Print ISSN: 2288-4637 / Online ISSN 2288-4645
doi:10.13106/jafeb.2021.vol8.no4.0145

Critical Factors Affecting the Choice of Logistics Service Provider: An Empirical Study in Vietnam*

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Received: November 30, 2020 Revised: February 20, 2021 Accepted: March 02, 2021

Abstract

The trend of globalization leads an increased need for international freight transportation and accelerates the development of the international logistics industry. The objective of this paper is to identify the critical factors that affect the choice of logistics service provider (LSP). The data sample was collected through a questionnaire, responded by 218 companies that outsource logistics services. The analysis uses descriptive statistics; exploratory factor analysis (EFA) and regression analysis were conducted with SPSS. The role of capabilities, customer service, and company reputation were evaluated and tested. Our findings show that capabilities and customer service have a considerable impact on the choice of LSP. The findings also indicate that company reputation do not have significant impact on the choice of LSP. They also showed that the capabilities is the variable that has the most significant effect on the choice of LSP. An implication of this study is that the competition should not only focus on pricing, but should be extended to improving enterprises capabilities, i.e., upgrading human resources, modernizing the modes of transportation, expanding business geographically and developing new technologies. Our study provides LSP managers with insights into how to meet customer expectations in the competitive logistics service sector.

Keywords: Logistics Service Provider, Capabilities, Customer Service, Company Reputation, Customers' Choice

JEL Classification Code: C12, L87, R41

1. Introduction

The outsourcing of logistics activities to logistics service providers has now become popular. Therefore, the logistics industry, as an integral part of the business environments, has attracted a lot of attention from academia and practitioners. There are many reasons for a company to outsource its logistics because they focus on their company's many businesses or they want to improve the quality of their business. Logistics outsourcing helps a company to improve the quality of its products by focusing more on the business; outsourcing also reduces expenses like labor and transportation costs (Abdul, Memon, & Shuaib, 2020). Logistics makes the business processes more efficient and cost-effective since it plays a supportive role to primary functions of business operation including marketing and manufacturing. It was proved that a decrease of 1% of logistics costs equivalent to an increase in sales of the company by almost 10% (Zhatkanbaev, Mukhtar, & Suyunchaliyeva, 2015). In order to increase the competitiveness, many logistics providers offer a variety of services. As a result, the selection of a suitable logistics provider that fits the needs of the company is not an easy task. The complexity of this task increases as the number of selection criteria increases.

Vietnam has experienced strong growth in trade in recent years, which will support ongoing development and expansion of its logistics. The logistics industry is one of the fastest growing industries in Vietnam, estimated to grow at a pace faster than the GDP growth rate. Currently, the logistics service accounts for 15–20% of GDP in Vietnam. However, it is shown that the main services Vietnamese logistics providers offer customers are basic services, or provide single services. Along with the development of Vietnamese

*Acknowledgements:
This research is funded by University of Transport Technology and Ministry of Transport Technology under the project with grant number DT214030.

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logistics businesses, enterprises need to have solutions to upgrade service quality so they can better qualify for the customers' choice distinction.

It is indicated that users are generally satisfied with their choice of logistics provider when they derive much benefit from services offered by them. Understanding the critical factors that affect the choice of logistics provider from the user's perspective is crucial to increase competitive advantage over other competitors. A few studies were conducted in developing economies like Vietnam, which investigated critical factors that influence logistics customers' intention and choice. Thus, in this study, we conceptualize a construct on influential factors contributing toward the choice of LSP in the context of Vietnam. In the following section, we summarize the relevant literature and conceptualize the factors that influence the LSP choice. We develop a set of hypotheses to test our theory, explain the research method, and test the hypotheses in a survey-based study. Finally, we present the results, conclusions and limitations of this study.

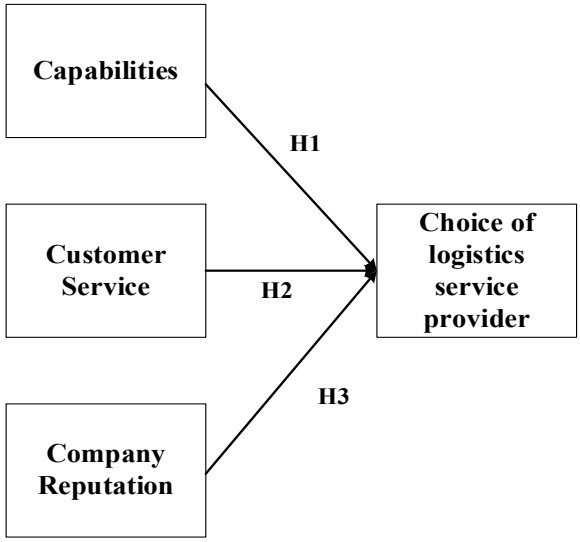

Figure 1: The Research Framework

2. Literature Review

2.1. The Research Framework

The decision on using the services is based on the customers' perception. It is shown that factors influencing the logistics service provider (LSP) choice from customers' perception are formed by past experiences and word-of-mouth communication (Taghizadeh, Taghipourian, & Khazaei, 2013). Identifying the factors that are important in a choice of a LSP brings various benefits such as understanding the expectations of the customers and improving the perceived value of the service offering. Our study focuses on a customer's choice between competing logistics providers. The logistics service provider selection criteria have been widely discussed in the literature (Chin, Bae, & Kim, 2007; Jharkharia & Shankar, 2007). These criteria are as follows:

Service capabilities are defined as the ability of logistics service providers to create and deploy resources to satisfy the logistics needs of their customers in pursuit of better service performance (Lai, 2004). Global and domestic markets for logistics services are continuously changing, so it is important that LSPs must develop their capabilities. LSP capabilities have impact on the choice of LSP as they control all activities upstream and downstream along the supply chain (Chen, Fung, & Yuen, 2019). Customers consider their purchases in its complexity and the logistic services should strive to meet with customers' preferences as much as possible. Services of LSPs must bring great benefit to their clients. Therefore, the service components are related to customer choices and the willingness to pay.

The prior and experiential knowledge can affect partner selection decisions. Various studies have indicated that firm reputation influences many customer responses, including product and service choice, overall attitudes, purchase intentions, and trust. It was found that firm reputation has a direct positive relationship with repurchase intention and word of mouth. Customers certainly maintain very different expectations about the level of service provided by firms with excellent reputations for service versus those with average reputations (Nikbin, Ismail, Marimuthu, & Abu-Jarad, 2011). The research framework is depicted in Figure 1. The hypotheses proposed in this study concerning the factors that affect the choice of LSP are as follows:

H1: *Capabilities have a positive impact on the choice of LSP.*

H2: *Customer services have a positive impact on the choice of LSP.*

H3: *Company reputation has a positive impact on the choice of LSP.*

2.2. Capabilities

The capabilities were measured using the following six items:

Quality of personnel: The service quality of personnel has a significant influence on customer satisfaction. The right personnel who pay attention to customers and put themselves in the position and circumstances of the customer could bring customer satisfaction. It has been indicated that the presence of personnel, etiquette, and the attitude of workers toward customers has been able to influence customer satisfaction. The greatest the results shown by the staff, the higher the customer's satisfaction (Masudin, Safitri, Restuputri, Wardana, & Amallynda, 2020). It was indicated that the

shortage of competent employees as well as managers in the Vietnamese logistic enterprises highly increases the awareness of the importance of human resource management, so that the employees who are competent in the logistics industry are always interested and treated well by the enterprise (Hoa, Ngan, Quang, Thanh, & Quyen, 2020).

Geographic coverage/international scope: A wide geographic coverage indicates that the liner network or container terminal portfolio covers many different geographical areas, but also that the distribution of capacity across those areas is in line with global demand for container transportation (Parola & Veenstra, 2008).

Multi-modal transportation capabilities: Multi-modal transportation is a logistics practice in which a set of goods have to be transported to different places, with a combination of at least two modes of transport, without a change of container for the goods.

Ability to provide EDI: The EDI technology is essential in the logistics industry. It makes the relations between the parties in the chain more efficient. The electronic exchange of data facilitates the sending and receiving of all types of documents in commercial transactions in a safe, fast, and fluid manner and with full integration into the internal management systems of customers, suppliers and any partner involved in the production processes whether they are commercial or administrative.

2.3. Customer Service

The customer service was identified through the following items:

Rate and price level: Costs in logistics can be said to be inclusive of two costs termed as direct and indirect transport cost. Direct transport costs include freight charges and insurance, which is customarily added to the freight charge. Indirect transport user costs include holding cost for the goods in transit, inventory cost due to buffering the variability of delivery dates, preparation costs associated with shipment size (full container load vs. partial loads).

Pick-up and/or delivery cargo reliability: This can be measured by arrival, loading, and departure events, since all three relate to the perceived service quality by the customers, competitors, and other stakeholders. If these events are "on-time", the reliably is executed.

Punctual time performance: Punctuality is one of the basic parameters of the assessment of the efficiency of logistics system operation (Tubis & Gruszczyk, 2015). Punctuality is defined as a feature involving reaching, passing or leaving a pre-set point on the line (a stop) by the vehicle at the time specified in the published timetable within specified tolerance limits.

Third-party logistics (3PL) service provision ability: The provision of a single or multiple logistics services by a vendor on a contractual basis. The 3PL as the outsourcing of logistics can be considered as a range of logistics services such as transportation, warehousing, inventory management, distribution, and other value-added services such as pick-and–pack, assembly, repairs, and re-conditioning (Asthana, Bhat, & Singh, 2015).

Logistics tracking (availability of tracking information): Logistics tracking is related to the methods and systems used for tracking tracking parcels and containers throughout their movement and storage in major logistic hubs and campuses.

Problem-solving ability: It was indicated that teamwork, problem solving, listening, and communicating topped the list of highly important skills for logistics managers (Goffnett, Williams, Gibson, & Garver, 2016).

2.4. Company Reputation

The company reputation was assessed by the following items:

Reputation in the logistics services market: Opinion of the public regarding the firm's image, services reputation and satisfaction level (Rajesh, Pugazhendhi, Ganesh, & Muralidharan, 2011).

Prior relationships with the logistics company: A prior relationship as well as a common logistics background or common regional or local knowledge were favored characteristics. The long-term relationship plays an important role in forming capacity and improving disaster preparedness for all partners by nurturing sound relationships and defining the respective roles and responsibilities (Haksöz, Seshadri, & Iyer, 2011).

Financial stability: A stable financial system is capable of efficiently allocating resources, assessing and managing financial risk. A customer will need to find a company with financial stability, with excellent products and good business support.

3. Research Method

The data were collected through a questionnaire, which included three major parts: (1) the basic information on enterprises, (2) the respondent's perception on the importance of factors guiding the logistics service provider's choice, and (3) the overall assessment on satisfaction degree and willingness to continue using services of the provider. The first part consisted of questions on the type of business ownership, the number of operations per year and the main area of operation. In part two, close-ended questions using 5-point Likert scales were utilized to explore the respondents' satisfaction degree. The final part focused on the overall assessment on customers' satisfaction degree.

In the second part, 13 items were used to measure the factors' importance. Of these, three items were used for

measuring the capabilities; six items for measuring the customer service, and three items for estimating the company's reputation. These items were adapted from previous studies (Gammelgaard & Larson, 2001; Lai & Cheng, 2004). The authors selected and modified these items after discussions with local academics and practitioners in logistics who are familiar with the context of Vietnam. The questionnaire was developed in Vietnamese language, then distributed through an electronic survey system (Google Form). The study sample included 218 companies that used services of logistics providers from different sectors and regions.

The data were analyzed with the statistical software SPSS. In order to answer the research questions, descriptive statistics were performed. Exploratory factor analysis (EFA) was conducted to test the validity and reliability of the scales. The regression analysis was also conducted to investigate the effect of the factor considered herein.

4. Results and Discussion

4.1. Descriptive Statistics

Among 218 companies, 33.9% are state-owned enterprises and 13.8% are foreign-invested enterprises; the number of companies with over 10 years in operation is 125, accounting for 57.3%. The major geographic operation area (43.6%) is in Red River Delta.

4.2. Testing the Validity and Reliability of Scales

The respondents reported the importance of factors that affect their choice of logistics provider by rating 13 statements on the 5-point Likert scale. Exploratory factor analysis (EFA) was performed. Reliability analysis is established by testing whether the items grouped under a factor are internally consistent and stable. Cronbach's alpha was utilized to analyze the reliability of the instruments. It is widely accepted that reliability over 0.80 is very good; reliability in the range of 0.60 and 0.80 is acceptable; and reliability less than 0.60 is considered poor (Sekaran & Bougie, 2016). Table 1 summarizes the factor analysis performed and also shows the factor loads of the questionnaire items and the Cronbach's alpha coefficients of the variables. Cronbach's alpha values ranged from 0.899 to 0.917, indicating that the factor had a high reliability.

4.3. Correlations

The correlation coefficient was estimated to test relationships between variables. As shown in Table 2, strong positive correlations can be found among variables. The relationship between capabilities and company reputation is the strongest ($r = 0.928$, $p < 0.01$); while the weakest relationship is between customer service and company reputation ($r = 0.871$, $p < 0.01$).

Table 1: Factor Analysis Results and Cronbach's Alpha Coefficients

Measurement Items	Factor loads	Cronbach's alpha
Capabilities		0.907
Quality of personnel	0.836	
Geographic coverage/ International scope	0.899	
Multi-modal transportation capabilities	0.860	
Ability to provide EDI	0.830	
Customer Service		0.917
Rate and price level	0.750	
Logistics tracking (Availability of tracking information)	0.850	
Punctual time performance	0.826	
Problem solving ability	0.821	
Third-party logistics (3PL) service provision ability	0.810	
Pick-up and/or delivery cargo reliability	0.819	
Company Reputation		0.899
Reputation in the logistics services market	0.902	
Prior relationships with the logistics company	0.874	
Financial stability	0.842	

Table 2: Pearson Correlations Between Key Variables

	Capabilities	Customer Service	Company Reputation
Capabilities	1		
Customer Service	0.887**	1	
Company Reputation	0.928**	0.871**	1

**. Significant at $p < 0.01$, two-tailed.

4.4. Hypothesis Testing

A regression analysis was performed to determine the effect of capabilities, customer service, and company reputation variables on the choice of LSP. Table 3 presents

Table 3: Regression Analysis Results

Model	Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.
	B	Std. Error	Beta		
(Constant)	0.352	0.173		2.033	0.043
Capabilities	0.497	0.118	0.460	4.208	0.000
Customer Service	0.343	0.090	0.313	3.791	0.000
Company Reputation	0.106	0.113	0.097	0.945	0.346

Dependent variable: The choice of LSP.
$R = 0.844$; *Adjusted* $R^2 = 0.708$; $F = 176.007$; $p = 0.000$.

the beta coefficients and significance levels concerning the effect of the variables. The effect of the capabilities on the choice of LSP is significant in the data sample ($\beta = 0.497$, $p < 0.01$). The finding confirmed the validity of Hypothesis 1. An evaluation of the effect of customer service on the choice of LSP indicated a significant effect a p level of 0.01 ($\beta = 0.343$). This finding revealed the validity of Hypothesis 2. Regarding the effect of company reputation on the choice of LSP, the regression analysis results also showed that the beta value ($\beta = 0.097$, $p > 0.01$) is positively, but not significantly related to the choice of LSP. Therefore, Hypothesis 3 is rejected. It is also showed that the capabilities is the variable that has the most significant effect on the choice of LSP.

In the regression analysis, the data sample has an F value of 176.007 and a p value < 0.01. The result indicated that the regression model is statistically significant. Adjusted R^2 value, which show the explanatory power of the regression model, is 0.708. This indicates that the model explained 70.8% of the variance in the choice of LSP.

From the results of the relative importance of LSP selection factors, as perceived by customers, the most important factor for choosing LSP is capabilities. It implies that, besides rate and price level, logistics companies should realize that quality of personnel, geographic coverage/ international scope, multi-modal transportation capabilities, and ability to provide EDI are also very important to survive.

5. Conclusions

In the present-day world, competitiveness in logistic industry is increasing as a result of globalization and more open markets. One of the most intensely discussed subjects is how to expand the customer segment and also how to increase the customer satisfaction. Understanding the choice of LSP is a key to successful management. This study has evaluated the key factors that influence the customer's choice of LSP. Three factors including thirteen measurement items were the focus of this study – capabilities, customer service, and company reputation. Three factors were studied to determine whether or not they influence the choice of LSP. The research findings show that capabilities and customer service have significant effect on the choice of LSP; the hypothesis that company reputation would have a significant effect on the choice of LSP was rejected. The study findings show that competition should not only be on pricing, but should be extended to improving enterprises capabilities, i.e., upgrading human resources, modernizing the modes of transportation, expanding business geographically, and developing new technologies.

The study has limitations. A rating scale was used to allow respondents to select the most representative answer for each of the questions under study. Therefore, the results are subject to respondents' judgment on each of the questions. Second, it is impossible to get a response from managers, who deal with logistics outsourcing directly, so, ways should be found to increase the accuracy of the results of this study.

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