# A Comparative Analysis in the Transportation Sector focusing on Seaport between Malaysia and Singapore*

- in the context of trade promotion-

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## 1.0 INTRODUCTION

Economic performance related to international trade has a profound effect on the development of a seaport. In addition, the rapid pace of industrial development and the need for industries to continuously respond to new competition and changing demands has placed increasing pressure on existing resources and transportation infrastructure sector such as seaport. Various factors can be attributed for port's success such as bunckering service, excellent infrastructure, strategic location at the crossroad of major shipping routes, good banking and financial services, skilled and disciplined workforce, telecommunications network just to name a few.

This paper focus on the port performance and efficiency for the Malaysian and Singapore ports with respect to several indicators. Singapore Port is chosen because of its success and with several issues affecting Malaysia's trade. By carrying out comparative analysis, the area of concerned need to be improved pertaining to port planning can be relatively highlighted especially in the case of Malaysian ports.

## 2.0 ECONOMY PERFORMANCE (Malaysia)

### *2.1 Economic growth*

The Malaysian economy has expanded rapidly and maintained an average growth of well over 8% per year. The total merchandise trade for the year 1994 expanded to US$123.9billion with total exports and imports recorded US$61.5billion and US$62.4 billion respectively as shown by **Fig. 1.** Import and export increased steadily and for the 1993 -1994 period, each recorded an increase of 32% and 26.8% respectively. In export terms, Malaysia ranks 13th largest exporting nation in the world.

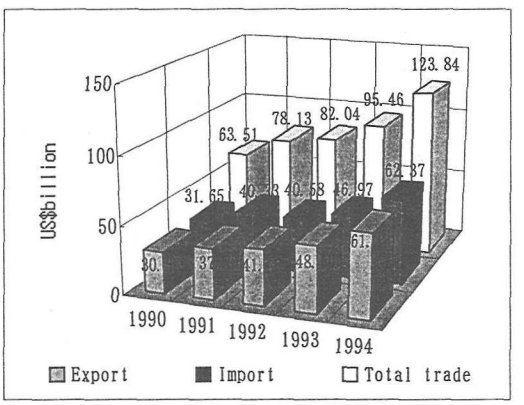


Fig.1: Import/export value (1994)

### *2.2 Economic Transportation and External Trade*

The basic composition of exports and imports in terms of SITC classification is summarized by **Fig. 2.** The expansion of the export sector and the dominance of manufacturing sector have brought about rapid transformation to the economy. Dependence on primary sector (agriculture and mining) is on the decline whereas secondary and tertiary sectors are increasingly more prominent.

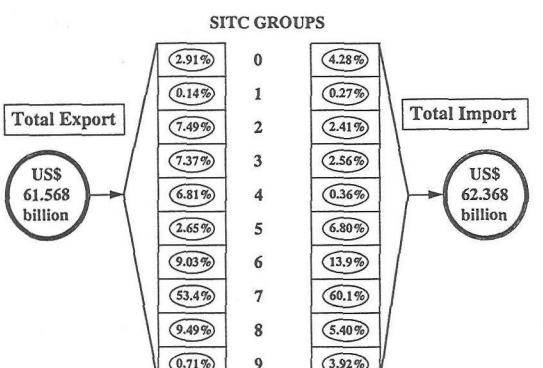


Fig.2: Import/export by SITC classification

*Keywords: Freight Flow, Terminal Planning

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Table 1: SITC Classification

| | |
|---|---|
| 0 | Food and live animals |
| 1 | Beverages and tobacco |
| 3 | Crude materials, excluding fuels |
| 4 | Mineral fuels etc |
| 5 | Animal, vegetable oil, fat |
| 6 | Chemicals, related product necessary |
| 7 | Basic manufacturers |
| 8 | Machines/transport equipment |
| 9 | Miscellaneous manufactured goods |
| 10 | Goods not classified by kind |

Manufacturing-oriented sector contributing 71.9% of the total exports while import trade characterized by sharp increase in the offtake of chemicals, manufactured goods, and machinery and transport equipment. The growing prominence of manufacturing and service sectors is clearly a reflection of the growth in value-added sectors. Japan,US and Singapore are the main export markets (55%) and are also the major supplier of Malaysia imports (59%). Exports of manufacturing goods are projected to account 81.8% of total exports by the year 2000. Share of primary agricultural exports will decline 6 % reflecting the increase level of domestic processing of agriculture raw materials. As for import, increased investments and manufacturing activities to the year 2000 will result an increase in imports of capital and intermediate goods with the latter a share of 40.2% reflecting increasing degree of domestic sourcing of intermediate goods.

The trade growth of both countries is given by **Table 1.**

Table 2: Trade growth (%)

| Country | Year | Agriculture | Industry | Services |
|---|---|---|---|---|
| Malaysia | 1993 | 3. 9 | 9. 6 | 8. 2 |
| | 1994 | 1. 2 | 10. 9 | 7. 9 |
| Singapore | 1993 | -2. 4 | 9. 3 | 10. 4 |
| | 1994 | -2. 0 | 13. 3 | 7. 8 |

## 3.0 ISSUES FACING MALAYSIA SEAPORT

Taking intermodalism into perspective, the main issue confronting Malaysia's port scene is governed by the the Singapore factor whereby:

i. for transshipment -30% of Malaysia trade handled by Singapore Port with monetary value of US$20.28 billion/year,

ii. for inland cargo movement ( crossing international boundary) these phenomena (Malaysia/Singapore) were observed:

- 700-800 trucks daily operated from Klang region,
- 2000 laden trucks daily from the north region,
- under-utilized port facilities especially in the east coast of peninsula.
- small number of Malaysian - flag merchant ships.

Bulk of foreign trade carried by foreign-owned vessels, contributing heavily to foreign exchange outflows.

## 4.0 PORT TERMINALS

Port of Singapore Authority (PSA) operates 6 terminals to accomodate all types of vessels-container ships, bulk carriers, cargo freighters, coasters, lighters and passenger liners. The Port handled a total cargo volume of 290 million freight tonnes in 1994. The average turn around time for 1000 containers is 10 hours.

There are 16 ports in Malaysia, of which 7 are regarded as major ports with facilities to handle general cargo, bulk commodities, and containers. 90% of the country's external trade is seaborne. In 1990 , the ports had the capacity of handling 79.4 million tonnes of cargo, increased to 119.5 million tonnes in 1995 and expected to increase to 130.3 million tonnes in the year 2000.

## 5.0 LOCATION AND GEOGRAPHICAL FEATURES

**Fig. 3** shows the location of Malaysian ports and Singapore port. It is important to identify the types of advantages experience by both countries especially that of Singapore.

### *5.1 Singapore Port*

Singapore as a regional logistics hub or global port can be analyse into two categories; natural and developed advantages.

### *Natural Advantages*

- Georaphical location- looked upon as a great asset being on the main shipping route between East and West including the trend for ships from Europe to off-loaded in Singapore or Hong Kong and taking the return loads from there on. The goods offloaded are then taken on by ships serving Asian locations and west coast of US.
- Having natural deep water ports such as Jurong Port with depth of 15m. Able to service ships with deeper draughts and not resorting to expensive and

extensive dredging operations although this has taken place over the years to improve port network.
iii. Free from mountain ranges and not subject to typhoons, allowing year round operations.

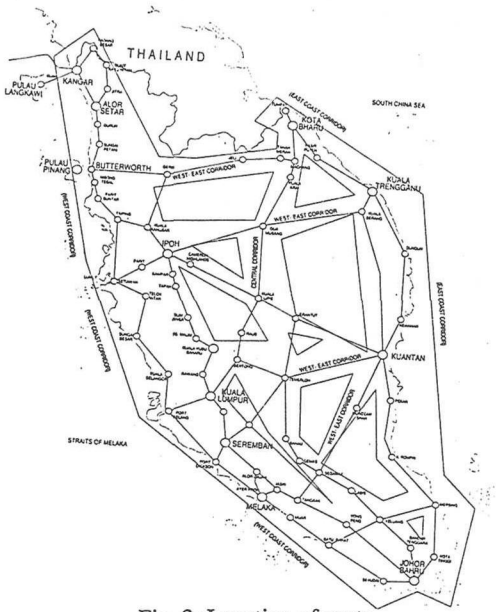


Fig. 3: Location of ports

*Developed Advantages*

It can be regarded as environmental and infrastructure developments taking place to capitalized on the natural advantages. The enhancement in becoming a very efficient and cost effective are through comprehensive infrastucture, legal, fiscal, and monetary planning.

*5.2 Malaysia ports*

In terms of location, they are less favorable than Singapore Port and with a natural depth of 14m. The main ports in Malaysia are located in the west coastal region with Straits of Malacca as the coastline. The most significant problem is the heavily congested Strait resulting in deteriorating safety. 600 vessels use the Strait daily with 20 cases of ships colliding in the past 18 months.

**6.0 REGIONAL HINTERLAND**

Variations in the volume of general cargo and containerized freight passing through a port depend on the changing economic conditions of the geographical area that constitutes its hinterland. Singapore is situated amongst some of the world's vibrant economies and the hinterland have long engaged in trade helping to develop its entrepot trade. With Malaysia having annual growth in GDP of about 8%, the spin-offs for Singapore will be even greater in years to come. Other ASEAN countries are also growing rapid ly and increasing utilizing Singapore as a gateway.

**7.0 OPERATING STATISTICS**

*7.1 Cargo Composition- container*

For Malaysia, cargo throughput at the principal ports increased 7.7% totaling about 114.82 million tonnes in 1994 and largely contributed by the expansion in containerized cargo with 28% share, liquid cargo -31%, dry bulk cargo - 14%, and general cargo-27%. As a result of structural transformation of the economy into manufacturing based, all principal ports are handling more containerized cargo. **Table 3** shows the containerized volume for the principal ports in Peninsula Malaysia (container facilities captured 90% or 1.9 million TEU of the total container traffic) and Singapore Port.

Table 3: Containerized volume (TEU)

| Port | 1991 | 1992 | 1993 | 1994 | 1995 |
|---|---|---|---|---|---|
| Klang | 607, 626 | 677678 | 771901 | 943, 846 | 1133811 |
| Penang | 251, 849 | 303, 367 | 330, 922 | 386, 182 | 434, 424 |
| Johor | 96, 931 | 128, 558 | 168, 315 | 235, 659 | 302, 898 |
| Kuantan | 4, 065 | 6, 818 | 9, 681 | 12, 192 | 22, 590 |
| PSA | 6, 245, 300 | 7, 398, 600 | 8, 876, 900 | 10, 254, 900 | n. a |

Fig. 3 shows the volume of containerized cargo (transshipment) handled by PSA between the main ports in Malaysia.

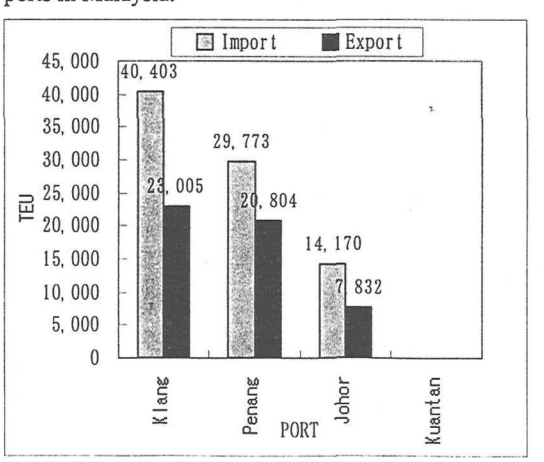


Fig 3: Container transhipment - PSA and Malaysia

### *7.2 Shipping Traffic*

The ships called at the ports are given in **Table 3** and **Table 4.**. It is important to note that the number of ships call did not follow the large increase in cargo volume sincecargo load per ship was getting bigger (deployed larger ships in trade).

| Port | | 1991 | 1992 | 1993 | 1994 |
|---|---|---|---|---|---|
| Klang | No. | 5, 910 | 6, 472 | 6, 832 | 7, 195 |
| | Tonne (' 000) | 49, 022 | 62, 020 | 66, 218 | 68, 595 |
| Penang | No. | 5, 810 | 6, 266 | 6, 043 | 6, 219 |
| | Tonne (' 000) | 17, 457 | 18, 139 | 19, 774 | 25, 355 |
| Johor | No. | 4, 022 | 4, 730 | 4, 355 | 4, 138 |
| | Tonne (' 000) | 19, 671 | 25, 163 | 24, 426 | 25, 410 |
| Kuantan | No. | 1, 095 | 1, 145 | 1, 217 | 1, 324 |
| | Tonne (' 000) | 5, 686 | 6, 558 | 7, 132 | 8, 168 |

Table 4: Ships called at Malaysia's ports

| Port | | 1990 | 1991 | 1992 | 1993 | 1994 |
|---|---|---|---|---|---|---|
| PSA | No | 60, 347 | 70, 345 | 81, 334 | 92, 655 | 101, 107 |
| | mil. GT | 678. 6 | 623. 8 | 578. 5 | 536. 6 | 491. 2 |

Table 5: Ships called at Singapore's port

In addition to Malaysia, the foreign and local ships registered are per Table 5.

| Type of Vessels | M'sian Regd Ships | | Foreign Regd Ships | |
|---|---|---|---|---|
| | No | GRT | No | GRT |
| Container Ships | 9 | 36, 000 | 0 | 0 |
| Gen. Cargo Ships | 193 | 337, 500 | 13 | 57, 900 |
| Tankers | 68 | 379, 500 | 128 | 2, 602, 000 |
| Ro-Ro | 4 | 8, 700 | 0 | 0 |
| Passengers Ships | 40 | 6, 900 | 13 | 111, 000 |
| Others | 480 | 289, 200 | 227 | 229, 300 |
| Total | 794 | 1, 057, 000 | 381 | 3, 001, 100 |

Table 6: Malaysia's ship statistic-foreign and local

### *Market Share*

The market share for the ports in Malaysia which is undergoing dramatic change is shown by **Fig. 3.** The growth of these ports reflected the maturing of the hinterlands served by the ports. No data is calculated for Singapore ports.

## 8.0 SUMMARY

An overview of the Malaysian economy and comparing various operating statistics selected between ports in Singapore and Peninsula Malaysia have been discussed. From the tabulated results and figures presented, the strategy adopted to promote Malaysia maritime aspirations are as follows:

i. to optimize the inland transport (road) and seaport charges by reducing the overall transportation cost so as to be competitive,

ii. to reduce the dependence on Singapore for transshipment say from 30% to 20% by reassessing Malaysia's port role for export promotion through:

- establish a load center (Port Klang) with traffic generated from own hinterland,
- establish another gateway (Kuantan Port)
- setting threshold; bigger cargo base attracts mother vessels.

The role of PSA in supporting Malaysian economy is undeniable. As can be seen from Fig. 3, the transhipment can be reduced perhaps by 5% or so to generate more activity to Malaysian ports and gradually lead to expansion.

These analysis would perhaps assist port planners to understand the dynamics of port development.

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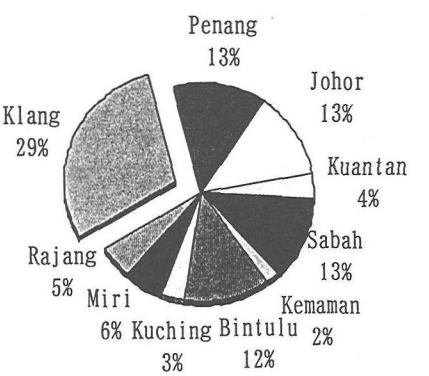


Fig. 3: Market share by ports - Malaysia.