THE IMPACT OF STRATEGIC ALLIANCE PERFORMANCE OF OCEAN CARRIERS IN MALAYSIA

CHANG KAH LOON

UNIVERSITI SAINS MALAYSIA

2024

THE IMPACT OF STRATEGIC ALLIANCE PERFORMANCE OF OCEAN CARRIERS IN MALAYSIA

by

CHANG KAH LOON

**Thesis submitted in fulfilment of the requirements
for the degree of
Doctor of Philosophy**

December 2024

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to those who have supported me throughout my PhD journey, without whom this thesis would not have been possible. First and foremost, I am deeply grateful to my parents for their unwavering support and encouragement throughout my academic pursuits. Their love and sacrifices have enabled me to pursue my dreams and achieve this significant milestone. I also extend my appreciation to my family members for their constant support and belief in my abilities, especially during the challenging times. My special thanks go to Capt. Logistician Ananda Kumar, FLogM, my Board Chairman at AK Ventures Berhad (Maritime Logistics Group of Companies), for providing me with the opportunity to undertake this research and for his excellent mentorship. His valuable insights, feedback, and guidance have been instrumental in shaping my research. I am also thankful to my colleagues and fellow logisticians for their invaluable contributions, insightful feedback, and collaborative spirit, which have enriched my research and helped me grow as a PhD researcher. Finally, I would like to express my sincere appreciation to my PhD supervisors, Prof. T. Ramayah (the main supervisor) and Assoc. Prof. Dr. Teh Sin Yin (the co-supervisor), for their invaluable guidance, support, and patience throughout my PhD journey. Their expertise and experience have been crucial in shaping my research and helping me achieves my goals. Once again, I extend my heartfelt thanks to all those who have supported and helped me along the way.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Page

LIST OF ABBREVIATIONS

3PL   Third-party logistics.

JPN   National Registration Department

MITI   Ministry of International Trade and Industry

NVOCC Non-Vessel Operating Common Carrier

SAM   Shipping Association Malaysia

TEU   Twenty-foot equivalent unit

LIST OF APPENDICES

IMPAK PAKATAN STRATEGIK TERHADAP PRESTASI
SYARIKAT-SYARIKAT PERKAPALAN DI MALAYSIA

ABSTRAK

Pakatan strategik adalah perjanjian jangka panjang antara syarikat dengan matlamat yang serupa yang menjadikan mereka lebih kompetitif dan menambah nilai. Ia memerlukan kompromi, analisis yang teliti, dan penambahbaikan organisasi. Syarikat pengangkutan laut mungkin membentuk pakatan untuk mencari laluan terbaik tanpa menetapkan harga atau berkongsi aset. Mereka juga boleh mencipta rangkaian pakatan strategik untuk mengurangkan kos dan memanfaatkan ekonomi skala. Dua puluh sembilan hipotesis telah diuji dalam model yang baru dibangunkan berdasarkan reka bentuk penyelidikan, yang merangkumi bahagian pelbagai proses penyelidikan, seperti orientasi pasaran (orientasi pelanggan antara firma, orientasi pesaing, dan kerjasama antara firma), orientasi keusahawanan (inovasi, proaktif, dan pengambilan risiko), orientasi teknologi, orientasi pembelajaran, dan kesesuaian antara rakan kongsi (keserasian, pelengkap, dan kesesuaian strategik). Teori-teori yang biasa digunakan untuk menjelaskan pakatan strategik termasuk teori pertukaran sosial, teori kos transaksi, pandangan berasaskan sumber firma, pendekatan berasaskan pengetahuan, dan teori agensi. Setiap teori memberikan perspektif unik tentang pakatan strategik, memberi pandangan tentang faktor-faktor yang mendorong pembentukan, pelaksanaan, dan kejayaan mereka. Dalam kajian kuantitatif, pendekatan metodologi digunakan untuk mengetahui bagaimana faktor-faktor yang berbeza mempengaruhi kepercayaan dan keberkesanan kerjasama pakatan strategik. Kaedah PLS-Predict digunakan, dan didapati kepercayaan adalah pautan antara faktor-faktor tersebut. Kajian rentas ini mengumpul

data daripada 400 syarikat pengangkutan laut dari barisan ahli Persatuan Pengangkutan Laut Malaysia (SAM), termasuk NVOCC yang terletak di kawasan Pelabuhan Klang, PTP, dan Pelabuhan Pulau Pinang melalui tinjauan e-mel. Pakej perisian IBM SPSS digunakan untuk analisis deskriptif dan pakej perisian SmartPLS untuk statistik inferensi, ujian ekonometrik, dan pemodelan SEM. Keputusan menunjukkan bahawa kebanyakan hipotesis diterima, kecuali lapan yang ditolak. Kajian ini melihat bagaimana struktur tadbir urus, prestasi pakatan strategik, dan orientasi organisasi mempengaruhi prestasi pakatan strategik, dengan tumpuan kepada industri pengangkutan laut. Kajian menunjukkan betapa pentingnya untuk memahami bagaimana orientasi organisasi mempengaruhi prestasi pakatan strategik dan bagaimana mekanisme ini mungkin mempengaruhi pesaing yang lebih kecil dengan sumber yang lebih sedikit.

THE IMPACT OF STRATEGIC ALLIANCE PERFORMANCE OF OCEAN CARRIERS IN MALAYSIA

ABSTRACT

Strategic alliances are long-term deals between companies with similar goals that make them more competitive and add value. They require compromise, careful analysis, and organizational enhancements. Ocean carriers may form alliances to find the best routes without fixing prices or sharing assets. They may also create srategic alliance networks to cut costs and take advantage of economies of scale. Twenty-nine hypotheses were tested in a newly developed model based on the research design, which includes different parts of the research process, such as market orientation (inter-firm consumer orientation, competitor orientation, and inter-firm cooperation) and entrepreneurial orientation (innovation, proactivity, and risk-taking), technology orientation, learning orientation, and inter-partner fit (compatibility, complementarity, and strategic fit). The commonly used theories to explain strategic alliances include the social exchange theory, transaction cost theory, the firm's resource-based view, the knowledge-based approach, and agency theory. Each theory provides a unique perspective on strategic alliances, offering insights into the factors that drive their formation, implementation, and success. In the quantitative study, a methodological approach is used to find out how different factors affect trust and how well strategic partnerships work. The PLS-Predict method is used, and it was found that trust is a link between the factors. This cross-sectional study collected data from 400 ocean carriers from member lines of the Shipping Association Malaysia (SAM) which includes NVOCCs located in the Port Klang, PTP, and Penang Port areas through email surveys. IBM SPSS software package for descriptive analysis

and SmartPLS software package for inferential statistics, econometric tests, and SEM modeling. The results indicate that most of the hypotheses are accepted, except eight, which are rejected. This study looks at how governance structures, the performance of strategic alliances, and organizational orientations affect the performance of strategic alliances, with a focus on the shipping industry. The study shows how important it is to understand how organizational orientations affect the performance of strategic alliances and how these mechanisms might affect smaller competitors with fewer resources.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

In the past, ocean carriers were regarded as having the primary function of organizing, executing, and dealing with the internal stream of materials, commodities, and information via maritime shipment (Beysenbaev and Dus, 2020). An ocean carrier is a determined interest whose primary reason for existing is to help exchange, business, and trade, regardless of whether it is worldwide or domestic, whether merchandise or individuals. On average, the ocean carriers transport 89.5% of total trade. As per UNCTAD figures, in 2019, while ocean trade development and terminal traffic development declined, the total amount of goods traded globally via the ocean carriers reached 11 billion metric tons, with an expected growth of +2.6% in 2019 and an annual typical improvement of +3.4% for the years 2019 to 2024 (Li, Haralambides, and Zeng, 2022). The main activities of ocean carriers not only cover ocean activities but also value-added logistics services such as quality control, testing, packing, order and purchase processing, material handling, good inventory, and warehousing (World Bank, 2016). The system of logistics involves a number of key players, which include ocean carriers, harbor operators, terminal operators, and firms that offer warehouse, stevedoring, and transhipment services, as well as freight forwarders.

Since the emergence of containerization in the 1960s, ocean carriers have encountered modest development until the 1990s and rapid growth in recent decades.

Container shipping has achieved markedly intensified growth with a 9.3% yearly growth rate, which has risen from approximately 85 million TEU in 1990 to 651 million TEU in 2013. The advent of containerization has lowered the cost of transportation and notably contributed to the worldwide chain of supply. The price of transportation of the patron goods makes up only 1% of the shelf cost (Clegg, 2019). Ocean carriers are known as a leading method for global cargo shipment. Ocean carriers have been viewed as an essential segment in the worldwide supply chain. A study done by Lloyd's Marine Intelligence Unit in 2009 revealed that 60% of world trade by value and 75% of international trade by volume were contributed by the ocean carrier industry, which covers general freight, containers, dry bulk, and tankers. Among them, 52% of the value of freight was transported by container ships. In 2019, about 29.8 percent of Malaysia's absolute exchange value was made via the ocean. Over a four-year span, the payload sent out via air became the quickest at 8.2 percent (Müller, 2020).

Several factors contribute to the popularity of ocean carriers. The transportation cost of ocean freight is lower than that of other modes of transportation, which is 3.5 times, 7 times, and 14 times less expensive than railway, roadway, and airfreight (Notteboom and Pallis, 2020).

Furthermore, when compared to freight transportation, ocean freight is more environmentally friendly and safer and allow for a greater capacity for transferring many shipments at once (Drewniak and Karaszewski, 2020). These determinants have made ocean freight the primary and superior transportation mode for world trade and the global supply chain (Notteboom and Pallis, 2020).

In recent decades, the dramatic changes in the global population, including globalization trends, the evolution of technology, a shift in customer demand, and industrial liberalization and deregulation, have compelled firms to reach for competitive and lower-cost resources with speedy approaches, which has subsequently expanded the significance of ocean carriers for the worldwide resource supply (Drewniak and Karaszewski, 2020). The ocean industry is now more competitive than ever before.

In recent years, customers have become more demanding and formidable, wanting faster and more flexible services at an affordable price. Additionally, there has been a recent influx of new products. Drone aircraft, 3D printing, and other technology within the scope of the transportation and logistics sector (Bustinza, 2019).

Furthermore, it is claimed that in this challenging business environment, ocean businesses are required to deliver efficiently and effectively, produce, create, and use creative technology to react to consumer needs with adaptability and, eventually, market survival. As a result, ocean carriers have aggressively partnered with competitors, developing a variety of tactics to decrease risks and costs while also increasing their competitive edge (Drewniak and Karaszewski, 2020).

This has stimulated substantial changes in the form of international business and freight shipment with the prevalence of supply chain integration and B2B features in order to achieve sustainability and competitiveness (Li, Haralambides, and Zeng, 2022). As a result, the traditional role of ocean carriers has changed, and it has become the dominant and prevalent transportation mode for the global supply chain in recent

decades (Notteboom and Pallis, 2020). The role of ocean carriers in boosting international business growth is notable because they not only allow physical shipment but also involve international businesses' trading and marketing activities. The efficiency and effectiveness of ocean carriers in providing integrated cargo transportation and logistics systems, along with high-quality logistics services, significantly contribute to the expansion of trade between countries. Thus, the rapid growth in world trade has propelled intensive competition in the maritime industry, restructured the global ocean industry, and brought liberalization, deregulation, and new developments to this industry. The integration of ocean carriers covers physical integration (i.e., integration of transportation modes), organizational integration (i.e., integration of business processes and human resources in the organization), as well as strategic and economic integration (i.e., integration of control and governance structure, vertical integration) (Bustinza, 2019).

1.1.1   Ocean Carriers

Ocean carriers have a relatively short history, with the first cargo vessel, Ideal X, being launched in 1956 by Malcolm McLean. It took another decade before the initial transatlantic, the beginning of container service between the US East Coast and North Europe, and regular services for long-distance container liners. 1968 saw the introduction of the first specialized cellular containerships that provided delivery (Notteboom and Pallis, 2020). In the 1970s, containerization became widespread because standard container sizes were used, and more people learned about its benefits and cost savings.

Even though container shipping only makes up about 12% of the total ocean fleet, it is the most rapidly expanding industry and handles greater than half of the global commerce value, including non-traditional goods like neo-bulk. Worldwide container transportation on the ocean surged to 152 million TEU in 2008 from 28.7 million TEU in 1990, exhibiting an average annual growth rate of 9%. Meanwhile, container terminal yield went from 36 million TEU in 1980 to 535 million TEU in 2018. In 2018, a container underwent handling (loading or unloading) 3.5 times between the first and last ports of loading and discharge (Li, Haralambides, and Zeng, 2022).

Asia now dominates the liner service networks, with 14 of the world's top 20 busiest container ports in 2009 coming from Asia, primarily from China. The growth of global container shipping networks has changed how the global supply chain works and put more pressure on container shipping service networks in terms of how often they run, how reliable their schedules are, how much of the world they cover, and how they set their prices (Notteboom and Pallis, 2020). Maritime supply is a fresh, comprehensive strategy for modern shipping, with the goal of conveying goods by ship on the ocean, rivers, and channels at the lowest cost, fuel usage, and emissions. Maritime services providers include ocean carriers, charter ship operators, port operators, transportation, stevedoring, transhipment, and storage companies that link ocean and land transport.

1.1.2 Air Cargo

Airfreight is the process of transporting goods via aircraft, either on cargo planes or in passenger plane cargo compartments. While airfreight is the fastest mode of long-

distance cargo transport, it is also the most expensive. However, airfreight provides countries, regardless of their location, with an efficient means of connecting to distant markets and global supply chains with speed and dependability (Hava, 2022). Consequently, countries with solid air freight capabilities maintain a competitive advantage in transactions and production compared to those lacking such capabilities, as documented by Wang (2019) and others. Economic development, often measured by GDP, either in aggregate or per capita, heavily relies on this competitive advantage. There is a strong correlation between air freight volume as well as GDP and GDP per capita, as shown by 95 zero-order correlations in countries from 1980 to 2017. Furthermore, air freight generally leads to increased trade and GDP growth. For instance, in the US, between 1992 and 2017, GDP, trade value, and air cargo value grew by 38%, 57%, and 83%, respectively (in constant 2000 dollars). When looking at different countries over longer time periods, trade growth has significantly outpaced GDP expansion, and air freight growth has even outpaced trade advancement (Yu, and Zou, 2022). Between 1980 and 2018, an examination of trade data from the World Bank (2019) for 68 countries with a 20-year data record indicates that GDP increased by 72%, trade by 132%, and air cargo by 302%. Even within the aviation industry, air freight tends to recover faster than passenger traffic during economic downturns, as seen in the latest slump (Czerny, and Zhang, 2021).

1.1.3   Road Transport

Road transport, especially for short distances, has gained popularity because of its flexibility and speed, particularly since the construction of highways in the 20th century. Road transport, which can be by truck, train, air, or ocean, is necessary to

transport goods from their origin to the seaport or airport and then to their destination, as production facilities cannot always be located near ports. Road transport is typically less expensive than air transport but more expensive than ocean transportation (Biehl, Schiffer, and Morlok, 2020). Less developed countries often have less efficient inland transportation infrastructure, making this statement especially relevant in such cases. Multimodal transport, also known as door-to-door shipment, entails the use of vehicles to transport cargo directly from the shipper to the destination, making it ideal for short and medium distances. Freight forwarders have traditionally been the link between the person who owns the cargo and the person who transports it. Forwarding or clearing the cargo accomplishes this.

Freight forwarders are logistics specialists for export shipments, although some also provide import services. However, in recent years, freight forwarders have taken on a new role by using their own means of transport or working with other providers to transport goods. Freight forwarders undertake functions such as procuring the most suitable mode of transport, arranging routes, providing ancillary services, and collaborating closely with shippers to provide value-added logistics services (Monemi, Gelareh, Nagih, and Jones, 2021). While road transportation is a convenient mode of transport, it can also be expensive and tiring for long distances, especially if the destination is difficult to reach (Wang, 2019).

Furthermore, road transport has a negative impact on the environment because it contributes to pollution, which is a pressing issue in efforts to decrease greenhouse gas emissions. The G8 has agreed on emission reduction targets of 50% by 2050, which may further reduce the use of road transport (Helm, and Hepburn, 2020).

1.1.4   Ocean Carriers in Malaysia

Malaysia has one of the world's fastest-growing economies, with the administration, manufacturing, agribusiness, and mining sectors providing the necessary balance. Malaysia's coordination industry, as the world's 24th largest exchange country, plays a fundamental role in empowering the development of the nation's production network (Ramli, and Ramli, 2020). Malaysia's logistics sector has made advancements in the past few years.

Organizations benefit from this arising pattern through the ascent of web-based businesses nationwide. Due to the significant advantages and growing interest, organizations are increasingly focusing on expanding areas such as cold chain logistics and last-mile conveyance services. The expected growth rate of the country's economy between 5% and 6% is anticipated to drive the expansion in the logistics sector further. As the development of the coordination area requires optimism in the future, there is significant potential for growth. Various changes are necessary to allow the logistics industry to manage rising freight volumes, speed up the movement of goods through supply systems, and reduce delivery costs (Chen, and Qiu, 2021).

The associations may focus on promoting collaboration, coordination, and development initiatives among businesses involved in various aspects of logistics, such as refrigeration distribution network coordination and end-leg movement organizations. Their goal is to foster cooperation and innovation within the logistics industry to capitalize on emerging opportunities and meet rising demand (Chen, Meng, and Choi,

2022). The logistics sector in Malaysia includes four primary forms of transportation: air, land, ocean, and train. It is reported that the worldwide logistics market, which is estimated to be worth $320 billion USD annually, is expanding at a rate of between 3% and 10% annually. The country's logistics sector has contributed to Malaysia's GDP development, as illustrated below. As of 2016, there has been development in various logistics subsectors, resulting in a CAGR of 5.17% from 2010 to 2015. The logistics industry significantly contributes to Malaysia's industrialization and global trade. Individual specialized service providers, such as transport companies, freight forwarders, and warehousing companies, predominantly comprise the industry. According to the Occupational Structure for the Integrated Logistics Services Industry (2008), there are approximately 22,000 businesses operating within the Malaysian logistics sector.

Figure 1.1: Statistics Transportation and Storage in 2017. This report provides data on transportation and storage services, including land transport, water transport, air transport, warehousing and support activities, and post and courier services. The statistics presented in this report were gathered from the Survey of Service Establishments conducted in 2015, with data referring to the year 2014.
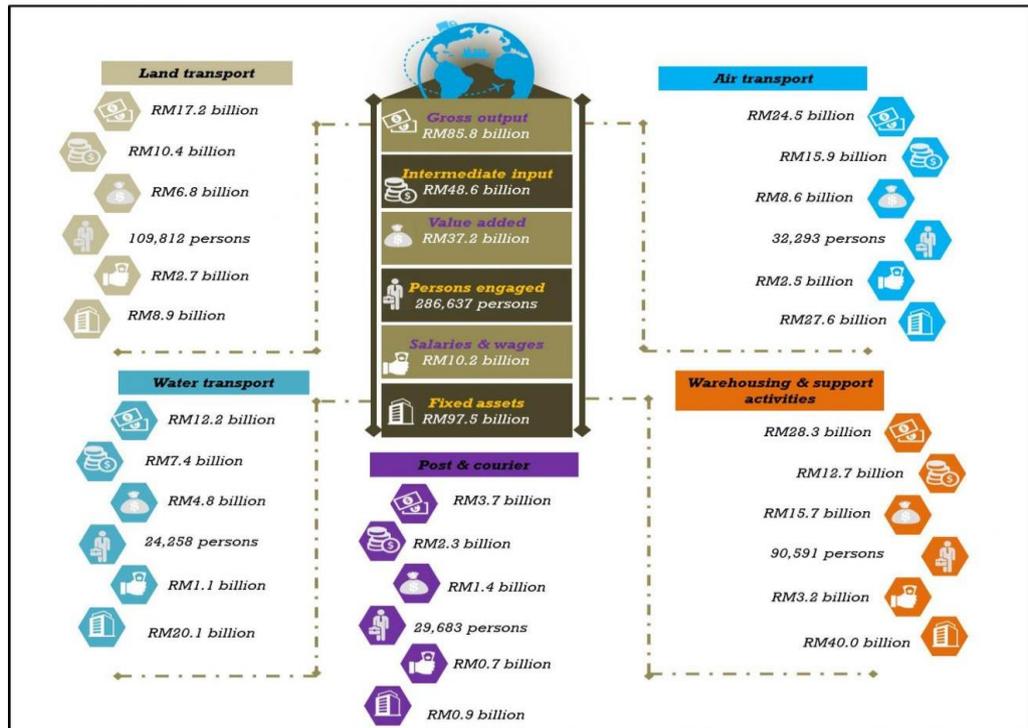
Figure 1.1   Services Statistics Transportation and Storage in 2017

Figure 1.2: Transportation and storage services provided by the activity. In 2021, benefits for storage and transportation in Malaysia generated a gross output of RM102.0 billion. The highest portion of the production of 40.9% (RM41.8 billion) was attributed to warehousing and support activities, tagged along by land transport with 26.3% (RM26.8 billion) and water transport with 19.1% (RM19.5 billion). The added benefit of these services within the same year was RM37.2 billion. Post and courier services generated 8.3% (RM8.5 billion), and aviation generated 5.4% (RM5.5 billion) of the total value added.

Aktiviti Activities	Nilai output kasar Value of gross output (RM '000)	Nilai input perantaraan Value of intermediate input (RM '000)	Nilai ditambah Value added (RM '000)	Jumlah pekerja Total number of persons engaged	Gaji & upah yang dibayar Salaries & wages paid (RM '000)	Nilai harta tetap Value of fixed assets (RM '000)
Jumlah *Total* Total	**102,041,689**	**58,490,092**	**43,551,597**	**457,484**	**15,574,266**	**192,230,745**
Pengangkutan darat *Land transport*	26,776,307	16,241,120	10,535,187	217,833	4,964,738	16,184,205
Pengangkutan air *Water transport*	19,508,626	12,848,338	6,660,289	29,243	1,694,318	35,180,501
Pengangkutan udara *Air transport*	5,514,420	4,645,973	868,447	31,271	1,592,319	33,701,274
Penggudangan dan aktiviti sokongan kepada pengangkutan *Warehousing and support activities for transportation*	41,762,297	19,543,723	22,218,574	142,535	5,945,314	105,605,530
Perkhidmatan pos & kurier *Post & courier services*	8,480,039	5,210,938	3,269,101	36,602	1,377,576	1,559,236

Figure 1.2   Performance of Transportation and Storage Services by Activity

The World Bank published the Logistics Performance Index (LPI) in 2016, ranking Malaysia second in the Southeast Asian region with the most excellent LPI rating, behind Singapore. However, in 2018, Thailand and Vietnam overtook Malaysia in terms of LPI scores. Malaysia's rank among 160 countries also decreased from 32nd in 2016 to 41st in 2018, as per the LPI. Organizations are consolidating and securing their patterns in order to gain a large slice of the pie and serve the growing interest.

The growth of online business is causing vertical and level unions among logistics and internet business companies to acquire scale and structure (Drewniak and Karaszewski, 2020). For over 1,000 years, the ocean has consistently played a significant role in Malaysia's ocean country. Diverse Malaysian regions and nations have long recognized and admired skilled seafarers' maritime expertise, innovation, and designs. They effectively depicted the exchange, political ties, and historical backdrop

among the incredible Malay vanquishers amidst the watercourse during the time in which the Malacca Sultanate was a fantastic model, showing how Malacca conducted global business transactions via remote locations as early as the 15th century (Sidek, and Mahmood, 2021).

The legacy of skilled seafarers in the Malay states and countries endures in the current era, with many commercial vessels taking part in the international market (Rahman, Sohag, and Uddin, 2021). Even now, ocean trade accounts for almost 90% of all trade, and the sector hopes to provide RM 6.35 billion in gross national income (GNI); as a result, Malaysia will add 55,500 jobs by 2020 (MIGHT, 2014). The maritime nation of Malaysia made significant progress throughout the 1970s. During this period, the country established the harbor framework and initiated new transportation lines to keep pace with the latest global exchange developments (Third Malaysia Plan, 1976). Quain (2019) prioritized the improvement of multimodal transport infrastructure, particularly roads and railroads, to strengthen hinterland connectivity with the seaport, in addition to focusing on seaport infrastructure.

Like this, the volume of holders was taken care of just as the foundation of new seaports to serve these expanded capacities had advanced all the while since the 1980s (Malaysia's Tenth Malaysia Plan, 2011). Even though the era of containerization began when trade began in 1956, it took almost 17 years for the first container ship to reach Malaysian waters to be established at Port Klang in 1973 (Zainal, and Jeevan, 2019). The development of transportation infrastructure has caused a dramatic shift in global commerce, significantly influencing the Malaysian marine industry. In addition to its

extreme land openness to sea waters, Malaysia's vital topographical area sits between the Pacific and Indian Oceans. It has the seventh-longest coastline in Asia (WFB, 2015), which has led to this coastal nation becoming a significant influencer in international trade.

Globalization and economic liberalization have prompted Malaysia to participate aggressively in international commerce. Consequently, Malaysia has been ranked as Asia's third-largest container producer, following China and Singapore (Quain, 2019). The logistics industry is vital to keep up with the Malaysian maritime sector, which is most well-known worldwide because of the Malacca Straits and the fact that it is a nation encompassed by the coast. Furthermore, Malaysia possesses a thriving maritime business that includes multiple ports, terminals, shipyards, shipping facilities, and other entities involved in sea-based activities (Sidek, and Mahmood, 2021). The importance of the logistics sector in any modern economy seeks to leverage the opportunities and challenges arising from globalization.

Roadways, seaports, air terminals, rail lines, and oceanic vehicles are key foundation components that impact the proficiency of the assisting cycles. Because of its optimal geological area, Malaysia is the new exchange center from the east to the west (Rahman, Sohag, and Uddin, 2021). By transhipping through this advantageous position, cost and process efficiency improvements are possible, shortening the supply chain's time. Malaysia currently holds half of the world's oil reserves, and its waters (the waterways of Malacca) facilitate a quarter of global trade. With its free market economy and expanding membership in ASEAN, Malaysia is very well positioned to exploit its position as a local logistics coordination point.

The Logistics Performance Index (LPI) report by the World Bank shows that Malaysia's ranking among 160 countries fell from 32nd position in 2016 to 41st in 2018, as per the "Malaysia Freight and Logistics Market-Growth, Trends, and Forecast (2019–2024)" report. Malaysia has a shoreline of 4,675 km (2,905 mi), together with Peninsular Malaysia and East Malaysia, which possess 2,068 km (1,285 mi) and 2,607 km (1,620 mi), respectively, making it the 29th longest coastline globally. Sources indicate that a considerable portion of Malaysia's traded goods are managed through critical trading ports such as Kuantan Port, Penang Port, Port Klang, Johor Port, Port of Tanjung Pelepas, Bintulu Port, and Kemaman Port.

The ocean industry in Malaysia has grown significantly over time, thanks to the strategic location of its ports and the low docking costs that drive the market. Furthermore, the existence of a plethora of shipyards, ports, and terminals creates opportunities for Malaysia's maritime economy to grow (Sidek, and Mahmood, 2021). Despite challenges such as overcapacity and tight financing, the maritime industry in Malaysia continues to offer significant opportunities. The nation's strategic geographic position makes it a vital transhipment hub. Malaysia's primary port, Port Klang, serves as a crucial transhipment hub, where nearly 70% of the volume is transhipped (Park, 2021).

Despite this, Malaysian ports face some challenges, such as cargo business process delays, which impact the country's logistics performance and cause it to lag behind regional competitors (Beleya, Veerappan, Ding, and Tan, 2020). The PSA in Singapore, the next-biggest holder port on earth, is the most exceptional port that can deal with tremendous freight measures. Malaysia's logistics sector foresees significant

changes due to the recent shift in the country's government. With the transformation in the Malaysian government following sixty years, the newly established government has declared some monetary and monetary changes, for example, nullifying GST, decreasing extract obligation, re-establishing the value of ringgit, thereby reducing the reliance on foreign employees, etc.

YEAR	IMPORT	EXPORT	TRANSHIPMENT	TOTAL
2005	1,342.901	1,276.661	2,923.965	5,543.527
2006	1,403.946	1,367.625	3,554.724	6,326.295
2007	1,527.893	1,474.193	4,116.628	7,118.714
2008	1,629.977	1,598.544	4,475.058	7,973.579
2009	1,515.743	1,478.354	4,315.682	7,309.779
2010	1,716.304	1,718.845	5,436.596	8,871.745
2011	1,794.508	1,720.542	6,088.875	9,603.926
2012	1,872.867	1,821.995	6,306.633	10,001.495
2013	1,907.497	1,860.613	6,582.299	10,350.409
2014	1,962.431	1,942.773	7,040.600	10,945.804
2015	1,992.460	1,962.237	7,931.988	11,886.685
2016	2,063.736	2,038.527	9,067.314	13,169.577
2017	2,175.055	2,161.053	7,642.358	11,978.466
2018	2,394.845	2,353.835	7,567.323	12,316.003
2019	2,548.714	2,485.728	8,546.397	13,580.839
2020	2,556.427	2,564.794	8,123.202	13,244.423

Figure 1.3   Statistic of Container Throughput at Port Klang from 2005 to 2020.

Over the period from 2005 to 2020, container throughput at Port Klang has demonstrated consistent growth, with total volumes increasing from 5.54 million TEU to 13.24 million TEU. This growth is evident in both import and export volumes, which have steadily risen over the years. Additionally, transhipment activity has experienced significant expansion, highlighting Port Klang's role as a key transhipment hub in the region. While fluctuations in annual volumes occur, overall growth has been notable, particularly accelerating in recent years. These trends underscore Port Klang's

increasing significance in Malaysia's maritime trade landscape and its vital contribution to economic development.

The ocean carrier industry is a significant source of economic and employment earnings, in 2005, employing 20,250 people and adding RM2.21 billion to the nation's exports in the same calendar year. According to JPN (2007), the logistics industry in Malaysia experienced an average annual growth rate of 0.1% between 1996 and 2005. The Location Quotient (LQ) was employed as a metric to determine the attractiveness and expression of a location, and the performance pertaining to a specific industry in a specified study region (Mokhtar, Mhd Ruslan, Abu Bakar, Jeevan, and Othman, 2022). The LQ analysis showed until the year 2018, the highest concentration of ocean carriers was present in the Selangor region accounts for 28% of Malaysian ocean carriers, followed by Sabah (21%), Johor 12%, and Sarawak 10%.

The cluster of Malaysian marine industry comprises three main sectors: shipping, shipbuilding, and terminals and ports. Which maritime industry may be determined using Location Quotient (LQ) categories are "overrepresented" and "underrepresented" in the region. Figure 1.4 depicts the geographic concentration of maritime companies operating in Peninsular Malaysia, Sabah, and Sarawak regions. The maritime services category comprises a moderately high concentration group (Group IV) in Labuan, Penang, Pahang, and Sabah regions. For the classification of the shipbuilding industry, the high representation group (Group V) is situated in Johor, Perak, Kuala Lumpur, Negeri Sembilan, and the Sarawak region. For the terminals and ports class, the high centralization of this sector (Group V) is appropriate in eight states, for example, Penang, Melaka, Kedah, Terengganu, Negeri Sembilan, Pahang, Perak,

and the Sarawak region. Malaysia is a competitive tiny open economy from the outskirts of Asia and enjoys some of the Asia zone's best monetary and business conditions.
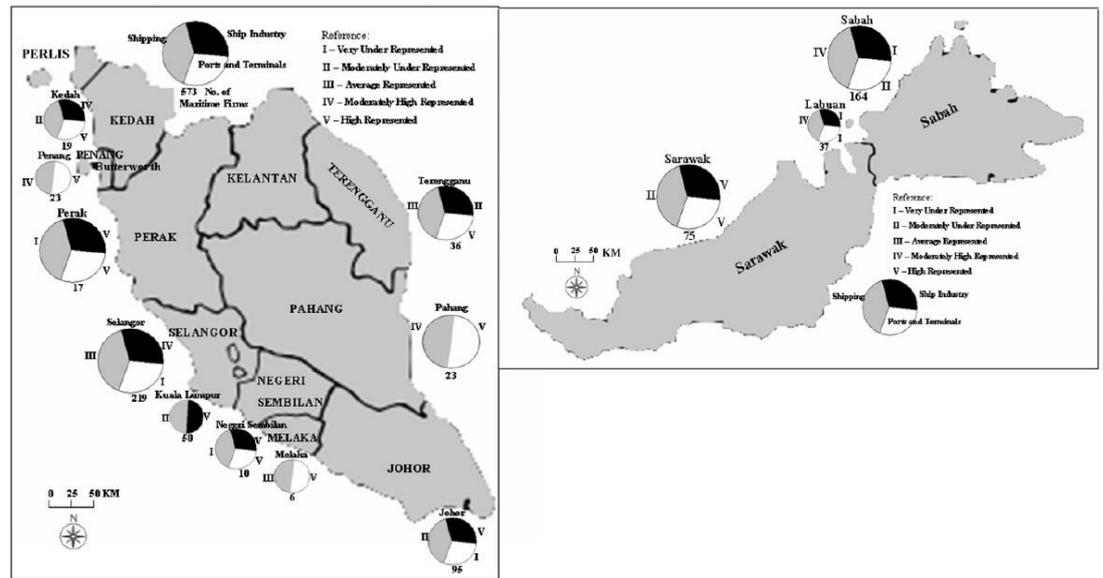
Figure 1.4   Spatial Concentration of Maritime Firms in Peninsular, Malaysia, Sabah and Sarawak.

1.1.5   Strategic Alliance

The corporate environment has undergone substantial transformations due to the digital revolution of the 21st century, and this has necessitated the desire to, among other things, review the theoretical understandings of strategic alliance research. Strategic alliances are mutually beneficial contractual alliances between two or more independent businesses to achieve a common goal by sharing their strengths and resources, which increases capabilities, confers a competitive edge, and extends a firm's capabilities through others (Carnovale, 2019; Liu, 2019; Wang and Dyball, 2019). The strategic alliance involves sharing knowledge and expertise while reducing risks and

costs (Drewniak and Karaszewski, 2020). A strategic alliance has the potential to manifest in either a formal or informal manner or a joint venture relationship entered into for the benefit of all parties (Chakrabarty, 2020). Das, and Teng (2020), and it has been predicted that in the future, the accelerating growth of relationships will not be based on ownership, but on partnerships (Quain, 2019).

In order to achieve competitive advantages, strategic objectives, and business sustainability, more and more companies have attempted to engage in the membership or formation of various kinds of strategic alliances with their suppliers, customers, and even competitors (Feldman, 2020). Strategic alliances refer to non-mandatory and continuing business agreements between companies that cover reciprocal, collaborative, and shared products, services, technologies, as well as development (Snyder, 2019). Strategic alliances, according to Keith (2020), are the collaborative alignment of two or more companies that exchange, share, and collaborate inputs in order to improve business sustainability and competitive outcomes while maintaining the firms' corporate images and identities. Based on the definition stated by Kozyra. According to Cygler, "strategic alliance" is regarded as a long-term, extended, and predetermined business arrangement and settlement among business fellows on the basis of the concepts of advantages and well-being attained from the merger and partnership while maintaining the business partners' autonomy and self-government. Drewniak and Karaszewski (2019) also defined strategic alliances as an intended and long-term strategic association between autonomous and self-governing companies to share and enjoy expected and well-matched benefits and objectives while maintaining a high degree of independence.

The shipping industry is among the earliest to use the principle of collaborative behaviour in pursuing adventure and specific strategic business goals. Cooperative behaviour is historically derived from the 1870s when the ocean carriers established the first collective agreement to remove and get rid of cut-throat competition by setting fixed rates of freight and restricting the capacity. Strategic alliance agreements can also be featured as technical collaborations because each partner in a strategic alliance is still responsible for transportation, marketing activities, and cargo invoicing. The establishment of today's international strategic alliances covers the significant activities of vertical integration of ocean operations and the horizontal agreement for sharing the services of routes (Glaister and Buckley, 1998; Li, 2017; Liu and Hsiao, 2019). Strategic alliances and continuous agreements of ocean carriers are critical components of strategic alliances in the shipping industry. Strategic alliances and collaboration in ocean carriers are continuously responsible for ocean carrier's long-term variability and operation. As proof of companies' strategic alliances and cooperation in the new service fleet path and network, these firms are involved in structuring and re-structuring different forms of collaborative alignment.

According to Chakrabarty (2020), strategic alliances can be explained as vertical or horizontal alignment, which accelerates the multifaceted association. Strategic alliances can be formed with a broad range of goals and motives, which happen across horizontal and vertical boundaries. Recent research has highlighted the advantages of having inter-organizational strategic alliances, which act as a tool to achieve various strategic and organizational goals and enhance the performance of different business functions (Clegg, 2019).

Feldman (2020) pointed out that active involvement in the strategic alliance can bring numerous benefits to the company, ranging from resource acquisition to synergies. These strategic alliances foster resource sharing and exchange to expand their business processes, services, and products (Olanipon, Olumuyiwa, and Akinola, 2018). Das, and Teng (2020) revealed that effective and efficient strategic alliances and alignments are strategic solid tools to ensure companies always maintain their competitiveness and competitive advantages in today's business environment by improving the firms' efficiencies and effectiveness, entering the new market, and evaluating the unique and crucial resources. Based on Keith (2020), in a strategic alliance, two or more ocean carriers agree to exchange and share common targets for mutual benefits to achieve strategic and organizational goals and maintain operational effectiveness and efficiency. In addition, ocean carriers continuously engage in strategic alliances to face external forces and threats, such as profit margin pressures and intense competition.

1.1.6 Strategic Alliance Performance

The growth of international strategic alliances has led to a corresponding increase in research efforts focused on enhancing understanding of the outcomes associated with their utilization. More strategic alliances are failures than successes (Snyder, 2019), motivating a subsequent focus on identifying factors that influence strategic alliance outcomes (Keith, 2020). In a literature review about international strategic alliances, Kale, Singh, and Perlmutter (2020) said that some studies find that a certain factor has a positive effect on performance. They also said that one weakness is the use of different, and sometimes wrong, measures of performance, which could explain why empirical findings aren't always consistent. Over the last thirty years (Margariti, 2019),

authoritative presentation writing has consistently recognized three elements of significance: exercise space (e.g., monetary versus operational); level of analysis (e.g., firm vs. inter-organizational unit); and data source (e.g., subjective vs. objective). In the strategic alliance literature, understanding the classification of execution measures is less articulated. The distinction most often seen in reviews of this literature is between subjective and objective sources (Spieske and Birkel, 2021). However, as illustrated by Hoque, and Rana (2020), not all subjective and objective performance measures, and not even all performance measures within these types, are highly correlated. The suggestion is that there are potentially more relevant factors than subjective or objective ones. Chakrabarty (2020) identified four common overall types of performance measures: (1) accounting; (2) cumulative abnormal return (CAR); (3) stability; and (4) subjective measures. The difference between these sorts of measurements lies in the method of assessment, which extends the conventional data source distinction by incorporating the use of data from diverse sources. The concept of strategic alliance performance and its determinants remain important matters in strategic alliance studies. Chung, Kim, and Kang (2019) suggest that we can assess strategic alliance performance using objective measures like survival and financial outputs, or subjective measures like overall satisfaction, achievement of individual or joint goals, and learning. However, Keith (2020) has questioned the validity and reliability of these performance measures. In their complete audit of measures used in business, Prashantham and Yip (2019) grouped execution measures by information source (essential or optional), level of examination (firm/SBU/between authoritative units), and kind of measure (operational/monetary/generally adequacy). According to the explanations offered, the type of measure refers to the domain of activities. Interestingly, conceptualizations of execution in the strategic alliance literature appear to be conflicting and uncertain

(Jambulingam, and Saxton, 2021). Surveys of coalition writing often identify a distinction between emotional and target information sources, as demonstrated by Song, Kim, Kim, and Lee (2019) and Margariti (2019). However, the instances of target measures in these studies vary greatly. For instance, Junaidu, Bature, and Zuru (2019) noted that "some studies apply objective performance indicators such as return on investment (RoI) or return on assets (RoA)," while Karakara and Osabuohien (2020) affirmed that "analysts have utilized yearly reports to gather data about the life span of financial exchange reports to decide total strange returns." Hellsten, Sacramento, and Pisinger (2020) recognize this expansion of data sources and data usage, presenting various performance measures based on performance assessment methods. Hellsten, Sacramento, and Pisinger (2020) recognized four focal measures: bookkeeping, CAR, solidness, and abstract measures. Several scholars have used survival as a way to measure the performance of strategic alliances, indicating that longer survival equates to greater success (Gomes, 2020). However, this approach has limitations as it may not account for strategic alliances formed at different times and may not consider terminated strategic alliances that were actually successful (Shaikh and Levina, 2019; Bustinza, 2019; Bogers, Chesbrough, and Moedas, 2018; Dalenogare, 2018). To address these limitations, scholars have turned to other measures, such as profitability and market performance measures (Gomes, 2019; Porter and Heppelmann, 2014), as well as subjective appraisals from strategic alliance managers (Hoque, and Rana, 2020) based on Keith's (2020) and Williamson's (2021) approach. However, these measures have limitations, such as sampling errors and varying appraisal criteria (Liu and Hsiao, 2019). We recommend sampling multiple respondents, including managers from both partner firms and the strategic alliance itself, to improve the validity of performance measures. Similarly, Keith (2020) used the local parent, foreign parent, and strategic

alliance general managers to appraise the strategic alliances' overall performance. Spieske and Birkel (2021) conducted a study to investigate the precision of strategic alliance managers' assessments and compared them with the evaluations of parent firm managers. They found that measuring the achievement of individual or shared goals from each partner's perspective provides a more accurate reflection of the success of strategic alliances than traditional measures such as survival, financial output, and overall performance. Partners form strategic alliances so that they can help each other meet their strategic goals and needs. Therefore, without clearly stated goals, other measures may fail to fully capture the success of strategic alliances. For instance, the formation of a strategic alliance for technology transfer may lead to an inaccurate assessment of the strategic alliance's success based on survival metrics. Therefore, each partner's individual evaluations subjectively determine how well they achieved their goals (Min, 2019). According to Gomes (2020), one of the most common methods for assessing the performance of strategic alliances is through the subjective evaluations of parent firm managers regarding the achievement of goals. For example, Hellsten, Sacramento, and Pisinger (2020) concentrate on joint goal attainment as a strategic alliance's performance measure. According to Spieske and Birkel (2021), strategic alliance performance comprises multiple elements such as effectiveness, efficiency, and responsiveness, with mutual goal attainment being a crucial aspect of it. Feldman (2020) has also proposed a merged measure to encompass various strategic alliance objectives in another study. However, the use of parent firms' evaluations to assess strategic alliance performance has its limitations, as pointed out by Min (2019). This is because the importance of goals may differ among parent firms, leading to different assessments of strategic alliances' overall performance. For instance, a change in ownership can lead to a shift in strategic priorities and, consequently, a different

assessment of the strategic alliance performance. To address these limitations, Min (2019) and Birkel (2021) developed a subjective performance assessment that combines overall satisfaction with specific goal accomplishments.

The extensive literature on strategic alliance performance reveals a significant research gap in the field. Specifically, there is a lack of comprehensive studies systematically examining various dimensions of strategic alliance performance and the factors contributing to it. While many studies focus on survival and financial outcomes, there's limited research exploring broader measures, such as subjective appraisals and goal attainment (Munim, and Saeed, 2019). Moreover, there's a need for more critical evaluation of the validity and reliability of performance measures, addressing issues like sampling errors and varying appraisal criteria.

Despite the theoretical advancements, there's a practical gap in understanding how changes in ownership or strategic priorities impact the assessment of the strategic alliance performance over time. This lack of practical insight limits the applicability of research findings to real-world strategic alliance management practices (Hoque, and Rana, 2020).

The methodological gap lies in the need for more rigorous and comprehensive studies that employ longitudinal designs to track the strategic alliance performance and evaluate how it evolves in response to changing circumstances (Gold, Malhotra, and Segars, 2021). Additionally, there's a need for studies that sample multiple respondents