

## **SUSTAINING COMPETITIVE ADVANTAGE OF MALAYSIAN PORTS: A RESOURCE BASED VIEW PERSPECTIVE**

Salwani Arbak

PhD Student, College of Law, Government and International Studies  
Universiti Utara Malaysia

### **ABSTRACT**

This paper is aimed to analyze the trends and changing environment of Malaysian ports industry and also attempts to discuss the strategies to sustain competitive advantage based on the theoretical perspective Ports cannot rely only on its external resources such as strategic locational advantage, excellent physical infrastructure and good structure of hinterland. The emergence of RBV has expanding the way of sustaining port competitive advantage by extracting and utilizing the firm internal resources. The detailed discussion of the ports and its resources, and analyzed the case using Resources-based view (RBV) of strategy. Finally this paper aimed to develop the Malaysian port competitiveness based on RBV framework.

## 1.0 Introduction

The fundamental mission of strategic management research is to investigate and explain differences in performance among firms (Rumelts et al.1991, Levinthal,1995; Mehra, 1996; Foss and Knudse, 2003, Hawawini et al.,2003). The explanation for the difference of firm performance among firm is based on the concept of competitive advantage. This concept was introduced by the early work of Ansoff (1965), and popularized by the work of Micheal Porter in the early 1980s (Porter,1979;1980).

There are many different explanations of the determinants of firms success have emerged since 1930'(i.e.,Chamberlin and Robinson 1933;Bain, 1956; Stigler and Demsetz, 1961, 1968 and 1973; Penrose 1959; Steiner,1969; Andrew 1971; Hunt, 1972; Dunning 1977; Rumelt 1974; Porter,1980; Ohmae, 1989). However, the emerged of Resource-Based View (RBV) in the early 1990s has gained prominence in the strategy literature in explaining why some firms outperform others. The RBV focuses on internal, firm-specific factors and their effect on performance. RBV is principally theories that internal, idiosyncratic resources explain the variation in success among firms competing within the same industry (Wernerfelt, 1984; Barney, 1991; Grant, 1991;Peteraf 1993; Amit and Shoemaker, 1993; Collis, 1994 and many others).

Conceptually, resources can be important factors of a firm's competitiveness only if they possess certain special characteristic; i) it must be valuable; ii) it must be rare among a firm's current and potential competition; iii) it must be imperfectly imitable and ; iv) there are no strategically equivalent substitute for this resources (Barney, 1991).These attributes can be considered as empirical indicators for determining a firm's specific resources, which can be used for generating sustained competitive advantage.

Throughout the course of its development, RBV has branched into many direction including the core competencies concept (Prahalad and Hamel, 1990), dynamic capabilities (Teece and Pisano, 1994), and knowledge-based theory of the firm (Grant,1996).

Based on the previous literature, the topic on the relationship between RBV and performance has been attracting great deal of research efforts (Grant, 1991; Collis and Montgomery, 1995; McGee and Finney, 1997). The empirical studies relating firm performance and RBV has been discussed lately by Kor and Mohaney, 2005; Yiu, Bruton and Lu, 2005; Carmeli and Tishler, 2004; Hult, Ketchen and Slater, 2005. However, only few studies has been covered on the relationship between intangible assets and firm performance (Michalisin, Kline and Smith, 2000; Bontis, Chua and Richardson, 2000; and Jeremy Thomas, 2004).

In the context of port industry, competition can be referred as a competition between port terminal operators who involved in the transport chain and the competition is not only based on tangible asset but also through provision of service (Haezendonck and Notteboom, 2002). Based on the previous research, there are wide ranges of research

on port competitiveness has been arguing on the factors that contribute to port competitiveness. They can be classified into two major streams. One focuses on the effects of external resources on port success i.e Sargent, 1938 and Morgan , 1951 (port hinterland structure), Bennathan and Walters, 1979 (port services), Foster, 1979 ;Trujillo and Nombela,1999; Slack,1985 (cost factor), Heaver ,1993, Winkelman,1983,1991 (role of technological innovation), Haezendonck and Notteboom, 2002 (hinterland accessibility, productivity, cargo generating effect, and reliability), Malchow and Kanafani, 2001 (oceanic and hinterland distances), Ruman and Verbeke (based on Porter's Five Forces Framework), Peter, 2001; Abdul Razak and Razman, 1999 (port operational efficiency) Robinson, 2002; Bichou and Gray, 2004 (supply chain).

On the other hand the second group is focuses on the internal resources that contribute to the port success. This area of research was grounded by the resources-based view perspective which emphasizing on port's internal strengths to access port competitive position. The internal resources of port that have been discussed are e.g. advanced information system and high quality of services (Notteboom and Winkelmans, 2001) priority systems (Hoguin-Veras and Jara Diaz,1999) service differentiation (Hogiu-Veras and Walton,1997), reputation and quality (Haezendonck and Notteboom, 2002), supportive government policies, well thought operation and information technology (Gordon et al.,2005), port operation policy (Peter, 1990) custom services, rapidness, simple port documentation and workers skills (Chiu,1996).

## **2.0 Changing trends and environment in port industry**

The success of port development lies predominantly in the competitive strategies ports adopt as well as the competitive advantage they can capture and sustain (Robinson 1993:85). Therefore, it is important to discuss the current level and trends of port development in order to give a clear picture for identifying the elements of port competitive advantage.

### **2.1 Liberalization of Maritime and Transport Services**

In the context of port industry, the new competitive landscape emphasizes flexibility and speed in responding to fast changing environments. One of the forces of the new landscape is the Liberalization of Maritime Transport Services which is included in the General Agreement on Trade in Services (GATS) within the multilateral framework of the World Trade Organization (WTO). During the Uruguay Round, international maritime transports was recognized to be already highly liberalized and port services were therefore included in the maritime schedule for the discussion.

In the case of Malaysia, the liberalization of the services sector which include port services was announced by the Prime Minister Dato' Mohd Najib Tun Abd Razak in the mini-budget for the Second Stimulus Package on 10 March 2009. The liberalisation of the services sector is pursued with the view of creating a conducive business environment to attract investments, technology and to create higher value employment opportunities. These efforts are expected to enhance the level of competitiveness of the services sector in the country. For ports, these changing

environment and trends have resulted in greater emphasis to become more competitive and must find unique way and strategies of competing with rivals.

## 2.2 The evolving of port development

Since the late 1980s, many national and state-level governments have adopted institutional reforms in the port sector, such as privatization, corporatization, and disintegration of terminal operation functions from the government's hands (World Bank, 2001).Based on the current studies on port privatization, most of the researchers have been interested in finding how the governance structure of a port effects their its competitiveness. A growing number of ports have adopted privatization assuming that the process will lead to efficiency and lower costs, thereby enhancing competitiveness. (Everett,2003).

According to (Cullinane et al., 2002) privatization is perceived to be the most important policy for improving the efficiency of the ports sector. Tongzon in his article 'Privatisation: The Port Singapore Experience agreed that privatization helps developing countries in Asia more access to capital and have better technology, allows port to be more flexible and autonomous in their operations. One of the best examples of port privatization is Port Klang which has been privatized to Klang Container Terminal Berhad in 1986. According to Md Nor et al.,(2003), the privatization of Port Klang has led to the improvement of overall port efficiency.

Another issue in port development has been raised by Notteboom and Winkelmanns (1999) which highlighted on the structural changes in logistic. Some the changes are an expanding scope of business among shipping lines which include terminal operations and hinterland transportation. This was supported by increasing demand for dedicated terminal in Europe for the last couple of years. By involvement in inland transportation carriers envisage saving trough a better balancing of flows and higher utilization of the equipment. The best example of dedicated terminal was shown in the Table 1.0

Dedicated terminal agreement between port authorities and shipping company

| <b>Port Name/<br/>Terminal Name</b>       | <b>Players<br/>Name</b>                      | <b>Share</b> |
|---|--|--------------|
| <b>Tanjung Pelepas</b>                    | Pelabuhan Tanjung Pelepas and Mearsk Sealand | Mearsk: 30%  |
| <b>Port Klang/CT3</b>                     | Port Klang Authorities & MISC                | MISC:15.8%   |
| <b>Laem Chabang/<br/>EGCT terminal B2</b> | Port Authority of Thailand &Evergreen        | N/A          |

Source: Port Authorities

## **2.3 Shipping Alliances**

In liner shipping context, the level of integration of inland transport and logistic has been helped by a series of vertical and horizontal mergers, acquisitions as well as formation of alliances (Panayides, 2006). Corporate strategies in liner shipping ranging from loose alliances to full vertical integration is an area of maritime logistic that has also received attention in the past.(Brooks,2000;Evangelista and Morvillo,1999,2000;Heaver 2002). (Slack et al 1996) had noted that ports face the constant risk of losing important clients, not because of deficiencies in port infrastructure or terminal operation, but because the client has rearranged its services or has partnership with other carriers.

The economic rationality for mergers and acquisitions is rooted in the objective to size, growth, economies of scale, market share, market power, instants access to markets and distribution networks and access to new technologies of diversifying (Notteboom, 2004). At the forefront of this trend are world's four biggest port operating companies, namely Hong Kong-based Hutchison Port Holding (HPH), Singapore's PSA Corporation, Dubai Ports World (DPW) and P&O Ports which manage worldwide. UNCTAD reported that these terminal operators combined to handle over third global volume in 2006. (UNCTAD, Review of Maritime Transport 2006) and by 2007, their share had increased to 81% (Notteboom, 2008).

## **2.4 Increases in Vessel Size**

(Heaver 1993: Winkelman, 1983, 1991) analysed the role of port altered by technological innovation. They argue that port terminal have come to be specially designed to meet the cargo handling and throughput requirement of integrated logistic system. (Notteboom and Winkelmans, 2001) found that the modern port are affected by the new forces driving global competition, including the far reaching unitisation of general cargo, the rise of mega-carriers, the market entry of logistics integrators, the creation of network linkages among port operators, the development of inland transport networks, and so on. In meeting this challenge, many ports have invested heavily in port equipment and vehicles to maintain smooth flow between the container yard and the quayside. (Khalid ,2007). He added, leading ports have installed super post-Panamax cranes with outreach capable of handling huge ships.

Cullinane and Song (2006) describe how containerization has increased competition among ports. The increased use of containers led to the creation of specialized ships in the 20th century. Considerable costs savings are generated by the economies of scale in building larger ships used exclusively for transporting containers (Stopford 1997). Recent development of the containership size was increased up to 12,000 to 14,000 TEU

that was built by South Korean Shipbuilder Shipping Heavy Industries (American Shipper 2005). The maximum size for container ships is predicted to be about 18,000 TEUs based on depth limits in the Malacca Straits (Gilman 1999). Such larger ships require deeper approach channels and berths, wider channels and turning basins, bigger container terminals with significantly more landside storage capacity to handle higher volume of containers.

## **2.5 Transshipment**

Another key change in port development is the changing role of transshipments. Gateway ports become more engaged in transshipments, and pure transshipment hubs have emerged. A study conducted by the Transport and Tourism Division in United Nations and Economic and Social Commission for Asia and Pacific (UNESCAP) in 2001 forecast increasing demand for container shipping and container port activities throughout the first decade of 2000 until 2011 as a result of growing trade (UNESCAP, 2001). In fact, this study predicted an increase in transshipment activities; hence, a demand for hub ports in Asian region.

Furthermore, (Baird, 2007) noted that more than 20 of the 100 largest ports worldwide are transshipment hubs, in the sense that at least half of traffic is ship-to-quay-to-ship. Major gateway ports are increasingly profiling themselves as transshipment terminals, because the fragmentation of ends to pull production out of (relatively expensive) gateway cities. (Mayrick 2004). According to (Heaver, 2002), the popularity of hub-and-spoke systems ease of transshipment traffic becomes increasingly important in determining port competitiveness.

In summary, the trend in port development has led to the intense competition among seaports to become more competitive in their rival. These trends require port operators and port authorities to be on their toes in order to remain competitive.

## **3.0 The issues and challenges in Malaysian Port Industry**

Looking into the scenario in Malaysia, one of the major challenges for port industry has been reported in Malaysian Port Review (2009). As noted by Chairman of Federation of Malaysian Port Operating Companies, pertaining to the "New directions needed in port policy and development", ports which are engaged in international trade and serving mainline shipping services are becoming under increasing pressure to meet the operational requirements and infrastructure needs of the ocean carriers. Accordingly, ports must not only be excellent in meeting the further demands on terminal and yard capacities, highly efficient in service and productivity but also must link up with value added services to remain competitive.

Another important issue in port industry is the issue of variance of port performance among Malaysian ports. As highlighted by Ada Suk Fung Ng and Chee Xui Lee, 2007 in

relation to the topic on “Port Productivity Analysis of Container Ports in Malaysia: A DEA Approach”. This paper studies on the port performance measurement of 6 container ports in Peninsular Malaysia by using the data envelopment analysis (DEA) approach. The result found that Port of Tanjung Pelepas and Johor Port emerge as the best performers when compared to the other Malaysian ports. In their analysis, both Westport and especially Northport do not perform very well. Based from this study there is a variance in term of port performance as showed in Table 1.0. The result from this study produces two major questions, firstly, what are the major factor contributed to the variances of performance among Malaysian ports? Is that due to the firm resources factor? If yes, how to improve the utilization of port resources for the seeks to reduce port cost operation and enhancing port performance?

Table 1: Result of DEA-CCR model of the six Malaysian ports and Port of Singapore

| <b>Container Terminal</b> | <b>Productivity Score (%)</b> |
|---------------------------|-------------------------------|
| Northport                 | 78.63                         |
| Westport                  | 88.72                         |
| PTP                       | 89.79                         |
| Penang Port               | 68.17                         |
| Johor Port                | 100                           |
| Kuantan Port              | 77.05                         |
| Singapore Port            | 100                           |

*Ada Suk Fung Ng and Chee Xui Lee, Journal of the Eastern Asia Society for Transportation Studies, Vol, 7, 2007.*

To date, as being mentioned at the earlier discussion, the majority of literature on port competitiveness focused on the impact of firm's internal and external resources that may influence port performance. However, findings of these studies produced mixed results and are not consistent to each other. Furthermore, little systematic effort has been devoted to understand the underlying factors by which port performance could be improved by focusing on the aspect of port internal resources using RBV theory. Most of the studies conducted tend to focus on the port external resources. As far as performance of port industry is concerned, no clear understanding exists on the effect of port's resources on port competitiveness (ref).

#### **4.0 Developing strategy for competitive advantage –A RBV perspective.**

With the increasing dynamic nature of competition, there is a strong tendency to understand firms in terms of the efficient use of port internal resources that create sustained performance differentials within industries. This issue has being widely discussed among strategic management scholars and it is originated from the theory of resource-based view (RBV).