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### A PURPOSE CONCEPTUAL FRAMEWORK TO EXAMINE THE CORRELATION OF LOGISTICS SERVICE QUALITY, LOGISTICS PERFORMANCE & COMPETITIVE ADVANTAGE OF LOGISTICS SERVICE PROVIDERS IN THAILAND

Weerasak Sojipun, Zuraimi Abdul Aziz and Rosmaizura Mohd Zain

*Faculty of Entrepreneurship & Business, Universiti Malaysia Kelantan, Pengkalan Chepa, 16100 Kota Bharu, Kelantan, Malaysia*

*Correspondence author: vcool99@hotmail.com*

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#### ABSTRACT

The logistics service offers a crucial role in the process of developing into the worldwide market. Several nations must enhance their logistics service operations to achieve strong performance and attain a competitive edge in the market. Logistics service quality is a crucial element in Thailand's logistics operations. It is a major feature in developing a new conceptual model for logistics service performance, which is essential for achieving competitiveness in the logistics sector. The aim of this study is to investigate the relationship between the framework of logistics service quality, logistics performance and competitive advantage of logistics service provider (LSPs) firms in Thailand. This study utilizes primary data and applies a quantitative methodology, involving the collecting and analysis of research data using a strategy that emphasizes quantification. The sample will be LSPs companies in Thailand. The future data in this study will be analyzed using the statistical software packages SPSS and Smart PLS. Partial least squares structural equation modelling (PLS-SEM) is a statistical method employed for data analysis, with the primary goal of enhancing the research model. Thus, the study presents a conceptual framework that suggests that enhancing service quality can improve the logistics performance and competitive advantage of the logistics service provider business in Thailand.

**Keywords:** Logistics service quality, logistics performance, competitive advantage

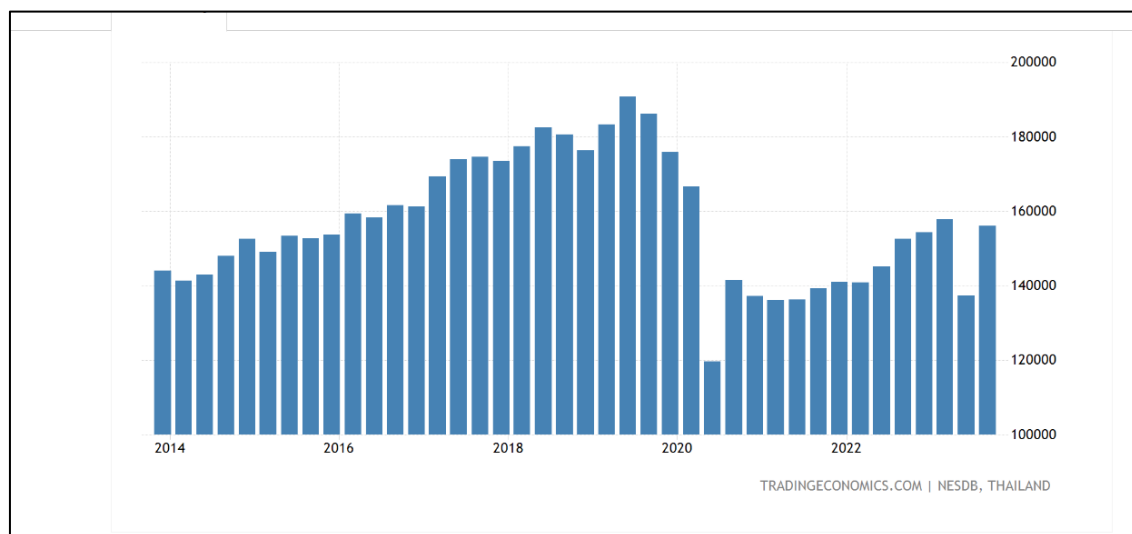
## INTRODUCTION

The service industry, including cross-border trade services, distribution service, computer services, and financial services, has become a crucial catalyst for global economic growth in a highly competitive and dynamic environment. The industry in question is the fastest-growing in the globe, and it makes up over 66% of global service commerce, as stated by Loungani et al. (2017); (Wingwon & Piriyaikul, 2010). The manufacturing industry in Finland and Switzerland has seen a deceleration in growth in the global economy, leading enterprises to focus on enhancing efficiency and cutting costs due to weakened demand. They are improving their internal procedures to enhance efficiency while also striving to decrease the supply chain costs of their suppliers and service providers (Solakivi et al., 2018). These modifications exert pressure on logistics service providers (LSPs) from several angles. Due to the significant rise in industrial production and transit volumes in the 21st century, logistics service providers (LSPs) are making substantial investments to expand their production capacity. In today's world, economic growth and logistics are closely intertwined. As the economy increases, there is a greater demand for logistics services to support this expansion. Logistics has become a vital element for businesses in the ever-evolving global economy (Filha, 2022).

Thailand, located in Southeast Asia, has the second-largest economy in the region. Its Gross Domestic Product (GDP) for the year 2021 amounted to a substantial sum of United States Dollar (USD) 513 billion. Thailand's economy has experienced significant growth, transitioning from a low-income to an upper-middle-income country, as classified by the World Bank (OECD, 2020b). The OECD has previously emphasized in its publications that structural changes have been crucial in facilitating this transition. Specifically, liberalization of trade and investment, along with regulatory reforms that promote business-friendly policies, have encouraged more involvement in global value chains (OECD, 2018, 2020a). The impact of products forwarding on the business competitiveness of the transport industry is influenced by the growth of goods in accordance with the national economy (Wongwilai & Hotrawaisaya, 2022).

**Figure 1**

*The gross domestic product (GDP) generated by the transport and storage industry in Thailand from 2014 to 2023.*



According to Figure 1, the transport and storage sector in Thailand experienced an increase in Gross Domestic Product (GDP) from 137,424 THB Million in the second quarter of 2023 to 156,008 THB Million in the third quarter of the same year, between January 2021 and July 2023. The transport industry in Thailand has contributed an average Gross Domestic Product (GDP) value of 115,789.86 THB Million. The peak value reached was 190,801.00 THB Million, attained during the second quarter of 2019.

In the last five years, transport providers in Thailand have seen fierce competition from major multinational logistics businesses that mostly cater to export sectors. Instead, the company started to boost its investment in Thailand by catering to a larger number of manufacturers that wish to sell their products in the nation. The company also aims to leverage digital technologies to enhance the efficiency of logistics management, therefore gaining a competitive edge (Center, 2019). The increase in the quantity of agricultural products has led to a higher need for transportation and distribution of goods throughout the country. Furthermore, the firm also profited from the ongoing growth of cross-border commerce, particularly the increasingly popular internet trading operations (Sathapongpakdee, 2019). Most road transport operators are tiny enterprises, accounting for 94.4% of all registered operators. As a result, they have a restricted client base and consequently make little investments in technology and staff. Individuals or businesses with insufficient funds available for operations frequently have issues with their ability to meet financial obligations and may eventually have to cease operations over time. Thai entrepreneurs that operate a comprehensive transportation business as a one-stop international logistics service provider (LSPs) have stronger competitiveness and negotiating power in the market, particularly medium-large operators (Sathapongpakdee, 2019).

The 2019 study from the Commerce of Thailand highlights that LSPs are now facing challenges in their business operations. The research emphasizes that the expertise and honesty of LSPs play a crucial role in determining the value and quality of their services. Moreover, to enhance domestic logistics service, the country must enhance logistics performance to meet consumer demand. Furthermore, the small logistics service organizations have a disadvantage because of the advancement of logistics technology and a deficiency in service quality management. Certain organizations lack the capability to access and exploit their service potential (Professionals, 2023). Furthermore, logistics service providers (LSPs) in Thailand have a disadvantage in comparison to their bigger international counterparts that operate within a more network of logistics enterprises (Transport, 2023; Yala, 2023). The Thailand transport department has proposed a way to address the problem by elevating LSPs to the status of a high-income country with competitive capabilities. This would be done under the integrated development plan for transport and logistics systems, which aims to boost competitiveness (Transport, 2023). The services provided by the transport industry involve enhancing the quality and efficiency of corporate operations and supply chain management. The main goal is to increase the quantity and quality of transport services offered by logistics service providers (Council, 2022).

Consequently, it is necessary for LSPs to create and execute high-quality services in order to fulfil these specific client requirements. A study conducted by Nunthong et al. (2019) investigated the logistics service quality model of Thailand's logistics service providers. The researchers found that both logistics service quality and satisfaction had a substantial impact on behavioral loyalty. Nevertheless, there are limitations to the study about the competitive advantage of LSPs in Thailand. Therefore, for LSPs to maintain and enhance their competitiveness, it is crucial for LSPs in Thailand to comprehend the essential components of improving their logistics service quality and logistics performance in order to achieve an advantage over their rivals.

## **Resource-Based View**

The resource-based view (RBV) theory suggests that organizations may enhance their performance by effectively utilizing distinctive organizational resources and capabilities (Barney, 1991; Wernerfelt, 1984). According to Barney (1991), if a company's resources are valuable, limited, difficult to reproduce, and non-substitutable, they can provide a competitive advantage. However, the mere presence of these resources does not guarantee that the organization will achieve a competitive edge. Capabilities, as defined by Amit and Schoemaker (1993), are a company's ability to effectively use its resources in order to achieve certain objectives. They enable the firm to enhance resource efficiency and produce economic profit more rapidly than its rivals. Capabilities are challenging to replicate due to their strong integration into the organizational procedures and routines of the enterprise. Grant (1991) and Makadok (2001) argue that these factors enable the firm to acquire and maintain a competitive edge over its rivals.

The Resource-Based View (RBV) has been employed in logistics research as documented in the current body of literature. The distinctive ability of logistics, as defined by Olavarrieta and Ellinger (1997) is a crucial strategic asset that gives 3PL suppliers a competitive edge. Lai (2004) identified four separate classifications of 3PL providers according to their level of service proficiency. In their study, Liu et al. (2010) established a set of 13 essential traits that play a critical role in determining the competitive advantages of Chinese third-party logistics (3PL) providers. In the field of third-party logistics (3PL), researchers Liu and Lyons (2011) employed the Resource-Based View (RBV) to conduct an empirical evaluation of the impact of resources and competences on company success. Liu and Lyons (2011) conducted a comparative analysis of the service capabilities of 3PL suppliers from Britain and Taiwan. Thus, this study has utilized the Resource-Based View (RBV) to investigate the correlation between logistics service quality, logistics performance and competitive advantage within the confines of the conceptual framework.

## **Logistics Service Quality**

Lewis and Booms (1983) recognized that service quality may be defined as the extent to which the level of service provided aligns with customer expectations. Providing excellent service involves consistently meeting client expectations. Therefore, service quality is considered to be the end product of a customer service organization and serves as a differentiating element for service delivery organizations to set themselves apart from their competitors (Parasuraman et al., 1985). The logistics service efficiently provides value and meets clients' delivery requirements in a cost-effective manner (Stank et al., 2003). Logistics services quality (LSQ) provides firms with a novel approach to enhance customer service and improve their market competitiveness (Davis, 2006). (Mentzer et al., 2001) introduced the concept of logistics service quality and proposed that the physical delivery of logistics services has an impact on consumer perceptions of service quality, especially in relation to the after-sales process. Customer expectations and the corresponding development of components for logistics service quality (LSQ) standards are vital in the context of emerging nations (Gupta et al., 2023).

Mentzer et al. (2001) developed a model consisting of nine items to segment the logistics service process. This paradigm provides a holistic perspective for evaluating the quality of logistics service. The nine criteria are timeliness, information quality, ordering processes, order correctness, order condition, order quality, order discrepancy management, and human contact quality (Thai, 2013). Mentzer et al. (1999) and Thai (2013) emphasized the importance of both customers and LSPs being acquainted with the LSQ concept. Enhancing the level of logistics service quality (LSQ) contributes to the competitive advantage of logistics providers in challenging business environments (Wang & Hu, 2016). There are problems with the quality of the physical distribution service and its functional

logistics. The logistics seven Rs, also known as "delivering the correct product in the appropriate quantity, to the designated location, at the specified time, in optimal condition, at the agreed-upon price, with accurate information," are the focal point of physical distribution services (Uvet, 2020). Banomyong et al. (2017) utilized the framework proposed by Mentzer et al. (2001) to assess the efficacy of logistic service quality in Thailand. Logistic service quality (LSQ) consists of the actual delivery of goods and services, as well as the impression of the entrepreneur's service.

### **Logistics Performance**

Previous studies have shown that logistics performance encompasses efficiency, effectiveness, and distinction. However, there are several indicators available for assessing logistics performance (Fugate et al., 2010). Mentzer et al. (2001) shown in their study that logistics performance is the primary determinant of LSPs. According to Duong and Paché (2016), logistics performance is a component of the broader concept of organizational output. Conventional logistics performance is primarily based on the increase in usefulness of location and time. The characteristics of a company's goods or services that contribute to the enhancement of utility through logistics operations are referred to as logistics accelerators.

According to Wong and Karia (2010) the efficiency of logistics key performance indicators in measuring logistic operations is influenced by the firm's activities, business strategy, procedural skill, and management systems. These variables are crucial in determining the competitive advantage of logistics service providers. Logistical performance refers to the degree of efficiency, effectiveness, and distinctiveness in providing logistical services (Mentzer et al., 2004). In general, logistics management should strive to reduce the utilization of resources in order to improve efficiency, fulfil desired objectives effectively, and gain a competitive edge over competitors via differentiation (Tuan, 2017).

### **Competitive Advantage**

The competitive advantage demonstrated a deep understanding of the latest advancements in the field of industrial organization economics. It effectively covered subjects such as market signals, exit barriers, and commitment via long-term investments. The study of competitive advantage sought to elucidate the sources of advantage through the concepts of cost, differentiation and focus (Huggins & Izushi, 2012). Researchers and academics have focused on identifying the origins of competitive advantage, which has become a significant field of study in business strategy, logistics, and supply chain management. This topic has been explored by various scholars such as (Barney, 1991; Chang et al., 2021; Spillan et al., 2013).

By making astute choices in their competition strategy, LSPs may attain a competitive edge, which is a unique quality that ensures a superior market position. Logistics service providers (LSPs) are more suited than internal teams to carry out logistical duties with high levels of efficiency and effectiveness (Hwang & Kim, 2019). Competitive advantage enables the firm to offer a more competitive product or service compared to others in the market. This allows for a thorough analysis of the competitiveness of LSPs by identifying the elements that contribute to their ability to gain a competitive advantage. The competitiveness of LSPs is determined by their capacity to attain and sustain an edge over their competitors in the market.

In today's world, economic growth and logistics are closely intertwined. As the economy increases, there is an increased demand for logistics services to support this expansion. Logistics has become a crucial element for businesses in the ever-evolving global economy (Filha, 2022). Logistics serves as the fundamental basis for global trade, efficiency in supply networks, and economic growth. As a result, it is feasible to acquire, produce, and deliver goods and services from virtually any place worldwide

(Professionals, 2023). A previous study conducted in Malaysia between 2013 and 2014 examined the influence of logistics innovation on logistics performance. The study found that both technological innovation and organizational innovation had no significant impact on logistics performance (Aziz, 2017). Whenever assessing logistic enterprises, it is crucial to take into account additional factors such as service quality, intention, and perception (OECD, 2020b).

The 2019 study from the Commerce of Thailand highlights that logistics service providers (LSPs) are now facing significant challenges in their business operations. The research also emphasizes that the knowledge and integrity of LSPs play a crucial role in delivering high value and superior service quality in their company. Moreover, to enhance domestic logistics service, the country must enhance logistics performance to meet consumer demand. Assistance should be given to use advanced technologies in logistics and supply chain systems to enhance competitiveness in the field of logistics (Council, 2022). Furthermore, small logistics service firms suffer from a disadvantage because of inadequate service quality management. Some organizations lack the capability to access and utilize their service potential (Council, 2021). In order to reduce production costs and provide internationally competitive services, transportation and operations systems aim to increase capacity and improve the quality and efficiency for LSPs (Transport, 2023).

Consequently, it is necessary for LSPs to create and execute high-quality services to fulfil these specific client requirements. A study conducted by Nunthong et al. (2019) examined the logistics service quality model of Thailand's logistics service providers. The researchers found that both logistics service quality and satisfaction had a substantial impact on behavioral loyalty. Tippong et al. (2020) conducted a study that examined how the implementation of Sufficiency Economy Philosophy (SEP) practices relates to the business success of LSPs in the South, as measured by the balance scorecard. Nevertheless, there are limitations to the study about the competitive advantage of LSPs in Thailand.

## **METHODOLOGY**

A research design is a systematic approach that outlines the methods and procedures for collecting, analyzing, and assessing research data, as well as determining how to address the research questions (Roger, 2009; Sekaran, 2003). This study aims to investigate the correlation between identified factors that impact logistics performance, with the ultimate goals of attaining a competitive edge in logistics service (Filho & Moori, 2020; Neto et al., 2018; Ralston et al., 2013). This study uses primary data. This study employs a quantitative approach, which involves the collection and analysis of research data using a strategy that focuses on quantification. Quantitative research is a systematic approach used to analyze the connection between variables, where the evaluation is done using numerical data and statistical and graphical methods (Saunders et al., 2019). The participants in this study are firms that provide logistical services in the LSPs market. The participants will be surveyed on the factors that led to their company's competitive advantage, including service quality and logistical performance.

The focus of this research is on logistics service providers company in Thailand, as the unit of analysis. This study examined the impact of logistics service quality on logistics performance and competitive advantage in Thailand. The intended respondents are those holding managerial positions or above in logistics service provider (LSP) firms that registered with the Department of Business Development in Thailand. Based on the research conducted by Hair et al. (2010), it is recommended to have a minimum sample size of 100 for models with five or fewer components and more than three items that have high item communalities (0.6 or above). For models with a significant number of components, some of which have low communalities, and/or less than three measurable elements, the recommended minimum sample size is 500. The study employed a straightforward method of sampling called simple random sampling, which incorporated both cluster and basic random sample techniques.

According to Borgman (2012) as cited in Grant (2017), data refers to any type of information that may be transformed into knowledge to represent a concept, object, or situation. This includes numbers, characters, symbols, and facts. A questionnaire is a method of gathering data in which each participant is required to answer a series of questions in a predetermined order (Cooper & Schindler, 2014). The data in this study will analyze by using the SPSS and Smart PLS, which are statistical software programmes. Partial least squares structural equation modelling (PLS-SEM) is a statistical technique use to analyse data and primarily to advance the research model (Aziz, 2017; Ringle et al., 2018; Ünal & Turan, 2020).

## **CONCEPTUAL FRAMEWORK**

### **Logistics Service Quality and Logistics Performance**

According to Pirttila (1996), in competitive situations, logistics service differentiation attempts to optimize the disparity between customer value and production costs. Customers have utilized the price of services as a measure of the quality of service they received. As a result of the company's internal disagreements, clients are offered numerous logistical service choices with varying levels of value. Due to the inherent ambiguity of the idea of service quality, it is challenging to accurately discern the real components only based on their outward appearance. To uphold consumer trust, logistic operations must consistently maintain service delivery in accordance with these criteria (Thanaruch, 2021). Based on the prior research review, the subsequent hypothesis may be assessed.

*H1: There is a direct relationship between logistics service quality and logistics performance of logistics service providers.*

### **Logistics Service Quality and Competitive Advantage**

The organization's logistic service quality ensures that the client receives the items in the correct amount, at the correct location, at the correct time, and at a suitable cost. Sriyakul et al. (2019) state that logistic service quality has become a crucial factor in the pharmaceutical industry's ability to gain a competitive edge. This is achieved through effective logistic operations that focus on cost, service, and delivery capacity. Within the context of the logistic service industry, the worldwide market has undergone a rapid and significant development (Ding et al., 2014; Ding et al., 2015). Analyze the quality of logistic services by examining customer factors such as incorporation, awareness, flexibility, and competency. Determine which factors might indicate the durability of competitive advantage. The study examined the impact of logistic service quality characteristics, such as placement order, delivery encouragement, and adaptability, on competitive advantage (Bandittayarak & Hotrawaisaya, 2021; Ding & Jie, 2021). Given the analysis of the preceding study, we can now evaluate the following hypothesis.

*H2: There is a direct relationship between logistics service quality and competitive advantage of logistics service providers.*

### **Logistics Performance and Competitive Advantage**

Logistic performance refers to the degree of efficiency, effectiveness, and distinctiveness related to the accomplishment of logistical services (Mentzer et al., 2004). In general, logistics management should aim to decrease the proportion of resources utilized for achieving results (efficiency), accomplishing set goals (effectiveness), and gaining a competitive edge over competitors (differentiation) (Tuan, 2017). According to Victor (2014) the factors of worth and arrangement have a greater impact on performance compared to the traits of uniqueness and inimitability when it comes to the dimensions of knowledge. The relationship between price and distinctiveness is positively correlated with performance and competitive advantage (Maket, 2017; Maket & Korir, 2017). Baia et al. (2020) argue that the positive

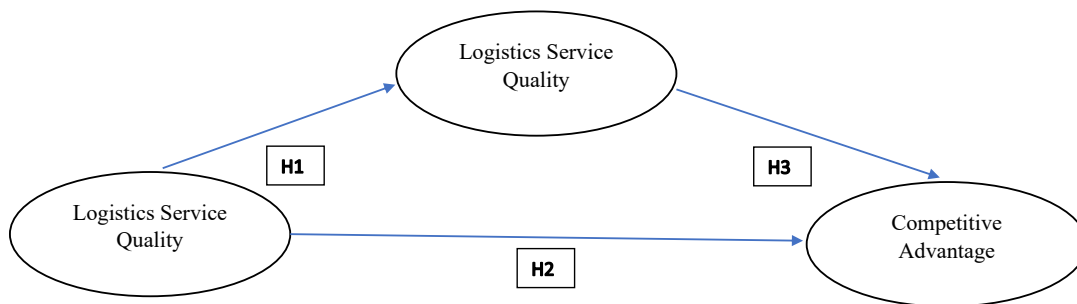
relationship between performance and competitive advantage is contingent upon the presence of valuable and distinctive combinations of resources and talents.

Today, businesses face two crucial challenges. The first is to effectively utilize their abilities to gain, produce, and enhance value in the marketplace in line with their business strategy. The second is to understand and evaluate their performance within the broader supply chain. Based on a review of previous studies, the study hypothesis may be evaluated.

*H3: There is a direct relationship between logistics performance and competitive advantage of logistics service providers.*

**Figure 2**

*Conceptual framework of logistics service quality, logistics performance and competitive advantage.*



## CONCLUSION

Various factors are employed to assess the competitiveness of logistics service providers and their performance, including service quality. Furthermore, the logistics performance might vary in terms of both financial and non-financial aspects. Furthermore, the quality of service has emerged as the paramount factor in all businesses. Logistics service processes are utilized by businesses to enhance effectiveness, service quality, and timeliness, thereby improving logistics performance. These factors contribute to the enhancement of performance and competitive advantage for logistics companies (Nurjaman et al., 2021; Wadho & Chaudhry, 2018). The study established a correlation between the quality of logistics services, the performance of logistics, and the competitive advantage from the standpoint of Thailand.



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