ling, 2003). To some extent, the situation of 3PL industry in China can be understood through the following description of one director of UPS, "there are very viable small and mid-size logistics providers-niche players that are geographically specific and have very good relations with local customers- and there are the larger players, the multinationals" (Knee, 2003, p. 43). Hong and Chin (2004) describe the Chinese logistics market as in its infancy and it is quite different from the developed countries. Also Kerr (2005a) states that "the Chinese logistics industry remains in the primary stage of extensive development, leaving much to be desired in quality and benefits" (p.49).

Jiang (2002) identifies that the most obvious challenge in China comes from the government-controlled and wholly-owned providers are notorious for bureaucracy. Three other challenges also have been revealed by the author. First challenge is the unbalance developed logistics system in China. In general, firms in coastal Free Trade Zones (FTZs) have efficient and simple supply chains, and they enjoy the high quality services provided by world-class companies such as UPS. However, firms within inland regions are facing more complicated supply chain issues. Second challenge is historically formed local protectionism and unfair competition. Compared with foreign 3PL providers, the local 3PL providers have noticeable advantage that they have strong relations with local or central government. Finally,

there is lack of cutting-edge technical support. For example, lacking of the support of tracking tools, it is difficult to know where it is once a shipment has entered the railway system.

Like other developing countries, China is still weak in 3PL capability, especially lacking 3PL expertise in most areas of China. A professor from Michigan State University's Department of Marketing and Supply Chain Management describes that the infrastructure outside major cities is limited, and in these areas, there is lack of skilful expertise who knows how to work with the government or political system in the special Chinese environment (Richardson, 2004).

Through a survey, Hong et al. (2004) have found some serious problems hindering the development of China's logistics industry, including: lack of awareness of the logistics concept, inadequate infrastructure, undeveloped information network, lack of skilful specialists or managers, and some constraints from government restrictions.

Kerr (2005b) summarizes 10 key major challenges in Chinese logistics industry, namely: poor infrastructure, entrenched regulations, persistent bureaucracy and deep culture, poor training, outdated IT and communication technology, undeveloped domestic industry, high transport costs, antiquated warehousing, big imbalances between regions, and high domestic trade barriers. Likewise, when talking about outsourcing to China, Trunick (2006) points out that opportunity is obvious in China, however, logistics costs there are high in the form of long lead times, low reliability, as well as regulations and bureaucracy.

According to the 3PL users' study conducted by the China Supply Chain Council (2005), there are only 20% of the 3PL users consider 3PL as a "solution provider", in other words, 3PL in China need to be more professional and differentiate through providing a wide range of services. The survey also shows that the top three

logistics services outsourced to 3PL in China are transportation (over 30%), warehousing (15%) and custom clearance (12%).

A director, who leads the Beijing office of Mercer Management Consulting, points out that China requires different operating licences for different cities and provinces, and there is widespread levy of "illegal" charges, which go to local government (Kerr, 2005a). A survey conducted by Dai et al. (2005) identifies that the lack of unique government regulations, high toll charges and market competition chaos are the most constraining factors for logistics companies in China. For instance, widespread over loading practices of the small and low cost operators make it extremely difficult to compete with them on cost alone. Also, they identify the major reasons resulting in high transportation costs are high toll charges (about 20% to 40% of the total transportation costs), high damage rate because of poor packaging, and low visibility.

Kerr (2006) identifies that government regulation is still 3PL providers' biggest challenge. Further, the author recognizes that Chinese 3PL providers are continually challenged by a shortage of skilled logistics professionals in China. Meanwhile, the foreign 3PL providers from U.S. and Europe must continue to work hard on fostering relationships at many levels of government and business. The overall situations of 3PL industry in China has been described by a TNT manager as that "barriers are easing and restrictions are being lifted, but complicated licensing, local protectionism, and the lack of explicit and effective policies still pose big problems" (Kerr, 2006, p.72).

By the end of 2005, the Chinese logistics market had fully opened, which results in complete deregulation on distribution or logistics services. Consequently, foreign 3PL companies have more freedom to compete with Chinese 3PL providers, which also increases the competition and pricing pressure within the Chinese 3PL industry. Pennington (2007) identifies some factors of challenge affecting the Chinese 3PL industry:

- The corporate tax rate looks set to consolidate into one single rate by 2007 - current expectation to rise to 25% from 16.5%
- Some 57% of historic exports are sourced by MNCs in China, which has a short-term boost on employment but longer term implications for inflation
- Customer maturity in logistics sector
- Continued provincial competition by further expansions in Free Trade Zones (FTZs) and Bonded Logistics Parks (BLP)
- Further pressure to re-evaluate the Chinese Yuan against the dollar
- Further consolidation of the logistics sector: in 2004, nearly 50% of all SOEs (state-owned enterprises) lost money. (p.51)

Concerning outsourcing to China, an article from AICHEMA Worldwide News (2007) points out before exploring the huge potential of China's market, companies should be aware of some fundamental differences between China and most western countries. In China, the term "logistics" traditionally means only transport and storage. Logistic standards have not been established yet, and there is a lack of service providers, and IT systems for the planning and monitoring of supply chains. Likewise, CILT World (2007) states that foreign companies wishing to benefit from China's economic boom will face discouraging obstacles: the difficulties in obtaining the necessary government authorisations, security-related issues in China (such as cargo security and goods tracking).

Klein (2007) suggests that China has lower labour costs though, it has higher logistics costs. DiBenedetto (2007) claims that despite the fact that 3PL industry has gained a continuing expansion in China, its sketchy domestic road and rail network make the task of extending supply chains beyond the coastal regions more difficult and costly. Similarly, Tirschwell (2007a) supposes that inland transport has emerged as a critical challenge, as the focus of economic development in China has shifted from port cities and regions to the interior.

2.6.2 Opportunities in Chinese 3PL Industry

The enormous challenges discussed above also imply great opportunities for both Chinese and foreign logistics companies. There are still great potential towards third-party logistics outsourcing in China. Dai et al. (2002) have conducted a survey among Chinese and foreign 3PL providers in the Chinese market. The survey results show that both domestic and foreign 3PL providers regard China as a 3PL market with huge potential. Another survey conducted by The China Supply Chain Council (2005) shows that 56% of the respondents have used a third-party logistics provider (3PL), but this is much less than in other continents such as North America (79%) or Western Europe (76%). The results mean that there is plenty of room for the development of 3PL industry in China. Further, Kerr (2005a) presents a forecast of china's logistics development. As shown in Figure 2.4, China's logistics market was forecasted to grow at an average annual rate of 33 percent through 2007.

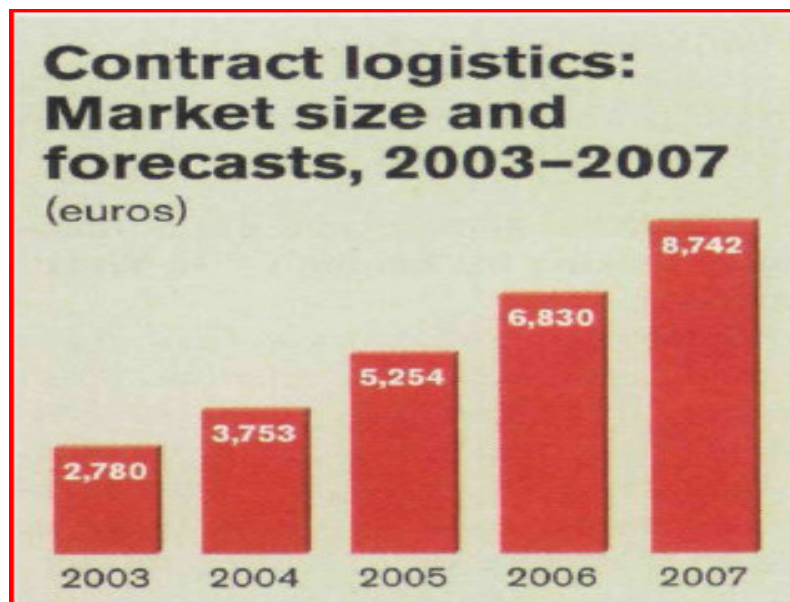


Figure 2.4. Contract logistics: Market size and forecasts, 2003 - 2007

Source: Kerr (2005a, p.52)

Undoubtedly, there is development potential for third-party logistics companies in Chinese market. According to Kerr (2006), China's logistics outsourcing industry is

growing at the rate of more than 22 percent per year. In the past three years, more than 70 percent of 3PL providers in China have achieved a sales growth rate in excess of 30 percent annually. Meanwhile, the Chinese government has paid more attention to the 3PL industry. A significant sign is that, logistics was pinpointed as a main focus for the first time in the government's 11th Five-Year Plan for 2006 through 2010. The government goal for logistics is to reduce the current logistics costs around 20 percent of GDP to the 10 or 11 percent of GDP.

Pennington (2007) summarizes some generally accepted facts of the logistics market potential in China:

- The average logistics component of a market product cost ranges from 7% to 15%
 - End-users' typical spend on logistics, as a percentage of GDR is nearly 2.5 times that in the USA
 - Logistics costs are around 20% of GDP
 - The estimated logistics market worth is currently around \$300 billion
 - Strong trade performance in import and exports has resulted in continued increases by around 30% in last three years
 - Outsourced third-party business is currently around 3% of total market worth.
- (p.50)

In addition to the above facts of current situation, Pennington (2007) also anticipates some future trends about logistics in China, such as logistics spending in China is anticipated to grow at 8.4% until 2010, and the outsourcing market rate will rise to 13% over the coming five years. All the above factors show that logistics in China is a new developing industry sector; the underdeveloped reality implies future developing opportunities.

From the macroeconomic perspective, there is no weakening sign in the growth of

China's economy. As DiBenedetto (2007) mentions, the growth in foreign investment in China is still forceful. Only in the first eight months of 2007, the foreign investment increased nearly 13 percent to \$42 billion. Similarly, in logistics industry, a number of multinational companies are keeping business expansion across the country, even to smaller cities and towns. Through acquisition, these multinational 3PL providers are establishing logistics networks and starting to serve fast-growing segments of the Chinese middle class and small and medium-sized businesses.

Meanwhile, Chinese government has made great efforts to improve the main logistics infrastructure in order to enhance the overall logistics capacity. For instance, in 2006, Chinese ports handling capacity reached about 100 million TEUs (Tirschwell, 2007b). This annual handling capacity will reach 6.1 billion tonnes, and the container handling capacity will be 120-140 million TEU by 2010 (CILT world, 2007). However, these big amounts of containers are transited mostly by road mode; only around 2 percent of China's container traffic moves via rail. This should be one of the reasons why the cost of logistics in China represents 22 to 24 percent of gross domestic product. Compared with that the costs of logistics are about 8 to 10 percent of gross domestic product in North America and Europe, there is really plenty of room for logistics developing in China (Tirschwell, 2007b).

The fast growth of ports handling capacity means that China has become the critical manufacture and trading centre of both Asia and the whole world. As a result, the logistics industry has inevitably played an important role in Asia. According to DiBenedetto (2008), most of the logistics activity in Asia is concentrated in China, around Shanghai (Yangtze River Delta), Shenzhen and Hong Kong (Pearl River Delta), and Beijing-Tianjin (Bohai Bay area). The boom around these coastal areas reveals the imbalance development through the whole Chinese logistics industry. With the shifting of developing policy from modern coastal cities and regions to the hinterland, the Chinese government has paid more attention to the development of

logistics infrastructure and networks in inland regions. As a result, the road and air networks accessing to inland regions are getting progressively better (Jacoby and Yang, 2008). It provides not only reliable environment for foreign investment, but also great opportunities for both Chinese and foreign logistics service providers.

2.7 SUMMARY

This chapter has reviewed the literature ranging from some basic definitions of logistics and third-party logistics, to those important logistics management elements such as objectives of logistics, customer service, and how successful 3PL relationships operate. Based on these conceptual frameworks, literature relating to the Chinese 3PL industry was also examined. The reviewing of the opportunities and challenges of the Chinese 3PL industry really presents the basic understanding of the current situation both domestic and foreign 3PL are facing in China.

From the literature review, it is easy to identify that the Chinese 3PL industry indeed has attracted a number of researchers' attention. These previous studies have investigated the phenomenon from different facets, and to some extent, the studies have shown their respective perception about the Chinese 3PL industry.

However, the previous research has investigated the different aspects separately, and most of them were conducted through survey. The results certainly provide only some broad and rough pictures of the Chinese 3PL industry. Also, none of these studies focus on using a qualitative method to investigate the situation the Chinese 3PL companies are facing, and the competitive strategies they are pursuing to compete in the current situation.

To fill the gap and gain a improved understanding of the current situation the Chinese 3PL companies are facing, the present study is designed as a qualitative research, and multi-case study is the main research strategy.

CHAPTER THREE

RESEACH DESIGN AND METHOD

3.1 INTRODUCTION

The design and method of this research are described in this chapter. The research was conducted mainly based on the strategy of case study. The following part of this chapter, the **Section 3.2** indicates the research paradigm adopted in this study. **Section 3.3** discusses the overall research methodology, in which case study method is described as the main research strategy of this study. Multi-case study is chosen as the final research method. Data collection method is discussed in **Section 3.4**. Under the principle of multiple case studies, questionnaire, telephone interviews and archive searching were adopted as the instruments for data collection. In **Section 3.5**, data analysis method and procedures are presented. Both within-case analysis and cross-case analysis are selected as the overall framework of data analysis. Meanwhile, content analysis is the main method for qualitative data analysis throughout the process of data analyses. Issues about validity and reliability are discussed in **Section 3.6**; **Section 3.7**, the final section, explains some ethical issues that were considered during the whole process of the study.

3.2 RESEARCH PARADIGM

The term paradigm refers to “the progress of scientific practice based on people’s philosophies and assumptions about the world and the nature of knowledge; in this context, about how research should be conducted” (Collis & Hussey, 2003, p.46). In other words, it is usually used to specify the methods and techniques that should be adopted when conducting research. It offers a framework providing an acceptable and basic set of theories, methods and ways of defining data (Collis & Hussey, 2003).

This study was conducted by following a phenomenological or qualitative paradigm

that "assumes that social reality is in our minds; a reaction to the positivistic paradigm. Therefore, the act of investigating reality has an effect on that reality and considerable regard is paid to the subjective state of the individual" (Collis & Hussey, 2003, p.352). The basic features of the two main paradigms, positivistic and phenomenological are showing in Table 3.1.

Positivistic paradigm	Phenomenological paradigm
Tends to produce quantitative data	Trends to produce qualitative data
Uses large samples	Uses small samples
Concerned with hypothesis testing	Concerned with generating theories
Data is highly specific and precise	Data is rich and subjective
The location is artificial	The location is natural
Reliability is high	Reliability is low
Validity is low	Validity is high
Generalizes from sample to population	Generalizes from one setting to another

Table 3.1. Features of the two main paradigms

Source: Collis and Hussey, (2003, p.55).

The features of the phenomenological or qualitative paradigm are critical for the further research methodology and technique selections. Also, inductive logic or emergent theory strategy was used throughout the research, in which "theory is developed from the observation of empirical reality; thus general inferences are induced from particular instance" (Collis & Hussey, 2003, p.15). The study started with initiating the research questions, which was used as guidance for the data collecting and analyzing. The researcher interpreted the data subjectively from both Chinese and logistics point of view.

3.3 METHODOLOGY

Methodology is the core part of the research design, which presents the basic structure for scientific research, also offers rules and criteria to data collection and analysis. According to Nachmias and Nachmias (1996), “a scientific methodology is a system of explicit rules and procedures upon which research is based and against which claims for knowledge are evaluated” (p.13). Briefly, the methodology helps to define the “rules of the game”. In other words, the methodology is an overall approach adopted throughout the research process (Collis & Hussey, 2003). To reflect the assumptions of phenomenological or qualitative paradigm, a case study strategy was chosen as the overall framework methodology of the research, also qualitative approaches were adopted in data collection and analysis.

3.3.1 Case Study Strategy

Originally, the research was designed as a questionnaire survey that aimed to understand simply the current situation of Chinese 3PL providers, and the research questions were designed to explore what kinds of services Chinese 3PL providers are providing. However, according to current literature review, previous studies have provided relatively clear outline of services provided by Chinese 3PL. For example, in one research of Chinese 3PL providers, Hong, Chin, and Liu (2007) have identified the basic services that Chinese 3PL providers are providing currently, such as transportation, warehousing, distribution and information management and some value-added service. Also, the information of the basic services Chinese 3PL providers are providing can be gained through browsing websites of these companies.

Based on the literature review, the purpose of the study was finally refined to gain understanding of current situation of Chinese 3PL providers, especially to focus on the competitive strategies pursued by Chinese 3PL providers. Consequently, the research questions were moved to focus on the competitive advantages pursued by Chinese 3PL providers. The refining of research purpose and questions resulted in

the changing of research methodology, i.e. from survey to case study. The case study method is finally considered as the most appropriate strategy for this study. Through the current research, a clearer understanding of what the exact competitive strategies the 3PL providers are pursuing and how these strategies can help 3PL users to maintain their competitive advantages has been gained

A case study is an extensive examination of a single instance of an interested phenomenon (Collis & Hussey, 2003). A detailed definition is concluded by Yin (2003) as: “A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between objective of study and context are not clearly evident” (p13).

In a simply way, Yin (1991, p.23) considers a case study as an empirical inquiry that:

- Investigates a contemporary phenomenon within its real-life context; when
- the boundaries between phenomenon and context are not clearly evident; and in which
- multiple sources of evidence are used.

As mentioned before, the phenomenon in this study is mainly about the competitive strategies pursued by the Chinese third-party logistics providers, which is an example of a contemporary event in the real time business context. There are no clear boundaries between the phenomenon and the context surroundings such as economic environment, location of the 3PL providers, government policy, even oil price in international markets. As the situation of Chinese 3PL providers and its context are relatively complex, multiple sources of evidence are necessary for gaining deep understanding of their competitive strategy.

The research questions are initiated mainly to investigate what is currently happening to Chinese 3PL providers. For example, what kind of information systems are they

adopting? What competitive strategies are Chinese 3PL providers pursuing? According to Yin (1991), “what” questions are exploratory, and this type of question is a justifiable rationale for conducting an exploratory study.

Overall, the case study approach was chosen because of the following factors: firstly, third-party logistics is a prevalent event in today’s business environment. Secondly, the context surrounding third-party logistics is diffuse and complicated. Especially in China, 3PL industry is still in its starting stage and facing more challenges than that in mature market or developed countries. Thirdly, the case study method allows research to deal with a variety of evidence, ranging from documents and archival records to interviews and observations or any combination of these. 3PL is a new industry and a new concept to Chinese market. While there are hundreds of thousands so-called 3PL providers in China, it is hard to identify and select a suitable sample for the study. From the researcher’s point of view, it is difficult to fulfil the study with a single source of evidence. Finally, the case study strategy requires only a small size of sample.

3.3.2 Multiple Case Study Selection

Similar to a statistical sampling, case selection is an important and difficult part of the research design. However, the objective of the case selection is not to achieve a statistical generalization that generalizes theory from a studied sample of a large population. In a case study, it is not necessary to find a representative case or a set of cases. The aim of the case selection is to determine the minimum size, through which the research can achieve a satisfactory level of confidence in the results (Angot & Milano, 2001).

Case studies can be single or multiple-case designs. The current study is designed as a multiple cases study. According to Yin (1991), the distinct advantage of multiple-case study in comparison to single case study is that “the evidence from

multiple cases is often considered more compelling, and the overall study is therefore regarded as being more robust” (p.52). The multiple cases should be considered as multiple experiments that follow replication logic, not sampling logic. Under the replication logic, “each case must be carefully selected so that it either (a) predicts similar results (a literal replication) or (b) produces contrary results but for predictable reasons (a theoretical replication)” (p.53).

Cases for a study is neither a random selection, nor the selections of the most convenient and accessible cases. The case selection process must incorporate with the specific reasons why the researcher needs the particular cases (Yin, 1991). In the present study, Chinese 3PL providers are the study objects, and the study is focusing on the competitive strategies Chinese 3PL providers are pursuing. However, as mention earlier, there are hundreds of thousands of 3PL providers in China, a rational criteria for case selection is necessary and critical for the overall completion of the research.

In China, the third-party logistics providers are quite different from each other. Most of them are very simple and immature and can provide only some basic and single logistics services, such as transport, distribution, or warehousing; some of them even do not clearly understand the concept of 3PL. As ‘competitive strategy’ and ‘competitive advantage’ are the main focuses of the study, some more mature 3PL providers fit in this study. Consequently, the top 100 Chinese logistics companies were chosen as the main sources of the case selection. The overall case selection process was on the basis of the following criteria or reasons:

- The selected cases are limited in the scope of Chinese third party logistics providers; foreign third-party logistics companies and joint-ventures are excluded.
- The chosen companies can provide multi-functional or diversified logistics services, such as transport, warehousing, distribution, and supply chain

solution; the single logistics service providers are not the object of this study, although they are 3PL providers;

- The services of the 3PL providers mainly focus on providing products or goods logistics for business such as manufactures and retailers;
- The big national-owned logistics companies, such as China railway, China post, and China Ocean Shipping Group, are not included in, because they are government monopoly logistics companies, in which the strategies may be affected by monopoly.

Based on the list of 2005 top 100 Chinese logistics companies and above criteria, the candidates of the case study were selected through case screening, which was conducted mainly through internet browsing. During the process; some basic but sufficient data were collected for the use of judging which case can meet the pre-established criteria. After the first stage of screening, there were 48 companies qualified. A further screening step was taken through further careful investigation on the candidates' websites, and this time the judgement was based on some new developed criteria such as: is there rich information in their websites? Can the candidate company be contacted? Consequently, 18 of the 48 companies were considered likely the eligible candidates for further investigation. From these 18 candidates, three were finally selected, which was based on the consideration of the willingness and information accessibility of the candidate companies.

3.4 DATA COLLECTION

The unique strength of the case study strategy is its ability to deal with a full variety of evidence. Yin (1993) identified that the use of multiple sources of evidence is a critical principle for data collection in case studies. The multiple sources of evidence allow investigators to address broader range of historical, attitudinal, and behavioural issues. The most important advantage of using multiple sources of evidence is to help the investigators to deal with the problems of establishing the

construct validity of their case studies. The best way to gaining multi-sources evidence is to combine data collection methods such as archive searching, interviews, questionnaires and observations (Collis & Hussey, 2003).

Under the qualitative research paradigm, the data collection in this study certainly focused on qualitative data, and both primary data and secondary data was gathered. To take the advantage of using multiple sources of evidence, the data collection of present study was designed to use the combination of the following three instruments: questionnaire, interview, and archive searching. The questionnaires were sent out by email, the interviews were completed through telephone, and the archive searching was mainly through the Internet browsing. Due to the time and budgetary constraints, the data collection was conducted in New Zealand, although the research was focused on investigating China's 3PL industry.

Before the data collecting, a case study database was created for the use of organizing and documenting the data gathered for the case study. The main motivation for the development of the database is that "every case study project should strive to develop a formal, presentable database, so that in principle, other investigators can review the evidence directly and not be limited to the written case study reports" (Yin, 1993, p. 102). The database was classified by both company name and data characters, and it comprised the following categories:

- Questionnaire feedback
- Interview records
- Interview transcripts
- Information retrieved (from companies' website)
- News and articles (about the companies, retrieved from other websites)

3.4.1 Questionnaire

According to Collis and Hussey (2003), a questionnaire is “a list of carefully structured questions, chosen after considerable testing, with a view to eliciting reliable responses from a chosen sample” (p.173). Although the questionnaire is used greatly by the survey strategy, it also can be used in case study strategy (Saunders et al., 2003). The overall aim of the questionnaire is to find out what selected participants do, think or feel (Collis & Hussey, 2003). Unlike in a survey study, the questionnaire in this study was used as one of the data collecting methods for multiple evidence requirements. Its main purpose is to collect some primary data about some basic information of the case study companies. In addition, it was used as a step in case screening process, from which the final case study companies were selected and some primary data were collected.

The questionnaire comprises three sections. The first section focused on some basic information of the company. The second part dealt with current situations of the company, in which, the questions were designed to gain the information about current services provided, information system used, contract contents, contract length and performance measurement; also, some basic knowledge about competitive advantages such the attitudes towards both cost and service strategies were included. The third section concerned the competitive situations Chinese 3PL providers are facing. The questions focused on gaining information about competition in China’s logistics market, main competitors of the companies, the strengths and weaknesses of the participating companies, and the opportunities and threads considered by them. Overall, the questionnaire was adopted as one of the three instruments of the data collection, and the purpose of the questionnaire was to gain some fundamental understanding of the companies studied.

The questionnaire was designed firstly in English version which has been attached as **Appendix 2**, and then translated into Chinese version. Before sending out to the

case study candidates, it was reviewed by a Chinese 3PL expert, which ensures the translation more appropriate and understandable for Chinese 3PL providers. The six-page questionnaire in Chinese was emailed to the candidate companies. Accompanied with the questionnaire, an introductory letter was also delivered, explaining the purpose of the study and some basic information about the researcher and the study. The introductory letter is shown as **Appendix 3**. To avoid that the emails might be treated as junk-mail, the researcher contacted all candidate companies individually through telephone before emailing the questionnaires to them, and ask for permission for the questionnaire delivery. Also, for those who did not response, further telephone reminder contacts were made two weeks after the date when questionnaire was sent out.

3.4.2 Interview

The interview is “a method of collecting data in which selected participants are asked questions in order to find out what they do, think and feel” (Collis & Hussey, 2003, p.167). It seems to be a purposeful conversation or discussion between the investigators and participants, through which the investigator can gain deep understanding about the interested events. The use of the interview can help investigators to gather valid and reliable data related to their research questions and objectives (Saunders et al., 2003).

Interviews can be associated with both quantitative and qualitative methodologies, and have been widely used in case study research. According to Yin (1994), the interviews may take a number of forms; however, the open-ended interview is the most common method in case studies. In an open-ended interview, a researcher can ask key respondents for the facts of an event as well as for the respondents’ opinions about the event. In some situations, researchers may even ask the respondents to propose his or her own insights into certain occurrences and may use such propositions as the basis for further inquiry.

The interview in this study was designed as one of the instruments for collecting multiple sources of data. The main purpose of the interview was to gain deep understanding about the situations of the participating companies. Trying to gain insights into 3PL situations in China, a semi-structured interview method was chosen in the study. The semi-structured interview has been considered to be more appropriate to the situations where the questions are complex or open-ended, and where the order and logic of questioning may need to be varied (Saunders, et al. 2003).

Before data was collected, a list of interview questions was proposed on the basis of the literature reviews discussed earlier. Open-ended questions were designed to cover the main themes that related to the strategies pursued by the participating companies. The questions were designed to focus on how the 3PL providers deal with their customer during the operation process, such as: how to develop and start doing business with a new customer, how to manage current customer project, how to deal with different customers, and how to satisfy the requirements of their customers. The purpose of the design was to identify the themes related to the achievements of both cost and service advantages. The completed interview question list is shown in **Appendix 4**.

The consideration was given to what forms the interviews would be, one-to-one or one-to-many, in other words, to choose an individual-based or a group-based interview. According to Saunders et al. (2003), the interviews may be conducted on a one-to-one basis between the researcher and a single participant; such interviews are normally conducted by meeting participants face to face, and for some situations, one can conduct an interview through telephone. In consideration of the researcher's time, cost constraints and the manipulating power of the willingness of the participants, the study adopted the one-to-one telephone interview method.

The open-ended and semi-structured interviews were conducted with all the final

three participants individually; while the time spent in each interview was only about 40 minutes, the whole procedure lasted about one month. The reason is that all the interview participants are top level managers who are busy all the time. It is difficult for the researcher to find suitable time and manipulate the overall interview process in a remote distance.

The interviews were carried out in Chinese, and the candidates were questioned following the guidance of the question list. During the process, the list was used only as a framework to direct the interviews, and the questioning processes varied from interview to interview. For example, the order of questioning varied depending on the particular situations of the conversation. All the interviews were recorded with a digital device, and then the recorded materials were transferred to the researcher's computer and saved in the case study database. Further, the recorded materials were transcribed and saved as interview transcripts for the future data analysis.

3.4.3 Archive Searching for Secondary Data

In research, secondary data refers to the data collected by others rather than by the investigators themselves. According to Nachmias and Nachmias (1996), the use of secondary data for scientific inquiry has been a growing trend in the last few years. These increased uses would attribute to the advantages of secondary data. The main advantage of using secondary data is “the numerous saving in resources, in particular your time and money” (Saunders et al. 2003, p.200). Moreover, it can be useful to compare data that investigators have collected through other methods. Further, “re-analyzing secondary data can also lead to unforeseen or unexpected new discoveries” (Saunders et al. 2003, p.201).

Secondary data are mostly used in case study and survey-type research, especially within business and management research; and the secondary data can be collected from various sources, such as: journals, newspapers, company records and documents,

government or industry statistics, and publications. Meanwhile, the Internet has been considered as a useful technique for locating the secondary data (Saunders et al., 2003).

The secondary data was used in the present study, including company introduction, company history and development, documentary, news, articles, and transactional case studies. These secondary data were gathered through frequently browsing the company websites, and some of the data was documented in the research database for the use of data analysis. The following company websites were mainly and continuously accessed sources throughout the research process.

- P.G. LOGISTICS CO., LTD.: www.pgl-world.cn
- GONGSUDA LOGISTICS CO., LTD.: www.gongsuda.com
- TOTAL LOGISTICS CO., LTD.: www.56888.com

3.5 DATA ANALYSIS

Data analysis was started simultaneously with the data collection rather than after data gathering. While data was being gathered, initial analyses were conducted to identify what data would be collected.

The whole process of data analysis was directed by the research purpose and questions. As a multi-case study, the analysis was carried out following the guidance of the frameworks of within-case and cross-case analysis. Also, the qualitative data, such as contextual materials, interview transcripts were analyzed by using content analysis method under the qualitative research paradigm. Further the qualitative data was interpreted subjectively according to the personal understanding to the conceptual knowledge and what happened in reality.

3.5.1 Within-case and Cross-case Analysis

Regarding data analysis in case study, Collis and Hussey (2003) claim that there are

two choices for the data analysis: within-case analysis and cross-case analysis. Further, the authors explain that within-case analysis may help researchers to become totally familiar with the materials collected through individual case study. This would enable the researcher to build up separate description, understanding, and explanation of events, opinions and phenomena which can be used to identify patterns. Meanwhile, through cross-case analysis, the researcher may address and identify the similarities and differences between the individual cases, which will help the researcher to identify common patterns about the studied events, opinions and phenomena.

As discussed earlier, this study was designed as a multi-case study. Based on the above data analysis principles of case study, both within-case analysis and cross-case analysis were chosen as the main framework of the data analysis in the study.

During the data analysis process, the collected data was presented and analyzed firstly within the boundary of individual case, and findings of the analysis of each single case was summarized as single case study report. The within-case analysis provides a clear understanding of local reality in a Chinese 3PL company, in other words, it helps to identify what is happening in the single settings of the studied phenomenon -- the Chinese 3PL providers. Subsequently, cross-case analysis was conducted based on the findings of within-case analysis, through which the similarities and differences that occur across the studied cases were addressed and discussed.

3.5.2 Content Analysis

Content analysis is a data analysis method encompassing a set of procedures for collecting and organizing information, which allows analysts to deal directly with text or transcripts of human communications (Weber, 1990); in other words, it seems most appropriate for analyzing written and recorded materials. This type of data analysis method can be chosen to provide insight into the research questions and is useful for studying beliefs, organizations, attitudes, and human relations (Harris 2001).

According to the United States General Accounting Office (1982), one commonly used process of conducting content analysis involves the following main steps: deciding to use content analysis, choosing the materials or texts to be examined, selecting the unit of analysis, determining coding categories or themes, coding, and analyzing and interpreting the results.

In this study, the data collected through questionnaire, interview, and website browsing is mainly qualitative data, which focused on the written and recorded materials, such as questionnaire feedback, interview transcripts, and news and articles about the studied companies. In the analysis of the news and articles, 'sections' was selected as units of analysis, because the sections in the context have been categorized into similar meanings and themes. However, in the interview transcript analysis, 'sentences' were chosen as the units of analysis, this because every sentence in the interview conversation has some meaning or theme.

The coding themes were determined under the guidance of research objectives and research questions. The themes were categorized as current situation, competitive situation, and strategy review. Some other themes were also addressed during the coding process, such as logistics networks, information technology, competition, competitor, and competitive strategy. Data coding was accomplished manually, in which the raw data was interpreted and matched the sections or sentences to the relevant themes. The whole coding process involved repeat reviewing on those contexts and interview transcripts. Finally, during the analyzing and interpreting process, all coded data was summarized and interpreted. Within single case analysis, the common patterns and relationships between themes were identified. In the cross-case analysis, similarities and differences between cases were addressed.

3.6 RELIABILITY AND VALIDITY

As mentioned earlier, a scientific methodology presents the basic structure for scientific research design, which comprises explicit rules and criteria to the entire research process. As a research design seems to present certain logic, the research quality also can be judged following certain logical assessment. In assessing the quality of scientific research design, reliability and validity have been the most utilized quality criteria. To reduce the possibility of getting the result wrong in research, researchers should pay particular attention to the reliability and validity of research design (Saunders et al., 2003).

Reliability concerns the findings of the research, which refers to whether a study is replicable by anyone else and the results obtained will be same. Validity relates to the entire research process, in which the research findings accurately represent what is happening in the situation, there are several different forms of validity assessment: internal validity, external validity, and construct validity (Collis & Hussey, 2003).

Under the phenomenological paradigm, there is not too much clear criterion of reliability, and it may be interpreted in a different way. Consequently, the reliability under the phenomenological paradigm is low (Collis & Hussey 2003). However, a phenomenologist may establish other criteria or procedures to ensure the reliability of their findings. Meanwhile, the phenomenological paradigm aims at capturing the essence of a phenomena and extracting rich data from its explanation and analysis (Collis & Hussey 2003), and such complete understanding of the fact and meaning of a phenomenon results in high validity.

For case study, Yin (1991) identifies several tactics for dealing with these research tests, which has described by Yin as an important innovation. Table 3.2 presents the four tests and the tactics for dealing with them in case study. The techniques illustrated in Table 3. 2 can be adopted to be the guidance of improving the quality of

the cases study design. In this case study, focus was mainly on construct validity, external validity, and reliability. The exploratory nature of the study prevents the regarding to the internal validity that concerns the establishment of the cause-and-effect relationships.

tests	Case-study tactic	Phase of research in which tactic occurs
Construct validity	Use multiple sources of evidence;	Data collection
	Establish chain of evidence;	Data collection
	Have key informants review draft case study report	Composition
Internal validity*	Do pattern matching	Data collection
	Do explanation-building	Data collection
	Do time –series analysis	Data collection
External validity	Use replication logic in multiple –case study	Research design
Reliability	Use case study protocol	Data collection
	Develop case study data base	Data collection

* Internal validity is used for explanatory or causal studies only, and not for descriptive or exploratory studies.

Table 3.2 Case study Tactics for Four Design tests

Source: Yin (1991, p.40).

3.6.1 Construct Validity

According to Riege (2003), construct validity relates to the establishing appropriate operational measures for theoretical concepts being studied. Case study research is recognized to be more subjective than other qualitative research methodologies because researchers in case study research usually have close and direct personal

contact with the targeted organizations or people. Therefore, to enhance construct validity, researchers need to avoid subjective judgements during the process of research design and data collection.

In the present study, construct validity is enhanced by using multiple sources of evidence in the data collection phase; triangulation is achieved through the combined use of questionnaires, and interview records and archive information. Also, a chain of evidence was established during the data collection, which includes the digital records and transcriptions of all the interviews, questionnaire feedback, and all downloaded archive documents.

3.6.2 External Validity

External validity “is concerned with the extrapolation of particular research findings beyond the immediate form of inquiry to the general” (Riege, 2003, p.81). In other words, external validity is used to evaluate if the findings of a study can be generalized. In contrast to quantitative research aiming at statistical generalization, case studies tend to rely on analytical generalization, this refers to the particular findings of a case study can be generalized or expanded to theories rather than generalized to a population (Yin, 2003).

In the current case study, multiple case study design was chosen as the technique for increasing external validity. All cases were selected following literal and theoretical replication logic. The studied 3PL companies were selected from the list of Chinese top 100 logistic companies which were within the same industry and involved in similar business activities. The cases were chosen also on the basis of the criteria made by the researcher. The above scope and boundaries defined in research design stage ensure the achievement of reasonable analytical generalizations of the study.

3.6.3 Reliability

As discussed earlier, reliability refers to the demonstration that the operations and

procedures of a study can be repeated by other investigators and the same results can be achieved. Generally speaking, in a case study, even though the researchers follow each step precisely, the results may be still different. In other words, the data related to real-life events collected by different researchers may result in different outcomes (Riege, 2003). However, Yin (1991) presents two useful tactics that can be adopted for researchers to increase the reliability of their studies: using case study protocol or developing case study data base.

To enhance the reliability of present case study, a case study database has been developed before data collection. As discussed earlier, the database was classified into different categories, and related information and data such as questionnaire feedbacks, interview records, and other retrieved archive information, was organized and documented in the database.

In addition to direct collected data, some information about the steps of conducting the study was also included in the database, such as research progress reports, feedback from research supervisor, and other information related to the research process. According to Yin (2003), the general way of approaching the reliability problem is to make as many steps as possible and to conduct research “as if someone were always looking over your shoulder” (p. 38). The introduction of case study database allows other researchers to review not only the research report, but also the raw data and explicit research procedures.

3.7 ETHICAL ISSUES

In the context of research, ethics refers to appropriateness of researchers’ behaviour which related to the rights of those who are the study subjects, or those who are affected by the study or results. Researchers need to consider ethical issues throughout the research process and remain sensitive to the impact of the study and its results on those who participate and supporters to the study (Saunders et al. 2003).

Ethical issues were considered in all aspects of the current research. An introductory letter was designed during the research design stage, and was sent to all the participants. The letter provided all participants with the information about the purpose of the study and how the collected information would be used and managed. Also, permission to be involved in the study was asked. In addition, before sending out the introductory letters, all potential participants were contacted through telephone to ask the permission for emailing them the letter. In the questionnaire, the final question was designed to ask permission for conducting interviews. All the questionnaires and interviews were conducted on the basis of being voluntary.

Issues of confidential were also considered. As the study focused on contemporary events, the information collected may be commercially sensitive and valuable. All participants were informed that the research was conducted for master study purpose but not for any business motivation, all the information was used extensively in this study, and could be accessed only by the researcher and his supervisor. Also, according to the willingness of the participants, all the names and job titles of the participants were avoided from appearing in the final report.

CHAPTER FOUR

WITHIN-CASE STUDIES

4.1 INTRODUCTION

The findings of this research are presented in two Chapters. Chapter Four provides three individual case study reports, in which the results of individual case studies are summarized and presented. The next Chapter, Chapter Five, presents the cross-case study findings and discussions on the basis of patterns emerged from the three single case studies and cross-case analysis.

The purpose of the current study is to understand the current situation of Chinese 3PL providers, focusing on the competitive strategies pursued by Chinese domestic 3PL providers. Under the guidance of the research purpose, the within-case study provides the researcher an understanding of each of the case study companies. The results of individual case analyses reveal the situation that the participating Chinese 3PL providers are involved in, such as the situation of logistics network, service providing, information system, competition situations, and strategic postures.

The within-case study findings are categorized in the following sections as three study reports that cover from the current basic situation to competitive situations and main strategies pursued, which presents an overall understanding of each company as a stand-alone entity.

4.2 TOTAL LOGISTICS (SHENZHEN) CO. LTD

Total Logistics is a state-owned company, but conducts business accounting independently and assumes sole responsibility for profits and losses. The company was set up in Shenzhen (China) in September 2000 by Shenzhen International Holdings Limited, with a registered capital of RMB 140 million (US\$ 20.5 million). The company was established originally as an e-business company when the Internet investment was so popular. As the Internet economic bubble was broken, the company transformed itself from an e-business company to a logistics company. After four years' development, Total Logistics had become a well-known logistics company in China, and was nominated as the number 86 of the Chinese top100 logistics companies in 2005. Currently, the company has 150 employees in its Shenzhen headquarters, and its turnover in 2007 was about RMB 160 million (US\$23.46 million).

4.2.1 CURRENT STATE

Distribution Networks

The physical distribution networks of the company have been established across more than twenty central cities all over China. Branches and regional distribution centres have been set up among the large and medium-sized cities such as Hong Kong, Guangzhou, Beijing, Shanghai, Nanchang, Wuhan, Changsha, Haikou, Chengdu, Kunming, Xi'an, Shenyang, Tianjin, Shijiazhuang, and Zhengzhou. Figure 4.1 illustrates the distribution of the main branches of the company. Meanwhile, the company has expanded its networks to some small cities and counties through cooperating with more than 200 transport enterprises or logistics companies in various provinces and regions throughout the country. As a result, the geographic service scope of the company has covered almost the whole country. In addition, the company owns over 60 fully-sealed container-shaped vehicles and 300 other types of vehicles, and there are over 1000 different size vehicles under agreement. Also, total areas of about 300,000m² warehouses and distribution centres have been built in

Guangzhou and Shenzhen.



Figure 4.1, The distribution of Total Logistics branches

Source: <http://www.56888.com>

Service Provided

With the distribution networks mentioned above, Total Logistics currently provides its customers with a comprehensive logistics service, ranging from basic logistics functional services to integrated logistics service to value-added services to supply chain solution services.

The basic logistics services the company provides include transportation (sea, land, air, railway, and combined transport), warehousing, distribution, order processing, inventory management, and international air and sea freight agent. Meanwhile, the company has provided some of the value-add services, namely sorting and sequencing, tagging and labeling, on-demand packing and repacking, quality management, cross-docking, just-in-time delivery, and merge-in-transit delivery. In addition, from the company website information, it is found that the company also provides more comprehensive supply chain solution service, which includes the market analysis, facility optimization, and integrated logistics solution.

Although specialist service and reverse logistics were not mentioned in the feedback of questionnaire and company website, the interview participant from Total Logistics stated that the company had started to provide some special logistics services for customers especially in chemical industry. Also, for environmental reason, the corresponding reverse logistics service is provided by the company.

Information Technology System

The questionnaire feedback reveals that the technology systems the company is using currently include: Warehouse Management System (WMS), Transportation Management System (TMS), and Web-enabled communication.

More findings regarding the information technology (IT) systems emerged through the website information analysis. Take the 'Tracking-tracing tools' as an example, although it was not selected by the respondent in the questionnaire, it can be identified from the company website information that the Global Positioning System (GPS) has been installed in some of the company-owned trucks.

Further, according to the website information, the researcher recognizes that the IT systems mentioned above were not adopted separately, but integrated into a complete information technology system, named 'Totalogisticstar', which was developed by Total Logistics itself. The software package of 'Totalogisticstar' comprises different logistics management systems, namely third-party logistics management system (TPL Fusion), warehousing management system (WMS Fusion), transportation system (TMS Fusion), distribution centre management system (DC Fusion), Tracking platform (Track Fusion), and e-business system (e-business Fusion).

Business Trend

In the questionnaire, the respondent was asked to present the figures of turnover in the recent three years. The annual turnover of the company in year 2005, 2006 and

2007 were RMB 145 million (US\$ 21.3 million), 150 million (US\$ 22 million), and 160 million (US\$ 23.5 million) respectively. As illustrated in Figure 4.2, the result shows an apparent increasing trend in the business of the company in the last three years. The yearly increasing rates are about 3.4% and 6.7% separately.

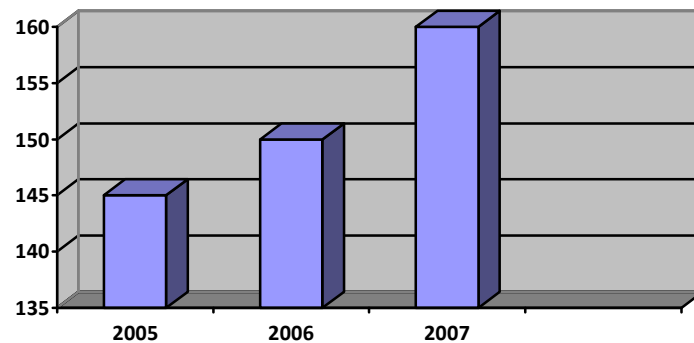


Figure 4.2: Recent Three Years' turnovers of Total Logistics

Customer and Contract

Based on the website information, it has been found that Total Logistics is currently providing logistics services for about 23 main customers. Among these customers, there are famous international brands such as Motorola, Pepsi, Sony, Wrigley, and Canon; also there are some Chinese domestic companies like Suning, Huiyuan, and Jianzhong Group. In other words, 12 out of the 23 companies (about 52%) are from foreign countries or outside mainland China, and the rest are well-known Chinese companies.

In the questionnaire, the respondents were asked several questions about the contracting practice of their company, and the answers would provide some basic understanding about the contracting situation and reveal some extend of the relationships between the 3PL providers and users.

According to the questionnaire feedback, the average length of contracts between Total Logistics and its customers are between 1 to 3 years. The main issues that Total Logistics normally addressed in the contracts or agreements include price or

rate, service standard and performance requirements, key performance indicators (KPI) for performance measurement, compensation or penalties, procedures for termination or dissolution, procedures for contract renewal, special information technology requirements, and special goal for future improvement.

Trying to achieve desirable level of customer service, the company has introduced different KPIs into their business operation processes. The main KPIs currently used by the company include on-time delivery, on-time bill return, order accuracy, order cycle time, inventory levels, goods damage rate, customer complaint, and customer satisfaction rate.

Regarding successful contracting practice, the respondent agrees that both cost and service would be the most important factors in successful contracting in China. From the respondent's understanding, the general reasons that companies are outsourcing their logistics include improving customer service, reducing costs, accessing technology and management skills, focusing on core business, and reducing risk and uncertainty. However, the respondent believes that the main attributes to the company's successful contracts are good service, flexibility, commitment, and reliability.

4.2.2 COMPETITIVE SITUATION

To understand the competitive situation the case study companies are facing, several questions were designed in the questionnaire. Likewise some questions relating to competition were discussed in the interview. The relevant findings are interpreted and categorized into following themes.

Competition

According to the questionnaire feedback, the respondent considers that competition within the Chinese logistics industry is intensive, and the main competitive pressures to the company are coming from cost and local protectionism.

Similar findings are concluded through the analysis of interview transcript. The intensive competition can be identified as two situations. Firstly, customers switch frequently. As the participant has explained in the interview that “there is a very common phenomenon in this industry (3PL industry), one client, today it is your customer, but tomorrow it will be your competitor’s customer”. Secondly, endless price competitions have been recognized in the Chinese 3PL industry. As the interview participant described “...no matter how low the price is, there always someone who will accept it...” and “...most businesses focus on price and 3PL selection mainly through bidding...”.

Competitors

The questionnaire respondent was asked to identify who are the company’s main competitors, domestic 3PL providers, or foreign 3PL providers, or both of them. In response, the respondent views domestic competitors are currently the main competitors creating the most competitive pressure. In the interview, the participant also expressed similarly feeling that currently the competition pressure the company is facing is mainly from domestic competitors. Such findings can be understood from following interpretations.

Firstly, although the 3PL industry in China is still very young, the development of the industry is fast. On the basis of the participant’s opinion, Chinese domestic 3PL providers are having the ability to offer various logistics services, such as mainline transportation, regional distribution, intra-city distribution, and express. It seems that no matter what a customer wants in logistics outsourcing, there will be a service provider or a service solution in China. In other words, Chinese domestic 3PL providers are involved in all the possible areas of logistics service. As a result, it is difficult for Chinese 3PL providers to compete with simply common logistics services. As mentioned in the company’s website that it is difficult for the company to compete by only providing single or simple logistics services,

Secondly, the domestic 3PL providers are likely to be more competitive these days in the special Chinese business environment. The interview analysis shows that in today's Chinese third-party logistics industry, it is still very common that some 3PL providers are using chaotic, unfair, even illegal competitive strategies. For example, some small logistics service providers, such as small transportation companies or warehouse providers are more competitive in price, because they would pay lower tax or use overloading illegally. As the interviewee mentioned: "...we do not have competitive advantages in this area...they always overloaded during the transport..., assume that the current tax rate for transportation is 6%, but through some special channels or ways (involving bribe or corruption) some companies can gain far lower tax rate..."

Meanwhile, the interview analysis identifies another reason that has led to such chaotic competitive situation is that most of the Chinese 3PL users are still not very mature in 3PL usage. The participant explained in the interview "...some domestic companies, even some big companies, like... (Companies name is anonymous), they concern only price, and (their 3PL selection principle is that) the bidder with the lowest price will win and those with the higher prices will be out..." He believes that such business environment does result in the intensive and endless price competition.

Thirdly, regarding foreign 3PL companies, the participant does not consider them as their main competitors. In the interview, he explained that currently both domestic and foreign 3PL providers have their own markets segments, and there is still room for both parties to develop individually. Although some foreign companies are willing to use foreign 3PL providers that they are familiar with in their homeland, it is still not creating any pressure on domestic 3PL providers. From the interviewee's view point, in most situations, the real logistics services providers are perhaps the domestic 3PL providers as well. To explain the reason, he gave an example as follows:

“... There was a foreign company from Britain, who set up its factory in Beijing. We tried several times (wanted to be its 3PL in China), but the company finally chose ABC (a foreign 3PL provider, and the name is anonymous) as its 3PL. The main reason is that ABC is providing service for the company from abroad. However, ABC came to us, and asked us to provide most of the services... This is the situation, the actual operators are still domestic 3PL providers... they (foreign 3PL providers) do not have (logistics) networks...”

When the interviewee was asked for future perspective on foreign 3PL companies, he said that the more mature the market is, the more competitive pressure comes from these foreign competitors.

SWOT Analysis

To gain a whole picture of the competitive situation of the company, the research also asked the questionnaire respondent to identify the competitive strength, weakness, opportunities, and threats of their company. The results have been summarized as SWOT analysis that is illustrated in Table 4.1.

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Service • Information technology • logistics networks • Management • Specialist • Capital investment 	<ul style="list-style-type: none"> • Price 	<ul style="list-style-type: none"> • 3PL still at its beginning stage • Massive market • High developing speed of China's economies 	<ul style="list-style-type: none"> • More domestic competitors • High oil price • Government limitation or legislation • Local protection

Table 4.1 SWOT analysis of Total Logistics

The SWOT analysis shows the competitive position in which the company is really

situated among its competitors. From the respondent's viewpoint, the main strengths of the company include service, information technology, logistics network, management, logistics specialist, and capital investment. The only one weakness identified by the respondent is price. The opportunities that the respondent believes the company has include: 3PL still at its beginning stage, massive market, high developing speed of China's economies. Finally, the threats the company is facing are more domestic competitors, high oil price, government limitation or legislation, and local protectionism.

4.2.3 STRATEGY REVIEW

Competitive Strategy

The questionnaire feedback shows that cost and service have been considered by Total Logistics as important factors in competition. The analyses of the interview transcript and website information reveal that pursuing cost and service advantages are the company's main competitive strategy. In other words, the company competes against its competitors through not the simple low price strategy but the overall cost reduction and customer service improvement.

Under the intensive competition environment, Total Logistics has situated itself in a position to service the medium-sized and large-sized companies who have the similar understanding of the logistics concept. The participant believes that these kind of companies are more mature and their criteria of 3PL selection is based on overall service capability. He explained in the interview:

“... Some companies are the ideal 3PL users that we want to cope with, because they are more mature (in 3PL using). Regarding logistics outsourcing requirements, besides price, your networks, information system, and service ability are all taken into account...our company likes to do business with such companies, because the management concepts are same, and it is easy to communicate to each other.”

To sum up, for this kind of 3PL users, price requirement is not the only criterion in 3PL selection. The weight of price may be only 30% in their 3PL evaluation, and the remaining weighs 70%. This is probably the main reason for Total Logistics to locate their customer segment in serving the medium-sized and large-sized mature customers. Also this is why Total Logistics has started to ignore the bidding invitations from those customers focusing only on lowest price, even though the customers are some big business.

Regarding the mature 3PL users, there is an interesting finding about bidding in China. In contrast to traditional bidding that the lowest price wins, some companies choose 3PL providers from the bids above a certain price line. These kinds of companies believe that in the China market, low price means low level of customer service. The interview participant described the bidding as ‘Chinese characteristic bidding’ which resulted from the Chinese special environment.

On the basis of above strategic customer segment positioning, Total Logistics has focused their competitive strategy on achieving both cost and service advantages, which can be identified through the following interpretations.

Total Logistics has put great effort in pursuing the service advantage, which can be understood by the development of distribution network and information systems. The obvious purpose of the development of distribution networks and information systems is to improve customer service. The national wide logistics network ensures the company can provide various and effective logistics services for different customers. Also, the company has invested in different public logistics facilities, which seems to be another way for the company to differentiate itself from its competitors. Meanwhile, the development of information systems, especially the self-developed IT system ‘Totalogisticstar’ has helped the company to achieve high visibility and reliability in their logistics operations. Overall, through improving

customer service, the company is trying to gain service advantages and differentiation in selected market segments.

Another finding related to pursuing service advantage is that Total Logistics has started its own chemical products logistics services. From the participant's point of view, the purpose involved in this new area is to achieve differentiation advantage. The reason the participant gave is "it is impossible for a 3PL company to be a monopoly in all aspects of logistics services in China. To be successful, you must be special in a certain area. This is why we have initiated chemical logistics services"

Likewise, pursuing cost advantage can also be identified. According to the interview participant's description, the company has no advantages in simple price competition, but this does not mean the company has no cost advantages. From the analysis of customer construction, the cost advantage can be recognized. As in the interview, the participant stated that most of their businesses are gained through bidding, and the biddings the company attended are mostly from mature customers. This can be understood that Total logistics has cost advantage within the selected market segment.

In Total Logistics, the service and cost advantage strategies are not only utilized to gain business, but also used to help customers to achieve competitive advantages. Currently, most of the company's customers are foreign companies (about 52%), and these 3PL users normally have clear, even detailed logistics strategy. The role of Total Logistics sometimes is likely to be a logistics operator only, in other words, to operate according to customers' strategies. However, as a logistics specialist, Total Logistics has been pursuing differentiation advantage all the time. According to the description of the interviewee, the strategies from customers will be reviewed and re-evaluated by Total Logistics during the operating process. Considering the situation of reality, Total Logistics will offer more effective and efficient solutions for

customers.

Similarly, for those companies which have no clear logistics strategy, Total Logistics also has its own special service procedure. Total Logistics starts the procedure from market research, and then according to the characteristics of the business and products, the company provides customers with several comprehensive logistics operation strategies such as distribution centre (DC) location selection, DC number decision, transport mode, even the decision about what sorts of storage equipment to be used. Just through such operational processes, Total Logistics helps the customers achieve competitive advantages meanwhile makes itself distinguishable from its competitors.

Physical Network Development

From the company's website information, it can be identified that logistics network development has been clearly stated as a main business strategy of the company. According to the website information, the physical network strategy of the company includes two main aspects. One is the overall distribution network development across the country and plays a fundamental role of all the logistics operations. Another is the investment in special logistics projects that support and expand the logistics service capability of the company.

As discussed early, Total Logistics has expanded its distribution networks throughout the country. From the strategic perspective, the company continuously focuses on the development of nation-wide distribution networks. The company has developed the area around Shenzhen and Pearl River Delta as its central logistics base. In addition to the centre base, the company has expanded branch companies in many different cities across the country. Meanwhile, various transportation lines and regional distribution nets have developed all over the country. The central base plays the role as management centre and the centre of the network. Also various branches and DCs would be the nodes of the net. Connecting the centre base and

these nodes with its transportation and distribution lines, the logistics network is formed.

In addition to the overall logistics distribution network, Total Logistics has invested comprehensively in different public logistics projects to support and expand its service ability.

Firstly, Total Logistics has gained more than 10% of the shares of Shenzhen Airlines, a Chinese domestic aviation company based on Shenzhen Airport. The corporation owns 16 most advanced Boeing planes, and its cargo and passenger services can reach all the Chinese cities. Since Total Logistics' participation, Shenzhen Airlines has changed to focus their strategy on developing air cargo business, which effectively supports the integrated logistics services ability of Total Logistics.

Secondly, Total Logistics has set up the Customs-Supervised International Express Centre at Shenzhen Airport through joint-investment with Shenzhen Airport, which is the exclusive channel for international express in Shenzhen, and the first experimental centre approved by the General Customs Administration of the PRC. The International Express Centre has premises of 32240m², in which the most modern express processing equipments have been installed. The centre operation follows the international express supervision standards and procedures. Currently the whole carriage declaration can be finished within 20 minutes, and the automatic cargo inspection system can simultaneously process up to 6 sources of express cargos. With the daily processing capacity of over 300 tons, the express supervision centre has become the largest centre in processing capacity in China. Its main users include 16 large express companies, such as UPS, DHL, and TNT.

Information Technology System Development

The analysis of the company's website information reveals that IT systems development in Total Logistics relies heavily on self-development ability. The IT

systems development focuses on not only the operational need of the company, but also on the requirements of other third-party logistics providers. In other words, in addition to self-utilization, the IT systems developed by Total Logistics have been sold as IT products and information platform to other 3PL providers.

There are two main reasons why Total Logistics has adopted such a strategy in IT system development. First, as mentioned earlier, Total Logistics was originally an e-business or internet company, so the company has a strong IT background and obvious advantages in information technology development. Second, the company believes that the self-developed IT system would be cheaper than purchasing outside, and self-developed IT systems would be more compatible with Chinese business situation.

The Total Logistics website (www.56888.com) has been developed as not only a company information platform, but also a public logistics information platform for other 3PL companies. Through the Internet, Total Logistics is providing diverse business services, such as business document processing, finance, insurance, goods tracking, and electronic customs clearance.

As discussed earlier, the company developed a kind of logistics IT product named 'Totalogisticstar', which has been explained clearly in the company's website. Totalogisticstar is a package of total logistics solution software system. With different functional modules, the software package can provide comprehensive solutions for the up and down stream parties of a supply chain. According to the company's information, Totalogisticstar software system provides 3PL providers with a complete logistics information system. The system provides customers with effective logistics solutions, and helps companies to achieve the integration of flows of materials, information, and funds. Consequently, great improvements in productivity, cost, and inventory have been achieved. Some detailed figures have been summarized on their website such as improve productivity with 30-50%, reduce

cost by 2-5%, and decrease inventory cost about 20-30%.

Customer Relationships

In the interview, a clear intention of establishing long-term partnerships with main customers was expressed by the interviewee. As discussed above, Total Logistics has moved their attention towards more mature 3PL users who have the same concept and also have the desire to build a partnership with 3PL providers. As the interviewee explained: "...from the strategy perspective ...we are eager to form strategic alliance ...based on same business concepts, the more we understand each other, the more we want to talk to each other (to communicate, to share information)..."

This does not mean Total Logistic only provides logistics service for those mature customers. The interview participant said that Total Logistics has a set of new customer evaluation systems, through which some potential customers were identified. No matter the customers are mature or not, Total Logistics always tries its best in developing partner relationship, even though some customers currently only require some simple logistics functional services. During the process of cooperation, Total Logistics may prove itself to be superior to take over more logistics services than ever. Meanwhile, through the cooperation with Total Logistics, the customers are more likely to learn more and become more mature.

The ensuring partnerships can also be understood by the fact that Total Logistics has been involved in the investment in the customer's logistics system. In other words, Total Logistics has invested in logistics infrastructures and facilities development for special customers, based on the customers' logistics operation requirements. According to the interviewee's example, if a customer set up a new factory, Total Logistics will probably build a warehouse or DC inside the factory or near by the factory to meet the logistics operation requirement. This kind of cooperation often leads to long-term and win-win relationships.

Another finding about relationships between Total Logistics and 3PL users is that Total Logistics has become selective in coping with 3PL users. As mentioned before, Total logistics has a new customer evaluation system. When there is a new customer, the company may do some basic evaluation to decide whether the customer can meet Total Logistics' requirements or not. For example, if a customer is purely concerned about price, and there is no further business opportunity, Total Logistics may ignore it or treat it as non-potential customer. In other words, the relationship between Total Logistics and such a customer has the traditional buyer/seller relationship or "arm-length" relationship.

To communicate with customers efficiently, Total Logistics has introduced SOP (Standard Operation Procedure) in its daily operation and communication with customers. There are clear requirements about how to communicate between the company and its customers, such as to whom customers place order, who customers should contact through telephone, and how both parties can communicate with each other if there is a problem. In addition to the daily communication, Total logistics also has monthly and yearly business review meetings with main customers. From the customers' side, they are willing to share more sources of information with Total Logistics, ranging from transactional to strategic information. As the participant described in the interview that "some customers provide not only monthly sales plan, but also weekly, quarterly, and yearly sales plans."

4.3 GONGSUDA LOGISTICS (SHENZHEN) CO., LTD

Gongsuda Logistics is a private logistics company, established in 1998. In the beginning, the company was a private shuttle bus company providing shuttle service for some companies. In 2001, Gongsuda started to be involved in the real logistics industry and expanded its business to outside south China area. During the following four years, the company developed its logistics business and service system throughout the country, and gained great achievement in the Chinese logistics industry. In 2005, the company was ranked the number 39 of the Chinese top 100 logistics companies. Overall, through ten years' development, Gongsuda has transformed itself from a traditional transportation enterprise to an integrative 3PL enterprise that provides containerized traffic, trunk line transportation, region distribution, warehousing, and international logistics services. At present, Gongsuda employs 1200 staff with its turnover of about RMB 230 million (US\$ 33.7 million) in 2007. The company has defined itself as a 3PL enterprise that is equipped with advanced logistics concept, effective networks, and modern technological system.

4.3.1 CURRENT STATE

Distribution Networks

Gongsuda has invested vast capital in the construction of physical distribution networks, which includes “one base”, the managing and controlling base in Shenzhen Headquarters, “three networks”, mainline transportation network, regional distribution network, and relative information network. The networks involve 12 branch companies and more than 70 business offices all over the country, covering central China, south China, east China, north China and north-east China. There are 20 distribution centres and 30 warehouses within the system, and more than 1000 vehicles with Gongsuda logo on running throughout the county. In addition, Gongsuda has long-term strategic partners in the north-west and south-west China, who usually support the services required in these areas. The spread of the six main service circles, main branches and business offices is shown in Figure 4.3

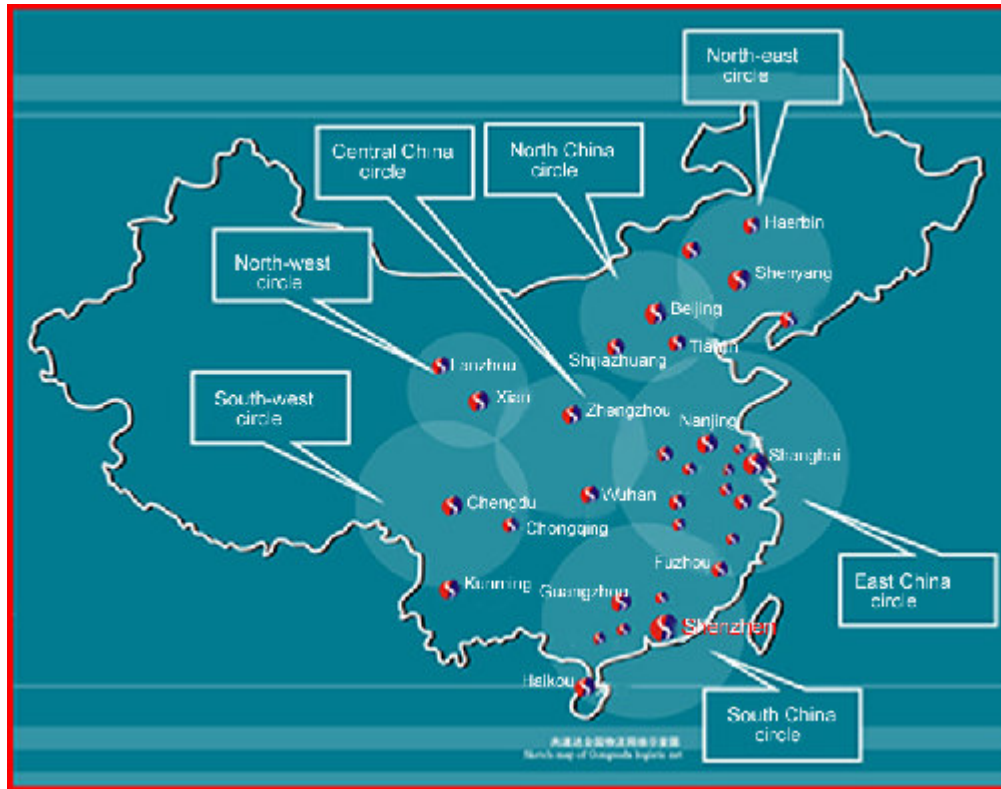


Figure 4.3 The network of Gongsuda Logistics

Source: [http:// www.gongsuda.com](http://www.gongsuda.com)

Service Provided

The study reveals that Gongsuda Logistics has provided various logistics services for its customers. The services consist of basic logistics services, some value-added services, and supply chain solution service. According to the questionnaire feedback, the basic logistics services Gongsuda Logistics provides include transportation, warehousing, distribution, inventory management. The value-added services involve sorting and sequencing, simple manufacturing and assembling, and vendor-managed inventory. Some other value-added services such as tagging and labelling, on-demand packing and repacking also can be indentified through website information analysis.

The information from company website also indicates that the company provides international logistics and supply chain solution service as well. The logistics services in which Gongsuda are involved include not only downstream functions like

out-bound transportation, distribution and sales, but also upstream functions as in-bound transportation and purchasing.

Information Technology System

From the questionnaire feedback, it can be identified that the information technology systems the company are currently adopting include: Warehouse Management System (WMS), Transportation Management System (TMS), Tracking-tracing tools, Electronic data interchange (EDI), and Radio frequency identification (RFID).

According to the website information, the information system of Gongsuda Logistics comprises two main parts: a supply chain management platform and Intelligent Vehicle Monitoring and Dispatching System (IDS). However, this does not mean the questionnaire feedback is contradictory to their website information. The further finding is that the information systems mentioned in questionnaire are all included in the supply chain platform and the IDS system, in other words, the systems act as sub-systems in the platform and the IDS system.

Business Trend

In the questionnaire, the respondent was asked to give the figures of turnovers of the recent three years. The results have been illustrated in Figure 4.4, which shows the turnover of the company in year 2005, 2006 and 2007 were RMB 160 million (US\$ 23.5 million), RMB180 million (26.4 million), and RMB 230 million (33.7 million) respectively. The sales continued to climb with the yearly increasing rates of about 12.5% and 27.8% respectively in the last three years.

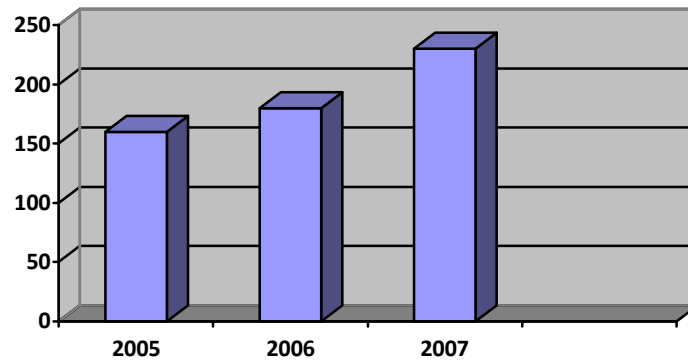


Figure 4.4: Recent Three Years' turnovers of Gongsuda Logistics

Customer and Contract

Gongsuda Logistics is currently providing logistics services for about 25 main customers. Among these customers, there are 9 companies (about 36%) from foreign countries or outside mainland China, while others are well-known Chinese brands.

The average length of contracts between Gongsuda Logistics and its customers are between 1 to 3 years, and the main issues normally addressed in those contracts or agreements are as follows: Price or rate, Service standards and performance requirements, Key performance indicators (KPI) for performance measurement, Compensation or penalties, Procedures for termination or dissolution, Procedures for contract renewal, Special information technology requirements, and Special goal for future improvement.

The questionnaire feedback revealed that the company has introduced different measures of customer service performance to help customers achieve desirable level of customer service. The main KPI include on-time delivery, order accuracy, and packaging quality (goods damage rate).

From the questionnaire feedback, it was found that Gongsuda Logistics views both

cost and service as very important factors for the successful contracting, and the main reasons that Chinese companies outsource their logistics are: improve customer service, lower capital investment, and reduce risk and uncertainty. However, from the perspective of the respondent, the most important reasons that customers select Gongsuda as their 3PL provider can be attributed to good service, commitment, and reliability.

4.3.2 COMPETITIVE SITUATION

Competition

The respondent of the questionnaire believes that the competition within the Chinese logistics industry is very intensive, and he identifies the most competitive pressure comes mainly from service, technology, and capital investment. Similar results can be recognized directly from the interview and company information. For instance, in the interview, the participant stated that most of their business is gained through bidding. Also, information from the company's website has mentioned the intensive competition many times. For example, when answering a journalist's question, the general manager of Gongsuda emphasized the intensive competition in Chinese 3PL industry.

Competitors

Like Total Logistics, in the questionnaire feedback, the respondent from Gongsuda Logistics views Chinese domestic competitors as their main competitors, and he believes that the domestic competitors are bringing the most threatening pressure on the company.

In the interview, the participant expressed that their company is in competition with other Chinese domestic 3PL companies in most situations. As mentioned earlier, bidding has become a main way for companies to select 3PL providers. Concerning Chinese domestic competitors, the participant concludes that different 3PL companies have their own competitive advantages. While some of them take the advantage of

their sound logistics networks and knowledge of modern logistics concept, some of them take the advantages of illegal or special methods in the competition. As the participant explained that: “in China, there are different types of bidding, relying on ‘guanxi’ (Chinese word, means having some special relationship with someone in government or in customer side) ... lowest price ... service quality...”. This means that the domestic 3PL providers compete to each other not only through low price or high quality service, but also through some so-called advantages, such as “guanxi”.

Regarding foreign competitors, the participant does not believe they currently have competitive advantages in the Chinese market. The participant thinks that foreign 3PL providers have no advantages in logistics networks and resources utilization. It is difficult for them to complete effective logistics networks in a short time period. To support his opinion, the participant gave an example about a famous foreign 3PL company. The foreign 3PL has provided logistics service for WAL-mart outside China, which is helpful for the company to gain business from WAL-mart in China. However the cooperation between the two companies in China was not very successful. This is because the foreign 3PL company lacked physical network to support its operation. The participant concludes that although the foreign 3PL providers have advantages in management, it is still difficult for them to compete without effective logistics networks.

Also, the participant explains that culture understanding may be another barrier for those foreign competitors. From his point of view, even if the foreign competitors have logistics networks ready, it is still not easy for them to do business smoothly in China. In some cases, foreign 3PL companies may gain logistics networks through merging themselves with some domestic 3PL companies, however, sometimes they still cannot make the merged logistics network work. In other words, they must face a challenging problem: to understand Chinese culture, especially Chinese business culture.

Similar to Total logistics, the participant from Gongsuda states that the foreign 3PL providers will be more competitive and cause pressure on Chinese domestic 3PL providers in future, when they have more complete distribution networks and are more familiar with Chinese culture.

SWOT Analysis

Competitive strength, weakness, opportunities, and threats of the company were summarized mostly based on the questionnaire feedback. In this case, some interview findings were also used in summarizing SWOT analysis results. The SWOT analysis is illustrated in Table 4.2. From the respondent's viewpoint, the strengths of the company cover service, information technology, logistics network, and capital investment. Price is the only weakness identified in the questionnaire feedback. However, in the interview, the respondent also expressed that the company has weaknesses in management and logistics specialists. The opportunities of the company are massive market and high developing speed of China's economy. Two main threats are identified as: more foreign competitors and intensive competition.

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Service • Information technology • logistics networks • Capital investment 	<ul style="list-style-type: none"> • Price • Management • Specialists 	<ul style="list-style-type: none"> • Massive market • High developing speed of China's economies 	<ul style="list-style-type: none"> • More foreign competitors • Intensive competition

Table 4.2 SWOT analysis of Gongsuda Logistics.

4.3.3 STRATEGY REVIEW

Competitive Strategy

To gain competitive advantages and survive in the fierce competition, Gongsuda Logistics has adopted the strategy of being both cost leader and service leader as its

main competitive strategies. In other words, the company tries to achieve cost advantage and service differentiation among its competitors.

The study results disclose that Gongsuda Logistics has its own market segment position. In the interview, the participant explained that the market of the third-party logistics has its own structure that different 3PL users chose different 3PL providers, and through this way, 3PL users gain what they want. The participant's conclusion is that, in most situations, small sized 3PL users like small 3PL providers because they are cheaper; conversely, larger companies are more likely to choose large 3PL providers who provide multifunctional logistics services and can help them gaining total cost reduction. Just under this way, Gongsuda logistics selects medium-sized and large-sized companies as its main service segment. This segment selection also can be identified through the analysis of customer constitution of the company which indicates that most of its customers are big companies. Within the selected market segment, the company aims at cost advantages and differentiation focus.

Pursuing cost advantage strategy was interpreted by the interviewee as Gongsuda Logistics has few advantages in simple price competition though, the company is more competitive in achieving low cost through improving overall service.

As the participant explained in the interview: "...as a big logistics company, we do not have obvious price advantage, because we have high management cost, (and other costs) such as high investment, interest cost...". He also explained the reasons and situations why it is impossible for the company to compete in price with small 3PL providers. In the meantime, the participant believes that the company is more competitive in overall cost reduction that can be achieve through the support of the company owned logistics networks and information systems.

Service advantage has been identified by the questionnaire respondent as an important factor in competition. It can be found from the interview and the website

information that gaining service advantage has always been the most frequently mentioned strategy. For example, improving customer service has been identified as the main purpose of the development of distribution networks and information systems. Also, under the increasing competitive business situation, it has been considered impossible to achieve cost reduction without service improvement. As the general manager of Gongsuda stated in an article (Anon, n.d.) that it is difficult to gain cost advantage through providing single logistics service, and the only way to gain competitive advantage is to provide integrated logistics service.

Likewise, the interview participant believes the company has service advantage over its competitors. As he explained in the interview, “Our company is reliable. Customers do not need to worry about a lot. They usually just leave us with a complex logistics project, and we will analyze, plan, and do everything well”.

Physical Network Development

Physical distribution network development has been found as one of the most important strategies of Gongsuda Logistics. According to the company website information, ‘developing three networks and bases’ has been considered as a long-term strategy. The three networks refer to the mainline transportation network, regional distribution network, and effective information system network. The ‘bases’ means to build multi-functional logistics bases across the country, which enable the company to provide not only warehousing or DC services, but also some value-added services such as packing, assembling, and consolidation.

In its network developing strategy, Gongsuda has divided China into seven service circles that include central China circle, south China circle, east China circle, north China circle, north-east China circle, north-west China circle, and south-west China circle. Currently, Gongsuda has established 12 logistics bases among the first five service circles, while the other 8 logistics bases will be established in north-west and south-west areas in next two years. Additionally, 200 vehicles for mainline transport

and 150 vehicles for regional distribution will be introduced in the system.

The study findings also identify that the distribution network development strategy focuses on developing a nation-wide physical distribution system, which starts from some developed cities and areas, and then expands to some developing or remote areas. According to the participant's explanation, the overall completion of the network also requires the support of business development. The seven-circle strategy plays as the main framework for the development of distribution network. Under the development framework, the company develops its distribution network step by step in accordance with its business development.

During the process of distribution network development, resource integration and organization has been a critical part. In a new market place where there has been no cover by the company's distribution system, the first step the company takes is to organize and integrate outside logistics resources such as warehouses, transportation, so that the services required by customers can be ensured. The operations in north-west and south-west areas are mostly working under this way. After careful evaluation about the business trend in the area, the company may set up business office, branch, and then logistics base. The overall investment would be balanced with business volume. Just through this way, the company has involved different areas into the whole system, and accomplished the expansion of its distribution network.

Overall, the distribution network of Gongsuda has developed towards covering most areas of China, which ensures that Gongsuda can provide logistics services for different customers throughout the country. Meanwhile, all the operations across this physical distribution system would be controlled and coordinated by an effective information technology system.

Information Technology System Development

As discussed earlier, the information system of Gongsuda Logistics comprises two main parts: supply chain management platform and Intelligent Vehicle Monitoring and Dispatching System (IDS). There are also several functional information technology systems included in the information system, such as Warehouse Management System, Transportation Management System, Tracking-tracing tools, Electronic Data Interchange, and Radio Frequency Identification.

The development of the information technology system has been included in the ‘three networks and bases’ strategy. As one of the ‘three networks’, the information network has been developed since 2001. The development of the information technology system has been based on the requirement of business development. The website information reveals that the company started to expand its service scope from south China, where its headquarters are located, to east China circle and north China circle in 2001. With the expansion of physical network, the information system became a bottleneck of the logistics operation. At that time, the company realized the necessity of information system development.

The IDS is an information system that integrated the functions of both GPS and GMS (Global System for Mobile Communication). Through GPS function, Gongsuda Logistics has realized 24 hours countrywide vehicle monitoring. Meanwhile, with GMS, the company may contact and dispatch vehicles at anytime and anywhere to meet different requirements. The utilization of the IDS enhances the visibility of the logistics system, which results not only in low rate of empty running, high vehicle utilization rate and overall transportation productivity, but also in the achievements of in-time, accurate, and reliable services.

Further, Gongsuda has developed its own supply chain management platform. The website information describes that with the development of logistics and supply chain management, more and more companies have shifted their attention to the

performance of not only a single company, but also a number of companies along a supply chain. Under such a new business environment, a supply chain management information system seems necessary.

The supply chain management platform was developed mainly for big customers, through which some of the order processing between suppliers and their customers such as order placing, order responding, order receiving, and order returning are conducted electronically. The platform provides the opportunities for the company to help their customers to monitor and manage the real-time inventory, also achieve quick response to market requirements and avoid product shortages and stock-outs.

Customer Relationships

The interview transcript reveals that Gongsuda Logistics focuses on establishing long-term relationships or strategic partnerships with its main customers. In coping with different customers, Gongsuda pays more attention to the customers who want to build a long-term relationship with the company. As the interviewee explained, some mature customers are keen to establish long-term partnership and share their 1 to 2 years development strategies with Gongsuda Logistics. In accordance with this, the company is likely to put great efforts into the customer system evaluation, logistics solution designing, and finally help these customers to achieve desired services and cost.

For those customers who are not very familiar to the benefits of establishing long-term partnerships, Gongsuda also makes efforts to pursue the long-term relationships with them. The interview participant describes this relationship pursuing as that the company must “sell” the collaboration concept to these customers as well as logistics services. When the customers are more familiar with the collaboration concept, they will recognize the benefits resulting from it, and thereby the relationships between the company and these customers may easily change into a long-term partnership.

The business concept has been considered as an important factor in customer relationships. The participant emphasizes that it is easy to cooperate with the companies who have the similar business concept. From the interviewee's point of view, foreign companies, joint-ventures, and some domestic companies seem to have similar a business concept, they have the intention to form a partnership with Gongsuda Logistics. However, it is difficult to persuade private companies to pursue the long-term relationships and the relevant benefits. Towards this kind of customer, the attitude of Gongsuda is that the company is not willing to put too much effort in coping with them.

Another finding relating to customer relationships is to share the benefits achieved through collaboration with customers. The interviewee believes that the real benefits of logistics outsourcing come from the collaboration between the relationship parties. The example given by the participant has explained how the company achieved low cost through cooperation with a customer. Gongsuda proposed a logistics solution, which required changing production schedule on customer side and adjusting purchase lead-time on the side of customer's customer. Just relying on the collaboration with the customer, Gongsuda achieved cost savings on their operation. Instead of hiding the benefits, the company shared the savings with the customer by reducing its transportation price.

Daily communication with customers is the precondition of customer relationships. In Gongsuda, there are monthly cost and service review meetings with main customers. Also there are yearly meetings for strategy reviewing. Communication between Gongsuda and its main customers involves various functions such as sales, operation, customer service, finance, and resource management. For some important customers, there will be a multifunctional team to be responsible for the overall communication. Sometimes the team tends to involve high level

management, even the highest level of managements based on special requirements of a project.

4.4 P.G. LOGISTICS GROUP CO., LTD

P.G. Logistics is a private logistics company, established in Guangzhou China in 1994. Its original business only involved traditional transport service as a railway freight service agent. In 1995, P.G. Logistics became the 3PL provider of P&G China, which provided the company an opportunity to approach advanced logistics concept and practice. The company was the first one who registers itself as a logistics company in China. Through the cooperation with international companies, P.G. Logistics has developed itself as one of the most famous logistics company in China. It was ranked number 18 of the top 100 logistics companies in 2005. The company has 1800 staff, with its turnover of about RMB 1.5 billion (US\$ 219.9 million) in 2007.

4.4.1 CURRENT STATE

Distribution Networks

The distribution networks of P. G. Logistics have covered the whole of China, and are expanding its service areas to America, Australia, and Thailand. The company has established 7 branch companies, 8 subsidiaries, and 50 business offices in 65 cities throughout the country. The distribution of these offices, branches, and subsidiaries is shown in Figure 4.5. Among the distribution network, there are four main modern logistics bases, named as P. G. Nangang logistics base, P. G. Suzhou base, P. G. Shanghai base, and P. G. Anhui base. The total built-up area of the bases is about 240000 m². The bases have been equipped with modern warehousing facilities and advanced information systems. Currently, diverse logistics services, especially some value-added services, have been implemented in these logistics bases.

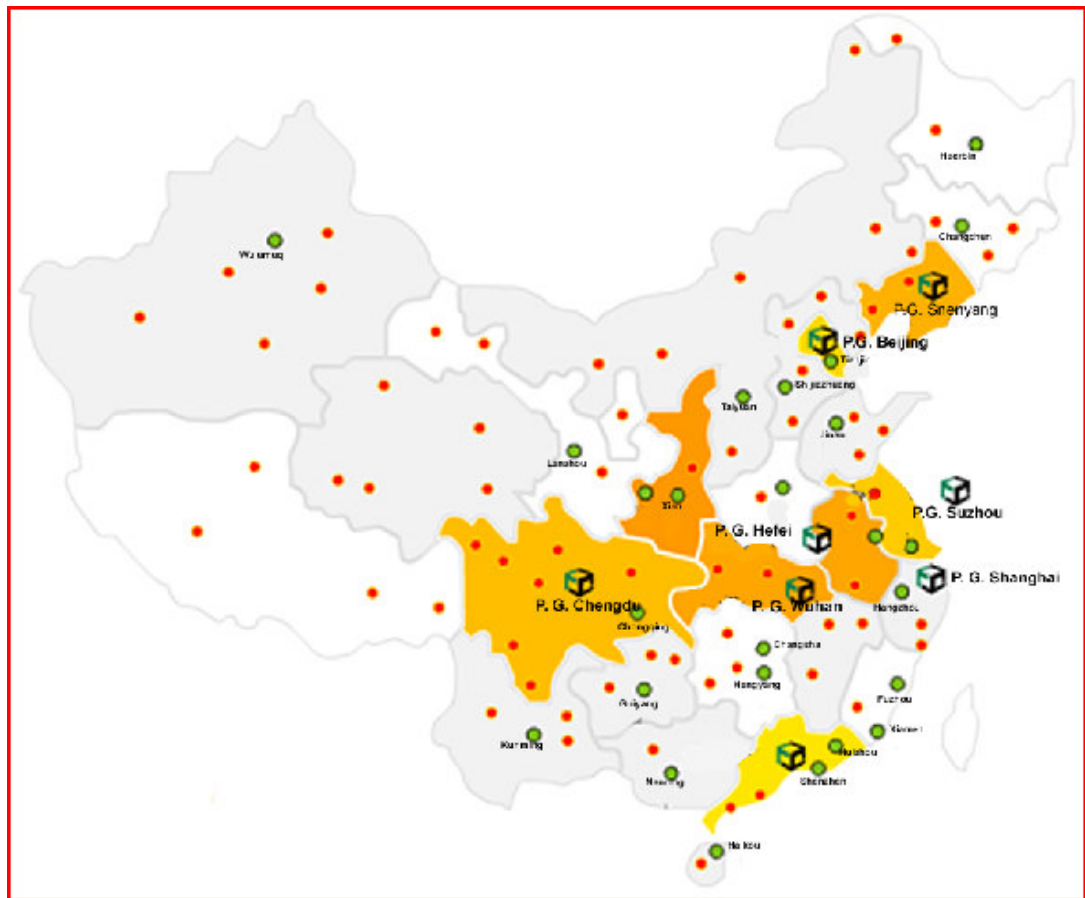


Figure 4.5 The network of P. G. Logistics

Source: <http://www.pgl-world.com>

Service Provided

Currently P. G. Logistics is providing various logistics services for its customers, the services includes basic logistics services, value-added services, also supply chain solution service. According to the questionnaire feedback, basic logistics services P. G. Logistics provides include transport, warehousing, distribution, order processing, inventory management, and reverse logistics. Value-add services and supply chain solution services provided are: specialist and niche service, sorting and sequencing, tagging and labelling, on-demand packing and repacking, light manufacturing or assembly, kitting, quality management, cross-docking, just-in-time delivery, merge-in-transit delivery, and vendor-managed inventory.

Information Technology System

From the questionnaire feedback, it was identified that the technology systems the company is currently using are: Warehouse Management System (WMS), Transportation Management System (TMS), tracking-tracing tools, Electronic Data Interchange (EDI), and web-enabled communication. In addition, although Radio frequency identification (RFID) has been available in the company, there are no customers at the present time. According to the website information, the above information systems were introduced at different time and based on different business requirements.

Business Trend

The figures of the recent three years' turnovers were given by the respondent in the questionnaire. Figure 4.6 shows the sales turnover of the company in year 2005, 2006 and 2007 were RMB 600 million (US\$ \$88 million), 1000 million (US\$ 146.6 million), and 1500 million (US\$ 219.9 million) respectively. Figure 4.6 shows an apparent increasing trend in the business of the company. The annual increasing rates are about 66.7% and 50% in 2006 and 2007 separately.

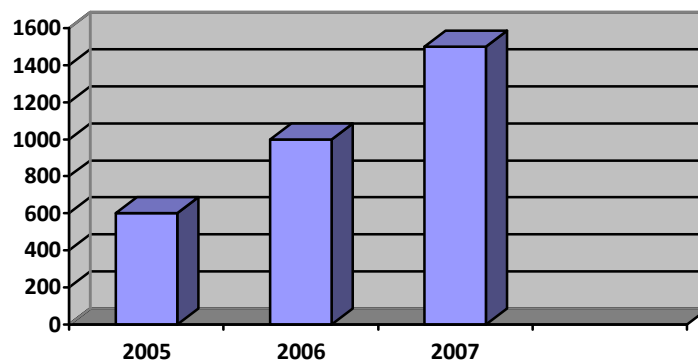


Figure 4.6: recent three years' turnovers of P. G. logistics

Customer and Contract

According to the website information, P. G. Logistics is currently providing logistics services for more than 108 main customers. Among these customers, there are 60

companies (about 56%) from foreign countries or outside China, and 52 of the 60 are from the Fortune Global 500 companies, such as WAL-mart, Shell, Unilever, Kraft, Pepsi, MacDonald, Toyota, LG, and BASF. The others are well-known Chinese brands.

The average length of most contracts between P. G. Logistics and its customers are about 1 to 3 years, and some are 5-year-long contracts. The main issues normally addressed in those contracts or agreements are: price or rate, service standards and performance requirements, key performance indicators (KPI) for performance measurement, compensation or penalties, procedures for termination or dissolution, procedures for contract renewal, special information technology requirements, special goal for future improvement.

The company has introduced different measures of customer service performance, involving on-time delivery, on-time bill return, order cycle time, inventory turns, inventory accuracy, goods damage rate, and customer complaint.

The questionnaire feedback analysis indicates that P. G. Logistics views cost as important and service very important for successful contracting. From the respondent's perspective, the main reasons for companies outsourcing their logistics are: improving customer service, reducing costs, lowering capital investment, accessing technology and management skills, increasing market penetration, focusing on core business, reducing risk and uncertainty. Further, the most important factors affecting the customer in choosing P. G. Logistics are because of good service, commitment, reliability, and self-owned modern logistics networks.

4.4.2 COMPETITIVE SITUATION

Competition

The questionnaire respondent considers the competition within Chinese logistics industry is very intensive, and he felt that the most competitive pressure comes

mainly from cost and service.

The analysis of the interview transcript also explores the intensive competition in China. The interview participant considers the price competition in China is fierce, and to some extent, the competition has been distorted by the special Chinese business environment. In the price competition, some Chinese 3PL providers' compete in unreasonable prices which even may result in loss. Some of the companies, especially state-owned companies concern only the sales turnover but not the profits. Also, some 3PL companies who have been listed in the Chinese share market do not care about profit from 3PL business, because they can make money through manipulating stock price. This is why P. G. Logistics has avoided attending most of the biddings invited by domestic companies.

Bidding has been found as a main reason leading to price competition. The participant states that bidding is very popular in the industry, and it is the main factor causing the customer switch-off. To support his point, the participant gave an example in the interview that explained how one important customer of the company terminated their cooperation. P. G. Logistics has provided service for the customer over 10 years, however, because of bidding, in which the company did not offer a lower price than its competitor, the 10 years cooperation ended.

Competitors

Different from the two former respondents, the questionnaire respondent from P.G. Logistics views both foreign and domestic competitors are the main competitors that are creating competitive pressure on the company.

In the interview, when talking about domestic competitors, the interviewee considered domestic competitors are competitive in price. As more and more companies chose 3PL providers through bidding, P. G. Logistics faces more pressure from its competitors. The respondent believes that the company has no advantage in pure

price competition, although the company has service strength among domestic 3PL providers. As mention earlier, the participant believes that the price competition in Chinese 3PL market is chaotic. The low prices given by some logistics companies may not represent the real cost; their only purpose is to win a bidding.

Meanwhile, the interviewee believes that the company is facing more and more pressure from foreign 3PL providers in addition to the domestic competitors. More than 50% of customers of P.G. Logistics are foreign companies, which results in the competition between the company and foreign 3PL providers. It seems that most of the foreign companies are likely to use the foreign 3PL providers they were familiar with or used before. When talking about the competitive pressure from those foreign 3PL providers, the interviewee explained that, generally, foreign 3PL providers have advantages in management and service. However, under the Chinese business environment, these foreign 3PL providers have started to compete with fairly low prices. More and more foreign 3PL have competed with P. G. Logistics by using low price strategy

Although foreign competitors are causing more pressure on the company, the interviewee shows great confidence in competing with them. He explained that, compared with domestic 3PL providers, foreign 3PL providers are still not acclimatized with Chinese market. To support this, the interviewee gave an example that shows how difficult it is for these foreign 3PL providers to compete with domestic 3PL providers in China with little understanding of Chinese culture and business environment.

SWOT analysis

The SWOT analysis of P. G. Logistics is summarized based on the questionnaire feedback and it is illustrated in Table 4.3, showing the competitive strength, weakness, opportunities, and threats of the company. According to the questionnaire feedback, the main strengths of the company can be summarized as: service, information

technology, logistics network, management, logistics specialist, and stable customer relationships. The same as Total Logistics, price is the only weakness identified by the respondent. The opportunities the company has include: massive market, high developing speed of China's economies, 3PL still at its beginning stage, total logistics cost still high in China, and more effective logistics bases. The threats identified by the respondent are more domestic and foreign competitors, and low price from competitors.

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Service • Information technology • logistics networks • stable customer relationships • Management and specialist 	<ul style="list-style-type: none"> • Price 	<ul style="list-style-type: none"> • Massive market • High developing speed of China's economies • 3PL still at its beginning stage • Total logistics cost still high in China • more effective logistics bases 	<ul style="list-style-type: none"> • More foreign competitors • more domestic competitors • Low price from competitors

Table 4.3: SWOT Analysis of P. G. Logistics.

4.4.3 STRATEGY REVIEW

Competitive Strategy

The questionnaire feedback reveals that both cost and service are considered very important factors in competition. The overall competitive strategy the company pursues is to compete with competitors through both cost reducing and service improving.

The analysis of customer information addresses the market segment of P. G. Logistics focuses on, providing logistics services for medium-sized and large-sized companies, especially international companies or joint-ventures. Likewise, the interviewee explained that the company is more likely to cooperate with customers who understand the modern logistics operation methods, for example, most customers of

the company are foreign companies, because these companies seem to fit the business concept of P. G. Logistics.

When talking about other customer segments, such as small-size companies or some larger domestic companies, the interviewee stated that "...there are many customers, who are only concerned about the pure price..., and we cannot meet such cost requirements..." This is why the company has no competitive advantages in price competition with other 3PL providers in these customer segments.

Meanwhile, the interview participant believes the company has overall cost advantages. All customers coming to the company unexceptionally expect to achieve cost saving. The customers keep doing business with P. G. Logistics so that they can get more benefits from P. G. logistics than from others. In other words P. G. Logistics can help its customers to gain more cost saving than other 3PL providers.

Pursuing service advantage can be found as a consistent competitive strategy from all sources of data. The questionnaire respondent admits service strategy is very important for the company. Also, the successful case analyses of P. G. Logistics on the website reveal that the company has utilized its service advantage to help its customers achieve benefits of both cost reduction and service improvement.

Based on the different situations, P. G. Logistics provides customers with different logistics solutions. Through strategic planning and integration, the company helps customers optimize location of D.C.'s and reduce the overall numbers of D.C.'s; through adopting specialist logistics management, the company helps the customer increase the productivity of resource utilization, such as human resources, facilities, equipment and capital resources; also through utilizing information systems, the company helps the customers increase overall visibility in different logistics processes. And the overall benefit is that not only does P. G. Logistics differentiate itself from its competitors, but also its customers can gain differentiation advantage.

Within the focused customer segment, the interview participant believes that the company has more advantages in logistics networks, information technology systems, and experienced management team. Through integrating these advanced resources, the company can keep standing in front of its competitors, and help the customers to achieve low cost and high service levels.

Physical Network Development

Through the analysis of website information, it was found that P. G. Logistics has regarded distribution network development as one of its critical strategies. The network development of P. G. Logistics has started from the coastal cities locating around the four main economic developing circles, the Yangtze River Delta circle (around Shanghai), the Pearl River Delta circle (around Shenzhen, Guangzhou, and Hong Kong), the Bohai Bay area circle (around Beijing and Tianjin), and the near Taiwan Strait circle (around Xiamen, Fuzhou). On the basis of the four circles, the network has spread and radiated to the central and western areas of the country, and finally a cross-country physical distribution system would be accomplished.

The analysis of the website information of P. G. Logistics indicates that the network development of the company consists of two main strategies, i.e. ‘logistics base strategy’ and ‘transportation network strategy’. The logistics base strategy refers to establishing modern logistics bases in the main cities across the country. The bases will be equipped with most modern warehousing facilities and equipments, and provide warehousing, transportation, distribution, and some value-added services. As the president of the company stated in a national logistics conference, the bases act together as a supply chain service platform, which can be purchasing centres, production centres (light manufacturing and assembling), value-added centres, and regional distribution centres. As mentioned before, four such modern logistics bases have been built up in four main cities. In the next few years, another eleven similar bases will be introduced into the distribution system according to the overall

development plan.

The transportation networks strategy means to develop fast, safe, and stable mainline transport network, regional transport and distribution networks. Through the transport networks, the company provides customers with B2B (Business to Business) and B2C (Business to Customer) distribution services, so that the customers can serve their customers more effectively and efficiently.

The interview participant also expresses the view that the development of a physical network is normally based on the business requirements. However, the strategy has changed these days. With the development of the logistics industry in China, the company has initially been involved in developing some facilities for the future requirements. From the participant's viewpoint, there are two motivations of this new strategic intention. First motivation is future business development, and another is the steep rise in land prices.

Information Technology System Development

The information technology system development strategy also has been identified as one of the business strategies of P. G. Logistics. According to the website information, IT development strategy, base development strategy, and transportation network strategy have been claimed clearly as the three main strategies of P. G. Logistics. The purpose of the I.T. development strategy is to form an integrated 3PL information platform, which links the upstream with downstream along a supply chain. The information platform will be a collaborated I.T. system triggered by orders, and it will cross through the whole process of order processing. The system will support a total visible, controllable operation throughout the supply chain.

The earlier findings indicate that P. G. Logistics has introduced several information technology systems into its logistics management, such as warehouse management system, transportation management system, tracking-tracing tools, electronic data

interchange, and radio frequency identification. The information from the company's website indicates that these introduced information technology systems are based on the operational requirements at different time periods.

The development of the information technology system comprises four main steps. First step is the internet-based information system, which was introduced during 1997 and 1999. The system was mainly used to provide the information of transportation, warehousing and book-keeping. In the second step, the EDI system was accomplished during the period 2000-2002. The system ensured the company could achieve real-time data exchange with its customers. It also smoothed the business operations between the processes of the company and its customers.

The third step was taken during the years between 2003 and 2005. The company developed a total order management system (TOMS) itself and introduced WMS through cooperating with IBM. Through combining the two systems with TMS and GPS, the company formed its 3PL information platform that not only links the processes of order processing, transportation, warehousing, finance, and other logistics basic information together, but also increases the visibility of the logistics operation process.

The fourth step was started in 2006. The company has put efforts in building a multifunctional information system to the continually increased requirement of supply chain management. As one of the important parts, RFID has been introduced into the information system of the company.

Customer Relationships

Establishing long-term relationships or strategic partnerships with main customers has been identified by the analysis of the interview transcript. As mentioned earlier, P. G. Logistics pays more attention to those foreign companies or joint-ventures. According to the interviewee's explanation, most of these customers are more likely

to establish long-term relationships with the company, and some of them have built a strategic partnership with the company. The long-term relationships between the company and its customers can be identified by following interpretations.

Firstly, some customers want to share their long-term strategies with P. G. Logistics, such as strategies of new site development and future acquisitions, so that the company may correspondingly adjust its future strategies and utilize its logistics advantages to support the fulfillment of these strategies. As the interviewee mentioned that once a customer builds a new site, P. G. Logistics may be involved in the development of the logistics facilities such as warehouses or D.C.'s. The involvements include direct investment by P. G. Logistics and share investment with the customer. The direct investment means that P. G. Logistics is responsible to all the investment (construction and operational equipments) and operation of a DC. The share investment refers that the customer may invest the DC construction while P. G. Logistics may invest the storage system, operational and handling equipments. No matter what kinds of investment are involved in, P. G. Logistics is always expected to be responsible for the management and operation.

Secondly, P. G. Logistics makes efforts to pursue the long-term relationships with its customers. From interviewee's viewpoint, it is easy to form long-term relationships with those who maturely understand the logistics concept. However, for those who are not clearly familiar with the benefits of partnerships, it would be difficult to achieve long-term relationship in a short period. In this case, the company would not simply give up; instead, the company would develop long-term relationships during the process of cooperation. Meanwhile, the customers may learn about how it is important to form partnerships in logistics outsourcing, and long-term partnerships may be established as a result.

For example, a new customer may only outsource its transportation to P. G. Logistics in the beginning. During the process of cooperation, P. G. Logistics may focus on

providing high quality of transportation service to meet the customer's requirements. Meanwhile, P. G. Logistics may evaluate the customer's logistics system initially to find and provide the customer with possible solutions for the improvement of its logistics operation. Consequently, the customer will benefit from the improvements, and P. G. logistics will gain more business. Thus, a long-term partnership between the two companies will be established.

Thirdly, the information communicated between P. G. Logistics and its customers is not only transactional or operational but also strategic information. According to the participant explanation, to reach the best logistics solutions, the two parties need sufficient communication about the situations of customers' business, products, market, and operation. Also, in daily operations, communication may be the prerequisite of smooth and successful logistics operation. Further a long-term relationship means strategic cooperation, which results in long-term and win-win benefits.

In the interview, the participant stated that some main customers have communicated strategically with the company. The information communicated includes: when and where the customer may set up a new factory, new branch, or a new merging, even the sales targets in recent years. For example, a famous multinational company's yearly sales target of 2007 was to increase sales 30-50% in China market. As a strategic partner, the customer requires the support from P. G. Logistics. Because of such communication, both parties made efforts together. With the same sized storage facilities, P. G. Logistics helped the customer increase their warehousing productivity by an additional 200%, and finally the customer achieved 50% increase in its sales.

Finally, the cooperation between P. G. Logistics and its main customers has been a multi-level contacting, in which different levels of management cooperation are involved. As the interviewee stated that there are the regular meetings between the

two parties, which includes the meetings of operational level, high management level such as the meetings of presidents, general managers, and the extensive level such as the regular meetings with the branch managers, sales managers, and production managers from customer side.

CHAPTER FIVE

CROSS-CASE DISCUSSION

5.1 INTRODUCTION

The findings of cross-case analysis are presented and discussed in this chapter, which are based on the findings presented in the within-case study in Chapter Four. The purpose of this study focuses on understanding the current situations Chinese 3PL providers are facing, especially on the competitive strategies they are pursuing. So far, to some extent the research has provided understanding of the situations occurring within individual 3PL providers. Through analyzing the within-case study findings, this chapter summarizes and presents the common similarities and differences between the companies studied. Further, through comparing, interpreting, and discussing the cross-case findings, the chapter reveals what has occurred across these Chinese 3PL providers studied.

5.2 CURRENT STATE

5.2.1 Companies' Overview

All three participating logistics companies come from the area of Pearl River Delta, which is the most developed coastal area in China, and the logistics industry there has developed faster than other areas of the country. Among the three case study companies, two are private companies while the other one is a state-owned company but conducts business accounting independently and assumes sole responsibility for profits and losses. All of the three companies are famous third-party logistics companies, which were ranked as the number 18, 39, and 86 respectively on the list of 2005 top 100 logistics companies in China.

According to the within-case study reports, two of the three 3PL providers were established in 1990s, and another was started in the year 2000. The three

participating companies originated from different service areas. One was originally a railway transportation agent; one started as a shuttle bus company; and another was originally an e-business company. In regard to 3PL development, Berglund et al. (1999) remark that from 1980s or even earlier, with the appearance of traditional logistics providers, the activities usually involved only transportation or warehousing. Also, from the late 1990s a number of players from other areas, like information technology, management consultancy services have started the involvement in the 3PL industry through working with the original logistics providers.

To some extent, the histories of the three companies uncover the development of Chinese 3PL providers. Concerning its origin, it is similar to the development of third-party logistics in other countries. However, the starting time period seems a little later than what happened in the developed countries. This may be the reason why some authors describe the third-party logistics in China as still ‘young’, ‘in its primary stage’, ‘in its infancy’ or ‘different from the developed countries’ (Hong & Chin 2004; Kerr 2005a).

5.2.2 Physical Distribution Networks

As top 100 Chinese logistics companies, the case study companies currently have sufficient logistics networks to support their logistics operation. The most common factor found is that the networks of the companies have been established and spread across the country. The distributions of business offices, branches, and logistics facilities reveal that the distribution networks of the case study companies have reached all the main cities, most of the provincial cities, and some of the small cities and counties in China.

In addition, as a part of the physical networks, the transportation network also has developed across the networks. The case study companies have invested in and owned a range of vehicles to support the operation of transport and distribution. Meanwhile, some under agreement third-party resources or facilities such as vehicles,

warehouses, and distribution centres also could be involved in the networks, when it is necessary.

It seems that these Chinese 3PL companies have developed and expanded their physical distribution networks to the places where the customer requirements can be satisfied. At the same time, the observation of the distribution of the networks reveals that the physical networks' are more concentrated along the coastal areas and scattered in the hinterland regions of the country. This may result from the imbalance of economic development between coastal areas and inland areas (Jiang, 2002; DiBenedetto, 2008).

5.2.3 Service Provided

Rushton et al. (2000) report that the basic services offered by third party logistics providers vary from hiring a provision of single vehicle or a fleet of vehicles to complete single functional logistics operation, including storage, transport, management services, order processing and stock control. In addition to those basic services, many other services are offered by 3PL providers, known as value-added services through which a massive additional value is added to the products in the logistics process.

Originally, the case study companies provided only basic and single logistics service, for instance, one of them was offering only the service as an agent of railway transportation while another one was only a shuttle bus provider. With the development of third-party logistics in China, the companies have moved their attention to multifunctional logistics services, such as transportation, distribution, warehousing, and inventory management.

Further, with the dynamic introduction and development of the notion of supply chain management, 3PL providers start to offer logistics support through value-added services and supply chain solution services, which creates opportunities for

companies to reduce costs and improve customer satisfaction (Knemeyer et al., 2003; Lieb, 2005). In the same way, the case companies start to provide some value-added services and supply chain solution services that were motivated by the increasing requirements from customers.

To sum up, the basic logistics services the case study companies are providing include: transportation, warehousing, distribution, order processing, inventory management, and services of international air and sea freight agent. Moreover, the value-added services and supply chain solution service they are providing are: sorting and sequencing, tagging and labelling, on demand packing and repacking, quality management, cross-docking, just-in-time delivery, merge-in-transit delivery.

5.2.4 Information Technology System

Information technology has been addressed as an important driver of supply chain management, and accessibility of information technology has been a main driver for or against logistics outsourcing (Ballou, 1992; Langley, et al. 2007). Consequently, the situation of information technology in the logistics industry has drawn more attention from researchers. A number of researchers have investigated the situation of information technology in Chinese 3PL industry in their studies (Jiang, 2002; Hong, et al., 2004; Kerr, 2005b). Generally, the situation has been described by using different expressions ‘undeveloped information network’, ‘outdated IT and communication technology’, ‘lack of cutting-edge technical support’, ‘without the support of tracking tools’, and ‘risks in IT systems for the planning and monitoring of supply chains’.

Interestingly, the companies involved in the present research are all equipped with different information systems that comprise similar functional information technologies. The results of the within-case studies reveal that although the participating companies are adopting different IT systems or platforms in their logistics management, the functional systems or subsystems included in the overall

information systems are similar. All the three participating companies have adopted the following functional IT systems or techniques in their operation, i.e. Warehouse Management System (WMS), Transportation Management System (TMS), Tracking-tracing tools, Electronic data interchange (EDI), and web-enabled communication. In addition, Radio frequency identification (RFID) is available in two of the companies, but currently there are no customers.

Such findings indicate that the information technology Chinese 3PL providers are using has developed and improved significantly, which can be an updated finding of the information technology situation in Chinese third-party logistics industry.

5.2.5 Business Trend

Kerr (2006) reports that with numerous potential in third-party logistics industry, China's outsourced logistics industry is growing at the rate of more than 22 percent per year, and more than 70 percent of 3PL providers in China have achieved a sales growth rate in excess of 30 percent annually in the past three years. Similarly, in this study, the increasing trend in the third-party industry can be addressed directly from the increasing growth in sales turnovers of the participating companies.

All the case study companies have achieved constant increase in their sales in the past three years, i.e. 2005, 2006, and 2007. The average growth rate in sales of the three companies is about 27.9%, the lowest growth rate is about 5.1%, and the highest one is 58.4%. Figure 5.1 summarizes all the sales turnovers of the three companies in year 2005, 2006 and 2007, which shows the overall increasing trend in different companies in different years, among which the most dramatic sales increase in P. G Logistics can also be identified.

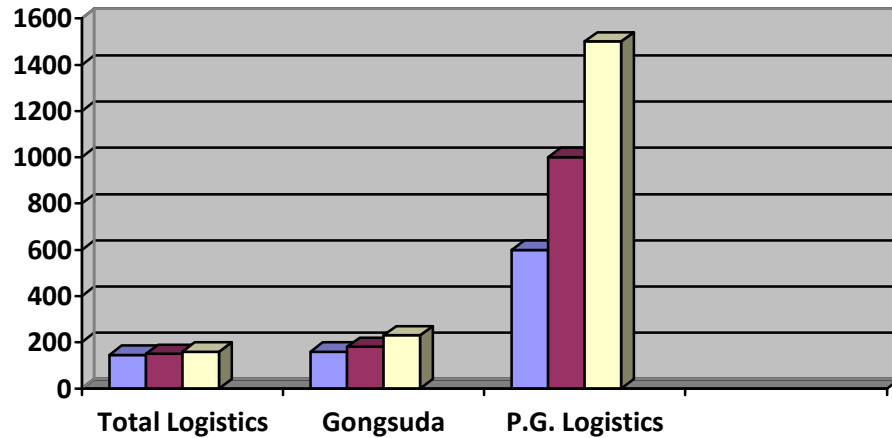


Figure 5.1: Recent Three Years' turnovers of the Three Case Study Companies

5.2.6 Customer and Contract

The analysis of within-case study results show that the participating companies are providing logistics services mainly for large and famous companies, which are from different industries and produce varieties of products. The results also show that these three companies' customers cover both famous international companies and famous domestic companies. More than 50% of the customers are foreign companies or companies outside mainland China, and a majority of the remainder are well-known Chinese companies. It can be understood that the participating companies own the relatively mature customer bases, because the foreign companies seem more advanced in using 3PL. Meanwhile, from the viewpoints of the participating companies, the general reasons that companies outsource their logistics function include: improving customer service, reducing costs, accessing technology and management skills, focusing on core business, and reducing risk and uncertainty.

The results of the within-case studies also show that the average length of contracts between the case study companies and their customers are mostly between 1 to 3 years, except P. G. Logistics, which maintains some 3 to 5 years contracts. In the contracts, the main issues of service level agreement have been clearly detailed and mentioned, such as price or rate, service standards and performance requirements,

compensation or penalties, procedures for termination or dissolution, procedures for contract renewal, special information technology requirements, and special goal for future improvement.

In addition, the issue of key performance indicators (KPI) for performance measurement has been identified in the companies' contracts. Lacking desired service level has been identified as one of the reasons why firms are against logistics outsourcing (Richardson 2004). To assure desirable level of customer service, the participating 3PL companies have introduced a series of KPI's (Key Performance Indicators) to measure the customer service performance when serving their customers. The main KPI's used by the companies include: on-time delivery, on-time bill return, order accuracy, order cycle time, inventory levels, goods damage rate, customer complaint handling, and customer satisfaction rate.

Concerning the success in contracting practice, all the case study companies consider both cost and service the most important factors in China. On the other hand, the three companies believe that their successes in contracting heavily rely on good service, flexibility, commitment, and reliability, and one of the three has taken account of self-owned modern logistics network as the factors affecting the company's successful contracting. It is interesting that all the companies accept that cost is an important factor in contracting success, but the cost factor seems ineffective to their own successes.

The companies involved in the research emphasize that customer maturity is an essential factor that influences not only contract success but also the overall success of the logistics outsourcing practice. According to the within-case study results, mature customers focus on customer service and overall cost reduction that resulted from logistics integration, supply chain solutions and value-added services. In contrast, immature customers are more likely to centre their attention on direct or pure price offered by 3PL providers. The mature customers are eager to build

long-term relationships, which directly contributes to the success of logistics outsourcing and long-term benefits; while the immature 3PL users are keen to stimulate price competitions between 3PL providers, which results in frequent turnovers of 3PL providers.

5.3 COMPETITIVE SITUATION

5.3.1 Competition

The results of the within-case study indicate that competition in Chinese 3PL industry is intensive. Two of the three companies describe the competition in the industry as very intensive, and another believes that the competition is intensive rather than very intensive. The participating companies identified the most competitive pressure comes from service, cost, technology, capital investment and local protectionism.

All the case study companies admit that attending bidding has been the main way for them to gain business. In China, immature 3PL users are more likely to adopt bidding as their main strategy in selecting 3PL providers, and most of the bidding may directly lead to price competition between the 3PL providers. The results of such bidding are endless price competition and frequent switch in 3PL. As all the participating companies believe, they do not have strength in pure price competition. They have neglected the bidding from those focusing only on the lowest price, even though some are big business. Conversely, the participating companies prefer to participate in the bidding organized by those mature customers, because what concerns the mature customers is not the lowest price, but the overall cost reduction.

The results of within-case study also indicate that the competition atmosphere within Chinese 3PL industry is chaotic, unfair, and even illegal. All the case study companies consider the immature 3PL usage is one main reason leading to endless price competition, frequent switch in 3PL, and finally chaotic competition. Also, historically formed local protectionism and persistent bureaucracy are the roots of the unfair and illegal competition. As one of the participants expressed in the interview,

many competitors rely on ‘guanxi’ (special relationship). This is consistent with some previous studies, for instance, Kerr (2005a) claims that the relationships with various government levels or regional business powers are necessary within China business environment.

To fit in with the chaotic competitive environment, some customers have developed special strategies in coping with different 3PL providers, so that they can obtain what they really want. For instance, the ‘Chinese characteristic bidding’ mentioned in within-case study can be a special product from the special Chinese competition environment. In contrast to traditional bidding that the lowest price wins, the bidding winner comes from the bids that are above a certain price line. Such kind of customers believe that low price means low level of customer service within the Chinese logistics market. This can be a good example that implies the complex competitive situation in China.

5.3.2 Competitors

Two of the three case study companies consider that domestic 3PL providers are their main competitors that create the most pressure on them. The companies do not think foreign 3PL providers are their main competitors. At least they still have more advantages over foreign competitors currently. Another company views both of the domestic and foreign 3PL providers cause competitive pressure on their business. The different perceptions of competitors might be associated with their individual business situations.

The reasons why they are more likely to consider domestics 3PL providers their challenging competitors can be summarized as follows. Firstly, Chinese domestic 3PL providers are more competitive these days. The 3PL industry is growing rapidly in China, although it is still very young compared with some developed countries. The Chinese domestic 3PL providers currently offer various logistics services, including not only the simple logistics services but also the value-added

services, even supply chain solution services. Secondly, the chaotic, unfair, or even illegal competition still exists in the Chinese 3PL market. In such a situation, the Chinese domestic 3PL providers seem more competitive. For example, compared with foreign 3PL providers, the local providers have an obvious advantage; in other words, they have strong relations with local or central government (Jiang, 2002). Finally, the Chinese 3PL users are still not very mature. The 3PL selection heavily relies on stimulating price competitions between 3PL providers. In this case, the Chinese domestic 3PL providers are more likely to fit such immature 3PL users.

The case study companies have different opinions in regard to foreign competitors. Those who do not consider the foreign 3PL providers as main competitors believe that currently both domestic and foreign 3PL providers have their own service market segments, and there is still room for both parties to develop. However, the companies also expressed that with the development of the logistics industry in China, the more mature the market is, the more competitive pressure from the foreign competitors they may have.

It seems that major multinationals from the U.S., Europe, and elsewhere tend to work in China with global or foreign 3PL providers while the Chinese 3PL providers are more likely to have Chinese customers (Kerr, 2005a). Although foreign 3PL providers have their advantages in coping with multinational customers, they have their disadvantages in Chinese market. Firstly, foreign 3PL providers may have not acclimatized themselves to Chinese business culture and market situation. Second, foreign 3PL providers currently have no advantages in distribution networks and logistics resources, which results in the fact that many foreign 3PL providers' logistics services are operated relying on networks of domestic 3PL providers.

In contrast, the only company considering foreign 3PL providers as main competitors believes that foreign 3PL providers have advantages in not only management but also service and cost. The results can be attributed to the following reasons. First

reason is that foreign 3PL providers normally have the similar market segment in China with the participated 3PL company. Generally, multinational companies are likely to work in China with foreign 3PL providers. However, some multinationals are beginning to deal directly with Chinese 3PL providers, and such a trend seems to be growing (Kerr, 2005a). Second there are more and more foreign 3PL providers involved in the Chinese market, indicating that the studied Chinese 3PL companies have encountered more and more competitive pressure from those foreign competitors. In this case, the participating company currently has more than 50% customers from international foreign companies, and those international companies seem to be favourable towards foreign 3PL providers. This obviously contributes to the competition between the participating 3PL and foreign 3PL providers.

5.3.3 SWOT Analysis

Table 5.1 presents an overall SWOT analysis that summarizes the strengths, weaknesses, opportunities, and threats of the three case study companies, which provides an overall picture and a summary of how the companies understand their competitive situations. The most common strengths addressed by the within-case study results include: service, information technology, logistics networks; while other strengths like management, specialist, capital investment, and stable customer relationships are less common. In contrast to the common sense that Chinese companies are more competitive in price, the participating Chinese 3PL providers all consider price is their weakness. One of them perceives management and logistics specialist as the company's weaknesses as well. The most noticeable opportunities addressed are high developing speed of China's economy and massive market, followed by the opportunities including: 3PL still is at its beginning stage, total logistics cost is still high in China, and more effective logistics bases. Further, the threats identified include: more foreign and domestic competitors, intensive competition, especially the low price competition, high oil price, government limitation or legislation, and local protection.

Company	Strengths	Weaknesses	Opportunities	Threats
Total Logistics	<ul style="list-style-type: none"> • Service • Information technology • logistics networks • Management • Specialist • Capital investment 	<ul style="list-style-type: none"> • Price 	<ul style="list-style-type: none"> • Massive market • High developing speed of China's economies • 3PL still at its beginning stage 	<ul style="list-style-type: none"> • More domestic competitors • High oil price • Government limitation or legislation • Local protection
Gongsuda Logistics	<ul style="list-style-type: none"> • Service • Information technology • logistics networks • Capital investment 	<ul style="list-style-type: none"> • Price • Management • Specialist 	<ul style="list-style-type: none"> • Massive market • High developing speed of China's economies 	<ul style="list-style-type: none"> • More foreign competitors • Intensive competition
P. G. Logistics	<ul style="list-style-type: none"> • Service • Information technology • logistics networks • Management and specialist • stable customer relationships 	<ul style="list-style-type: none"> • Price 	<ul style="list-style-type: none"> • Massive market • High developing speed of China's economies • 3PL still at its beginning stage • Total logistics cost still high in China • more effective logistics bases 	<ul style="list-style-type: none"> • More foreign competitors • more domestic competitors • Low price from competitors

Table 5.1 SWOT analysis summary of all the case study companies

5.4 STRATEGY REVIEW

5.4.1 Competitive Strategy

Competitive strategy has been defined by Porter (1985) as the means to search for and establish a profitable and sustainable competitive position in an industry. Through adopting a competitive strategy, companies can improve their position in an industry. As Porter (1985) emphasized, "Competitive strategy... not only responds to the environment but also attempts to shape that environment in a firm's favour" (p.2).

Competition is intensive in the Chinese third-party logistics industry. Companies involved in the industry must be competitive to survive and thrive in the challenging environment. In the current study, the results of within-case study indicate that these three 3PL companies clearly have their competitive strategy.

Market segment selection has been a critical step for companies to achieve competitive advantages within an intensive competition environment. Porter (1985) reported that the segment positioning is more likely to identify segment scope. Segment scope, a dimension of competitive scope, means the product varieties produced and buyers served. In logistics industry, the segment scope of 3PL companies can be the logistics services provided and the 3PL users served. In other words, to achieve competitive advantages, 3PL companies should identify what kind of services they are willing to provide and who are their main customers they want to serve.

The results of the within-case study reveal that the participating 3PL providers have clear customer segment scope. All the three case study companies locate themselves to offer service to medium-sized and large-sized companies who have the similar understanding of the logistics concept with them. The study results show that the most favourable customers for the participating 3PL providers are those who select 3PL providers on the basis of service capability and overall cost reduction. As one of the interviewees expressed "... Some companies, they are the ideal 3PL users that we want to cope with, they are more mature (in 3PL using)...besides price, your networks, information systems, and service ability are all included in their consideration..."

At the same time, the results indicate that the competitive strategies the participating 3PL providers are pursuing the aim of cost advantages and differentiation focus in their positioned market segment. Cost advantages and differentiation focus have been defined as two generic competitive strategies by Porter (1985). Regarding

logistics competitive strategy, Christopher (1998) developed the two generic strategies as cost leadership strategy (or value advantage) and service leadership strategy (or productivity advantage). According to Christopher's idea, a 3PL company may compete as a service leader trying to gain value advantages over its competitors by providing various services to achieve differentiation. Meanwhile, the company may compete as a cost leader, trying to utilize and optimize its resources so that the company can offer services at the lowest cost.

Pursuing service leadership strategy can be easily observed through analyzing the within-case study results. To achieve value or differential advantage, all the case study companies have put great effort in improving service advantage. Firstly, the companies have provided customers with various logistics services, from basic services to value-added services and supply chain solution services. Secondly, to support effective and efficient logistics services, the companies have developed effective physical distribution networks including a number of logistics bases, DCs, warehouses, transportation and regional distribution networks throughout most areas of the country. Thirdly, the companies have introduced and established different IT systems to improve the overall efficiency and visibility of the logistics operations. Finally, the current customer situation or construction of the companies also can be interpreted as the result of flexibility, commitment, and reliability in the cooperation with their customers. This has been considered by all the case study companies as the main differentiation advantage contributing to the successful contracts.

Unlike service advantage, cost advantage strategy seems not obvious. In the SWOT analyses, all the three companies consider good service is one of their important strengths. In contrast, price has been identified as a common weakness of the companies. This does not mean that the companies do not pursue cost advantage strategy. The results of within-case study show that pursuing cost advantage also has been the case study companies' main focus. The companies have no advantages in pure price competition, in particularly when serving an immature customer.

However, all the case study companies emphasize that they have cost advantages, and the advantages are more manifest when serving a mature customer. More than 50% international companies in their customer formation can also be evidence supporting the understanding of the pursuit of cost advantage, because earning money is the ultimate purpose of all the businesses.

To help firms to gain cost (or productivity) advantage in logistics, Christopher (1998) suggested several logistics leverages for cost minimization, such as capacity utilization, low inventory, and schedule integration. In the present study, similar leverages have been adopted by the participating 3PL providers. The companies have tried a range of ways to gain cost advantage. First of all, transportation integration has been a common way in minimizing the transport cost. Secondly, the implementation of different information technology systems is helpful to improve productivities in the operational processes. For example, WMS is used to improve warehousing productivity; GPS can help the companies in tracking vehicle situation and allocating the different transportation assignments, so that the companies can achieve higher vehicle utilization. As a final point, the combination of physical networks and information systems are the major contribution to high efficiency and visibility in logistics operation. Further benefits are a short lead-time and low inventory; thereafter cost and service advantages will be achieved.

5.4.2 Physical Distribution Network Development

The physical distribution function is a complex process which consists of all the activities involved in the flow of goods from suppliers to final consumers. The goal of distribution network operation is to achieve desirable customer service levels at a minimum total cost (Lancioni & Grashof, 1997). Obviously, an effective physical logistics network is critical for successful logistics operation; it can be strongly related to the achievement of both cost and service competitive advantages.

In the current study, distribution network development has been found as a primary

strategy for the case study companies to gain competitive advantages. The within-case study results reveal that all the participating companies have chosen physical network development as one of their main strategies that can help them to compete with their competitors. For instance, in the SWOT analysis, one of the participating companies has considered the effective distribution network as its important strength. Similarly other case study companies also show great confidence that they have obvious advantages in distribution networks over their competitors.

Mourits and Evers (1996) summarize that physical logistics network strategy entails decision-makings on a range of issues, such as the location and size of distribution centres, the logistic activities to be performed at these centres, the capacities required to fulfil these activities, their allocation to specific product groups, and the control system to manage all activities. Moreover, physical distribution consists of all the activities involved in the flow of goods, including transport, transshipment, maintenance of the inventory, and the assembly or reconditioning of products.

It seems that all the case study companies have established and developed their own country-wide logistics networks that can support their overall logistics operation. Literally, the three participating companies have chosen different strategies in their distribution network development. For example, while P.G. Logistics focuses on 'logistics base strategy' and 'transportation network strategy', Gongsuda Logistics adopts 'three networks and bases' as their long-term strategy in physical network development.

Nevertheless, through cross-case analysis, it is not difficult to conclude that the case study companies have implemented similar strategy in their network developments. The common characteristics of the strategies can be summarized as follows.

Firstly, all the network strategies comprise logistics base strategy, main line

transportation strategy, and regional distribution strategy. The logistics bases play the role of nodes in the network, while the main line transportations act like the lines linking the different nodes, and the regional distribution networks ensure the overall network is more detailed and effective. The logistics bases were developed through setting up branches, business offices, building DCs and warehouses, or integrating external resources wherever it is necessary. Currently, the logistics bases have been expanded from big cities to small cities and counties.

Meanwhile, the transportation strategy and regional distribution strategy have involved various modes of transportation in the systems by direct investing or outsourcing to external transporters. The transportation lines and regional distribution networks link the nation-wide logistics bases together and finally form the overall distribution networks or channels for products to flow effectively and efficiently from manufactures to final customers.

Secondly, all the distribution networks strategies seem to have similar developing trend, i.e., all the physical networks tend to develop from coastal areas (or developed areas) toward inland regions (undeveloped areas). The tracks of the distribution networks development reveal that the networks have started from the coastal cities located around the four most developed areas, namely the Yangtze River Delta circle, the Pearl River Delta circle, the Bohai Bay area circle, and Taiwan Strait circle; and then the networks spread to hinterland and remote inland regions, such as central and western areas of the country.

Thirdly, one theme coming out is the effect of customer business requirements on the network development strategy of the case study companies. During the process of the network development, customer business requirements influence the network decisions significantly. The within-case study results reveal that the distribution networks have been enlarged based on business requirements from customers. When customers have service need in a new region, the companies would extend

their network towards the places where customer needs can be satisfied. For example, Unilever, an international business power, established one of its plants in Anhui as its logistics service provider, P. G. Logistics has been forced to follow them in using a variety of logistics resources in area. As a result, the distribution network was expanded to a new point.

Finally, the shifting of government's developing policy has significant effect on the case study companies' network strategies. It has been known that China is shifting development from richer coastal regions to poorer regions in the remote interior. With the shifting of developing policy, many firms have to relocate manufacturing from traditional coastal-area to the interior. Undoubtedly, the shifting of developing policy has brought practical effects on the network development of the case study companies. The results of with-in case study have disclosed that when the location of customers' manufacturing shifts, the case study companies have to develop their networks to enhance their competitive advantages in the interior areas.

In addition, taking the advantages of capital investment and government restrictions into the strategy of network development has been identified in the study. Being involved in the development of public logistics facilities, one of the participating companies has expanded their own business service range and also reinforced the capability of its physical network. For example, in this study, Total Logistics has been involved in airline transportation by gaining shares of a main Chinese airport. Also by joint-investment, the company has set up the Customs Supervised International Express Centre of Shenzhen Airport, which is the exclusive channel for international express in Shenzhen. With this public facility, the 3PL company is not only involved in the business of express, but also provides the service for another 16 large express companies, such as UPS, DHL, and TNT. It is obvious that the involvement of public logistics facility development can be understood as another strategy of physical network development.

5.4.3 Information Technology (IT) System Development

Information has been identified as one of the main drivers of the supply chain. Christopher (1998) emphasized “information has always been central to the efficient management of logistics but now, enabled by technology, it is providing the driving force for competitive logistics strategy” (p.199). IT systems have been used in logistics management to fulfil different roles. “They may aid the decision-making process, help to monitor and control operations, create simulated systems, store and process data, and aid communication between individuals, companies and machines” (Rushton et al. 2000, p.483).

Similar to the physical networks development, the development of information technology systems or networks also has been focused among the case study companies. The results of the within-case study reveal that all the participating companies have continuously pursued the improvement of IT competency that has been considered as a critical factor to successful logistics operations.

The within-case study results indicate that the participating companies are willing to invest in IT introduction and development. The willingness toward IT investment shows how these 3PL providers view the significance of information technology in helping them to achieve logistics success. As Bowersox et al. (1989) emphasize that one of ten differentiators between leading-edge logistics firms and average firms is the ability and willingness to invest in “state-of-the-art IT”. This has answered the question why these case study companies can be in the top100 Chinese logistics companies and how they are different from their competitors.

Further, all the case study companies have put great effort into adopting and developing IT systems at different periods for different business requirements such as: customer service communication, operation controlling, planning, and co-ordination. The IT networks development of the case study companies can be summarized into three main stages. At the first stage, the companies introduced IT systems to support

internal data processing and information communication, which ensures the effectiveness and efficiency in the company-wide management. Second stage is to introduce IT systems to support external information communication, data processing and transferring between the 3PL providers and their customers. Third stage refers to use more sophisticated and integrated IT solutions to meet the increasing supply chain solution requirements.

With similar sub-systems or technologies, all the case study companies have developed different IT networks or platforms. This clearly implies that the Chinese 3PL companies have gained unique IT capabilities that help them to develop unique information systems according to respective needs. This also can be understood as a differentiation advantage over their competitors. As Lai et al. (2006) describe that the investment in IT system is easy to be duplicated; however, it is difficult to imitate the creation of unique IT capability such as technological resource configurations, infrastructure, business processes, and the synergies among them. In other words, with similar information technologies, different companies may have different utilization in their logistics operations.

5.4.4 Customer Relationships

Traditionally, customer relationships have been viewed as buyer and seller relationships, which are adversarial relationships and are very common in traditional business environment. Both buyer and seller struggle to gain so-called maximum benefits for their own companies, and none of them pay attention to the benefits of the business partner. In this kind of relationships, price is the key point, power is the tactic, and also 'win-lose' and adversarial situations are the results. In contrast, the new customer relationship between supplier and customer is a long-term partnership that encourages the parties involved to work collaboratively to achieve mutual benefits and reinforce the competitiveness of both parties.

Tate (1996) emphasizes good relationships require constant hard work from the

parties involved. With the increasing growth in logistics outsourcing, more and more companies are entering into long-term relationships with their third-party logistics providers. The ability to sophisticatedly manage third-party relationships has become a main factor of successful logistics outsourcing (Leahy, et al. 1995). Likewise, from the viewpoint of logistics providers, customer relationship has been a strategic focus of the provision of logistics services.

In this study, all the participating 3PL companies consider establishing long-term partnerships with customer is their main relationship strategy. The current situations discussed before have indicated that the participating companies and their main customers have entered upon a complex cooperation stage. The participating companies provide not only single logistics service but also value-added services and supply chain solution services. Bask (2001) emphasized that “the complexity of service varies from simple to complex, whereas the customer relationship varies from loose to close” (p. 475). The cooperation situation requires the companies to elevate the normal transactional relationships to strategic stage (Harrington, 1999). Pursuing partnerships has been observed from the within-case study results, which can be interpreted from the following aspects.

Willingness to Establish Partnership

All the case study 3PL companies have realized the importance of establishing partnership with customers, and have shown great willingness to set up close and long-term relationships with main customers. From the viewpoint of the participating 3PL providers, long-term partnerships result in more understanding, easy communication and obvious mutual benefits. Within today’s Chinese 3PL industry, more and more foreign and domestic competitors’ involvement results in increasing complication and intensive competition in marketplace. As mentioned earlier, it is difficult for the companies to survive by simply competing with low prices. The companies have introduced integrated and value-added logistics services and competed with both improved service and reduced costs. However,

long-term partnerships with customers are the prerequisite that leads to successful business cooperation and give both parties competitive edge in the marketplace (Tate, 1996).

Developing Compatibility

Having similar business concepts has been emphasized by all the case study companies as an essential factor in dealing with customers. This means both 3PL users and providers should have compatible corporate culture and value, which has been defined by Bowersox (1992) as ‘selective matching’ or ‘compatibility’, one of the key ingredients to a successful partnership. The results of within-case study have revealed that the participating 3PL companies have tried and built partnerships with the customers who have the similar ‘business concept’. Meanwhile, the companies also have put efforts in selling their ‘business concept’ to those immature customers who are not familiar with such compatible business concepts.

From the experience of the participating 3PL companies, it is easy to form a mutually beneficial relationship with those mature or compatible 3PL users. However, for those who are not compatible currently but with business potential, the participating companies have to work hard continually at developing long-term partnerships with them. As one of the participants expressed that 3PL providers should sell the concept to those immature users while providing logistics service.

Open Communication

Communications have been identified by Tate, (1996) as a critical element that can make the difference between success and failure in logistics outsourcing. The study results identify that the participating 3PL companies and their main customers have communicated openly with each other. The information shared during the communications includes not only operational information but also strategic information.

The within-case study results show that all the three 3PL providers have regular meetings

with their main customers. The meetings have been involved in different levels of management, such as the meetings of presidents, general managers, and operation. To gain more understanding about each other, the communication has been expanded widely to various functions such as production, sales, and marketing from both sides. In addition to sharing operational information, the parties have also communicated with each other with strategic information such as sales strategy, new plants location selection, new branch development, and long-term cooperate strategy.

Mutual Commitment

A mutual commitment can be addressed in the relationships between the participating 3PL companies and their main customers. Commitment must go both ways, as Tate, (1996), emphasized that “successful partnerships, like marriages, demand that both partners be committed to weathering and working out bad times” (p.11). In this study, the commitment can be identified by the two aspects below.

First, the commitment can be understood based directly on the customer base. As mentioned earlier, all three participating companies consider commitment is one of the important factors affecting the success of their contracts. This can be understood that if the 3PL providers make a commitment to their customers, the customers will keep outsourcing their logistics to the 3PL providers; while the 3PL providers will constantly provide satisfying logistics services to these customers in return for their commitment.

Second, the mutual commitment also can be interpreted from the direct investment by the participating companies and joint investment with customers in the customers’ logistics facility building and development. According to the results of within-case study, all of the three companies have more or less been involved in logistics infrastructures and facilities development for special customers. This kind of cooperation requires high level of mutual commitment between the parties. Also the cooperation is built up from long-term relationships and mutual trust. An uneven commitment in the cooperation may lead to a failure logistics partnership, and result in losses on both sides.

CHAPTER SIX

CONCLUSIONS

6.1 INTRODUCTION

On the basis of individual case study findings and cross-case discussions, this Chapter summarizes the overall conclusions of the study. Firstly the Chapter reviews the objectives set up at the beginning stage of this study. Then, based on the original study objectives, corresponding conclusions are drawn and presented. Finally, the limitations of the current study and suggestions for future research are provided.

6.2 OBJECTIVES OF THE STUDY

As mentioned at the first Chapter, the objectives of this study are as follows:

1. To understand the current situation of Chinese domestic 3PL providers
2. To discover the competitive strategies pursued by the Chinese 3PL providers

6.3 CONCLUSIONS

6.3.1 Current Situations of Chinese 3PL Providers

General Situations

Under the booming economic environment, the studied Chinese 3PL companies have achieved significant progress in different aspects. As the case study companies were chosen from the list of 2005 top 100 logistics companies in China, they can be recognized as the most developed 3PL providers in Chinese 3PL industry.

The developing histories of the companies revealed that they started their business from 1990s to 2000s, and all the three companies were originated from different service areas. Among them, one was a railway transportation agent, one started its business from a shuttle bus company, and another one was an e-business company

originally. With different background the companies have developed themselves into advanced 3PL companies in the country. In the last three years, all the case study companies have achieved constant increase in their sales, which shows the increasing trend in the 3PL industry in China.

Currently, all the case study companies have established effective distribution networks across the country. Business offices, branches, and logistics facilities have been set up in all the main cities, a great number of the provincial cities, and some of the small cities and counties in China. To move goods between different business points, the companies have invested in and owned a range of vehicles to support their logistics operations. In addition to self-owned logistics resources, the companies have the ability to integrate some under agreement third-party resources into their physical distribution systems.

As a critical part of logistics system, information technology systems have been introduced into the logistics networks of the participating companies. All the IT systems currently adopted comprise the general information technologies used in logistics management, and advanced techniques such as RFID system has been equipped in two of the three companies. The 3PL companies have the capability to combined different IT techniques into special platforms to meet their practical needs.

With the distribution networks and information systems, the case study companies have been able to provide a full range of logistics services, from basic logistics services, to value-added services, and to supply chain solution services. The basic logistics services the case study companies are providing include: transportation, warehousing, distribution, order processing, inventory management, and services of international air and sea freight agent. The value-add services and supply chain solution service provided include: sorting and sequencing, tagging and labelling, on demand packing and repacking, quality management, cross-docking, just-in-time delivery, and merge-in-transit delivery.

The case study companies are providing logistics services not only to Chinese domestic firms but also international companies in China. In their customer bases, there are about 50% of the customers are international companies or companies from outside China. This means the services provided by the case study companies have been accepted by both Chinese and foreign firms. Currently, most contracts between the companies and their customers are 1 to 3 years long, and some of the contracts are 3 to 5 years long. Within the contracts, main issues of service level agreement have been clearly detailed and mentioned.

Competitive Situation

The study reveals that the competition in Chinese 3PL industry is fierce, chaotic, unfair, and even illegal. This may be closely related to the business environment in China. With the development of the logistics industry, more and more 3PL companies are involved in the competition, especially more foreign competitors have entered the competition after China joined the WTO.

Historically formed local protectionism and persistent bureaucracy are the roots of the unfair and illegal competition, and traditional Chinese culture causes complex relationships between business entities. In today's Chinese logistics market, bidding has been identified as the main means for the 3PL companies to gain business. In most circumstances, bidding is only a pure price competition, especially the bidding invited by customers who like using bidding as a tool to stimulate price competition. However, the biddings organized by those mature customers are more attractive to the case study companies. This is because what concerns the mature customers is not the lowest price, but the overall cost reduction.

In the current situation, Chinese domestic 3PL providers have been considered as the main competitors by the case study companies. In comparison to foreign 3PL providers, Chinese domestic 3PL providers are considered more competitive within

the present Chinese market. First, the Chinese domestic 3PL providers have made great progress, and they are familiar with advanced logistics concepts, new technologies and new management skills. Second, the Chinese domestic 3PL providers have relatively effective distribution networks in China. Third, the domestic 3PL providers, rooted in the Chinese culture, are more competitive within current Chinese business environment. For example, they have strong relations with local or central government.

Compared with Chinese 3PL providers, foreign 3PL providers have been found more competitive when serving international businesses, in other words, they have advantages in coping with multinational customers. Within the same market segment providing services for international companies in China, the case study companies have felt more pressure from those foreign competitors. In the competition, the foreign 3PL providers have advantages in not only management but also service and cost. Meanwhile, those who currently do not consider foreign 3PL as their main competitor believe that with the development of logistics industry in China, foreign 3PL providers would be more competitive in the future.

6.3.2 Competitive Strategy Pursued By Chinese Domestic 3PL providers

All the case study companies have their own market segment that is focusing on providing logistics services for those medium- and large-sized companies who have the similar business concepts. Within the selected market segments, the Chinese 3PL companies are pursuing both cost and service leadership. In other words, the 3PL companies are competing through cost and service advantages. To achieve competitive advantages, all the case study 3PL companies have put great effort in the following aspects.

All the case study companies have chosen developing effective distribution networks as their primary strategy. All the three companies have clearly strategies and have

implemented similar strategies in developing physical logistics network. Firstly, all the case study companies focus on developing country-wide distribution network that can meet different logistics requirements of customers from different industries. Secondly, all network development strategies comprise logistics base strategy, main line transportation strategy, and regional distribution strategy. Thirdly, all the physical networks have developed from coastal areas toward inland regions on the basis of customer business requirements and the shifting of government's developing policy. Finally, some Chinese 3PL providers have taken the advantages of capital investment and government restrictions into their strategy of network development. For instance, Total Logistics in this study has been involved in the development of public logistics facilities, through which the company has expanded the service range and reinforced the capability of its physical network.

Adopting and developing IT systems have been identified as another important competitive strategy pursued by the case study companies. The participating 3PL companies have recognized the importance of information technology in logistics success and have introduced a variety of information technological systems into their logistics operation. While having adopted similar basic functional information technologies, all the case study companies have developed different platform or overall IT systems based on respective requirements. This reveals that the Chinese 3PL companies have the capability to differentiate themselves from their competitors through IT capability.

Establishing long-term partnerships with customers also has been identified as a competitive strategy adopted by the participating 3PL companies. All the case study companies have shown great willingness to set up close and long-term relationships with their main customers. Such long-term partnerships have resulted in deeper understanding, easy communication, obvious mutual benefits, and successful logistics outsourcing. The successful 3PL partner relationships heavily rely on developing business compatibility, open communication, and mutual commitment.

In conclusion, the objectives of the current study have been achieved. To some extent, the research results have provided the researcher with clearly understanding of the current situation of the Chinese 3PL providers, especially the situation those advanced Chinese 3PL providers are facing. The research results reveal that the 3PL industry in China has developed significantly. The perception of logistics concept is more mature than ever before, and some Chinese 3PL providers have possessed the necessary capabilities to compete with those foreign competitors in China.

6.4 LIMITATIONS OF THIS STUDY

The current study has its strengths that may add value to previous studies on Chinese 3PL industry. A qualitative case study method adopted in this study enables the researcher to gain profound understanding about what is happening within the specific 3PL companies and fulfil the original research objectives. The results of the current study must have enhanced the previous perception about Chinese 3PL industry. However, the current study also has a few limitations.

The research has been limited by the overall time and budget. Such limitations have prevented the researcher from studying more cases of Chinese 3PL companies, which would have benefited the study from wider understanding about the 3PL phenomenon in China. Also, the limitations have constrained the researcher to conduct the study through visiting the sites of the case study companies and gathering data through participated observations. Although telephone-interview, questionnaire and website information have provide adequate data for understanding the current situations of the participating companies, the participated observation may lead the researcher to more deeper and direct understanding of the phenomenon.

The interviews in this study were conducted only with one top manager from each of the case study companies, and this might have influenced the study results by merely

taking account of the participants' personal interests and subjective viewpoints. Also the interviews were conducted through telephone, which prevents the researcher to observe the interviewees' body language that may be useful for the further interview interpreting.

Another flaw of the study is that the utilization of the secondary data from the websites of the case study companies may result in bias. The websites in China, to some extent, have a suspicion of propaganda. In other words, the company website may only provide some positive information about the company.

6.5 FUTURE RESEARCH

It is hard to gain full understanding of a phenomenon through only a telephone-interview, a questionnaire and some information from company website. The current situations that Chinese 3PL providers are facing are complex and very different from those in other countries, and the competitive strategies they are pursuing tend to be interrelated with a variety of factors within the context of Chinese market. Therefore, it is worthwhile investigating and analyzing the same phenomenon in depth. For example, future studies may comprise direct site observations and interviews with staff from different management levels. Also, if it is possible, the interview time should be longer enough to gain rich information. All those would provide opportunities for researchers to gain a full range of perspectives about the phenomenon.

Also, if the resources (time and budgets) are available, more cases can be introduced in future studies. Yin (1991) believes that case study is like lab experiments, "the great certainty lies with the large number of cases" (p.57). Further, he emphasizes that regardless of resource constraints, the larger the number one can study, the better. One possible guidance for future research is to select as many qualified cases as the researcher can.

Further study and analysis may be required to identify the processes of how competitive strategies are formulated, and how the outcomes of the strategies are measured. Also understanding the operational and strategic differences between Chinese 3PL providers and foreign 3PL providers may lead the further studies to another direction to understand the situations the Chinese 3PL providers are facing.

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APPENDICES

APPENDIX 1: Determinants of Successful Third-Party Relationships

1. *Access of parties to the latest technology*—allows the service buyer to use the latest technology and equipment of the provider without the burden of financial investment.
2. *Change orientation (innovative)*—the provider can easily adapt to a changing business environment and develop contingencies to minimize system breakdowns.
3. *Channel perspective*—all parties (i.e., both the provider and the buyer) view the relationship from the system perspective of the overall channel or supply chain.
4. *Control and performance appraisal*—there is agreement between the provider and buyer on performance measurement standards.
5. *Convenience*—the provider is readily available, cooperative, and easy to conduct business with.
6. *Cost savings*—the provider can perform the outsourced tasks at the same, or lower, cost.
7. *Customer orientation (responsive to customer needs)*—a philosophy that customer service is a process that results in value added to the service exchanged. This includes the provider's ability to customize or tailor its services to the buyer's needs.
8. *Dependability*—services are provided in a consistent and reliable manner.
9. *Emphasis on long-term relationships*—relationships between the provider and buyer that are characterized as contractual rather than transactional in nature.
10. *Exit provisions exist*—stability of the relationship must be balanced with the buyer's and provider's freedom to exit when, and if, it is in their long term-interest.
11. *Financial strength*—ensures that the provider's and buyer's financial position warrants a commitment of resources and that each party has the staying power to withstand economic conditions.
12. *Focus on core competency*—allows the provider and buyer to specialize in their primary business operation.
13. *Guidelines exist to resolve issues or disputes*—procedures have been established to identify and discuss matters, or issues, of interest to both parties (i.e., provider and buyer).
14. *Improved service*—providers can perform the outsourced tasks at the same, or higher, service levels.
15. *Management expertise*—the provider employs experienced professionals to manage all aspects of the supply chain.

16. ***Mutual consideration and trust***—all operating objectives and motives are known by the provider and buyer.
 17. ***Number of services offered***—the provider offers a comprehensive set of value-added services to meet client needs.
 18. ***Provider's knowledge of customer operations and vice versa***—each party has a clear understanding of the capabilities and limitations of those involved.
 19. ***Provider's knowledge of the external or competitive environment***—the provider has knowledge of competitors, industry regulations, political and market conditions.
 20. ***Sharing of benefits and risks***—an incentive program is established which involves the sharing of benefits and risks between the provider and buyer for any cooperative efforts.
 21. ***Sharing of common goals (value consistency)***—matching of the provider's and buyer's corporate cultures and philosophies.
 22. ***Sharing of facilities and human resources***—the provider and buyer agree to share physical facilities and employees.
 23. ***Sharing of relevant information***—establishing information systems, procedures, and meetings that involve the sharing of information between the buyer and provider.
 24. ***Timeliness***—services and information are provided to the buyer in a prompt and timely fashion.
 25. ***Total organizational involvement***— there are multiple levels of commitment by both the provider and buyer (including the commitment of top management).
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APPENDIX 2: QUESTIONNAIRE – SURVEY ON 3PL IN CHINA

This information is for reference only and will not be published.

Company Name:

Respondent Name:

Position/Title:

Phone Number:

Email address:

Part 1 – Company information

1. Type of company

- ☐ Joint Venture
- ☐ Foreign-owned enterprise
- ☐ Chinese owned enterprise
- ☐ Other (Please specify)

2. Establishment of your company

- ☐ Before year 2000
- ☐ 2000 to 2002
- ☐ 2003 to 2005
- ☐ After 2005

3. Number of employees

- ☐ Less than 20
- ☐ 20 to 50
- ☐ More than 50

4. Annual Turnover of the recent three years

2005 _____
2006 _____
2007 _____

Part 2 – Current Situation

5. Types of Logistics services provided

- ☐ Transport
- ☐ Warehousing
- ☐ Distribution
- ☐ Order processing
- ☐ Inventory management
- ☐ Reverse logistics
- ☐ Other services

6. Length of contracts (average)

- ☐ Less than one year
- ☐ 1 to 3 years
- ☐ 3 to 5 years
- ☐ more than five years

7. The most important factors to attract customers

- ☐ Good service
- ☐ low costs
- ☐ Flexibility
- ☐ Commitment
- ☐ Reliability

8. To what extent does your company focus on cost

- ☐ Very Important
- ☐ Important
- ☐ Neither important nor unimportant
- ☐ Unimportant
- ☐ Very unimportant

9. How often are costs reviewed

- ☐ Not at all
- ☐ Annually
- ☐ Quarterly

☐ Monthly

☐ Weekly

☐ Daily

10. To what extent does your company focus on customer service/performance

☐ Very Important

☐ Important

☐ Neither important nor unimportant

☐ Unimportant

☐ Very unimportant

11. How often are customer services reviewed

☐ Not at all

☐ Annually

☐ Quarterly

☐ Monthly

☐ Weekly

☐ Daily

12. When you contact customers, to what extent do cost criteria lead to out-sourcing being considered

☐ Very Important

☐ Important

☐ Neither important nor unimportant

☐ Unimportant

☐ Very unimportant

13. When you contact customers, to what extent do performance criteria lead to out-sourcing being considered

☐ Very Important

☐ Important

☐ Neither important nor unimportant

☐ Unimportant

☐ Very unimportant

14. What kinds of value-added services does your company provide

- ☐ Specialist and niche service
- ☐ Sorting and sequencing
- ☐ Tagging and labelling
- ☐ On demand packing and repacking
- ☐ Light manufacturing or assembly
- ☐ Kitting
- ☐ Quality management
- ☐ Cross-docking
- ☐ Just-in-time delivery
- ☐ Merge-in-transit delivery
- ☐ Vendor-managed inventory
- ☐ Other

15. From your company perspective why did your customers decide to out-source logistics with your company

- ☐ Improve customer service
- ☐ Reduce costs
- ☐ Lower capital investment
- ☐ Access technology and management skills
- ☐ Increase market penetration
- ☐ Focus on core business
- ☐ Reduce risk and uncertainty
- ☐ Other

16. How does your company measure its performance of customer service

- ☐ On-time delivery
- ☐ Order accuracy
- ☐ Frequency of delivery
- ☐ Order cycle time
- ☐ Reliability of delivery
- ☐ Inventory levels
- ☐ Inventory turnover
- ☐ Customer complaint
- ☐ Other

17. What kinds of technology systems are used in your company

- ☐ Warehouse Management System (WMS)
- ☐ Transportation Management System (TMS)
- ☐ Tracking-tracing tools
- ☐ EDI (Electronic data interchange)
- ☐ RFID (Radio frequency identification)
- ☐ The Internet (web-enabled communication)
- ☐ Other

18. What are the main issues normally addressed in your contract or agreement

- ☐ Price or rate
- ☐ Service standards and performance requirements
- ☐ Key performance indicators (KPI) for performance measurement
- ☐ Compensation or penalties
- ☐ Procedures for termination or dissolution
- ☐ Procedures for contract renewal
- ☐ Special information technology requirements
- ☐ Special goal for future improvement
- ☐ Other

Part 3 – Competitive Situation

19. To what extent do you think the competition existing in China logistics industry is

- ☐ Very intense
- ☐ Intense
- ☐ Some competition but not intense
- ☐ No competition

20. Which kind of competitor is creating the most pressure on your company in the Chinese market

- ☐ Domestic
- ☐ International

21. What is the most competitive pressure coming from your competitors

- ☐ Price
- ☐ Service
- ☐ Management and specialist
- ☐ Information technology
- ☐ Protective policy
- ☐ Capital investment
- ☐ Other

22. What are your company's strengths compared to your competitors

- ☐ Price
- ☐ Service
- ☐ Information technology
- ☐ logistics networks
- ☐ Management and specialist
- ☐ Capital investment
- ☐ Other

23. What are your company's weaknesses compared to your competitors

- ☐ Price
- ☐ Service
- ☐ Information technology
- ☐ Logistics networks
- ☐ Management and specialist
- ☐ Capital investment
- ☐ Other

24. What opportunities does your company have in today's Chinese market

- ☐ 3pl still at its beginning stage
- ☐ Massive market
- ☐ High developing speed of China's economies
- ☐ Protective policy from government
- ☐ Total logistics cost still high in China
- ☐ Other

25. What threats does your company face in today's Chinese market

- ☐ Intense competition
- ☐ More international competitors

- ☐ More domestic competitors
- ☐ High oil price
- ☐ Government limitation or legislation
- ☐ Local protection
- ☐ Other

26. What are the biggest obstacles hindering your company's future development

- ☐ Government policy
- ☐ Capital
- ☐ Management and specialist
- ☐ Other

27. Would you like to participate a follow up interview to discuss further about above issues?

- ☐ yes
- ☐ No

THANK YOU FOR YOUR TIME

APPENDIX 3: Introductory letter

Dear Sir/Madam:

My name is Yongli Liu. I am following the courses of master degree of logistics and supply chain management at Massey University in New Zealand. I would like to invite you to participate in the research I am conducting about third party logistics providers in China. Please read this information sheet carefully before deciding whether or not you want to participate in the study.

The purpose of this research project is to understand the current situation of Chinese 3pl providers, especially the competitive strategy they are pursuing. Your company has been chosen as a possible candidate to conduct the research. If you kindly give your permission, the study will involve one in-depth interview regarding the topic mentioned above. Your participation in this study is absolutely voluntary.

All data collected about your company will be held and used only for my master's thesis. It will be sorted securely at Massey University, and only my supervisor and I will be able to access to it. Though the participation of the survey is voluntary, your response is very important to us to acquire the necessary data and gain the valuable knowledge. Should you have any questions and queries regarding the study, please feel free to contact:

My supervisor: Dr. Norman E. Marr, phone: 0064-6-3505226,

email: n.e.marr@massey.ac.nz

or me: Liu yongli, phone: 0064-9-8354938, e-mail: louieliuyl@hotmail.com.

Yours sincerely,
yongli Liu

APPENDIX 4: QUESTIONS FOR INTERVIEW ON 3PL IN CHINA

The following questions were used as guidance for the interviews

1. What kinds of strategies are adopted in your company to help your customer to achieve cost reduction?
2. For different customers, does your company use the same price strategy or policy? Why? Or why not?
3. What kinds of strategies are adopted in your company to help your customers to achieve service improvement?
4. For different customers, does your company use the same service strategy or policy? Why? Or why not?
5. How does your company view the relation between your service strategies and the corporate objectives or strategies of your customer?
6. What procedures or service policies are in place in your market developing process? Or how does your company translate customer requirements into an attractive offer?
7. In addition to customers' requirements, does your company investigate the marketing position or situation of your customers? If yes, how?
8. How can your company ensure that the services provided by your company can help the customer to achieve competitive advantages?
9. How does your company manage different customer or project?
10. How can your company adapt your current system to meet special customer needs?
11. Comparing with other Chinese 3PL providers, what aspects does your company need to improve?
12. What do you think are the main gaps between Chinese 3PL providers and international competitors?
13. What do you think are the most challenges for your company in future?