LOGISTICS SERVICE PROVIDERS' CAPABILITIES AND ROLES OF GOVERNMENT TOWARDS CROSS BORDER LOGISTICS PERFORMANCE BETWEEN THAILAND AND MALAYSIA

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Abstract

This paper is a critical review of the literature, based on secondary data on the capability of logistics service providers (LSPs) and the role of government in enhancing cross-border logistics performance (CBLP) between Thailand and Malaysia. Methodology wise, the literature review involved 26 academic articles published in recognized international and domestic journals in Tier 1, as well as policy documents/statistics obtained from relevant government agencies from 2015 – 2021, using essential keywords. The review provides a clear picture of cross-border logistics (CBL) between Thailand and Malaysia with an in-depth explanation and analysis of the broader implications under the Resource-Based View (RBV) theory. It reveals that cross-border operations are currently facing an unstable environment, stiff competition, and complex operations. Therefore, LSPs are required to have the necessary capabilities to ensure effective operations. Government resources should also be developed to ease movement and activities in the international trade process, such as ensuring the effectiveness of information and communication technology, reducing the barrier of service delivery, and mitigating public complaints. Firms should become more capable in improving the tangible and intangible resources that help support their working process, especially in terms of qualified manpower.

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This paper presents practical experiences in developing organizational resources which can be adopted by LSPs and governments. This may lead to a better CBLP for the bilateral countries.

Keywords: Logistics Service Provider, Capabilities, Government, Cross-Border Logistics Performance, Resources-Based View

1. INTRODUCTION

Logistics processes are prevalent in almost every circadian rhythm of human activity, whether directly or indirectly (Stock & Lambert, 2001). Logistics management is a part of the supply chain process defined as the planning, implementation and control of the physical flow of goods, services and related information from point of origin to point of use, meeting customers' needs at a profit (Kotler & Killer, 2015; Stock & Lambert, 2001). In the context of border crossing, logistics activities make up several components of a whole system where both opportunities and threats could be present at the same time (Slusarciuc, 2015). A variety of business strategies have also been put in place to ensure effectiveness in global distribution (Bhantnagar & Teo, 2009). This is because effective border crossing operations impact the results in terms of time and cost reduction. Thus, countries especially those with shared borders are more concerned about developing cross-border logistics operations (Mohmand et al. 2015) with the aim to increase potential and stability among them (Pengman & Kettapan, 2018).

Thailand and Malaysia appear to have the highest competitive streak in cross- border trade, with both countries having simplified their cross- border trade business processes and having secured the first and second rank among their neighboring countries (The World Bank, 2019). Thailand and Malaysia share a border and make use of a bilateral trade agreement, recording the highest value of trade among all ASEAN countries at THB 52. 5 Billion (Parpart, 2016). Compared to trade volumes with Cambodia, Laos, and Myanmar, good volumes have been recorded between Thailand and Malaysia in recent years (World Economic Forum, 2018), accounting for approximately 33.00% of total trade (Department of Foreign Trade, 2021). In addition, Malaysia and Thailand improved their rank for ease of doing business in 2019. The countries were ranked 12th and 21st respectively out of 190 countries (in 2018, the countries were ranked 15th and 27th, respectively) (The World Bank, 2018; The World Bank, 2019). Songkhla is the Thai province with the highest trade value, including its borders at Sadao, Padang Besar, and Ban Prakob. Sadao, a Malaysian border, has continuously remained at the top list of trade volumes with a 7.99% increase from 2018 to 2019 (Department of Foreign Trade, 2019),

strengthening volumes of global commerce in each country and bringing up the trade competencies in this economic region. Meanwhile, the amount of trade and investment in border areas has also been increasing. This has led to business expansion, as well as increased population due to greater employment opportunities (Melan & Sabar, 2013). There has also been growth in the demand for logistics in the North Eastern Border of Thailand and Lao PDR (Prapinit et al., 2019). This may lead to socio-economic improvements in the border areas and better cross- border cooperation (Slusarciuc, 2016).

The clear direction and promotional activities in Thailand as a logistics hub in South-East Asia and the associated development projects supporting logistics systems have resulted in enhanced trade facilitation, increased cost efficiency, greater customer responsiveness, reliability, security, and a value-added creation in logistics and other supporting industries (Office of The National Economic and Social Development Council, 2018). Thailand's Logistics Development Strategy (2007-2011) was implemented to increase exports (Limcharoen et al., 2017). The strategies have been strengthened by various government policies such as the introduction of electronic submission in 2008, the systems upgrade for Electronic Data Interchange (EDI) in 2009 (The World Bank, 2018), the establishment of the National Single Window (NSW) in 2015 (Raktam & Keawkitipong, 2015), and the establishment of the Special Economic Development Zones (SEZs) (Walsh, 2013; Singler, 2014). Moreover, Malaysia and Thailand have agreed to remove various bureaucratic procedures at border crossings which are expected to operate 24-hours a day (currently, the borders are only open for 18 hours a day). The Malaysian government will also be building two bridges which will connect Kelantan to the border to facilitate the movement of goods as announced by the then Prime Minister Tun Dr Mahathir Mohamad on 24th October 2018 during his visit to Thailand (Parpart, 2016; Elancovan, 2018; Jaafar, 2018; Palansamy, 2018). The advantages of effectiveness in cross-border operations will boost the macro economy of the countries and improve the quality of life for the people in both countries.

On the other hand, challenges are awaiting for trucking companies at the border-crossing between Thailand and Malaysia (Melan & Sabar, 2013). Primary problems are inspection delays and the limitation of space due to the immense volume of shipments and loading. Additionally, the process requires transport partners to deal with government agencies in both countries. In Malaysia, most goods traded with Thailand such as machinery, mineral fuels, oils, distillation products, plastics, and optical and medical apparatus, must travel through a bottleneck. Numerous heavy vehicles cross the Thailand border at two checkpoints i.e. Sadao to Padang Besar and Sadao to Bukit Kayu Hitam. The supplier

must consequently bear extra costs due to delays, document corrections, credibility assurance among customers, and effects on competitiveness reduction (Samart, 2016). All this leads to a decrease in productivity, as well as reduced cross-border trips and customs income (Cornejo et al., 2017). Moreover, the environment surrounding the border areas is subjected to congestion and smoke emissions which generates negative economic impacts for the local communities and the region (Ahmad & Melan, 2014; Ahmad et al., 2015; Melan, 2016). In addition, Thailand and Malaysia have shown unfavorable cross-border logistics performance in comparison to other neighboring countries. Singapore has been the leader in Asia since 2007 according to the World Bank's Logistics Performance Index, with the most efficient customs clearance out of 160 countries, clearing 90% of physical cargo within 8 minutes (Economic Development Board, 2019). The World Bank (2018) also reported that the low scores for Thailand and Malaysia in global logistics performance in 2018 were associated with the customs clearance process. In short, Thailand and Malaysia remain highly inefficient in terms of speed, simplicity, and predictability of formalities. Therefore, Thailand and Malaysia could improve their cross- border logistics performance by improving trade facilitation and service provision**.**

Cross- border operations have been investigated from different perspectives through various contexts. Previous studies have revealed that the border-crossing implementation in Thailand and Malaysia is not as smooth as it appears. This is in line with many other studies on cross-border trading in terms of movement of labour (Vaičiute et al., 2017), cross-border cooperation, formalities and documentation (Studzieniecki et al., 2016), and government support (Pinto et. al, 2017), especially for logistics problems involving transportation, import- export and the value chain (Vaičiute et al., 2017; Gani, 2017; Dong & He, 2018). Most studies have found that the development of trading, services, and merchandise movement, in cross- border operations is relevant and requires the cooperation of various players (Bochaton, 2015; Studzieniecki et al., 2016; Pinto et al., 2017).

Previous studies have revealed that many parties are involved in the logistics process including government sectors i.e. the policy makers for trade facilitation (Pinto et al., 2017; Valarezo et al., 2018; Herrera et al., 2014; Haughton & Isotupa, 2012; Teangsompong & Sirisunhirun, 2018; Vaghi & Lucietti, 2016; Gani, 2017), trade cooperation for agreement (Doan & Xing, 2018; Mohmand et al., 2015), the customers of both import and export companies (Dong & He, 2018), logistics service providers and third parties including transportation, freight forwarder, and shipping companies (Chung et al., 2018; Zhu et al., 2018; Haughton & Isotupa, 2012; Vaghi & Lucietti, 2016; Gani, 2017).

The first prioritized sector that is generally mentioned when discussing border crossing is the "government" (Río et al., 2017; Yilmaz & Bititci, 2006). Firstly, the government is a critical player in creating policies and regulations in operations. Therefore, the flexible and transparent practices of the government are taken as excellent opportunities for ensuring smooth cross-border operations. Secondly, the government is responsible for establishing necessary infrastructure to facilitate the flow of activities in cross-border operations, bringing new technological tools to eliminate complexities in the process. Finally, the government is responsible for creating cooperation at regional, national, and international levels, supporting border-crossing activities to become more efficient.

The factors that should not be ignored in improving cross-border logistics (CBL) operations are the specific knowledge and skills of the performers (Vaičiute et al., 2017). Numerous players such as manufacturers, wholesalers, retailers, buyers, service providers, suppliers, and others are involved in supporting cross-border operations (Dong & He, 2018). Therefore, they must have the necessary knowledge and skills to enable smooth cross-border operations. For instance, they must have clear knowledge about logistics, formalities, and operation processes. Communication and collaboration skills are also highly essential as they can help reduce trade barriers and improve cross-border efficiency with faster performance and fewer mistakes. Thus, it is essential for organizations associated with cross-border operations to carefully analyze the necessary knowledge and skills that can improve the competencies and capabilities of their workers (Vaičiute et al., 2017).

CBL operations involving various public and private organizations can be understood via the Resource-Based View (RBV) theory. The concept of RBV can be identified as the capabilities of an organization that enable it to compete with rivals using resources that are valuable, rare, difficult to imitate and cannot be substituted. The organization's capability in managing its resources will lead to its high performance and sustainable success. It requires knowledge and competencies such as those related to information technology and innovative skills (Barney, 1991; Furrer et al., 2008; Fensterseifer, 2009; Mile, 2012; Holdford, 2018). Different firms with the same strategy demonstrate different performance levels and resources (Furrer et al., 2008). There are direct relationships between firm resources and capacities (Holdford, 2018). For example, organizations with good internal processes and development resources will generate a better competitive advantage (Fensterseifer, 2009). Greater operational performance can be achieved due to the variety of resources that contribute to the capacity of the organization in offering products or services (Chen & Zhang, 2018).

As mentioned above, improve-

ments in border crossing operations, have resulting impacts in terms of a reduction in both time and costs. The quality of the outcome may lead to improved effectiveness of cross-border operations which may in turn bring economic benefits both nationally and regionally. Therefore, this study aims to increase the knowledge of researchers and practitioners regarding the capabilities of logistics service providers (LSPs) and the role of governments based on the Resource-Based View (RBV) theory in the context of enhancing cross- border logistics performance (CBLP) between Thailand and Malaysia through a review of the relevant literature. The results gained can be used to develop approaches for generating an effective logistics system, which brings successful supply chain integration and widens the region's economic market potential.

2. METHODOLOGY

This study utilized a structured procedure to critically evaluate and review documents from secondary sources to improve understanding of the cross-border issues related to LSP capabilities and government roles in cross-border logistics. The literature review method allows for the development and understanding of previous research related to the study's main purpose (Wilson, 2012). This study was conducted based on the following approaches.

Firstly, determination of the scope of an interesting area of study is designed to narrow down the points explored in previous studies. Relevant topics can then be chosen from existing similar studies using keywords from various sources of literature. Examples of essential keywords include logistics service provider, government administration, cross- border logistics, border trade in Thailand and neighboring countries, the role of logistics service providers and government, and logistics performance.

Next, suitable sources of literature were determined for the data collection process. There were various international and domestic documents and works including books, research papers, and published documents. The references in the collected data directed the search to other articles linked to the chosen keywords. An Internet search was also conducted via online databases including Science Direct, Scopus, EBSCOhost, and Proquest. These databases typically store good academic journals containing theoretical and fundamental concepts supporting a critical review of the research topic. Thus, it is an excellent source for generating ideas (Wilson, 2012). In addition, various Internet websites have abundant sources of national and international statistics, annual reports, and significant figures. They were accessed via the websites of government agencies and reliable international organizations to ensure the sources' reliability (e. g. , Bank of Thailand, Department of Foreign Trade, Thailand, Fiscal Policy Office,

Economic Development Council, Singapore, The World Bank). All the information gathered were taken from sources published between 2015 and 2021, allowing the development of understanding regarding the specific context and area of study i.e. whether the study was aligned with the theoretical bases and research purpose.

Finally, all the information collected was structured appropriately, including the definition of the topics investigated, the study background, the methodologies, and the results and discussion of the research articles. Additionally, the information from other sources was summarized in terms of definitions, main ideas, and links to the study area. All results were presented using a descriptive method. The references to key authors were also listed to ensure data reliability and conformance to research ethics.

3. RESULTS AND DISCUSSION

This section presents the findings of the selected articles related to the scope of this study. It also generalizes the distribution of papers related to application of the RBV in LSP capabilities and government administration, and the enhancement of cross-border logistics performance via the capabilities of the LSPs. The papers were categorized into three sub-categories namely (1) articles that adopted RBV in explaining the capabilities of the LSPs (14 articles), (2) articles that adopted RBV in explaining Government administration (6 articles), and (3) articles that presented the improvement of cross-border logistics performance via the capabilities of the LSPs (6 articles). Tables 1, 2, and 3 list all the papers included in the literature review and the key scope of each article.

3.1 The application of Resource-Based View (RBV) in Explaining LSP Capabilities and Government Administration

3.1.1 Capabilities of Logistics Service Providers (LSPs)

Most of the previous studies that adopted the RBV mainly focused on enriching firm performance using well-managed resources as presented in Table 1.

3.1.2 Government Administration

The RBV concept had been generally applied in studies on firm competency. It helped generate valuable resources and develop strategies to compete with competitors. Moreover, the RBV can be adopted for the resource management of government sectors as presented in Table 2.

3.2 The Impact of Logistics Service Providers' Capabilities on Cross-Border Logistics Performance

LSPs in cross-border activities generally create value in the supply chain that influences operational CBL. Three significant aspects implemented by the LSPs should be considered in improving the

Table 1 Summary of Previous Studies Related to the Adoption of RBV Towards LSP

Authors (Year)	Results
Ding et al. (2012)	Standard operating procedures with increased responsiveness affect the capabilities of LSPs in China, especially information and communication technology firms.
Yu et al. (2018)	Big data represents extensive resources that could formulate the capabilities of firms in China's manufacturing industry.
Parrish et al. (2004)	In the US textile and apparel industry, well- utilized resources represent the capability of a firm in strengthening its competency to compete with rivals.
Fensterseifer (2009)	Strategic resources should be applied in the firms of an industrial cluster for a sustainable competitive advantage.
Rivera et al. (2016)	Training supports the collaboration strategies of the firm in Zaragoza (Spain) , which were essential resources for generating value-added services.
Monteiro et al. (2019)	The resources of exporting companies in Portugal such as finance, information, and relationship positively affect their dynamic capability.
Yuen et al. (2019)	The resources of the shipping companies for transport cargo operations in Singapore such as assets, processes, and knowledge could enhance sustainable management in the companies, which in turn creates capabilities in handling innovation and technological changes.
Yu et al. (2017)	For the manufacturing industry in China, service quality is an essential capability created by intangible resources such as logistics flexibility and relationship flexibility.
Koc and Ceylan (2007)	Technological strategy, idea quality and generation, as well as technological acquisition are good sources for emphasizing the innovative capacities of the logistics firms in Turkey.
Yang et al. (2009)	The resources of container shipping services in Taiwan such as information, equipment, and corporate image generate better service and innovation capabilities.
Furrer et al. (2008)	The resource configurations of marketing technology industrial companies produce different performance levels for firms that have the same strategy.
Chen and Zhang (2018)	The intangible resources of firms running cross- border operations including products or services and business decision-making significantly affect the capability of logistics enterprises in China.
Lee et al. (2017)	Information exchange, coordination, activity integration and responsiveness drive the supply chain capabilities of the textile and apparel industry in Malaysia.
Eliaa et al. (2021)	In the context of export firms in Italy, organizational resources support internationalization via digital channels with a higher propensity to undertake digital exports.

performance of cross-border logistics namely logistics service quality, business decision-making, and capabilities of the LSPs to provide logistics services (Giovanis et al., 2013; Bakar & Jafar, 2016). The results of previous studies proved that the capabilities of LSPs could develop CBLP as presented in Table 3.

Table 2 Summary of Previous Studies Related to the Adoption of RBV Towards Government Administration

Authors (Year)	Results
Waller and Genius (2015)	Technical issues such as infrastructure, privacy, and security are essential resources in improving the effectiveness of e-government in Jamaica.
Antún and Alarcón (2014)	Well- managed resources could validate government administration which is linked to economic development in Mexico.
Charanwanitwong and Fraszczyk (2018)	Good practices related to financial management are the best resources in government performance related to fundamental infrastructure development for rail liberalisation in Europe.
Antoniades and Haan (2019)	Intangible resources of the government such as entrepreneurship, motivation, investment, and adaptation enable commercial potential in managing capital, talent, and other benefits for the Cyprus government.
Tangi et al. (2021)	For Italian municipalities, organizational barriers negatively influence digital government transformation which is a significant ability to handle the complete re-design of existing processes, procedures, and structures among others.
Uyar, Fernandes and Kuzey (2021)	The quality of public governance relies on corporate governance policies contributed by intangible resources including well- managed corporate governance practices, enforcement mechanisms, and political stability.

Table 3 Summary of previous studies related to the capabilities of LSPs towards Cross-Border Logistics Performance

Authors (Year)	Results
Wang et al. (2018)	There is a positive relationship between logistics capabilities and logistics performance for 3PL companies in Australia as those capabilities can mitigate uncertainty risks in the supply chain.
Monteiro et al. (2019)	Dynamic capabilities and entrepreneurial orientation positively impact the export performance of Portuguese

Table 3 Summary of previous studies related to the capabilities of LSPs towards Cross-Border Logistics Performance (Continued)

Authors (Year)	Results
	exporting companies as dynamic capabilities can transform resources into performance development.
Roslan et al. (2015)	Third-party logistics companies in Iskandar Malaysia that provide services based on the SERQUAL model demonstrated improved logistics performance and customer satisfaction.
Yu et al. (2017)	The logistics quality of the manufacturing industry in China positively affects its logistics performance due to the flexibility in handling services under different environmental conditions.
Chung et al. (2018)	The study in the US-Mexico border found that the third-party buffer inventory positively affected the Just-In-Time (JIT) performance; for example, the replenishment caused delays and transportation problems.
Ren et al. (2020)	Capacity on allocation such as consolidating orders from different retailers andplatforms of third-party-forwarding-logistics (3PFL) services in China, contributes to cross-border performance in terms of the minimization of operational costs.

4. CONCLUSION AND RECOMMENDATIONS

There are several important factors and considerations in the reviewed studies, especially regarding resource factors. Firstly, the RBV Theory has been integrated into many areas of study especially those that involve an unstable environment with intense competition and complex operations. The findings generally prove that resources are primary sources of organizational capabilities. This is in line with the cross-border operation context of Thailand-Malaysia in which stakeholders along the supply chain generally operate in a volatile situation (Yu et al., 2018). Lack of knowledge is the main barrier to internationalization and leads to the identification of opportunities in the international market that could increase the value of any firm (Monteiro et al., 2019). The important tangible resources that drive the service capabilities of both LSP and government administration in operating cross- border logistics include a readily adapted information system to fulfill the needs of customers and partners, the security of business transactions, the readiness to use cargo tracking system facilities, and Electronic Data Interchange (EDI) (Yu et al., 2018; Ding et al., 2012; Yang et al., 2009; Antún & Alarcón, 2014). In addition, a well-

managed and effective control system for intangible resources also enhances the capabilities for operating cross-border logistics, such as financial stability, branding, positioning with satisfied and loyal customers, and formal planning, as well as ensuring skillful and qualified staff (Yang et al., 2009; Madhani, 2010; Yu et al., 2018; Agmeka, Wathoni & Santoso, 2019).

Secondly, empirical studies have also identified the two main elements of a firm's capabilities namely tangible and intangible resources. Tangible resources such as technology, information equipment, communication technology, corporate services, and innovation, support the working process (Hassan et al., 2017; Yang et al., 2009). They drive the capability to create a strong relationship with related agencies (Ding et al., 2012). Moreover, they support LSPs in providing effective products or services to users because all information and equipment is interrelated in the management system (Pengman, 2016). Intangible resources play an essential role in enhancing the quality of human resources, such as the provision of training, the generation of collaboration, and the provision of value-added services (Rivera et al., 2016). Learning organizational resources will lead to the development of ideas (Yuen et al., 2019), primary resources, and innovation (Koc & Ceylan, 2007). LSPs and relationship flexibilities are essential resources that drive logistics service quality (Yu et al., 2017). Intangible resources also entail sustainable management in responding to customers during an unstable environment (Yuen et al., 2019). This is essential for decision-makers at the management level, significantly impacting the CBLP of logistics enterprises (Chen & Zhang, 2018).

All empirical findings confirm that firm capabilities cannot be created without appropriate and adequate resources. Therefore, it is interesting to prove that the effect of resources on LSPs' capabilities in operating cross- border activities between Thailand and Malaysia will benefit practitioners in designing a strategic plan for developing CBL operations regionally.

There are no available resources in the government sector regarding administration as they are referred to policymakers who have complete control over the process of internationalization and the development of trade facilities, such as border infrastructure, roads, and railways (Charanwanitwong & Fraszczyk, 2018). The government is also concerned with practical issues in which all resources are required. For example, the effectiveness of information and communication technology reduces service delivery barriers and improves social issues (Hassan et al., 2013; Waller & Genius, 2015; Omotayo & Melan, 2017). Moreover, governments are required to perform corporate governance practices (Ren et al., 2020) such as full disclosure of all consolidated subsidiaries and public commitment of being compliant to relevant laws

(Dooren, Caluwe & Lonti, 2012; Transparency International, 2019; Veljković, Sanja & Leonid, 2014). Furthermore, the publication of information provided by governments under open links should be made available to download, while there should also be convenient locations and hours of operation to support cross- border logistics operations (Dooren et al., 2012).

Very few studies had investigated the relationship between resources and government administration. Some findings have indicated that the government performs better if they have entrepreneurial and adaptive capabilities generated by organizational resources (Antoniades & Haan, 2019). Thus, it is interesting to explore the results by testing both factors quantitatively to confirm practical operations and improve plan strategies, which may enhance the development of a robust bilateral trade between Thailand and Malaysia.

In particular, the performance capabilities of firms have similarities with LSPs which could lead to their success in cross- border and international trade operations. The fluctuation of the global market and fast- changing LSPs call for the need to focus more on dynamic capabilities and service quality (Monteiro et al., 2019). On the other hand, performance improvement in terms of rapid growth, business expansion, and customer satisfaction shall be an essential mechanism in border trades (Roslan et al., 2015; Yu et al., 2017). Therefore, it is very interesting to prove the relationship between the capabilities of LSP and operational CBLP.

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