

Logistics Barriers to International Operations: A Case Study of Japanese Firm in China

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Abstract— The aim of this paper is to capture the specific logistics problems and the new challenges that Japanese firms face in their operations in China, and to identify the key factors influencing the development of effective logistics management. The analysis is based on a case study of a Japanese firm that manufactures its products in China and sells in the Japanese market. The findings show that establishing logistics functionality in China is the key for maintaining low prices. The critical challenges in procurement: quality, cost, and delayed delivery are seriously affected by logistics problems. The logistics barriers Japanese firms encountered in China have been changing; however, regulatory restrictions and local protection regulations still remain the most critical problems. Meanwhile, some new issues: a rise in logistics costs, local labor costs, and a shortage of human resources are becoming major concerns.

Keywords—international operation; logistics management; case study; China

I. INTRODUCTION

Foreign Direct Investment (FDI) to China has increased rapidly in recent years. In the 1990's, many foreign firms shifted their manufacturing base to China to utilize the cheap labor costs. Since China joined the WTO in 2000, an increasing number of foreign firms are entering China to take advantage of the business opportunities in the potentially huge market. Japan is a leading country in investments in China, and the FDI from Japan has increased from 137.7 billion Yen in 1998 to 670.0 billion Yen in 2008 (MOF, 2009). Joint Venture Enterprises (JVEs) and Foreign Investment Enterprises (FIEs) account for about 90 percent of all FDI in 2008. Additionally, Japanese firms tried to establish local suppliers instead of importing from home. Recent data shows that local supply has increased to 50 percent from 10 percent in 1995 (JCIPO, 2007). Subsequently, there has been a rise in the distribution of materials and products in local markets. However, most of these firms encountered logistics problems in distributing their products in China. The reason for this is the development of the Chinese logistics industry has fallen behind the rapid economic growth and increased demand for distribution. As a result, some Japanese firms have begun to establish efficient logistics networks in their operations in China.

The Chinese government has begun to formulate logistics as a strategic industry and invested heavily in improving infrastructure, such as nationwide multi-modal transportation networks and large-scale logistics centers. The logistics barriers foreign firms encountered in China have been changing, and some new challenges have become concerns for the Japanese firms. This study aims to capture the specific logistics problems and new challenges facing Japanese firms operating in China, and to identify the key factors influencing the development of effective logistics management.

II. LITERATURE REVIEW

A number of researchers have studied logistics problems facing foreign firms in China from various aspects. Carter et al. (1997) conducted a survey to identify the logistics barriers that U.S. firms encountered in China. They found that logistics barriers were present in all aspects including purchasing, transportation, order processing, warehousing, inventory control, and import/export services. They indicated that logistics barriers to international operations were partially the result of internal inefficiency, rather than a large scale problem. Developing reliable suppliers can reduce the severity of those problems. Ta et al. (2000) surveyed Singapore-based manufacturing firms in China and found that particular transportation problems were more serious than others. They concluded that the type of transport mode and ownership of transport services could affect the level of satisfaction for transportation in China. Zhang (2001) provided a case study on supplier management of joint ventures in China, and indicated that one difficulty facing JVEs was trying to simultaneously maintain quality levels while reducing costs by purchasing materials locally. Hong et al. (2004) concluded that there was an increasing trend for firms to outsource logistics services in China, especially in the area of logistics information system management and logistics system design. Easton (2003) indicated that China's supply chains were costly, inefficient and unreliable. In addition, the infrastructure and operational paradigms restrained economic development and limited the performance of local and foreign companies. Zhang & Goffin (1999) identified four major problem areas: 1) recruiting and training employees, 2) supplier delivery, 3) quality output, and 4) achieving an effective business culture

environment. The importance of research on operations management in an international context has been recognized by Sweeney (1994) and Fey (1994). Easton and Zhang (2002) addressed that in Asia, the supply chains of multinational corporations were three to five years behind those of western countries. A variety of research on logistics problems facing foreign firms in China has been conducted. The present study aims to address major issues facing Japanese firms in China from the aspect of logistics, and it identifies the new challenges facing Japanese firms in their Chinese operations.

III. RESEARCH APPROACH

In prior research, we provided an overview of the current state and framework that hinder foreign firms' involvement to supply chain management in China (Yu, 2006). It highlighted the major issues that foreign firms face in their Chinese operations, such as fragmentation of logistics industry, supplier management, and third party logistics. It pointed out that the challenge to meet the business practice worldwide for Chinese logistics sectors is to learn and achieve supply chain efficiency and to modernize the logistics industry.

To further identify the specific logistics problems presently facing Japanese firms in their Chinese operations, a qualitative case study approach was deemed appropriate because it enables in-depth investigation and analysis of the case. Furthermore, this case study can examine current logistic practices. Case studies are a commonly adopted strategy in the area of logistics research (Bolumole, 2001; Hayashi et al., 2010; Zhang, 2001; Gunasekaran et al., 2004). In order to make the finding representative, a leading home center company, which is heavily involved in the logistics industry in China, was selected for this study.

The company has over 160 stores in 22 prefectures and is one of the top sales companies in the Japanese home center industry. While the industry as a whole is suffering from slow growth, the company maintains stronger sales by concentrating on the development of private label products, which enable them to provide high quality products at a low price. They currently offer about 12,000 items of private label products and their sales account for over 30% of the turnover. The company selects local manufacturers at a large trade fair held in Guangzhou, China and examines whether the factories and facilities of those makers meet its standards. As all the goods produced in China are meant for Japanese consumers, they face various problems in the course of producing and transporting products in China.

The reason for selecting this company is that its private label products are manufactured in China and transported to stores in Japan. This case facilitates understanding of how manufacturing and distribution sectors deal with the management of logistics in China, and enables us to examine the problems facing shippers from the aspect of logistics.

Additionally, an open-ended questionnaire was completed by the head of the procurement department in the company as a means to expand the depth of data gathering during the interview. The questionnaire focuses on the problems and barriers for doing business in China from the aspect of logistics. One section also required the respondent

to identify the degree in which various barriers cause problems.

IV. FINDINGS AND DISCUSSIONS

A. Establishing logistics functionality in china is the key for maintaining low prices.

The company currently offers about 12,000 private label products, and 90% of them are made in China. They select qualified local manufacturers at a large-scale trade fair held in Guangzhou, China, to produce their products. Because these products need to be transported to Japan, they have built three distribution centers in China. All the products are first sent to one of the distribution centers, then to the nearest harbors, and finally exported to Japan. The logistics operation of the company is shown in Figure 1.

The company established its own distribution centers; only transportation of the products is outsourced to the local logistics providers. This enables them to achieve logistics that match the needs of mass transportation and the just-in-time delivery system to maintain low prices of private label products. Also, this logistics strategy is mainly used by foreign firms in their Chinese operations.

However, they face various problems in the course of producing and transporting products, particularly concerning the logistics operation within China (as shown within the dotted line area in Figure 1).

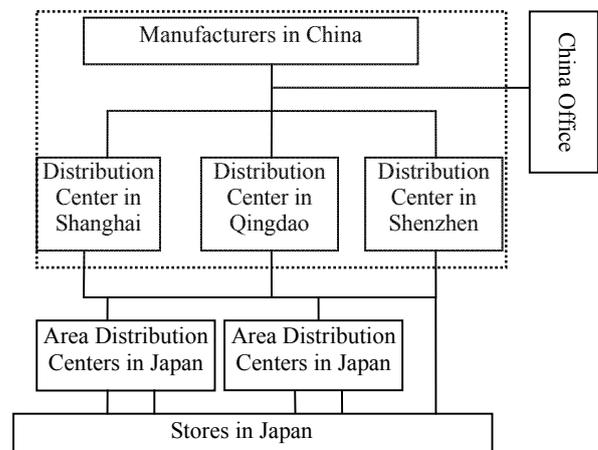


Figure 1. The logistics operation of the company.

B. The critical challenges in procurement: quality, cost, and delayed delivery are seriously affected by logistics problems.

The findings elicited from the case study indicate that the common problems in procurement facing Japanese firms can be grouped into three categories: quality, cost, and delayed delivery. These findings are identical to the outcomes of the surveys conducted by JCIPO (2003, 2005, and 2007). The observable troubles that Japanese firms have been suffering in China were verified through interviewing the head of the procurement department. Regarding the problems in

procurement, Table I summarizes the data information collected from the surveys.

TABLE I. PROBLEMS OF PROCUREMENT THAT FACE JAPANESE FIRMS IN THE CHINESE MARKET

Year	The Rate of the Respondents Having Problems		
	2003	2005	2007
Quality	84.8%	72.9%	76.5%
Cost	59.8%	81.6%	87.2%
Delayed delivery	64.3%	49.2%	64.4%

Source: The data were collected from the surveys of JCIPO (2003, 2005, and 2007).

The surveys show that the problems with quality, cost, and delayed delivery in procurement remain a critical challenge. On the other hand, we found that these three issues are related to logistics. The detailed factors concluded from the interview are summarized in Table II. The quality of products deteriorates owing to the inadequacy of transport vehicles, materials storage, and management systems. Also, increased product cost is primarily derived from a rise in logistics cost. The delivery date is often not met for a number of reasons, such as the lack of container trucks (which causes water damage to shipment when it rains), rough handling of freight, and defective containers. Traffic restrictions that ban heavy vehicles from entering major cities also affect due dates.

C. The hardware, which used to present formidable challenges for foreign firms, has been improved.

Major problems that the company has encountered in China are summarized in Table III. These findings support many researchers' view that the logistics barriers Japanese firms encountered in China have been changing, and the hardware, such as infrastructure and means of transportation, which used to present formidable challenges for foreign firms, has been improved. Many problems identified during the interview, for example, the lack of the container trucks, overloading, rough treatment of the products, and the discrepancy of standards as well as a lack of understanding between shippers and logistics providers, support the conclusions of the previous research (Yu, 2006). One contrasting feature is the evaluation of local logistics providers, which is improving.

D. Regulatory restrictions and local protection regulations still remain the most critical problems.

As a burgeoning market, China has attracted huge foreign investment. However, regulatory restrictions, especially in distribution and logistics sectors, limit the efficiency of its performance. Therefore, it is necessary for most foreign firms to build a distribution infrastructure system or extend their business to the logistics sector in order to support their operations. Also, as shown in Table III, the findings show that regulatory restrictions and local protection regulations still remain the most critical problems; particularly, various restrictions imposed by the administrative organizations on local transportation hampered the level of service and the feasibility of deliveries.

TABLE II. THE SPECIFIC FACTORS PERCEIVED FROM THE INTERVIEW

	Factor1	Factor2	Factor3
Sourcing	<p>Quality</p> <ul style="list-style-type: none"> maintain quality level 	<p>Cost</p> <ul style="list-style-type: none"> price increase 	<p>Delayed delivery</p> <ul style="list-style-type: none"> unstable delivery
Supplier selection	<p>Quality</p> <ul style="list-style-type: none"> maintain quality level 	<p>Cost</p> <ul style="list-style-type: none"> cost performance 	<p>Delayed delivery</p> <ul style="list-style-type: none"> unstable delivery
Manufacturing process	<p>Quality</p> <ul style="list-style-type: none"> inadequacies in quality inspection system 	<p>Quality</p> <ul style="list-style-type: none"> poor equipment maintenance 	<p>Quality</p> <ul style="list-style-type: none"> defective condition of manufacturing facilities
Logistics	<p>Quality</p> <ul style="list-style-type: none"> lack of container trucks products damage caused by poor condition of containers 	<p>Quality / Cost</p> <ul style="list-style-type: none"> rough treatment of products instability of ocean freight rising labor costs 	<p>Quality / Delayed delivery</p> <ul style="list-style-type: none"> different standard and understanding of logistics practice between China and Japan delayed delivery due to shortage of labor
Regulations on distribution and logistics	<p>Cost</p> <ul style="list-style-type: none"> transshipment caused by restrictions 	<p>Cost</p> <ul style="list-style-type: none"> unclear customs tariff (differing from revenue officer) 	<p>Delayed delivery</p> <ul style="list-style-type: none"> traffic regulations, especially in major cities

E. *Some new issues: a rise in logistics costs, local labor costs, and a shortage of human resources are becoming major concerns.*

In addition, the findings revealed some new issues: a rise in logistics costs, local labor costs, and a shortage of human resources. Low costs and a rich supply of labor have to this point been the biggest advantages of expanding businesses in China; however, the changing environment, such as the rapid economic growth along with rising incomes, is now putting pressure on foreign firms and becoming a major concern for them. The interviewee pointed out that although delayed deliveries were mostly caused by logistics barriers in the past, presently this problem can be attributed to the shortage of manpower.

V. CONCLUSIONS

As identified in this study, logistics problems greatly affect the business operation and performance in a huge developing market such as China. Foreign firms in different industries are establishing effective logistics strategies in their operations in China due to the growing importance of China's economy. The continuous success of those firms in the Chinese market may depend on how well they deal with the problems encountered there.

The entry of foreign firms to the Chinese market will certainly encourage the development of the logistics industry, and will stimulate local logistics providers to learn and

achieve logistics efficiency and modernize the logistics industry. It is important to recognize the challenges posed when entering the Chinese market and to anticipate how those issues can be improved and shaped in the future. The present study has identified that quality, cost and delayed delivery are seriously affected by logistics problems. Also, the logistics flow within China is where most problems regarding logistics arise in the entire business operation.

Through research in this case study it has been identified that the logistics barriers attributed to hardware such as infrastructure have been improved; a reduction of other prominent barriers derived from various restrictions is essential for many foreign firms to practice standard logistics management in China. To accelerate the modernization process, the macro environment for foreign firms to apply standard logistics management, such as regulatory restrictions, should be adjusted as a first step. Furthermore, in order to achieve effective logistics management in China, a well-trained local work force cannot be underestimated. Additionally, though maintaining lower costs is important, it is an immediate task for Japanese firms to cultivate human resources and secure experienced workers, along with developing their necessary skills and expertise. To fully investigate the factors influencing the development of effective logistics management for Japanese firms in the fast-changing economic climate, more samples across a wider range of industries and companies will be considered for future studies.

TABLE III. MAJOR PROBLEMS OF LOGISTICS ENCOUNTERED BY THE HOME CENTER COMPANY

Major Problems	Degree of the Problems			
	<i>The most critical</i>	<i>Critical</i>	<i>Less critical</i>	<i>No problem</i>
• Lack of logistics infrastructure facilities		○		
• Lack of means of transportation			○	
• Deficiency of road conditions		○		
• Poor service quality of local 3PL providers			○	
• Lack of information on traffic laws and regulations		○		
• Subcontracting with local logistics providers		○		
• Selection of local logistics providers				○
• Reliability of local logistics providers			○	
• Regulatory restrictions	○			
• Local protection regulations	○			
• Maintenance of quality	○			
• Rise in logistics costs	○			
• Rise in local labor costs	○			

• Stable source of local employees	○
• Delayed deliveries	○

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