

PORTS IN SOUTH EAST ASIA: ISSUES AND CHALLENGES¹

Nazery Khalid

Abstract

Ports in South East Asia, one of the world's most vibrant economic regions, have grown tremendously in terms of capacity to support tremendous growth in cargo throughput emanating from the boom in regional and global trade. This paper outlines the issues and challenges faced by the region's ports in the face of projected growth of seaborne trade between ASEAN nations and their trading partners. It argues that to capitalize on booming regional and global maritime trade, the regional ports need to expand their capacity and increase their level of competitiveness amidst intense competition to lure shipping lines and to facilitate the handling of greater volume of cargo.

Keywords: Ports, global trading, cargo, competition, and seaborne

Ports as critical trade facilitators in the South East Asian region

Seaports in the South East Asian (SEA) region play a crucial role as the gateway to the flow of goods and act as a vital link in facilitating trade in the region. Given its geographical spread, maritime shipping provides the most cost effective means for goods to be transported across the vast expanse of the SEA area.

The dramatic changes unfolding before our eyes in the way business, manufacturing and distribution activities are undertaken have had a drastic impact on the way ports are planned, developed, managed and branded. Globalization and liberalization have resulted in more intense competition for investments, resources and services which has been strongly felt in the SEA region. ASEAN has lost a significant amount of foreign direct investment (FDI) – crucial to power the economic engines of many of its member nations - to China, India, and other economic growth areas. These forces have also added greater emphasis on attaining economies of scale, service, quality, and efficiency to ports in the SEA region cater to a wider and more competitive marketplace. The advent of technology and systems have also altered the transportation landscape and the manner goods are delivered. All these have combined to radically change the way transport operators and other players in the logistics chain conduct their business.

Against this backdrop, ports in the SEA region are no longer seen as static entities where goods and passengers are loaded and unloaded. More and more, they are spoken of as strategic infrastructure and a crucial component of the supply chain. They have assumed an importance of strategic proportion to the extent that the competitiveness of nations in the SEA territory is measured in proportion to the level of capacity and efficiency of their seaports.² The requirement of port infrastructure and services, the business approach and even the workforce that

operates ports in the SEA region, have greatly changed in today's world. As critical trade facilitators, there is an ever-growing demand by port users for ports in the region to meet increasingly sophisticated requirements in the transportation of goods worldwide.

For SEA ports to play the vital role of facilitating trade efficiently and effectively amidst these dynamics, they must continue to evaluate the environment in which they operate, identify current trends and anticipate new ones, and formulate viable strategies to face the challenges brought about by those trends. Major developments such as containerization, the advent of new generation of super-sized ships, and the use of IT, for example, have a huge bearing on the operations and in determining the strategic directions of container ports. In addition, business trends like mergers and alliances amongst shipping liners, as a result of overcapacity and diminishing profit margins, and the breakneck changes in the logistics industry also affect port operations and strategies. Increasing convergence of transport modes, links and nodes – in response to increasing demand of shippers to deliver goods cheaper, faster, further, safer, and in bigger volumes - have given rise to greater need for ports to integrate with other transport modes. Changes in rules and regulations concerning trade, economies, ports and shipping - in keeping with a dynamic world in flux – also demand port authorities and terminal operators to be constantly on their toes to adjust their operations and processes accordingly. Even the changing relationship between ports and their users – which include, among others, newly industrializing economies (NIEs), government agencies, terminal operators, freight forwarders and cargo owners - is also having a telling impact on the development and management of ports in the SEA region.

Global trends in the development of ports are indicative of the need for ports to enhance their competitiveness to lure more main line operators and pull in more cargo.³ Ports are operating in an ever-increasing competitive environment in which they are constantly trying to outdo one another to gain market share. In the SEA region, one of the world's most vibrant economic areas, competition is fast coming from feeder ports bent on leveraging on their locations and increasing their capacity and productivity to handle greater volume of cargo and bigger ships. More than ever, the future roles of ports - including those in the region - will be determined by their competitive advantages.

It is within this dynamic landscape that SEA ports have to continuously develop and improve their capacity and competitiveness. For ports in the region to stay ahead of the competitive curve, their operators must continuously assess the environment surrounding their operations, identify the trends and draw up strategies to confront the challenges these trends demand. This is even more so in light of increasing focus of many ASEAN nations on trade as the main thrust of their growth engine. Port operators and authorities in the region must closely monitor international trends in areas that affect maritime trade and transport to assess their impacts on their development and strategic direction.

In an increasingly competitive business environment, ports which ignore these trends and the challenges they bring do so at their own peril. As such, it is imperative for trade-dependent nations in the SEA region to stay abreast of international trends that influence port operations to strategize appropriate plans to tackle the demands and challenges of these trends to ensure their survival and continued prosperity. That the performance of SEA ports today carries huge

strategic implications for the region's maritime and trade interests and its socio-economic well-being in general cannot be overemphasized.

To enhance the region's competitiveness as a trading area and its attraction as an FDI destination, SEA ports face huge challenges to meet the lofty expectations of being critical infrastructures that facilitate the region's trade. For starters, the port stakeholders must have in place a long-term strategy to develop the ports in a coherent manner to enhance their capacity, productivity and efficiency. This is essential in light of the importance of ports in facilitating trade in the SEA region and given the rising competition among economic regions to attract FDI and among ports worldwide to attract shipping lines. As the trade volume of SEA nations increase, in line with the expansion and diversification of their economies, there will be growing demand for port and shipping services in the region and increasing need for greater port capacity to handle larger trade volumes. As such, SEA port stakeholders must provide adequate financial resources and the necessary manpower to expand their capacity, improve their productivity and enhance their overall competitiveness. They must also attract huge amount of investment to develop and upgrade the ports to handle growing ship sizes and process large throughput volumes of a wide variety of cargos. Increasingly, ports in SEA act as crucial hubs in the trade supply chain, hence they must establish good linkages with other transport modes and offer a wide array of logistics and ancillary services to facilitate efficient handling of cargos. Only by meeting these challenges can ports in SEA rise to the occasion to facilitate growing trade volumes of their host countries and play a significant role in attracting investors to the region.

Port Development Boom in SEA

Since the introduction of the ASEAN Free Trade Area (AFTA), the production base of ASEAN member nations has been enlarged, thanks to the larger market created and the dismantling of trade barriers in the region.⁴ It is a glowing testimony to AFTA's success that most of the SEA region is currently a free trade area and 96% of all ASEAN trade involves the first six signatories of the CEPT scheme.⁵ This provides evidence to one of AFTA's greatest successes which is the elimination of tariffs on intra-regional trade.

Another testimony to AFTA's contribution in boosting regional trade is the expansion of intra-ASEAN (see **Table 1**). AFTA's successful implementation is highlighted by the growth of intra-regional trade in SEA, which made up 25% of the region's total trade in 2005.⁶ Since its introduction in 1992, many nations in the region have recorded high growth rates - thanks to the greater trade with their regional neighbors - with the notable exception of the period during the Asian financial crisis in the late 1990s.

Table 1: Intra-ASEAN trade 1993-2005

Year	Trade value(US\$ bil.)
1993	82.4
1995	123.8
1997	150.0
1999	131.5
2001	152.1
2003	159.5
2005	304.9

Source : ASEAN Secretariat

As seen from the table, intra-ASEAN trade has grown rapidly over since 3001, with the 1990s especially being the most prosperous decade for several member countries. This purple patch coincides with the introduction of AFTA, which has contributed to greater efficiency in production and increasing competitiveness in the economies of member nations. These in turn have had a catalyst effect in advancing intra-ASEAN trade.

The tremendous growth of world maritime trade is showing no sign of abating, and ASEAN ports lie in the center of major trade lanes facilitating international seaborne trade. Four of the world's top 20 container terminals are ASEAN-based (see **Table 2**), largely due to the trade boom across the ASEAN and East Asian region.⁷ The inclusion of four SEA ports in the list underscores the impressive growth of the region's port throughput. Their growth rates have also far outstripped other more established Asian ports such as Kobe and Yokohama in Japan, underscoring the sensational trade and economic development of the ASEAN region. The fact that the world's busiest port, Singapore Port, is based in the SEA region provides further testimony to the region's growing clout as a global maritime trade center.⁸

**Table 2: Top 20 container terminals and their throughput, 2002-2004
(in million TEUs)**

Rank	Port	2005	2004	% change2005-2004
1	Singapore	23.19	21.33	8.72
2	Hong Kong (China)	22.43	21.93	2.28
3	Shanghai	18.04	14.57	23.82
4	Shenzen	16.20	13.65	18.68
5	Busan	11.84	11.43	3.59
6	Kaoshiung	9.47	9.71	-2.47
7	Rotterdam	9.30	8.30	12.05
8	Hamburg	8.05	7.03	14.51
9	Dubai	7.62	6.43	18.51
10	Los Angeles	7.48	7.32	2.19
11	Long Beach	6.71	5.78	16.09
13	Antwerp	6.48	6.06	6.93
12	Qingdao	6.31	5.14	22.76
14	Port Klang	5.54	5.24	5.73
15	Ningbo	5.19	4.00	29.75
16	Tianjin	4.81	3.81	26.25
17	New York	4.80	4.45	7.87
18	Guangzhou	4.68	3.31	41.39
19	Tanjung Pelepas	4.17	4.02	3.73
20	Laem Chabang	3.81	3.62	5.25

Source : UNCTAD

Further evidence of SEA ports is provided by their throughput growth in recent decades (see Table 3). The growth of the region's share of container throughput vis a vis the total world throughput marks an unmistakable shift of the world's maritime trade center of gravity from the West to the East. The spread of containerization in trade throughout the SEA region accelerated the expansion of main ports in the region in the 1980s. This benefited the smaller ports in the region which act as feeder ports to the more established ports.⁹ Investments in ports in the SEA region continued well into recent years, with new ports such as the Port of Tanjung Pelepas (Malaysia) and Muara (Brunei) being built. Established ones such as Port Klang (Malaysia), Singapore, Laem Chabang (Thailand), and Tanjung Priok (Indonesia) have also continued to undergo expansion and capacity improvement to cater to greater regional trade.

Table 3: ASEAN container ports throughput vs. world ports throughput (mil. TEUs)

Year	ASEAN ports throughput (mil. TEUs)	World ports throughput (mil. TEUs)	ASEAN ports share of world ports throughput
1975	0.40	17.41	2.3%
1985	1.80	37.16	4.8%
1980	3.36	55.90	6.0%
1990	9.47	85.59	11.1%
1995	19.96	137.24	14.4%
2000	50.55	225.29	22.4%
2005	n.a	372.24	n.a

Note: n.a = not available

Source : Containerisation International, UNCTAD

Leading the explosion of growth of ASEAN ports was Singapore which emerged as the world’s busiest port in 2006, handling 24.8 million TEU.¹⁰ Besides container ports, other types of terminal are also being commissioned to facilitate the ASEAN region’s increasing trade and growing consumer demands. Malaysia’s Bintulu Port has emerged as the world’s largest single LNG port capable of handling up to 25 million tons of cargo per year.¹¹ The plan to build additional deepwater ports and to develop existing key ports in Vietnam also underscores the intensity of maritime infrastructure development in the SEA region and its ambition to enhance its maritime competitiveness.

ASEAN ports have also engaged in strategic alliances with foreign port authorities and terminal management companies. Port Klang, for example, has entered into a strategic partnership with various ports such as Marseilles (France), Ningbo (China), San Antonio (Chile), Conakry (Guinea Republic), Dakar (Senegal), Mina Zayed (UAE), and Luka Koper (Slovenia).¹² Such engagements underline the ambition of ASEAN ports to grow further, in line with the explosive trade growth in the country.

China’s Rising Trade with South East Asia

China’s increasingly voracious appetite for international trade is one of the major factors currently energizing growth of the global economy. Its growing economic stature, combined with the sweeping forces of liberalization and globalization, have significantly facilitated greater global trade and fueled consumer demands in an unprecedented scale. These forces have spurred international trade dramatically over the last few years.

Barring sharp economic turnarounds and political turmoil, China is expected to continue to power the engine of international trade in the years ahead. This bullish prognosis presents a healthy outlook for the economies in the SEA region as ASEAN has emerged as China’s fifth largest trading partner. Its burgeoning international trade with the region has had an indelible impact on the growth of the region’s economies. Statistics from the ASEAN Secretariat showed that China-ASEAN trade volume has been on an up-trend over the past decade (see **Table 4**). In 2004, the trade volume between the two surpassed the USD100 billion mark for the first time to reach US105.9 billion.

Table 4: China’s trade with ASEAN, 1994-2006 (USD billion)

Year	Export	Import	Total
1994	5.304	5.759	11.063
1996	7.474	9.218	16.692
1998	9.203	11.212	20.414
2000	35.035	26.481	61.516
2002	19.548	23.21	42.760
2004	42.90	63.00	105.90
2006	64.13	81.04	145.17

Sources : ASEAN Secretariat, Xinhua News Agency

China-ASEAN trade relations are set to enjoy brighter prospect with the China-ASEAN Free Trade Agreement which is expected to be implemented in 2010.¹³ The initiative, which will lead to the creation of the world’s largest free trade zone, is projected to double trade volume between the two.¹⁴ This historic pan-Asian trade pact is poised to rival the US and European Union as a trade bloc.¹⁵

Simulated by China’s economy, the volume of world container trade is expected to grow larger. Much of this trade will trickle to the ASEAN region, being an increasingly important trading partner for China. The Middle Kingdom’s robust economic and trade growth is set to contribute further to the increase in container traffic movement and throughput in ports in the SEA region, besides its own.

In many SEA countries, the ‘China phenomenon’ has resulted in the investment and development of infrastructure to support the explosion in trade with the Middle Kingdom. At the forefront of infrastructure enjoying the spillover from greater trade between the region and China are ports, a critical facilitator of international trade between them. China’s surging trade has directly and indirectly resulted in the capacity improvement and expansion of ASEAN ports. Better infrastructure and supporting services, in turn, have become catalysts to even greater demands for more goods to be delivered even faster and at cheaper costs between SEA nations and China and their other trading partners.

Many of the world’s top ports have handled record throughput over the last few years, mainly fueled by the flood of Chinese exports to every corner of the globe and its growing appetite for commodities and consumer goods. Reflecting ever-growing inter-regional trade, containerized trade between China and SEA countries is expected to grow in the years to come. This bodes well for port throughput and port development in the region. SEA ports such as Singapore Port and the Malaysian ports of Port Klang and Tanjung Pelepas have benefited tremendously from the flourishing Chinese economy, recording substantial growth in throughput, and are well-positioned to enjoy the patronage of Chinese trade.

The positive vibes from the joint efforts in regional cooperation between China and the SEA region are set to drive economic growth in the region. As it is, trade between the two is booming, so much so that ships calling at ports in the region have been hit by delays and congestions. Much of this was attributed to the inability of those ports to keep up with surging global trade volumes as a result of the thriving Chinese economy.¹⁶

The ratification of the China-ASEAN accord is expected to provide access to duty-free goods to 2 billion people.¹⁷ This agreement should augur well for trade between China and the region.¹⁸ More so, the development is expected to have a

terrific impact on the growth of ports and shipping in the SEA region to facilitate the impending trade explosion.¹⁹

Issues and Challenges for Ports in South East Asia

The rise of seaborne trade volume has exerted a noteworthy impact on trade, transportation, technology, business operations, economies, and the development of seaports in the SEA region.

There is an unmistakable trend of shipping lines to commission the construction of bigger container vessels to accommodate greater demand for shipping services resulting from rising global seaborne trade. This in turn has influenced ports in the SEA region to upgrade and improve their infrastructure to accommodate such ships. Investment on additional capacity, equipment and deepening of berths is necessary for ports to gain competitive edge in attracting shipping lines to facilitate greater intra- and extra-regional trade.

Energized by their strong performance in handling greater volume of trade, ports in the region have also expanded and improved not only in terms of infrastructure and equipment but also in their functions and roles. Many have added and improved on value added logistics and ancillary services to attract more shipping lines and facilitate the handling of greater volumes of cargo. Many have been privatized to improve their management and to facilitate expansion. Ports in the region are also increasingly integrated into the intermodal links, developing connections with road, rail and even air transport modes.

Major seaports in SEA nations will have to be prepared to keep pace with the infrastructure and resources to facilitate greater trade if they do not want to be left behind in capitalizing on the growing regional and global seaborne trade. Challenges abound for port planners in the SEA region to plan their port development well, enhance infrastructure, stay abreast with state-of-the-art technologies, increase productivity, organize operations efficiently, invest wisely, and allocate resources effectively to cater to greater maritime trade volume.

The influence of developments in trade and transport look set to color the regional ports scene in the years ahead. Although the consequence of their impact may not be applicable to all the ports in the SEA region, some are notable for their magnitude and for mirroring global trends in port development. They include advances in shipping technology, improvement in efficiency, concentration of resources and processes, and door-to-door delivery stretching across the supply chain. These have been detrimental to the planning, organization, development, management, and operation of key seaports in the region.

If current trends are any indication, the next decade or so is poised to be an even busier period for maritime trade in the region. As the liberalization of the world economy continues and new markets are opened via trade agreements, global maritime trade will increase and will exert its impact on port development. Ports in the SEA region will be expected to play an immense role amidst this challenging scenario in fulfilling their immense role as crucial components of maritime transportation and international trade facilitators.

It is expected that with the bullish prognosis of regional and global seaborne trade, the future development of SEA ports will be marked by an increasing need to adequately support greater cargo volume and cater for ships with bigger capacity

and better technology. Ports in the region are expected to be more involved in logistics services, undertaken either alone or via strategic alliances with logistics operators. Mirroring a worldwide trend of their evolving role, ports in the region are seen to act more as transit points of cargos within the intermodal transport network than mere recipients, processors and distributors of cargos.

It is likely that the pursuit to accommodate greater trade volume will exert influence on the role of ports in the region and the way they will be developed. It is foreseen that this will result in significant changes in which will lead to accelerated integration of ports and carriers, a shift towards door-to-door service and logistics solutions, and increasing investment by carriers in ports to achieve economies of scale. All these will have a huge impact on the manner in which SEA ports are planned and run.

Conclusion

Barring any drastic changes to the status quo, regional and global seaborne economy and trade are expected to chart impressive growth in the near future. This will most likely boost cargo throughput in the SEA region's ports even further and demand greater capacity, productivity and investments to cater to growing cargo volume.

SEA ports are expected to record firmer growth in container volumes in years to come, boosted by regional trade as a result of increasing integrating of the region's economy and the continued blossoming of China's economy. Ports in the region will have to keep up with developments and trends in trade, economy, investment, production, technology, transport and ports management in order to survive the onslaught of competition from ports in other economic regions. They will need to enhance their capacity and competitiveness to reap the opportunity from the projected growth of seaborne trade.

With the increase in export and import trade among countries in the SEA region and with its trading partners, the role of maritime transport services in facilitating greater seaborne trade in the region will become more prominent. In coping with the robust growth, ports in the SEA region must be dynamic and able to accommodate increasingly larger trade volumes. On this score, it is heartening to note that many main regional ports have expanded or are planning for expansion in terms of capacity and facilities to capitalize on the rising trade volumes. But this will continue to present a multitude of challenges for the regional ports to build and improve on their capacity, productivity and competitiveness to facilitate greater trade volume and to fulfill their increasingly strategic role as trade facilitators.

The trends discussed in this paper will pose very critical challenges for the planning, development, operations and strategies of SEA ports for many years to come. Hence, it is imperative for port planners, authorities and operators in the region to grasp these trends and stay abreast with them to survive the increasingly competitive fight to attract shipping lines and cargos.

Endnotes

- ¹ Paper presented at ASEAN Emporium, Department of South East Asian Studies, Faculty of Social Sciences, University of Malaya, 23 April 2007. The opinions expressed herein are entirely the authors' own and do not reflect MIMA's official views.
- ² Literature suggests that the efficiency of ports is an important determinant of shipping costs, hence the trade competitiveness of a country. Inefficient ports increase handling costs of cargo, which is one of the components of shipping cost. See for example X. Clark, D. Dollar and A. Micco, "Maritime transport costs and port efficiency," World Bank Working Paper, February 2001.
- ³ A research on ports conducted by Coopers & Lybrand in 1996 postulates that the selection of port by shipping company or a liner is based on several factors. These factors can be grouped into seven key criteria : (i) Frequency and destination of ocean liners. (ii) Speed of turnaround at port. (iii) Level of port charges. (iv) Quality of services provided at port. (v) Availability of port ancillary services. (vi) Complexity of port legislation. (vii) Provision of information by port operators.
- ⁴ ASEAN Secretariat, "South East Asia : A free trade area" <http://www.aseansec.org/viewpdf.asp?file=/pdf/afta.pdf> (accessed 17 March 2007)
- ⁵ Ibid.
- ⁶ ASEAN Secretariat, "Asean Statistics", <http://www.aseansec.org/Stat/Table17.pdf> (accessed 12 April 2007).
- ⁷ United Nations, Review of Maritime Transport 2006, United Nations Conference on Trade and Development, Geneva, 78
- ⁸ Ibid., 76.
- ⁹ P. Rimmer, "The spatial impact of innovations in international sea and air transport since 1960," In Chia, L.S (ed.), *South East Asia transformed : A geography of change* (Singapore : ISEAS), 290.
- ¹⁰ Maritime and Port Authority Singapore, <http://www.mpa.gov.sg/infocentre/portstatistics/portstats.htm> (accessed 3 April, 2007)
- ¹¹ A. Rahim, "The Bintulu Experience : The World's Largest Single LNG Facility," Paper presented at East Malaysia Maritime Conference 2005, Kota Kinabalu, Malaysia, 22-23 September 2005.
- ¹² Gateway (various issues), Port Klang Authority.
- ¹³ CNN International, "China, ASEAN to create trade bloc", <http://edition.cnn.com/2004/WORLD/asiapcf/11/29/laos.asean/index.html> (accessed on 29 March 2007).
- ¹⁴ J. Bishop, "China-ASEAN FTA to Boost Regional Integration – Merrill Lynch", *Philippine Daily Enquirer*, http://www.bilaterals.org/article.php3?id_article=2001 (accessed 16 March 2007).
- ¹⁵ Guardian News, "Asean signs historic deal with China", *Guardian Business News*, <http://www.guardian.co.uk/business/2004/nov/29/china.internationalnews> (accessed 29 March 2007).
- ¹⁶ Fang, N., "Booming trade at PSA terminals", *Business Times*, 29 June 2004.
- ¹⁷ The China-ASEAN pact heralds China's multilateral approach to increase its sphere of influence in the region via trade and economic cooperation. At the core of this strategy are free trade agreements such as the accord and regional financial cooperation among East

Asian countries. See, for example, Kuik, C.C., "Multilateralism in China's ASEAN Policy : Its Evolution, Characteristics and Aspirations," in *Contemporary South East Asia*, Vol.27, No.1 (April 2005), 102-122 for a detailed discussion on China's multilateral approach in its foreign policy towards ASEAN.

¹⁸ Boyd, A., "ASEAN, China all smiles for now", *Asia Times Online*, 3 December 2004, http://www.atimes.com/atimes/Southeast_Asia/FL03Ae02.html (accessed 30March 2007).

¹⁹ It has been argued that SEA nations are "bandwagoning" with China only to tap into its enormous trade potential and value maintaining cordial relations in cognizance of its potential to become a superpower. However, it would be hard to argue that China's actions in the region have thus far not in keeping with good neighborly spirit and that trade and economic initiatives involving ASEAN and China have not been beneficial to the regional economies.