

## Logistics resources as a source of competitive advantage for logistics service providers

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**Abstract:** A competitive advantage is an element of long-term success, seen as a determinant of survival and development in a long term. Highly competitive markets aimed at reducing cost and continuously satisfying customers, therefore, the effectiveness and efficiency of Logistics Service Providers in delivering their service is fundamental to sustain and compete in the market. Competitive advantage is a kind of distinction, that ensures LSPs better results, and which can be realized by means of carefully chosen strategy of competition. In addition, both globalization and liberalization have led to many competitors entering the market which resulted to global LSPs increased and created a great pressure on logistics systems, which makes inevitable changes for local LSPs. The LSPs must increase values to their customers by providing logistics service more efficiently than their competitors. This study attempts to investigate the logistics resources as a source for competitive advantage in this industry. The semi-structured interviews with top managers were conducted at five Logistics Service Provider firms. The finding indicated that LSPs have acquiring physical, management expertise, technology, relational and organizational resources in their firms. However, management expertise and relational resources are more significant impact towards to the competitive advantage for LSPs.

**Key words:** Logistics resources; Logistics service providers; Competitive advantage; Competitiveness; Logistics

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### 1. Introduction

Highly competitive markets aimed at reducing cost and continuously satisfying customers, therefore, the effectiveness and efficiency of Logistics Service Providers (LSPs) in delivering their service is fundamental to sustain and compete in the market. Previous studies have also reported that many LSPs failed to grant expected cost reductions, meet the increasing demand for extensive logistics services, trustworthy relationship, geographical coverage and advanced information technology ([Langley & Capgemini, 2007](#)).

Logistics services has been outsourced and increased dramatically in recent years almost at an exponential rate ([Briggs et al., 2009](#)). Walsh ([2009](#)) reported that the global logistics market had a size of \$804.6 billion in 2007 and this market size is estimated to increase to 29.3% in 2012 and equivalent to a size of \$1040.6 billion. Despite the growth of this industry, Langley and Cap Gemini ([2007](#)) in the study on the LSPs found that satisfaction with the performance of LSPs in emerging markets was lower than satisfaction measured across all markets.

Both globalization and liberalization have led to many competitors entering the market. As a result, the global LSPs increased and created a great pressure on logistics systems. This scenario makes changes inevitable for the local LSPs. As the logistics industry become more competitive, it is therefore,

important for these LSP firms to distinguish themselves from other competitors. As their services are restricted within home market, they should strive to extend their services abroad if they want to create a name for themselves internationally. Lu ([2000](#)) mentioned that if firms aim to gain competitive advantage over their rival, they must increase values to their customers by providing activities more efficiently than their competitors.

### 2. Logistics resources

#### 2.1. Physical resource

LSPs required the physical resource to support logistics services and administration but they have not been conceptualized and measured for LSPs. Physical resource refers to the facilities and equipment for warehousing, inventory and transportation (Stefansson, 2006) for LSPs. However, some scholars refer the physical resources as the Information Technology (IT) infrastructures, such as value-added logistics service (Lai, 2004) logistics ICT (Chapman et al., 2003) and physical IT-assets, as physical resources which enable logistics facilities as competitive advantage.

LSPs have to gain access to these resources to maintain the control of logistics activity and to improve the reliability and speed of delivery (Wong & Karia, 2010). Since it would be one of the most competitive resources for LSPs, it is important for

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physical resources are valuable for the movements of goods from one point to another because it would allow LSPs to perform activities of the movement of goods. Previous studies suggest that physical resources have resulted in considerable savings such as decreased inventories, decrease in warehouse operations and transportation costs and increased delivery performance (Stefansson, 2006).

## **2.2. Management expertise resource**

Management expertise resources are crucial to determine the LSP performance (Ellinger et al., 2008). For example, firm requires sufficient skilled, knowledge and experienced employees to carry out and perform the task. Study by (Lin, 2008) of 142 LSPs in Taiwan found that quality of human resource is significant to technology adoption. This finding supports previous arguments by (Lai, 2005) that the lack of expertise in IT and employee knowledge are potential barriers for LSPs in adopting and implementing IT. Other scholar (Mentzer et al., 2004) proposed that management skills, knowledge, and logistics expertise are intangible resources which lead to capabilities.

In the logistics literature, there were highlighted many component for the management expertise resources. It includes skills, experience and education; knowledge resources, hiring management expertise, and provision of training and education. Some scholars (Poist et al., 2001) consider firms hiring or recruiting people who have new skills, knowledge and quality as management expertise resources. Some scholars also recognized management expertise as one of a key success factor for third party logistics provider (Murphy & Poist, 2000) albeit there have not been established in logistics literature yet. They recognize the need for providers to employ experienced professionals to manage supply chains. Whilst (Chapman et al., 2003) refer to knowledge as new knowledge or expertise as management expertise resources for LSPs creating it's to service innovation.

## **2.3. Technology resource**

In the logistics literature, technology resource refers to advanced technology, advanced equipment, information equipment, resources and information systems and improvement in information technology. In addition, firms keeping pace with information age or up-to-date technology via the internet are also referred to technology resources (Chapman et al., 2003). Another scholar Yang et al. (2009) indicates others technology resources that can be considered are information equipment resources such as EDI facilities, internet service facilities, and cargo tracking system facilities as technology resources. The conceptualization and measurement of information equipment resources were reliable when study conducted on 123 Taiwanese shipping containers.

LSPs are giving a lot of attention on technology resources as it enabling information to be accessed and used by various parties in the logistics network to enhance logistics performance (Brah & Lim, 2006) and they are important for LSPs to acquire, process and transmit information for achieving effective decision making (Sanders & Premus, 2005). Study by Lai et al. (2005) found that technology resources enable LSPs quickly access important information. Their study is also indicates that most LSPs have adopted logistics information systems so that they can integrate all information in order to enable management in monitoring inventory at all locations throughout the supply chain with multiple warehouses in multiple countries.

In the earlier study of 232 LSP firms in Hong Kong, Lai (2004) concludes that LSPs who have a high level of technology resources such as tracking and tracing shipment information, web-based linkages, receiving/sending shipment notices can be considered as a technology-enabled for LSPs. In this study, it confirms that the above conceptualization and measurement of technology-enabled logistics service were reliable.

## **2.4. Relational resource**

The importance of cooperative relationships between LSPs and suppliers and customers has been recognized in the logistics literature (Chapman et al., 2003; Gunasekaran & Ngai, 2003; Panayides & So, 2005). In logistics literature, relational resources are referring to close relationships with trading partners, cooperation, collaboration, information sharing and trust, relationship orientation and relationship networks.

Other scholar emphasizes that the focus on customer needs requires a firm to gain a comprehensive understanding of the buyer's entire value chain through developing relational networks (Chapman et al., 2003). Suggestion made by (Murphy & Poist, 2000) where in order to anticipate customer needs and deliver solutions to problems, firms should be collaborative between parties. By doing this exercise, it allows providers and users to have effective and ongoing communication through shared ideas, information, mutual understanding and working together as a team.

Relational resources should be conceptualized as LSPs ability to build close relationships with customers and suppliers through collaboration and communication to coordinate, share relevant information and understand customer needs. These enable LSPs to improve firm performance and lead to firm competitive advantage. It supports other authors where relational resources allow LSPs to coordinate business activities with trading partners such as suppliers, manufacturers, distribution centers, customers and logistics service providers (Sanders & Premus, 2005).

## **2.5. Organizational resource**

The conceptualization of organizational resources has to be measured and constructed as it helps LSP to competence in its business process to organize its organization and improve its effectiveness in providing logistics services capability. It would develop through policy/procedures, developing system and routines/practices to emphasize customer orientation so that LSPs are able to develop and achieve strategies and objectives into routines and practices, which may enhance their competitive advantage. In addition, some scholars also consider strategic or capacity planning, operation strategy, reputation, corporate image resource as organizational resources which may have a positive impact on strategy and the objectives of an LSP (Brah & Lim, 2006; Yang et al., 2009).

Studies by (Brah & Lim, 2006) consider top management leadership, strategic planning, customer focus, quality focus, information system and analysis and human resources as organizational resources that lead to firm performance. Meanwhile, (Gunasekaran & Ngai, 2003) identify that strategic and capacity planning allow small 3PL in Hong Kong achieve firm performance. Some logistics scholars refer to total organizational involvement (Murphy & Poist, 2000), organizational encouragement (Lin, 2008) and managerial involvement (Lai et al., 2008) as organizational resources.

### 3. Competitive advantage

The competitiveness of LSP is the ability to achieve and maintain an advantage over their market rivals, it allows identifying it with the company's ability to present in the market a competitive offer comparing to others, which gives a good basis for analysing a competitiveness of a LSP by identifying the factors that determine their competitive advantage achievement. Under the RBV, a competitive advantage is conceptualized as the implementation of a strategy that is currently not used by competing firms, which helps reduce costs, exploit market opportunities, and neutralize competitive threats (Barney, 1991). A firm that attains a competitive advantage, whether based on offering the same benefits at a lower cost or providing greater benefits at the same cost, will be able to improve its performance in a way that competitors cannot match (Newbert, 2008).

The aim of a competitive advantage is to be a more attractive partner for customers than other companies in the market. It is the factor of success, which is having a relative nature and is possible to be determined in the market context. When a LSP has a competitive advantage, it means that they have something that others do not have, they do something better than others or do something that others cannot.

Competitive advantage is the extent to which a firm is able to gain and retain a dominant position over its competitors through creating value for its customers (McGinnis & Vallopra, 1999). It comprises capabilities that allow a firm to differentiate itself

from its competitors and is an outcome of critical management decisions (Tracey, Vonderembse & Lim, 1999). Tracey et al. (1999) identify quality, cost, delivery, and flexibility as important competitive capabilities. Some logistics literature has suggested the existence of direct or indirect relationships between various resources and advantages of LSPs (Wong & Karia, 2010).

### 4. Research method

Semi-structure face-to-face interview consumed appropriately 45 minutes to one hour each were conducted to the LSPs. All interviewees held the top position in their respective organization. In total, five top managerial personnel were interviewed. Interviews were recorded and transcribed while interviewees were guarantees of personal confidentiality. The interview session held at their respective office.

Formal invitation had been sent to them for the interview appointment, looking for their approval and time availability. There are eight LSPs were approached. However three of them refused to participate in the study with their own reason.

Eight questions had been set for all participants. Questions are directly related to the participant information, company background, physical resource, management expertise resource, technology resource, relational resource and organizational resource. It is also questions on competitive advantage of LSPs.

### 5. Findings

The study starts with a discussion of the demographic profiles and goes on to analyze the logistics resources of LSP firms toward to the competitive advantage.

#### 5.1. Participant information and company background

The managers involved with the study are those with the top position in their respective company. One of them was General Manager, two Senior Managers, and the other two were Manager. Four of them had served with the company for more than 10 years, while the last was served with the company between 8-10 years.

In term of the company background, there was only one company with more than 200 employees, two of them were between 51-100 employees and the other two were between 11-50 employees. All of the companies were operated LSP operations for more than 10 years with four of them were Malaysian owned company, while the another company was Government-link company. Most of the companies rendered their logistics service within all regions including Sabah and Sarawak except one company was only focused within Klang Valley.

Details of the information are as per highlighted in Table 1.

**Table 1:** Participant and company background

Item	Firm #1	Firm #2	Firm #3	Firm #4	Firm #5
Position held	General Manager	Senior Manager	Senior Manager	Manager	Manager
Year of service	> 10 years	> 10 years	> 10 years	> 10 years	Between 8-10 years
No of employee	11-50 persons	51-100 persons	51-100 persons	> 200 persons	11-50 persons
Type of company	Malaysian owned company	Malaysian owned company	Malaysian owned company	Government-link company	Malaysian owned company
Year of LSP operations	30 years	24 years	38 years	25 years	10 years
Geographic coverage	Southern, Northern, East Coast, Klang Valley, Sabah, Sarawak	Southern, East Coast, Klang Valley, Sabah, Sarawak	Klang Valley	Southern, Northern, East Coast, Klang Valley	Southern, Northern, East Coast, Klang Valley, Sabah, Sarawak

## 5.2. Physical resource

The LSPs are focused on physical resource expansion. For example, most of LSPs have several branches or agencies in order to render fast service to the customers. In order to sustain in this industry, the LSPs have capable to provide wide range of transportation modes and distribution channel.

"[...] We then managed to increase number of warehousing and other logistics facilities in order to offer full package of logistics service to the customer...." (Firm #1)

"We expanded our service from year-to-year. This is important for us to maintain existing customers and attract new customers by rendering the logistics service with the good condition of physical logistics facilities" (Firm #2)

## 5.3. Management expertise resource

From the interview session, it is apparent that all LSPs have been continuously developing and enhancing their employees. The most common management expertise resource that emphasizes by the LSPs are 1) the ability of employees to respond of unforeseen events during transit of cargo; 2) employees skill in handling the logistics system; 3) the firm provides training to upgrade logistics personnel; 4) high level of responsiveness to meet other's department need; and 5) recruit staff with good communication skill.

"From the very beginning of our operations, we emphasized on the management expertise in order to deliver good service to the customers. We strongly believed that the human resources are important for us to run our business". (Firm # 3)

"[...] Our employee able to responds on the customer's request. Most customers required us to provide the feedback with accurate information so that their cargoes can be monitored effectively...." (Firm #4)

## 5.4. Technology resource

Technology resources are operationalized as the capabilities of information systems and technology facilities to integrate with internal and external processes. It was noted that LSPs are increasingly leveraging on technology such as electronic data interchange, hardware, and communication technology to reduce costs, increase productivity and improve customer services.

"[...] IT provides real-time visibility of demand forecast information, inventory levels, production schedules, and material flows. With that, the process of logistics operations can be delivered efficiently" (Firm #2)

"The use of technology in logistics is valuable in helping LSPs to monitor status of inventory, improve utilization of transport vehicles and warehouses, eliminate duplication of effort in performing various logistics activities, and complete delivery tasks timely and effectively" (Firm #5)

## 5.5. Relational resource

LSPs emphasized that the focus on customer needs requires a firm to gain a comprehensive understanding of the buyer's entire value chain through developing relational networks. These enable LSPs to improve firm performance and lead to firm competitive advantage. Most LSPs suggested that the following relational resource should be implemented in the LSPs: 1) managing information flows throughout the channel of distribution; 2) effective working relationship with the customers; 3) coordinate logistics activities with customers, suppliers and other channel members; 4) effective linkage with related industries' information system; and 5) develop formal contract terms.

"[...] We have attempted to build up collaborative relationships with their customers. It is appeared to be the main reason for the success in winning new contracts and securing long-term or continuity of contract...." (Firm #1)

"To maintain in this business, our firm is established good rapport with customers and suppliers". (Firm # 3)

" In term of relational resources, it is not only useful for access to customers, it is also a quick-win

strategy to swiftly access to physical, information and knowledge resources". (Firm #5)

### 5.6. Organizational resource

Organizational resources are required to synthesize strategy and objectives of LSPs into practices or routines. It is important for LSPs in order to understand their performance, to organize and improve organization and effectiveness and to achieve LSP strategies and objectives.

"Organizational resources are more on corporate strategy and image; and need top management commitment to resource acquisition and continuously improve in the logistics industry" (Firm #2)

"[...] Within our firm, logistics planning is well coordinated with the overall strategic planning process..." (Firm #3)

### 5.7. Competitive advantage

Some LSPs may excel in performing capabilities at the operational level, while others may have excellent capabilities demonstrating at strategic or networking levels. In this study, there are certain factors being identified by LSPs to measure the competitive advantage namely 1) Logistics service differentiation; and 2) Logistics cost leadership. These can be seen through made by the participants as follows:

"If we need to sustain our performance in the market and to be competitive advantage in this industry, the LSP has able to deliver services with consistent quality compared to its competitors". (Firm #1)

"[...] Our firm able to promptly handle the customers complaint at any time and our logistics services allow our customers to add value on the services..... In the meantime, LSP has to offer a competitive price on the service render to the customer". (Firm #2)

"[...] We always provide our distribution service at low distribution cost". (Firm #3)

"[...] Our logistics services are customized to meet the need of our customers with the flexible price". (Firm #4)

"In order to determine the competitive advantage indicators, we believe that the combination of logistics service differentiation and logistics cost leadership are two important component required in this industry. This is because we have to understand that the competitive advantage is a firm able to gain and retain a dominant position over its competitors. (Firm #5)

### 6. Conclusion

Among the five dimensions of logistics resources, management expertise and relational resource had significant towards competitive advantage. The findings suggest that the LSP firms required

enhancing the management expertise such as skilled and knowledge employees for both management and non-management. This result is in line with (Ellinger et al., 2008; Lin, 2008; Lai, 2005). Management expertise resource is crucial to determine the LSP performance and competitive advantage (Ellinger et al., 2008). This is to show that human resources are critical logistics resource since the logistics service is dealing with the people business (Zineldin, 2004).

The participants also agreed the role of relational resource in logistics resource as a source of competitive advantage for LSPs. This result is supported the study by Sander & Premus (2005) that LSPs should coordinate business activities by establishing the cooperative relationships with the customers and suppliers. These enable LSPs to improve firm performance and lead to firm competitive advantage. Relational resources were also established via horizontal alliances because LSPs realized the need to cooperate with other service providers (Lieb and Bentz, 2005).

In term of competitive advantage indicators, service differentiation and cost leadership are two important dimensions as there would be important tools to measure the competitive advantage of the LSP firms. This result was supported the study by Fugate et al., 2010; Wang and Lawani, 2007; Daugherty et al., 2011; Lai, 2006; Lai 2008; Raslton, 2013. Both dimensions are providing an edge over the competition.

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