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Port Expansion Strategy as Catalyst to Achieving Critical Mass for Sabah's Economic Growth

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ABSTRACT

Digital transformation has led to a new era of port development at an unprecedented pace. China represents a large percentage of total global trades, navigating the maritime silk-road to various global and regional ports. This paper strategically guides managers of organizations in Sabah, government, and businesses towards building a transshipment port in Sabah to effectively retire cabotage policy to reduce cost, enhance port throughput, develop hinterland for critical mass, enhance ports-economic clusters connectivity, eliminate capacity bottleneck, unlock natural resources export potential, align port service towards regional port users? needs and to give regional port powers a run for their money.

1. Introduction.

1.1. Background of the Study.

Transshipment port was established with the sole purpose of linking the interior business hubs with international companies. For example, Palau was considered a petroleum super port in the 1970s (Gurpreet and Richa, 2018). The policy implementation of the Panamanian sea-level canal demonstrated the changes that have been implemented in the transshipment port towards enhancing accessibility from the international sectors (Bonney, 2016).

Cluster theory explains that strategy to build transshipment port in Sabah is contingent on value-adding production chain, which helps achieve horizontal integration by linking the activities of the firm and customer needs. It reflects the interdependencies of the firms through shared input, alliance formation and co-location, such as such as borrowing empty containers from parters to reduce cost and congestion by minimizing empty container movement (Chhetri, et al., 2014; Kuzmicz and Pesch, 2018).

Transshipment-ready port specifically in Sabah showed an increase in volume of cargo in Sabah, this has placed pressure on handling capacity of the port (Wai, 2008). With direct calls, consolidation of direct and transshipment cargo was made possible. Economic development and industrial development in Sabah mean that the logistic costs reported can be reduced drastically, but the increase in volume of cargo has meant that there is a plan to expand Sapangar Bay container port (Business Standard, 2018; SEDIA, 2016).

State and federal governments should look into building transshipment port in Sabah because Sabah state has demonstrated its growing ability to be the hub of economic activities in Malaysia with the availability of agricultural products in the region (Sabah Development Corridor, 2016). Sabah is the centre of tourist attraction in Malaysia, and the attractiveness of the port is dependent on the infrastructural development and reduction in logistic processes or procedures for the tourists (Vega, et al., 2019).

Sabah needed to have a transshipment port in Sabah because the state has demonstrated strong economic progress with the GDP of the region growing from 2.7% reported in 2011 to 8.2% in 2017, Sabah contributed 5.8% of total GDP to Malaysia, and 75% of total palm oil exports are from Sabah (Sabah Development Corridor, 2016). Moreover, transshipment port can fur-

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ther eliminate bottleneck for Sabah tourism sector, as it is evident that the expenditure per tourist in Sabah is RM 1,810, which is the highest among all states in Malaysia (The Malaysian Insight, 2018).

The benefits of forming strategy to build transshipment port in Sabah include growth in tourism in the region, and this improves the reported revenue outlay in Malaysia (Lu, et al., 2010). Moreover, agricultural products such as palm oil can be exported to different economies across the globe (Kim, et al., 2016).

However, the disadvantages to forming strategy to build transshipment port in Sabah include increase in the cost of financing for the development of the project, which can affect the stability of both Sabah and Malaysia (Kim, et al., 2016). Also, procurement of the resources is challenging to the project management, this can influence the success of the project (Wang & Yang, 2014).

The opportunity to form a strategy to build transshipment port in Sabah include the potential in capturing the highest economic value for its activities, and this will enhance economic growth and development of Sabah (Sumner & Rudan, 2018; Jiang, et al., 2014). Another opportunity is to handle higher port throughput in terms of volume to take advantage of the existing maritime Silk Road (Duchatel and Duplaix, 2018).

The threats to form strategy to build transshipment port in Sabah include lack of technological advancement to build modern and sophisticated port infrastructure, which influences the port activities of the port because MLO and other port users rely on sophisticated and innovative mode of transportation (Sumner & Rudan, 2018; Darayi, et al., 2017). Moreover, laws and regulations by the federal government of Malaysia not recognizing needs and problems of Sabah to build a transshipment port can impact the influx of economic activities in both Sabah and Malaysia (Duchatel and Duplaix, 2018).

Contradictions about forming strategy to build transshipment port in Sabah include many ports being developed in the global port industry, and Sabah state's inability to recoup the cost incurred in the construction of the port (Chhetri, et al., 2014). However, socio-cultural practices in the Sabah can also influence the completion of the transshipment port project, as most of the businesses in Sabah, the federal government of Malaysia, MLO and other port users are not interested in the port activities of Sabah (Kim, et al., 2016).

Chhetri, et al. (2014) supported strategy to build transshipment port in Sabah through the economic perspective, whereby focusing on sharing technologies and increasing customer - supplier relations can contribute to distribution networks (Chhetri, et al., 2014). In contrast, Yang, et al. (2017) supported strategy to build transshipment port in Sabah by assessing the socio-cultural practices, which is influential in integrating the different components of port management in Sabah.

The contributions of study from this research include understanding of the logistics issues that can impact the development and implementation of transshipment port towards realizing economic growth in both Sabah and Malaysia (SEDIA, 2016); understanding the role of technology and innovation in facilitating the development of the transshipment port (Chou, 2014; Antara News, 2018).

1.2. Developing strategy to build transshipment port in Sabah.

Successful milestones of Sabah port industry include continued growth in cargo volume, which increased by 180% from 2005 to 2013 and expected to increase in the future (SEDIA, 2016). There is improvement in participation of small players in the industry, this has also been made possible by the removal of non-tariff barriers by the government, which has increased international trading activities (Idrsi and Idris, 2017). Moreover, there is improvement in co-operation between local and international players, which enhance the efficiency of Sabah port industry (Huo et al., 2018; Merkel, 2017).

Political environment that affects strategy to build transshipment port in Sabah include improvement of security for operators as a result of the government's commitment to curbing piracy from sea pirates, hence Sabah port industry has higher security enforcement (Mak, 2017). Also, there is an increase in access to the market, as a result of the partial removal of the cabotage policy that promoted monopoly, total removal of cabotage policy is still under review stage by state and federal governments of Malaysia, as total removal of cabotage policy will affect seafarers' income tax and the ship owner's corporate tax (Suffian et al., 2015; Daily Express, 2018).

Economic environment that affects strategy to build transshipment port in Sabah include economic performance of Sabah in 2016 has made a profit of RM 66.38 million, Sabah being a surplus state has managed to make more money than it has spent, which made Sabah the second highest profitable state of all states in Malaysia (Tan, 2018). Moreover, the fiscal health of Malaysia has increased to 82.4%, thanks to Sabah for having profitable economic activities and able to meet its financial and service obligations (The Heritage Foundation, 2019).

1.3. Problem Statement.

There is a lack of transparent administrative procedures to enhance quality workforce to improve the port information system, this has hindered expansion in positioning Sabah as the leading economic region in Asia, this is when the logistics sector in Sabah is lack of international connectivity, slow internet services, and poor service delivery (Felder, 2018). There is a lack of efficient connectivity to international markets in Sabah. Port is an important part of local economic growth. For port to accommodate mega containership of 5th-generation Panamax vessels and above and expand local economy requires competitive advantages. No international port for direct shipment, no international air freight logistic hub and no highway or railway connectivity to major cities has led to small niche market of Sabah (Sabah Development Corridor 2018; Daily FT, 2018a). There is high logistics and operation cost in Sabah, inefficient inland transport and inland connectivity, lack of hinterland developments, and complex procedures have led to inefficient port handling in Sabah (Su, et al., 2016; Martin and Sauri, 2014). High handling cost charges and transportation cost per container and storage cost and inbound/outbound cost in Sabah are affected by lack of good road and railway connectivity to major cities town and industrial area (Jeevan, et al 2018). Sabah has shown a low response to port users' needs evidently in slow port

clearance and lack of service differentiation has meant Sabah port did not meet port users' needs and expectations. Low service quality has adversely affected customer loyalty and referral intention, the national conference on "economic corridors challenges and prospects" pointed out that there has been a problem of low internet speed of 2 to 30 Mbs, this has affected shipment safety and security, application of information technology (IT) in operations, and congestion in SBCP (Antara News, 2018; Heilig and Vob, 2017).

1.4. Significance of the Study

Managers of organisations in Sabah rely on strategy to build transshipment port in Sabah because they need to enhance the efficiency of and expand their operations by operating optimally through low costs and improved service quality (Business Standard, 2018). This will, in turn, create a competitive advantage that increases the capacity by organisations in Sabah and the ability to compete at the global level via enhanced operation efficiency, especially when importing and exporting large volume of goods and services (Beard, 2018; Mooney, 2018). According to Wiegmans, et al. (2009), building a transshipment port will enable mass container handling operations that will create a competitive advantage for the port, and in turn support, demand-oriented mass production of goods and services among the organisations in this area, hence leading to optimal productions and operations.

Malaysia government rely on strategy to build transshipment port in Sabah because they need to enhance the economic growth in this area as well as to create more yield for the government to enable support for its development agenda. According to Lu, et al. (2010), the transshipment port will afford incentives for local cargo to use the port, encourage long-term berth leasing agreement, set up hub-and-spoke contracts with MLO carriers, provide flexible rate to respond to market change, improve port information systems, simplify administrative procedures as well as enhance the services of direct shipping in Sabah crucial for growth of the economy of the state. This attracts both local and foreign investments in this area, hence improving its economic growth rate by making the port area a multi-functional business centre (Kim, et al., 2016; Egyptian, 2018; Jacobs, et al., 2010). As the economy grows, government revenues will improve from money collected in tax, including customs duty and levy.

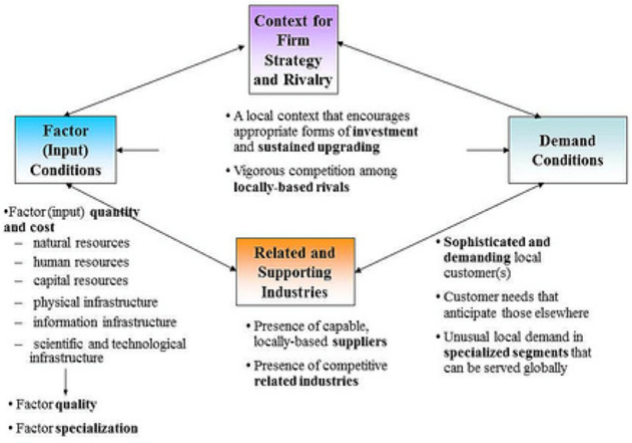
Sabah and its people rely on strategy to build transshipment port in Sabah because they need to accelerate investment and create employment opportunities that will promote improved standards of living and social welfare support system in the state. This is because the transshipment will increase mixed development, both from residential perspectives as well as commercial perspectives. According to Chhetri, et al. (2014), enhancing transshipment creation or expansion leads to increase in logistics sector employment as well as jobs in other sectors, including air and space transport, postal services and road freight among, which is beneficial for the unemployed but skilled workforce that can work in these sectors.

2. Literature Review.

2.1. Theories.

2.1.1. Cluster theory.

Figure 1: Cluster theory.



Source: Seguir, 2011.

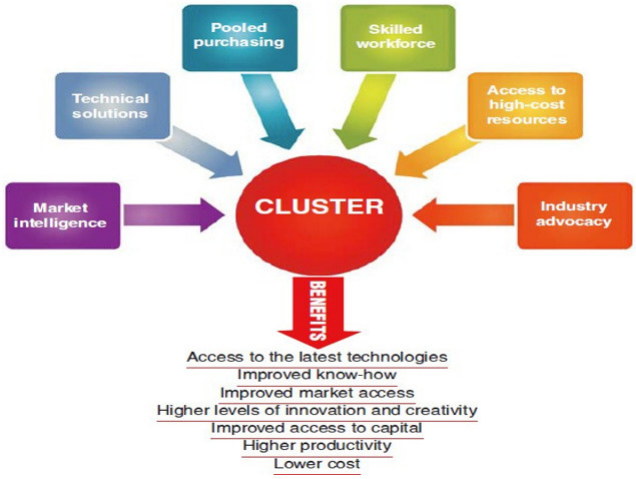
Cluster theory as shown in Figure 1 analyses strategy to build a transhipment port as a catalyst to achieving critical mass for Sabah's economic growth. Cluster theory focuses on externalities, linkages, heightened demand, productivity, and innovation. Strong clusters generally attract more firms and clusters with strong innovative records pose benefits in attaining more innovation and higher productivity (Chhetri et al., 2014). The value-adding production chain concept leads to more productivity through the integration of different firms as well as consumers. In addition, this enhances efficiency through co-location, alliance formation, and shared inputs (South China Morning Post, 2019; Woo, 2019). Other variables in cluster theory are commonalities and complementariness. Commonalities and complementariness are aspects that make it possible for firms to create a sole cluster and they include products, services, inputs, technologies and output activities (Lexicon, 2019).

Cluster theory initially focused on externalities and agglomeration, then later changed to innovation milieu and in contemporary times as industrial districts (Chhetri et al., 2014). The intellectual antecedents of clusters date back to 1890 and defined as a group of firms with a common premise to create business advantages (Neale, 2017). Cluster theory focused on concentration of specialized industries in particular localities to create benefits of less competition occurrence, thus higher profit gained by the firms, strong unchanging customer base, steady presence of suppliers leading to low costs for the firms and better personable relations that lead to better business in all manners (The Economist, 2009).

Evolution of Cluster theory is from externalities and agglomeration, later to innovation milieu, and more recently as industrial districts (Iammarino and McCann, 2014). Basically, the cluster theory is a theory of strategy that focuses on the

characteristics of clusters as concentration of specialized industries in specific localities known as industrial districts (Sforzi, 2015). Further research on Cluster theory is beneficial because since clusters are not static entities, they evolve over time and through the various life cycle, which paves a way to conduct a study on the evolutionary approaches to cluster mapping and modelling based on the timelines of cluster development from a methodological perspective (Charoen, 2016).

Figure 2: Extended framework on Cluster theory.



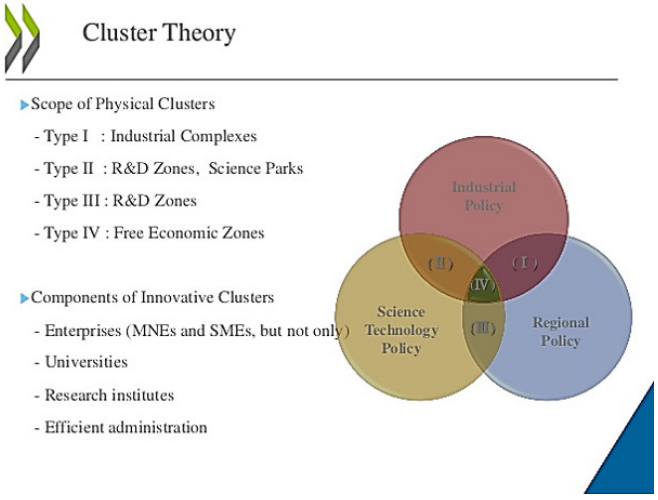
Source: Canadian Sailings, 2019.

Figure 2 showed that extended theoretical framework on Cluster theory should explore the benefits of cluster formation, which includes improved know-how, availability, access to latest technologies, improved operational efficiency, lower cost, higher productivity and service quality. Cluster theory relates to this research by exploring the various benefits of forming clusters which are less competition occurrence thus higher profit gained by the firms in Sabah port industry, strong unchanging customer base, steady presence of suppliers leading to low costs for the firms and better personable relations that lead to better business in all manners all of which reflect on the proposed variables of availability, operational efficiency, port cost, service quality and strategy to build transshipment port in Sabah. Cluster theory relates to research problems on strategy to build transshipment port in Sabah by defining the relationship between proposed variables and benefits of cluster formation to effectively and efficiently build transshipment port in Sabah.

Assumptions from the theoretical framework of Cluster theory are the firms forming a cluster are positioned or concentrated in specific localities, the firms compete and collaborate to achieve efficiency and lastly firms form clusters to effect many benefits of higher profits and unchanging customer base (Sheffi, 2012). The main structure of Cluster theory entails four phases which are the context for firm strategy and rivalry, factor (input) conditions, related supporting industries and demand conditions and the four phases are related with one another (Chhetri et al., 2014). Cluster theory is generally practised in industrial relationship management to explore the benefits of formation of industrial districts based of geographic concentration of firms which stipulates for inter-regional and international competition (Lund, et al., 2016). Cluster theory is also practised by government authorities to enhance knowledge and innovation in the territorial perspective of software clusters through new industrial spaces as well as milieu innovation (Hwang, 2018).

Evolutionary stages by the passage of time that created Cluster theory are industrial revolution and policies of regional and international development forming industrial districts (Konzelmann & Wilkinson, 2016). Alfred Marshal used the cluster theory to refer to the concentration of specialized industries in specific localities as “thickly people industrial district” due to the ongoing shifts in industry and trade. Subsequently, it is related to locally developing division of labour, competences and knowledge sharing (Konzelmann & Wilkinson, 2016). Cluster theory is not applicable when firms forming a trading partnership are not concentrated in particular localities and geographical concentration, but rather on distant outsourcing (Bhawsar & Chattopadhyay, 2018).

Figure 3: First model that studied on Cluster theory.

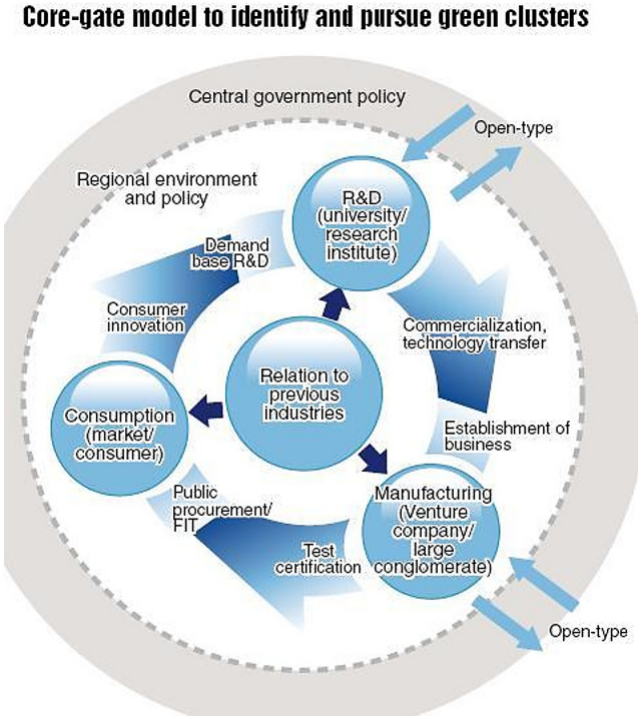


Source: Goldstein, 2014.

Figure 3 showed Goldstein (2014) has proposed own model to study on factors affecting Cluster theory, which are industrial policy, science, and technology policy and regional policy and other components of innovation clusters which are enterprises, universities, research initiatives and efficient administration.

Yoon-Jun (2010) has also proposed own model to study on factors affecting Cluster theory, which are regional environment and policy, central government policy, commercialization technology transfer, relation to previous industries, consumer market, demand base, research institutions, and consumer innovation.

Figure 4: Second model that studied on Cluster theory.



Source: Yoon-Jun, 2010.

The similarity in proposed models between Goldstein (2014) and Yoon-Jun (2010) is science and technology policies, which have a key role in establishment of businesses that integrate to form a cluster. Due to the advancement in technology and science innovation, technical aspects are vital variables in formation of corporate clusters in any particular region of the globe. However, the proposed model by Goldstein (2014) is dependant on industrial policy in physical clusters which shape the formation of clusters within a particular geographical locality; in contrast, proposed model by Yoon-Jun (2010) is dependant on central government policy which has a vital role in the formation of business clusters within a particular geographical locality.

2.1.2. Game theory.

Figure 5: Game theory.

	Firm A High price	Low Price
Firm B High Price	*(collusion)* (A) £8m, (B) £8m	(A) £1m, (B)£10m
Low price	(A) £10m, (B) £1m	*(non-collusion)* (A) £3m, (B) £3m

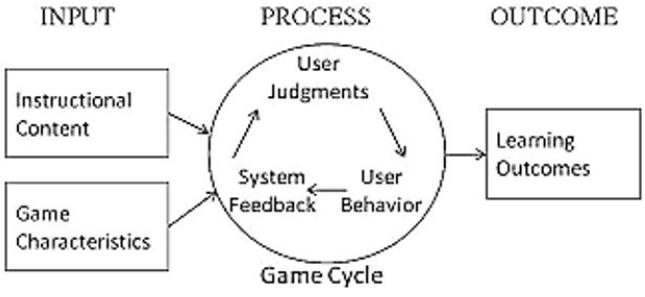
Source: Tejvan, 2019.

Game theory as shown in Figure 5 analyses on the strategies for port managerial decisions (Hidalgo et al., 2017). Game theory focuses on investments, price policies, ownership on profits, social welfare, competitive position and performance, each of these factors has a vital role in ensuring the benefits of cluster formation are explored in a strategic point of view, these factors enhance the possibility to theoretically analyze the effects of port management decisions. This can be better explained in the amount of capital to be invested to maximize realization of capital profits and enhance performance through investment decision planning and implementation (Byung and Hokey, 2011).

Game theory focuses on mathematical equilibriums, utility maximizing and rational choice (Caputo & Ling, 2017). Rationality is a significant assumption of Game theory, however, there were no explanations for various forms of rational or irrational decision. This means that the rational choice theory, as well as the player's general knowledge, were ideal in predicting utility maximizing decisions (Liu, et al., 2018). Game theory focuses on determining the most beneficial choice of all players in a game as it sought to pinpoint the decisions players should make without emphasizing why such decisions were made (Aumann, 2017). Therefore, rationality decisions of the player and common knowledge were used in predicting utility maximizing decisions.

Evolution of Game theory from zero-sum games branches out to study of mathematical models of strategic interaction between rational decision makers and other fields of social science, logic, and computer science (Podimata and Yannopoulos, 2015). In contemporary times, game theory focuses on behavioural relations of the logical making of decisions in humans, computers, and animals (Yang, et al., 2017). Further research needed on Game theory because most research focuses on how groups of people interact but do not focus on the reasons behind formation of these groups (Webster, 2018). Therefore, there is an explicit need to carry out further research on the relationship between decisions for formation of such groups and the process of people interaction and how rivals decide involving strategic interaction.

Figure 6: Extended framework on Game theory.



Source: Bulander, 2010.

Figure 6 showed that extended theoretical framework on Game theory should explore the inputs, the process, and outcomes of making strategic decisions. Input could be based on instructional content and the aspects of the game. The process

entails user judgments and behaviours. The outcome entails the learning outcomes from the made strategic decisions. Game theory relates to this research by analysing the competition and the strategies for port managerial decisions based on benefits in availability, operational efficiency, port cost, service quality, and strategy to build transshipment port in Sabah. Such strategies include containerization, privatization, market liberalization, capacity investment and hinterland infrastructure investments, which affects port managerial decision-making and promote healthy competition (Su, et al., 2016; Morley, 2018; Tu, et al., 2018; Cheon, et al., 2010). Game theory relates to research problems on strategy to build transshipment port in Sabah by analysing port competition and strategies for port managerial decisions.

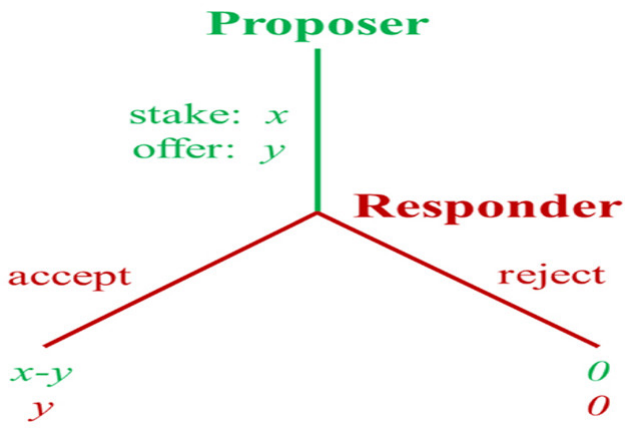
Assumptions from the theoretical framework of the Game theory are rationality and maximization. It is assumed that players of the game are rational and will strive to maximize their playoffs in the game and will exclude any 'what if' questions that may arise (McNulty, 2018). Main structure of Game theory is game defined as set of circumstances that has a result dependent on the actions of two players, players as strategic decision maker, strategy as a complete plan of action taken by a player, payoff as the payout received from an outcome, information set available at a given point in the game and equilibrium where both players have made their decisions and an outcome is reached (Arin, et al., 2015). Game theory is generally practised in social sciences, logic, and computer science to study the mathematical models of strategic interaction between two players as strategic decision makers as well as optimal decision-making of independent or competing players in a strategic environment (Thibaut, 2017). Game theory is also practised in political science in overlapping areas of fair division, political economy, public choice and war bargaining, as the application of game theory is to find effective solutions to ongoing political issues (Munck, 2018).

Evolutionary stages by the passage of time that created Game theory are the idea about existence of mixed-strategy equilibria in two-person zero-sum games, followed by the rise of modern mathematical concepts (Geiger, 2018). In addition, the discovery of the law of development of organic nature by Darwin led to the biological application of the game theory. Lastly, the technology revolution in the past half a century has led to adaptation of game theory in computer science (Xing & Huang, 2018). Game theory is not applicable when there is dependent decision-making that lies at the heart of the interaction between businesses in a competitive market that is the players have incomplete information about the others' intentions, in this case, a bargaining game can be considered instead (Song and Wen, 2015; Zheng, et al., 2017).

Figure 7 showed that Wang et al. (2015) have proposed own model to study factors affecting Game theory, which are investor, stake, trustee, non-trust, prosper, offer and responder.

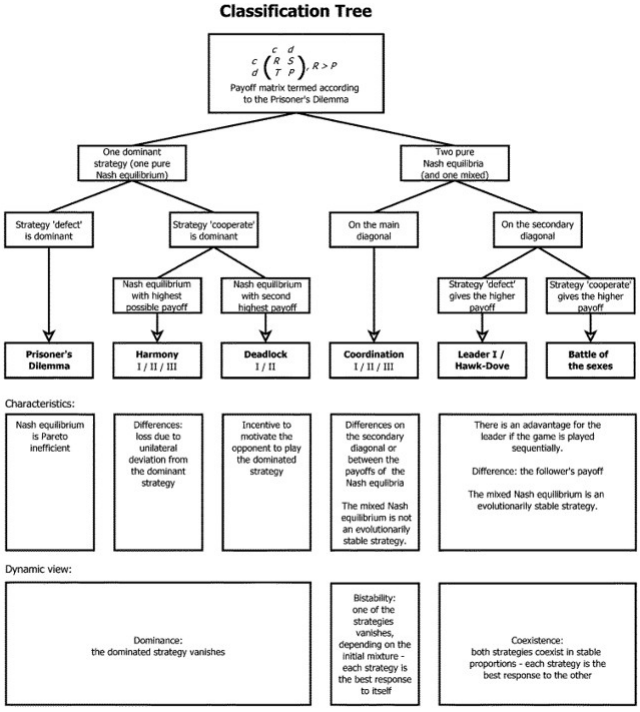
Figure 8 showed that Hummert et al. (2014) have also proposed own model to study on factors affecting Game theory, which are coordination, harmony, deadlock, and leader (Hawk-Dove, Battle of the sexes).

Figure 7: First model that studied on Game theory.



Source: Wang et al., 2015.

Figure 8: Second model that studied on Game theory.

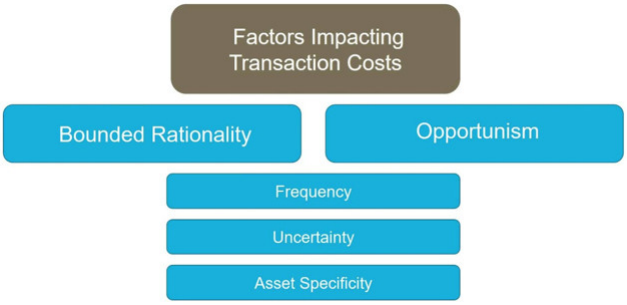


Source: Hummert et al., 2014.

Similarity in their proposed models between Wang et al. (2015) and Hummert et al. (2014) is that both researchers focused on strategy corporate and strategy defect, that is, the interaction between the two players decide their payoffs, and mutual cooperating brings a modest payoff to both players, while mutual defection yields lesser amounts of payoffs. However, the proposed model by Wang et al. (2015) studied that the strategy is responder to accept all non-zero offers for purpose of maximizing payoffs as well as to make the smallest possible offer; in contrast, the proposed model by Hummert et al. (2014) emphasized that each strategy is the best response to the other where both strategies are coexistence in stable proportions.

2.1.3. Transaction cost economics theory.

Figure 9: Transaction cost economics theory.



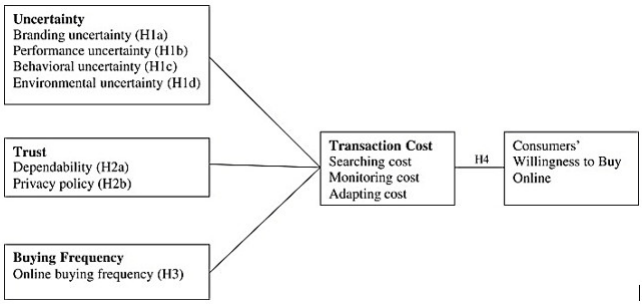
Source: Accounting College, 2016.

Transaction cost economics (TCE) theory as shown in Figure 9 examines effective and efficient boundaries between markets and organisation. It postulates that firms and markets are different governance structures which differ only in transactional cost (Cho, 2014). TCE theory focuses on asset specificity, uncertainty and frequency, these variables decide whether an organisation will produce internally or outsource services from external markets.

TCE theory focuses on formation of institution which minimizes resource wastage, this is achieved by avoiding incurring more cost than benefits accruing from business, managers could form governing structures and chain of commands to ensure smooth flow of operations, as a result, entities could establish the best integration strategy for the deployment of resources to ensure positive performance of the organisation (Kim, et al., 2016). TCE theory entails conducting a cost-benefit analysis to understand the viability of projects, organisation investment requires intensive capital to kickstart and implement, most of these products are irreversible in nature, TCE practices are tailored to ensure meagre substitutes when structuring efficient transactions in case a market fails (Bandara & Nguyen, 2016).

Evolution of TCE theory can be traced from the 1970s with Oliver Williamson. With Herbert Simon, they tried to reconcile the neoclassical approach to enhance cognitive turn in economics. Up to late 1980s, development of TCE theory was marked by treating firms as sole avoider of negative frictions (Lubell at el, 2017). During 1900, further evolution occurred such as the literature on modularity which stressed firms as the creator of positive value. As a result, firms are now viewed as the creator of value through investment of resources in risky projects. Further research on transaction economic theory is beneficial because of changing nature of business and markets that result in more risks and uncertainties. The lack of which threatens firms to lose opportunity cost in the market. As result, entities are paying uncertain cost, which makes them incur loss instead of creating values (Hanley, 2016). In addition, technological advancements which are causing turbulence shifts in markets transactions necessitates manager to conduct further research on TCE theory.

Figure 10: Extended framework on Transaction cost economics theory.



Source: Teo & Yu, 2005.

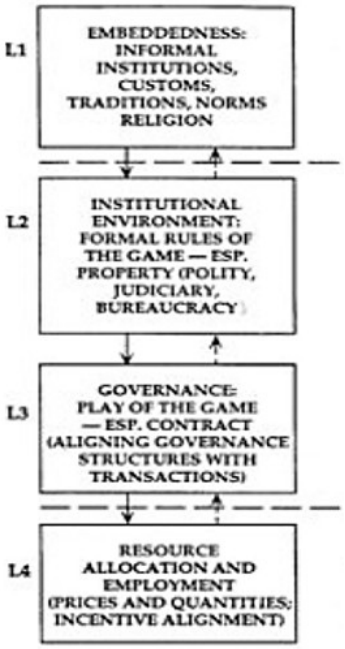
Figure 10 showed that the extended theoretical framework on TCE theory should address market uncertainties, consumer behaviour and accountability aspects in the organisation. This helps the organisation to specialize in areas it has a competitive advantage in and outsources services it cannot offer excellently (Cheung, 2016). This can only be achieved by analysing consumer behaviour in the market as well as a system of accountability to reduce frauds, errors and wastage of resources. TCE theory relates to this research by providing a useful theoretical background to find the country environment and port capabilities with aim of minimizing shipping cost to increase Sabah's economic growth. In addition, this theory entails evaluating different alternatives such as capital source, investments and outsourcing of services. All these are aimed at stimulating efficiency, quality and availability of materials within ports (Cho et al., 2018). Risk and uncertainties are common in markets due to the changing nature of the business and thus TCE theory is relevant since it establishes a framework to minimize maritime uncertainties leading to the advancement of business value. As result, firms embracing this theory can optimize their profit margins in long run. TCE theory relates with research problem on strategy to build transshipment port in Sabah by emphasizing on cost-benefit analysis in ports projects, to find costs to be incurred in establishing port and the benefits thereafter to ensure the strategy implemented to build a transhipment port is a catalyst to achieve critical mass for Sabah's economic growth (Cho at el, 2018). As result, firms will be able to hedge against such risks thus enabling them to generate sustainable value in the long run.

Assumptions from the theoretical framework of TCE theory is the economic transactions handicapped by incomplete contracts. The theory assumes that opportunism by the people as they try to take advantage of the opportunities that are available for exploitation, hence they opt to use methods that reduce the transactional cost (Hansen, et al., 2016). The main structure of TCE theory determines that the factors affecting the transactional cost in an organisation are bounded rationality and opportunism. The frequency of use, the uncertainty of the availability of a commodity in the market and the level of asset specify determine decision of the organisation. Transactions are affected by two human factors which are bounded rationality and opportunism, and three environmental factors, which in-

clude uncertainty small numbers trading and asset specificity (Clark, et al., 2017). TCE theory generally practised is in the decision by the organisation whether to produce commodities internally or acquiring over the market. The organisation is able to pick the option that is cheaper and convenient (Zimmermann & Rentrop, 2014). TCE theory is also practised in the manufacturing of Boeing 787 Dreamliner where different parts are outsourced to different companies across the world with the aim of reducing uncertainty, the time taken to complete the work and the cost of production (Tsay, 2014).

Evolutionary stages by passage of time that created TCE theory is as follows; informal stage, pre-formal stage, semi-formal stage and finally fully formal stage. The earliest stage of the theory started from 1920 to the late 1970s. Transaction cost economics selectively combines economics, organisation theory and law and is the product of the contributions of some of the finest minds in those three fields (Valentinov & Chatalova, 2014). TCE theory is not applicable when a transaction does not involve uncertainty, when the price of a commodity is known, then there is no need for the organisation to consider external sources since the cost is the same, example of area that the theory is not applicable is procurement of security assets, as quality is the only aspect that is considered, hence this means that according to TCE theory, external sources will be given priority as long as the external sources provide high quality (Tsay, 2014).

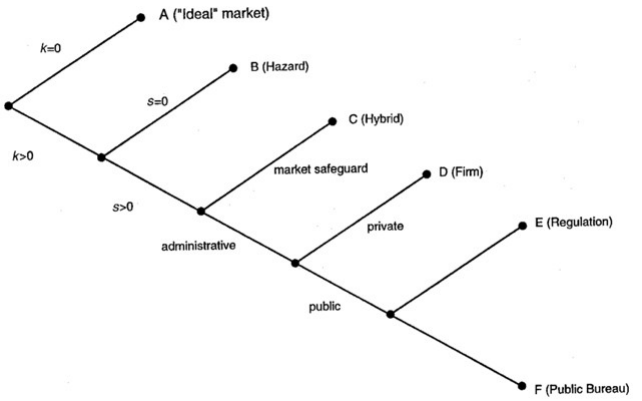
Figure 11: First model that studied on Transaction cost economics theory.



Source: Popov, 2014.

Figure 11 showed that Popov (2014) has proposed own model to study factors affecting TCE theory, which are embeddedness, institutional environment, governance and resource allocation and employment. The researcher urges that the control of the government to the activities of organisations fuel the decision on whether the company should make items internally or outsource.

Figure 12: Second model that studied on Transaction cost economics theory.



Source: Nicita & Vatiero, 2014.

Figure 12 showed that Nicita & Vatiero (2014) have also proposed own model to study on factors affecting TCE theory, which are, administrative regulations, the nature of the organisation, market safeguard and the nature of commodities.

Similarity in proposed models by Popov (2014) and Nicita & Vatiero (2014) is that they have both considered the administration and regulations as factors that explain the transactional cost and method used to regulate transactional costs, both researchers agreed that the governance and policies of an organisations stipulate whether an organisation should outsource or make products internally. However, the proposed model by Popov (2014) emphasized that transactional cost depends on the institutional customs and practices, the researcher argued that the purchasing policy depends on the practices of the organisations, in contrast, proposed model by Nicita & Vatiero (2014) showed that the transactional cost depends on the nature of the organisation in terms of whether it is private or public, private organisations are seen to be good in internal development while the public organisations mainly outsource products.

2.2. The factors that shape strategy to build transshipment port in Sabah.

Strategy to build transshipment port in Sabah through enhancing offshore shipping function with Mainland China will ensure improvement and greater importance to networking of agents with geographic proximity, that is, there will be a strong link between customers in Mainland China and agents in transshipment port in Sabah (Daily FT, 2018b; Lu et al., 2010). Strategy to build transshipment port in Sabah through facilitating employee training and knowledge will lead to efficient operations, therefore, increasing performance as well as reliable customer service delivery. Conducting task-related training activities will make sure employees are empowered by adequate knowledge on how to serve customers by the best approach (Jayaram & Xu, 2016). Also, strategy to build transship-

ment port in Sabah through improving port information systems based on customer-supplier relations or sharing technology will lead to vigorous competition with other locally-based rivals and strengthen the distribution networks (Antara News, 2018).

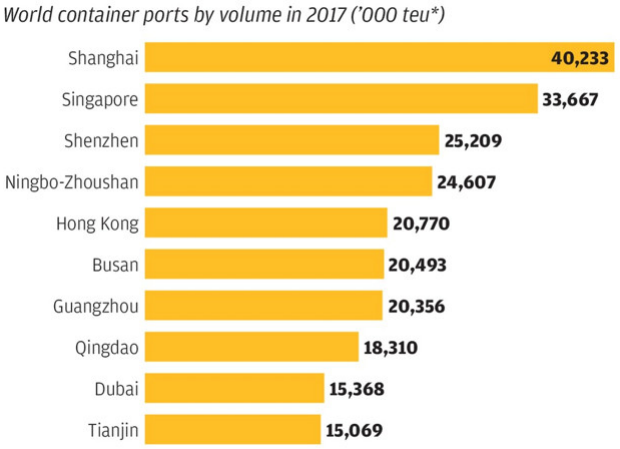
Strategy to build transshipment port in Sabah through developing service routes with Hong Kong and Mainland China will enhance infrastructure investments, and become a viable solution to overcapacity in one port, therefore, there will be more movement of cargo through the transshipment port in Sabah with an extra capacity redirection to Hong Kong and Mainland China (Morley, 2018; Wu and Lin, 2015). Strategy to build transshipment port in Sabah through encouraging private-sector equity participation in the port will lead to increased cargo movements and competition, containerization and privatization thought to enhance movement of cargo and this, in turn, will fuel competition (Wilmsmeier & Sanchez, 2017; Lu et al., 2010). Moreover, strategy to build transshipment port in Sabah through the process of management reorganisation will make it possible to examine the effects of port management decisions made by the managers on investments, price policies and ownership on profits (Tejvan, 2019).

Strategy to build transshipment port in Sabah needs to include a flexible rate to respond to market changes, as the consequences of not correctly adapting to the market uncertainty may lead to higher opportunity costs (Cho, 2014). Establishing free trade zones marketing and shipping in transshipment port in Sabah will enhance port capabilities and this, in turn, will lead to increase in traffic volumes and decrease in logistics costs in container ports (AJOT, 2018). Also, by providing incentives for local cargo to use Sabah Port will lower transactional costs, thus increasing the frequency of using the port as well as lower opportunity costs when market changes (Accounting College, 2016).

The strategy to build transshipment port in Sabah is possible, as the Malaysian federal government in 2016 allocated US$230 million to the state government of Sabah through the Sabah Economic Development and Investment Authority to transform the Sapangar Bay Container Port (SBCP) into the transshipment hub of the East. The expansion project was predicted to raise the port's yearly capacity to more than 1.25 million TEUs by 2030 (Ascutia, 2016). However, the federal government has yet to allocate the required funds of RM 1.8 billion, hence limiting the port's handling capacity to about 280,000 20-footer containers annually for the moment. Presently, vessels calling on bigger ports have higher volume. The lack of a capacious port of a transshipment class has undermined the opportunity for Sabah port. The opportunity cost is if Sabah transshipment port is ready, the forecast is an expansion in the manufacturing industry from 7.5% to 30% of the state's total GDP (Patrick, 2018).

Challenges faced by strategy to build transshipment port in Sabah include Figure 13 showed that current ports in Sabah are far below the world's top ten container ports by volume, the prominent challenge faced by the strategy to build transshipment port in Sabah is funding challenges as the federal government is yet to issue to the Sabah government the required RM 1.8 billion (Wong, 2018; Patrick, 2018). Moreover, the lack of efficient logistic infrastructure and support is also hindering formulation of strategy to build transshipment port in Sabah, such as no international port for direct shipment, no international air freight logistics hub, and slow internet speed (Jenne, 2017). Furthermore, the lack of effective and integrated government policy direction in term of promoting trade competitiveness, increasing transport efficiency and cargo liability regulations has undermined the strategy to build transshipment port in Sabah (Mooney, 2015). Also, the inadequate time frame and cost has also undermined the strategy to build transshipment port in Sabah and in particular, the state government of Sabah expresses concerns the project to develop current SBCP in Sabah may not materialise at the end of the stipulated deadline (Lajiun, 2018).

Figure 13: Shanghai has served more than 40.2 million TEU and Singapore has served more than 33.6 million TEU.



Source: Wong, 2018.

Causes of these challenges include the federal government of Malaysia holding the allocated funds for the project on strategy to build transshipment port in Sabah that cost RM 1.8 billion, hence causing issues of financing to develop Sabah port industry (Patrick, 2018). The high logistics and operation cost, as well as lack of efficient connectivity to global markets, are the critical causes to inefficient logistic infrastructure and support, which are affecting formulation of strategy to build transshipment port in Sabah (Ferreira, et al., 2018). International competitiveness intensification for port market across international markets and lack of cargo liability regulation acts, FDIs and economic development plans are also the causes of ineffective and integrated government policy on the strategy to build transshipment port in Sabah (World Shipping Council, 2019). Moreover, delaying of funding from the federal government has led to the challenge of mobilizing the strategy to build a transshipment port in Sabah on the stipulated cost (Cedillo, et al., 2017).

The federal government has supreme rule over the state government, thus the state government of Sabah has to wait for further instruction on funding. This undermines the process of eliminating the issue of delayed financing (Bowman & Kearney, 2017) on strategy to build transshipment port in Sabah. Subse-

quently, the lack of adequate funds allocation limits the strategies to acquire efficient logistics infrastructure as well as connectivity to international port markets (Duchatel and Duplaix, 2018). Increasing competition levels in the international port market and lack of integrating Peninsular Malaysia, Sabah and Sarawak have undermined curbing the issue of lack of effective and integrated government policies and incentives (Lajiun, 2018). Holding funds to build transshipment port in Sabah by the federal government has undermined eliminating time frame and cost issues because the state government can only carry out the physical phase of building a transshipment port in Sabah if funds were available (Kuzmicz and Pesch, 2018; Inoue, 2018).

The state government has of Sabah has pointed out that no funds have yet been released by the federal government on the strategy to build transshipment port in Sabah, hence indicating a clear view of the issue of lack of financial support (Subhan and Ghani, 2012). Hence, there is no international port in Sabah for direct shipment, making bigger ships to sail to other larger ports (Port Strategy, 2018). The port in Sabah is less competitive and presently handles 280,000 20-footer containers annually, thus a sign of lack of effective and integrated government policies and incentives to ensure vessels can berth to load and unload cargoes as well as handle some repair (Daily Express, 2018). Also, the project to expand SBCP in Sabah has yet to commence, which indicates that the stipulated time frame and cost are jeopardized, leading to a necessary adjustment in the project to expand SBCP in Sabah once the funds are released from the federal government (Duchatel and Duplaix, 2018).

First main reason affecting formulation of strategy to build transshipment port in Sabah is availability, because regional agglomeration of inter-firm networks creates a distinct competitive advantage, hence through increasing local cargo volume, there will be more private-sector equity participation in the port, as more privatization and market liberalization occur, the economic size of the port will significantly increase (Chhetri et al., 2014; Tu, et al., 2018). Clusters denote geographical proximity, which facilitates development of the import/export market and host city through enhancing the services of direct shipping with Mainland China, Mainland China will experience growth in its market niche, thus more productivity and performance, as a result of import and export activities (Daily FT, 2018b). The localization of firms that connect Sabah ports and economic clusters facilitates port use, such as natural resources, human resources, physical infrastructure, and information infrastructure, thus strengthening port market and promotion. The process of competing and collaborating will enhance customer base in attaining a higher market positioning in the port market (Su, et al., 2016; Zhao, et al., 2017; Lun, et al., 2013).

Availability can affect formulation of strategy to build transshipment port in Sabah through analysing port competition and the available strategies behind port managerial decisions, which will enhance preference of shipping liners and the relevant industries through simplified administrative rules, the administrative decisions will be vital in establishing a simplified procedure of the strategy to build a transshipment port in Sabah (PortNews, 2018). Availability of containerization, privatization, and market liberalization will lead to increased cargo movements and competition, which directly increase the physical capacity to accommodate higher volumes of cargo ships and encouraging more private-sector equity participation in port, when there is large port physical capacity, private investors will benefit from the higher throughput in their port activities (Morley, 2018; Tu, et al., 2018). Availability of hinterland infrastructure investment and specialization are vital solutions to under capacity, through developing service routes with Hong Kong and Mainland China to make sure excess cargo can transport to these regions and not occupying more space at the port, thus more ships can dock to load and offload (Cho, 2014; Su, et al., 2016).

Availability can affect formulation of strategy to build transshipment port in Sabah, because adapting to the changing market will eliminate the possibilities of facing opportunity costs as a result of increased market uncertainty, and this will enhance proximity to the export area and in the market niche, as capacity to have the available flexible rate at the onset of market uncertainty leads to increased financial performance (Cho, 2014; Kim et al., 2016). If Sabah port can find its available capability strategies to increase traffic volume and decrease logistics costs through utilizing its facilities or infrastructures which in turn will enhance offshore shipping with Mainland China, therefore decreased logistics and operational costs mean that there will be an increased flow of shipping activities between Sabah port and Mainland China (Sabah Development Corridor, 2016; SEDIA, 2016). The process of producing internally or acquiring over the market by a particular company depends on the available lowest transaction costs, if the cost of producing internally is too high, then the firm will turn to acquire over the market. By contrast, if the transactional costs of acquiring over the market are too high, the company will turn to internal production (Wiesner, 2017).

Second main reason affecting formulation of strategy to build transshipment port in Sabah is operational efficiency because localization of firms that compete and collaborate to achieving efficiency through supply chain corporation will enhance offshore shipping function with Mainland China (Chhetri et al., 2014). This is an indicator of the benefits of forming industrial districts by firms in the same geographical location, such as reduction in operational and logistics costs, as well as serving huge customer base (Ng, 2013; Tadic, et al., 2014). The presence of research centres and educational institutions within or near the port location will lead to enhancing employee training and knowledge ideal for efficient cargo handling, thus increasing cargo handling speed (Liu, et al., 2018). Having experienced and knowledgeable employees will increase the overall productivity of the port through increased terminal productivity and effective cargo handling procedures (Börsch-Supan & Weiss, 2016). Also, sharing technologies, labour resources and consumer networks will lead to increased hinterland development, which in turn strengthens the port reputation towards its marketing and promotion activities (Su, et al., 2016). The factor inputs are based on quantity and cost and these resources could be natural resources, human resources, capital resources, capital infrastructure and information infrastructure that can be

shared collectively among hinterland firms (Seguir, 2011).

Operational efficiency can affect formulation of strategy to build transshipment port in Sabah, as containerization and privatization lead to increased cargo movements and competitions and this will significantly impact terminal productivity, encouraging private-sector equity participation in port will increase terminal productivity as more goods are exported or imported by private investors over the port thus recording a large cargo throughput (Cho, et al., 2018). Analysing the port competition and the strategies behind port managerial decisions are crucial for managers to attain the success of the firm in carrying out the operational activities in the port, it is the responsibility of the managers to come up with simplified procedures and decisions on investments, pricing policy and social welfare that will ensure efficient operations and management reorganisation around the port (Bridge & Dodds, 2018). Specialization as a solution to overcapacity enhances increased cargo handling speed by providing incentives for local cargo to use port, therefore there will be more available space in ground slots or stack slots in transshipment port in Sabah which will attract larger ships to call. Consequently, since there is no congestion in the port, cargo handling will be efficient (Hidalgo et al., 2017; Kim et al., 2016).

Operational efficiency can affect formulation of strategy to build transshipment port in Sabah, as decreasing logistics cost in container ports and increasing traffic volumes through enhancing free trade zones marketing and promotion lead to high terminal productivity, since firms will incur fewer logistics costs in the established free trade zones, there is an incentive to increase their port operations that leads to operational efficiency in the port (AJOT, 2018; Accounting College, 2016). The transaction costs whether from internal resources or external resources has a huge impact on the success of operations, if the transaction costs are high, this could be an indication of poor operational efficiency; however, if the transaction costs are low, this is an indication of good operational efficiency thus more terminal productivity (Cho, 2014; Zant, 2018). Adapting to the changing market conditions would lower the risk of facing opportunity costs, which in turn lead to increased hinterland development as more capital is available for development activities, management reorganisation as well strategies to improve port information systems ensuring better operational efficiency (Jeevan, et al., 2015).

Third main reason affecting formulation of strategy to build transshipment port in Sabah is port cost, because there are multiple cost-generating demands associated with the high reliance of maritime environment for its resources and trade, yet the current SBCP port is in close proximity with those of other nations, which include 218 ports in Indonesia, 127 ports in the Philippines, 63 ports in Vietnam, 37 Thailand, 13 ports in Singapore, 5 ports in Brunei (Jeevan et al., 2015; Ports.com, 2019). Port in Sabah faces the need to stay competitive, as it has to set aside funds for upgrading and repair its facilities, while at the same time maintaining favourable charges to stay competitive within the cluster of international ports around it, by reducing transshipment costs, port service costs, and port charges to increase the strength of economic activities and geographical separation from other international ports (Bandara and Nguyen, 2016). Port cost affects strategies in administrative procedures, personnel training, multiple stakeholders engagement, flexibility, provision of incentives, and to invest in modern information technology and other facilities that promote integration, to focus on the needs for building transshipment port in Sabah (Antara News, 2018).

Port cost can affect strategy to build transshipment port in Sabah, as the port authorities face the imperative to increase its port charges with the goal to increase the returns on investment. This strategy would, however, be counter-productive as other nations that stand to lose from the increase in charges will change their trading routes in response (Hidalgo et al., 2017). Malaysia will have to spend more on training its human resource so as to increase its capacity to handle technical aspects of operations, however, a cost-benefit analysis refutes this claim, as other nations are also improving their already experienced workers (Kim et al., 2016). Cost implications involved in adding charges as well as investing heavily in human resource, strategic planning has to be moderated to factor in the countermeasures that other competitors will design for the purposes of eliminating unprofitable expenditures (Heilig and Vob, 2017).

Port cost can affect strategy to build transshipment port in Sabah, as transshipment involves frequent transactional costs, which involves loading and unloading of cargo and requires investment in automated port facilities to minimize them, hence port costs have a significant effect on the level of inter-regional trade and competitiveness because port users opt to use gateways that are cost friendly and also have minimal transit time loss while transitioning between sea transport and land transport channels (Cho, 2014). Port costs are the major influencers of strategy, these costs raise decision-making problems with regards to the quality of administration, level of investment in cargo handling facilities, and offering incentives to promote the use of the ports (Liu et al., 2018).

Fourth main reason affecting formulation of strategy to build transshipment port in Sabah is service quality, because its spatial proximity to many other national ports means that there are many activities done on a daily basis, hence port users would be engaging with stakeholders that are adding values to their supply chain only (Heilig and Vob, 2017). Given the wide scope of activities emanating from the geographical proximity and the heavy reliance of the marine environment to drive the economy, hence quality of services and safety issues will rise, the port management has to focus on reliable services and safety such as prompt loading and offloading of goods (Kim et al., 2016). To address service quality and safety issues, the strategic planning ought to consider the use of information technology software to monitor the progress and completion of activities within the supply chain to guarantee reliable service delivery (Rancourt, et al., 2014).

Service quality can affect formulation of strategy to build transshipment port in Sabah, as a fixed number of port users who use various ports throughout the ASEAN economies and many countries have invested in quality services to attract port users, there will be a decrease in the returns of port users for countries that have poor services (Homosombat, et al., 2016).

As at the moment, the port in Sabah is relatively small but handles many operations ranging from offloading, loading, and dispatching goods to the next destination, however, to stay competitive, there is a need to train employees on how to transition merchandise within the shortest time, to counter the rapidly increasing skill set of other neighbouring ports and economies (Yang and Chen, 2016; Su, et al., 2016). It is crucial to continually investigate competitive position of port, by comparing port management decisions on managing employees' performance that will affect reliability of service performance provided to port users. This way, strategies are laid out for improved offerings over competitors, by providing better service quality that is different from competitors (Hidalgo, et al., 2017).

Service quality can affect the formulation of strategy to build transshipment port in Sabah, as the technologies deployed in the port and shipping industry changes rapidly, hence the average benchmark for facilities required to provide quality services also changes rapidly, and the failure to evaluate whether to upgrade internally or externally as per the changing customer needs and market conditions would create higher transactional costs (Cho, 2014). Past researchers have studied that the metrics for port quality services have a very wide range, their correlation with customer satisfaction varies and are not always defined in the same way, and other volatile market forces such as a change in the political environment of one country affects another country's cost and service quality of meeting port users' needs (Lopez, et al., 2014). Transactional costs highly affect the provision of service delivery, profitability, and even survival of the port operators, hence there is a need to constantly adjust measures and share information to establish the equipment and operations that will effectively meet the needs of port users, while avoiding cost of idle resources (Tse and Gong, 2009; Scott, 2015; Hu and Sheng, 2014).

3. Conclusions.

3.1. Overview of the Study.

Difficulties in justifying that availability, operational efficiency, port cost, service quality can influence strategy to build transshipment port in Sabah are due to gaps not covered in past researches on strategy to build transshipment port in Sabah. There are no past research and literature on problems in availability, operational efficiency, port cost, and service quality to build a transshipment port in Sabah, therefore creating challenges on formulating strategy to build a transshipment port as a catalyst to achieve critical mass for Sabah's economic growth (Kim et al., 2016). Moreover, so far there is no research article that explores potentials Sabah port industry on the state's total GDP in Malaysia (Patrick, 2018).

3.2. Implications

Cluster theory supported the influences of availability, operational efficiency, port cost, service quality on formulation of strategy to build transshipment port in Sabah Malaysia by reflecting the interdependencies among industries for performance gain through co-location and shared input, thus increasing alliances and networking through an increase in port capacity and reduction in total transport per container. Regionally agglomeration of inter-firm networks creates a distinct competitive advantage for the clustered firms and regions where they are located through enhancing encouraging private sector equity participation in port which in turn enhances operational efficiency and service availability.

Game theory supported the influences of availability, operational efficiency, port cost, service quality on formulation of strategy to build transshipment port in Sabah Malaysia by exploring influences of port management decisions such as investments, price policies and ownership on profits, on social welfare and on the competitive port, and founded that simplified and specialized administrative procedures ensure simplification specialization of procedures and supply chain corporation, thus enhancing availability, operational efficiency, port cost, and service quality. Also, containerization and privatization lead to increased cargo movements and competition, thus enhancing low congestion in a port, thus increasing terminal productivity and cargo handling speed.

TCE theory supported the influences of availability, operational efficiency, port cost, service quality on formulation of strategy to build transshipment port in Sabah Malaysia by emphasizing that Sabah port operator to correctly adapt to market uncertainty to eliminate the risk of incurring opportunity costs, thus decreasing port costs such as cargo handling charges and port service costs, and thus encouraging more direct shipping with Mainland China, which in turn enhances availability, operational efficiency, port cost, and service quality of port in Sabah Malaysia. Moreover, decreasing the logistics cost in container ports enhances operational efficiency and increase in traffic volumes, therefore developing service routes with Hong Kong and Mainland China to resolve overcapacity issue.

The managers in Sabah organisations to improve availability as a strategy to build transshipment port in Sabah by ensuring there is an increase in local volume cargo to attract external firms, which will lead to more economic development in Mainland China also providing incentives for local cargo to use Taichung Port; increasing port physical capacity to accommodate more volumes to increase the number of cargo handled annually and attract larger cargo ships to call on the port; ensuring an increase in local volume cargo and port physical capacity will enhance proximity to the market niche and to the export/import area, thus increasing availability of local cargo and international cargo.

The managers in Sabah organisations to improve operational efficiency as a strategy to build transshipment port in Sabah by simplifying procedure for port customs to enhance services of direct shipping with Mainland China and free trade zones marketing and promotion, which lead to increased cargo handling speed; enhancing terminal productivity through increased cargo handling speed thus enhancing operational efficiency as more cargo can be handled with a simpler procedure. This, in turn, enhances the flow of cargo in and out of the port thus enhancing supply chain cooperation with Mainland China and Hong Kong

through development of service routes leading to an increase operational efficiency and contributing to increased hinterland development.

The managers in Sabah organisations to improve port cost as a strategy to build transshipment port in Sabah by minimizing port charges through setting up simplified customs rules so that companies can use the port at lowered charges, this attracts more local and international cargo handling firms, which in turn improving port competitiveness and development; lowering cargo handling charges to attract local unestablished cargo handling firms by the lower stipulated charges, thus increasing the volume of cargo handled in the port; marketing on free trade zones marketing at reduced port service costs and in turn attract more local and international firms to call the port, hence increasing terminal productivity.

The managers in Sabah organisations to improve service quality as a strategy to build transshipment port in Sabah by ensuring reliability of service performance and focus enhancing service performance strategies that will lead to increased quality service delivery; enhancing safety and security around the port through engagement of security services and use of remote tracking devices to check the cargo movement; cut congestion in the port through containerization and privatization to enhance cargo movements and competition, this can also be achieved through developing service routes with Hong Kong and Mainland China to enhance cargo flow and to deal with overcapacity.

The state and federal governments of Malaysia can improve availability as a strategy to build transshipment port in Sabah by increasing economic size of the transshipment port, which refers to making the port capacious and increasing its ability to handle the busy inflows of vessels and other operations at lower costs; improving proximity, which refers to strategic placement of the transshipment facility easily accessible by the port users, which involves the reduced distance between the import and export facilities in the shipping area; improving market niche, which refers to identification of a certain market area that state government of Sabah intends to serve, in the shipping industry, the state government of Sabah should develop containers that can hold goods from the marketing niche.

The state and federal governments of Malaysia can improve operational efficiency as a strategy to build transshipment port in Sabah by improving terminal productivity, this refers to the level of goods and services that a terminal can handle for a given time. It is important for the Malaysian government to promote collaboration among stakeholders and availability of the right machinery and equipment to boost terminal productivity; improving cargo handling speed, which refers to the handling rate of ship-to-shore cranes, gantry cranes, ridges stackers, prime movers, forklifts and other machinery at the yard, having modern equipment like Internet of Things (IoT) technology and well-trained personnel will enhance cargo handling speed; simplifying procedure, which refers to shortening of cargo handling procedures thus reducing time wastage.

The state and federal governments of Malaysia can improve port cost as a strategy to build transshipment port in Sabah by reducing port charges, or by providing better harbour facilities at lower port charges; reducing cargo handling charges for the handling of the cargo that port users deliver on the port; use of modern cargo-handling techniques at the port may cut cargo handling charges; reducing port service costs that incurred in servicing the port, or by having quality equipment and qualified operators at a reduced port service costs.

The state and federal governments of Malaysia can improve service quality as a strategy to build transshipment port in Sabah by improving on reliability of service and performance, which refers to provision of services that meets or exceeds customer expectations, such quality of services will enable the state and federal governments of Malaysia to enhance services delivered in the transshipment force; improving on safety and security, which refer to the securing users of the port facility and facility itself from internal and external threats, more shipping companies will be willing to use the facility when they are assured of their safety; improving on application of information technology (IT) and exploring innovation like Internet of Things (IoT) will aid in automation of services and communication at the transshipment port, boosting its operations.

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I am grateful for the opportunity to write about a paper on port economy and economic growth and empowerment from an engineer's perspective. In its core is a story that needs to fuel the narrative and drive the conversation at the highest level for the betterment of the future of Sabah and its people.

"Today having power means knowing what to ignore." ~ Harari, 2015

Disclosure Statement.

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