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THE MARITIME POTENTIAL OF PENANG

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ABSTRACT

THE MARITIME POTENTIAL OF PENANG[1]

Location at the entrance /gateway to the Indian Ocean and its long coastline provide Penang State with a substantial maritime potential. The maritime potential and its utilization by a maritime economy have been captured by an index, developed by the Centre for Policy Research and International Studies, USM. Using data of the CenPRIS Ocean Index the paper will analyse the competitive position of Penang in relation to Singapore, Johor, Negeri Sembilan, Malacca, Selangor, Perak, Kedah and Perlis, all states along the Straits of Malacca. The question will be asked and at least partially answered, whether or not Penang has realized its maritime potential and has moved ahead of its competitors along the Straits of Malacca, serving as a gateway to the Indian Ocean. The development of the other maritime states will provide a benchmark, through which the performance of Penang can be measured. It will be argued that Penang's maritime potential as a gateway to the Indian Ocean could be more fully realized and some of the connections across the Indian Ocean will be highlighted.

KEYWORDS: Ocean Index, Maritime Economy, Development, Shipping, Fisheries, Malaysia

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1. Work on the CenPRIS Ocean Index was carried out jointly by a team of CenPRIS-USM and ZEF-Bonn by Azhari Karim, Hans-Dieter Evers, Solvay Gerke, Sezali Darit, Guido Lüchters, Benjamin Schraven, Marissa Idenal and Pamela Nienkemper. This paper was presented at the Conference "Penang and the Indian Ocean", Georgetown, Penang, 17-18 September 2011, organized by ThinkCity-Khazanah Nasional, University of Cambridge, UK and CenPRIS, Universiti Sains Malaysia.

1. INTRODUCTION: CONNECTING THE INDIAN OCEAN AND THE SOUTH CHINA SEA

The sea lanes from East Asia to the Indian Ocean pass through *Nusantara*, the Malay world "between the islands". Throughout history different centres have emerged to make use of the opportunities and advantages offered by a location close to trade and shipping, offering shelter, supplies and trading opportunities. Srivijaya, Junk Ceylon, ancient Kedah, Aceh, Malacca, Johor, Brunei Darussalam, and further afield Banten, Gresik and Makassar are just some of the places to mention. They have lined, like pearls on a string, the sea lanes from East to West and from West to East. Singapore, Port Kelang and Penang are the more recent additions to these places that have thrived by using location as a resource. To the West, "the Indian Ocean Region has definitively reached the forefront of world geopolitics and is considered as an area of crucial geostrategic importance" (Bouchard and Crumblin 2010:27). To the East, the South China Sea is hotly contested because of its maritime resources, oil, gas and fish, while being transverse by shipping lanes to the economic growth poles of China, Japan and Korea.

The authors of this study are aware of the burden of history or of "path dependency", as terminology-happy economists call it, though the emphasis of this short paper will be on the current situation. Picking up the ancient idea of location as a resource, we will ask the question, whether some regions, states and countries have made good use of this resource, whereas others are trailing behind. In this we follow a very narrow path of geographical, social and economic indicator research, while being well aware of the limitations of this approach. In fact, using indicators to describe and analyse a very complex process, we engage in an extreme case of a "reduction of complexity" (to borrow a term coined by Niklas Luhmann 1968). This reductionist approach will have at least one decisive advantage. It will allow us to compare different locations, port cities and countries over large areas and a longer time span and hopefully yield some robust results and pointers for further more detailed research. First of all we shall provide a non-technical explanation of the CenPRIS Ocean Index (COI) to be used in this study.

2. THE CenPRIS OCEAN INDEX (COI)

The Ocean Index measures, how far regions, nations or states have made use of their potential of having access to oceans, coast lines along seas and an average short distance from land to sea. Having access to water ways and oceans is seen as a resource that can be used to improve the competitive positions of nations in the world economy.

In constructing the indicators we have largely followed OECD standards (Nardo, Saisana et al. 2005). We have also adopted standard computing practices used for the Human Development Index (UNDP 2009:208-212) and the Knowledge Assessment Methodology (KAM) of the World Bank (World Bank Institute 2008). The GIS mapping methods are described in our earlier paper (Evers, Genschick et al. 2009, Evers and Karim 2011). As severe criticism (Lüchters and Menkhoff 2011,1996) has forced a revision of the HDI, we also recalculated our COI, following partly the new 2010 UNDP standards.

For the “Maritime Potential Index” (MPI), the standardized variables “mean distance to coastline in kilometres” (MDC) and “Percent of coastline of total country outline” (PCTCO) were chosen. The values for the MDC variable were subtracted from the value 100 so that both variables “Mean Distance to coastline (in kilometres)” and “Percent of coastline of total country outline” have the same poles (100=high maritime potential; 0=low maritime potential).The MPI thus ranges between the poles of a landlocked country (=0) and a pure island country (=100). The variable “Mean Distance …” generally relativises the maritime potential for those countries, which may have a higher percentage of coastlines in their total outlines but on the other hand also have relatively big landmasses; those countries are assumed to have a lower maritime potential, which should be reflected in the MPI. This assumes that a large landmass offers more chances for land-based economic activities rather than investments into a maritime-based economy.

The CenPRIS Ocean Index (COI) introduces a new and we believe innovative feature, because it is different from other indicators, like GDP, HDI or, for that matter, various university rankings. The latter are perhaps welcomed by those universities, occupying top positions, but less so by institutions further down the list. These rankings are, indeed, very unfair. A university with some 500 years of history (like Cambridge,

Yale or Heidelberg), a staff of more than a thousand PhD level researchers and endowment funds of billions of Euro or Dollars has, of course, a much higher potential to produce innovative research results, published in top journals, than a new university with limited staff and hardly any research funds (like Universiti Sains Malaysia or other ASEAN institutions). What should count is, whether the potential of, in this case a university, is actually met by its performance. A university or research institute with a high potential in terms of human resources and location in a knowledge cluster (Evers and Gerke 2011; Evers, Gerke, Menkhoff 2011) may make less good use of this potential compared to a less endowed institution. In short, the innovative aspect of the CenPRIS Ocean Index in contrast to other indicators is that it interprets geographical features as a resource and introduces a sense of "fairness", as it attempts to measure how far a maritime potential has actually been realized.

3. THE MALAYSIAN MARITIME ECONOMY

Our study started with a comparison of ASEAN countries and their maritime economy (Evers and Karim 2011a). It showed that Malaysia occupies a medium score of 56, if ranked on the COI on a scale from 0 to 100. This means that Malaysia still has ample chance to develop its maritime potential in comparison to other ASEAN countries (Evers and Karim 2011b). From a global perspective, Malaysia still ranks among the top 20 maritime nations, but exports only 2.2 % of container freight worldwide through its harbours (measured by TEU, 2009), in comparison to 1.7% for India and 25.2% for China[2].

The current study, still under way, compares the maritime economy of coastal areas from Singapore on the eastern entrance to the Straits of Malacca to Penang State at the exit to the Indian Ocean, with Johor, Malacca, Selangor, Perak, Negeri Sembilan, Kedah and Perlis in between. All these states share the opportunity to profit to a certain extent from the flow of shipping and trade through the Straits of Malacca (MIMA 2009),and they all have extended coast lines and ports of different size and importance. They have fleets of trawlers and small-scale fishing boats, and they have their own shipyards, ocean going ships, coastal vessels and ferries. In other words, they are

2. **Source:** IHS Global Insight, World Trade Service, http://www.worldshipping.org/about-the-industry/global-trade/trade-statistics#2

making use of their maritime location to a bigger or lesser degree. How far their maritime economy has been developed is measured by the Maritime Economy Index (MEI)3. The time series data of the MEI also shows the dynamism of the maritime economy, i.e. whether the maritime related economic activities have increased, decreased or remained stagnant. As it is not based on monetary values it is perhaps rather comparable to the Human Development Index (HDI) than measures of economic development, like GDP. In any case it is an index, measuring an economic sector of Malaysian states.

TABLE 1: Dynamic Maritime Economies, MEI Malaysia 1999 to 2009

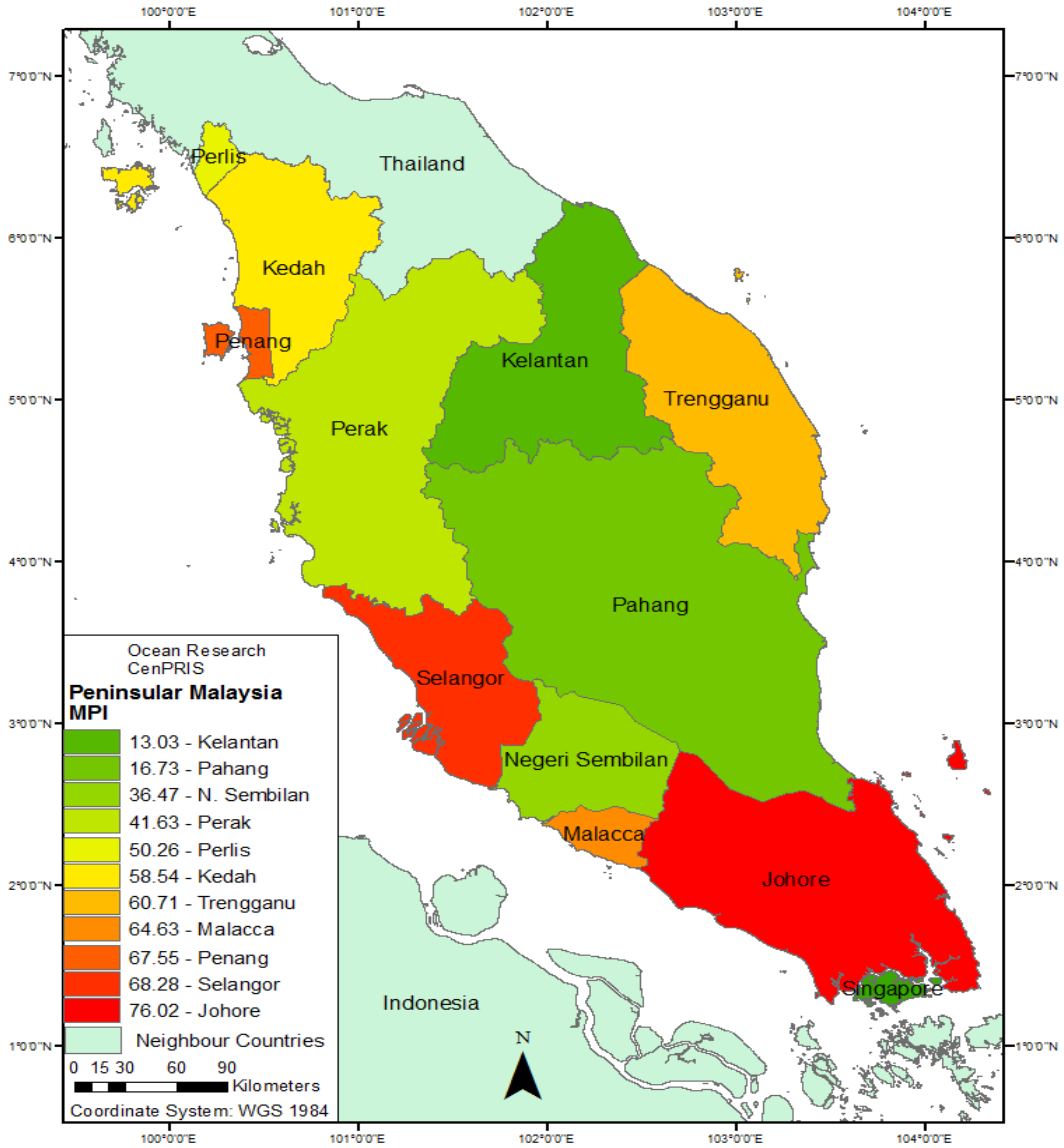
State	1999	2005	2009	Change (Ranked)	Average Annual Growth Rate
Johor	14.03	31.61	39.89	25.86	10.45
Selangor	22.44	32.16	43.44	21.01	6.61
Perak	16.30	19.20	24.62	8.32	4.13
Perlis	8.89	11.84	16.03	7.14	5.90
Kedah	8.65	9.22	14.63	5.99	5.26
Sarawak	20.40	23.64	25.87	5.47	2.37
Kelantan	5.85	6.73	10.10	4.25	5.46
Penang	7.17	7.78	11.05	3.88	4.32
Sabah	30.22	26.17	33.00	2.78	0.88
Pahang	11.26	11.43	13.38	2.12	1.72
Malacca	0.70	1.03	1.37	0.66	6.64
Negeri Sembilan	1.30	1.54	1.88	0.58	3.71
Terengganu	16.24	12.03	12.67	-3.57	-2.48

This index “indicates” that Selangor with Malaysia’s premier port facilities at Port Kelang and Johor (both MEI 32 on the basis of Malaysian states 2005) have dynamically developed their maritime economy. Penang’s maritime industry is, in contrast, relatively underdeveloped. Singapore, a highly industrialized island state, in line with its overall economic position ranks high on the MEI (score 91 on the ASEAN MEI in 2005, see Evers and Karim 2011).

3. In this paper we have excluded off-shore oil production from the MEI.

4. USING THE MARITIME POTENTIAL OF MALAYSIAN STATES

MAP 1: Maritime Potential, Malaysian States

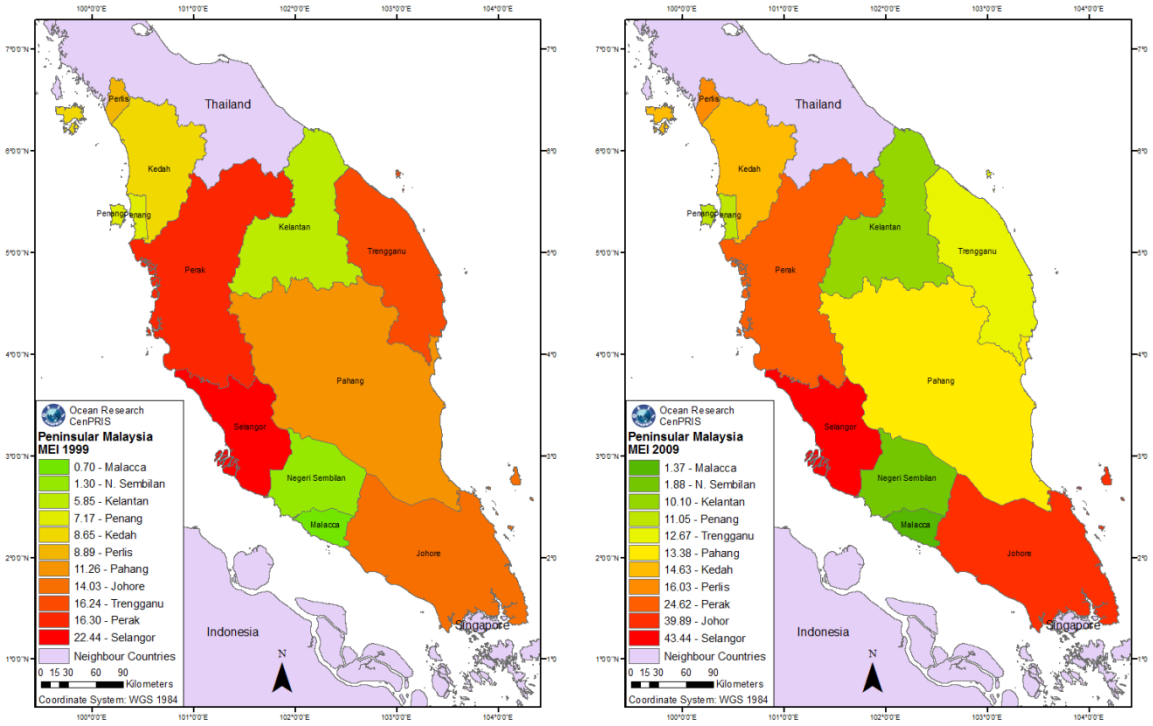


Malacca, Penang, Selangor and Johor, all located along the Straits of Malacca, also have the highest maritime potential, as measured by the MPI. Their long coastline relative to their land area, their estuaries and sheltered anchorages and their closeness to major shipping lanes and fishing grounds all explain their high potential to develop a maritime industry.

TABLE 2 : The Maritime Potential of Malaysian States (Ranked by MPI)

State	MPI	State	MPI
Kelantan	13.03	Kedah	58.54
Pahang	16.73	Terengganu	60.71
Sarawak	36.25	Malacca	64.63
Negeri Sembilan	36.47	Penang	67.55
Perak	41.63	Selangor	68.28
Perlis	50.26	Johor	76.02
		Sabah	76.93

MAP 2: Maritime Economy Index (MEI), Peninsular Malaysia 1999 and 2009



Our index of the maritime economy shows that during the past 20 years the maritime sector of the Malaysian economy has become more concentrated along the Straits of Malacca rather than along the South China Sea. This is partly due to the relative decline of fisheries along the upper East coast, including the illegal practice of selling fishing licences to Thai fishermen and landing fish in Southern Thailand rather than in Malaysia. But also along the Straits of Malacca the maritime industry, including port development, has increasingly been concentrated in Selangor and at the southern tip of Johor, i.e. at the Straits of Malacca, the Singapore Strait and the South China Sea. The growing importance of harbours and the shipping along the Straits is partly explained by trade with India, which, between 1999 and 2010, has grown in value (US$)

by an average of 14% per year (SOURCE: Department of Statistics Malaysia (http://www.indianhighcommission.com.my/ec.php).

Measuring the status and growth of the maritime industry and relating it to the maritime potential, a different and more interesting image emerges. Malaysian states have made different use of their maritime potential. The CenPRIS Ocean Index (COI) measures how far this potential has been used by its maritime industry. Selangor with its thriving port of Kelang has made good use of its maritime potential, especially its location on the Straits of Malacca. This is in contrast to Penang that despite its location at the North-western end of the Straits as a potential gateway to the Indian Ocean, and its high maritime potential as an Island and coastal state, ranks rather low on the COI. Fortunately during the past decade its COI has increased at an average annual rate of 9.4%, which means that the utilization of Penang's maritime potential has been steadily improved. However Penang is still a long way off in comparison to the most dynamic Malaysian state Johor (see table 3 to 5 and map 3) . Due to the construction of new port facilities of Tanjung Pelepas and Pasir Gudang and the development of the Iskandar economic cluster, the maritime economy thrived and has become the most dynamic in Malaysia (Evers, Ramli, Nienkemper 2011). Johor's maritime industry index (MEI) changed by 26 points or 31% between 1999 and 2009, and that of Selangor by 21 points or 25% (see table 1).

Singapore at the Eastern end of the Straits of Malacca has, despite its big harbour and shipbuilding facilities not fully made use of its maritime potential, as measured by the ASEAN COI (54 in 2005). The Singapore government has, however, reacted and is supporting its maritime industrial cluster (Menkhoff and Evers 2011).

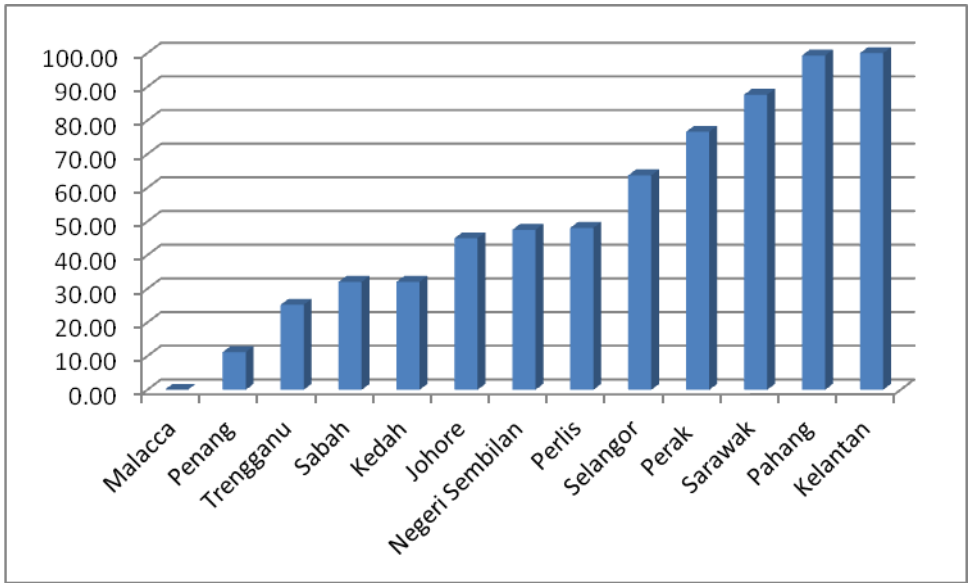
TABLE 3 : CenPRIS Ocean Index (COI), Malaysian States, 1999 to 2009

STATE	1999	2005	2009	Change (%)
Perlis	38.58	43.18	48.12	8.80
Kedah	24.01	24.50	32.09	7.46
Penang	6.07	6.56	11.21	4.74
Perak	66.01	70.60	76.65	9.82
Selangor	30.95	47.15	63.70	30.24
Negeri Sembilan	49.19	49.17	47.52	-1.54
Malacca	0.00	0.00	0.00	0.00
Kelantan	97.07	98.28	100.00	2.70
Terengganu	33.29	25.60	25.24	-7.43
Pahang	100.00	100.00	99.30	-0.64
Johor	3.33	32.92	44.98	38.45
Sabah	29.46	22.02	32.06	2.40
Sarawak	82.24	87.46	87.65	4.99

TABLE 4 : Ranking of Malaysian States on COI 2009

STATE	1999	2005	2009
Malacca	0.00	0.00	0.00
Penang	6.07	6.56	11.21
Terengganu	33.29	25.60	25.24
Sabah	29.46	22.02	32.06
Kedah	24.01	24.50	32.09
Johor	3.33	32.92	44.98
Negeri Sembilan	49.19	49.17	47.52
Perlis	38.58	43.18	48.12
Selangor	30.95	47.15	63.70
Perak	66.01	70.60	76.65
Sarawak	82.24	87.46	87.65
Pahang	100.00	100.00	99.30
Kelantan	97.07	98.28	100.00

Figure 3 : CenPRIS Ocean Index (COI 2009): utilization of maritime potential by Malaysian States, 2009



It should be noted that the COI in its present form (phase one) is heavily weighted on the fishing sector, both on the fish production as well on the employment side. The other large component is container and bulk cargo shipping.

If we compare the maritime potential index (MPI) with the MEI, a somewhat different picture emerges (table 2). It shows that Singapore has improved its position and is making much better use of its high maritime potential, moving up from 29 to 54 on the Ocean Index (Evers and Azhari-Karim 2011) between 2000 and 2005, similar to Selangor with a score of 31 in 1999, 47 in 2005 and 63 in 2009. This means that these two states have increasingly made use of their maritime potential and moved up the ranking of Malaysian states and Singapore.

TABLE 5 : CenPRIS Ocean Indices, 2009

State	MPI	MEI 2009	COI 2009
Perlis	50.26	16.03	48.12
Kedah	58.54	14.63	32.09
Penang	67.55	11.05	11.21
Perak	41.63	24.62	76.65
Selangor	68.28	43.44	63.70
Negeri Sembilan	36.47	1.88	47.52
Malacca	64.63	1.37	0.00
Kelantan	13.03	10.10	100.00
Terengganu	60.71	12.67	25.24
Pahang	16.73	13.38	99.30
Johor	76.02	39.89	44.98
Sabah	76.93	33.00	32.06
Sarawak	36.25	25.87	87.65

Note: MPI=Maritime Potential Index; MEI=Maritime Economy Index; COI=CenPRIS Ocean Index

MAP 3 : Changes in the Ocean Index in percentages, Malaysia 1999 to 2009

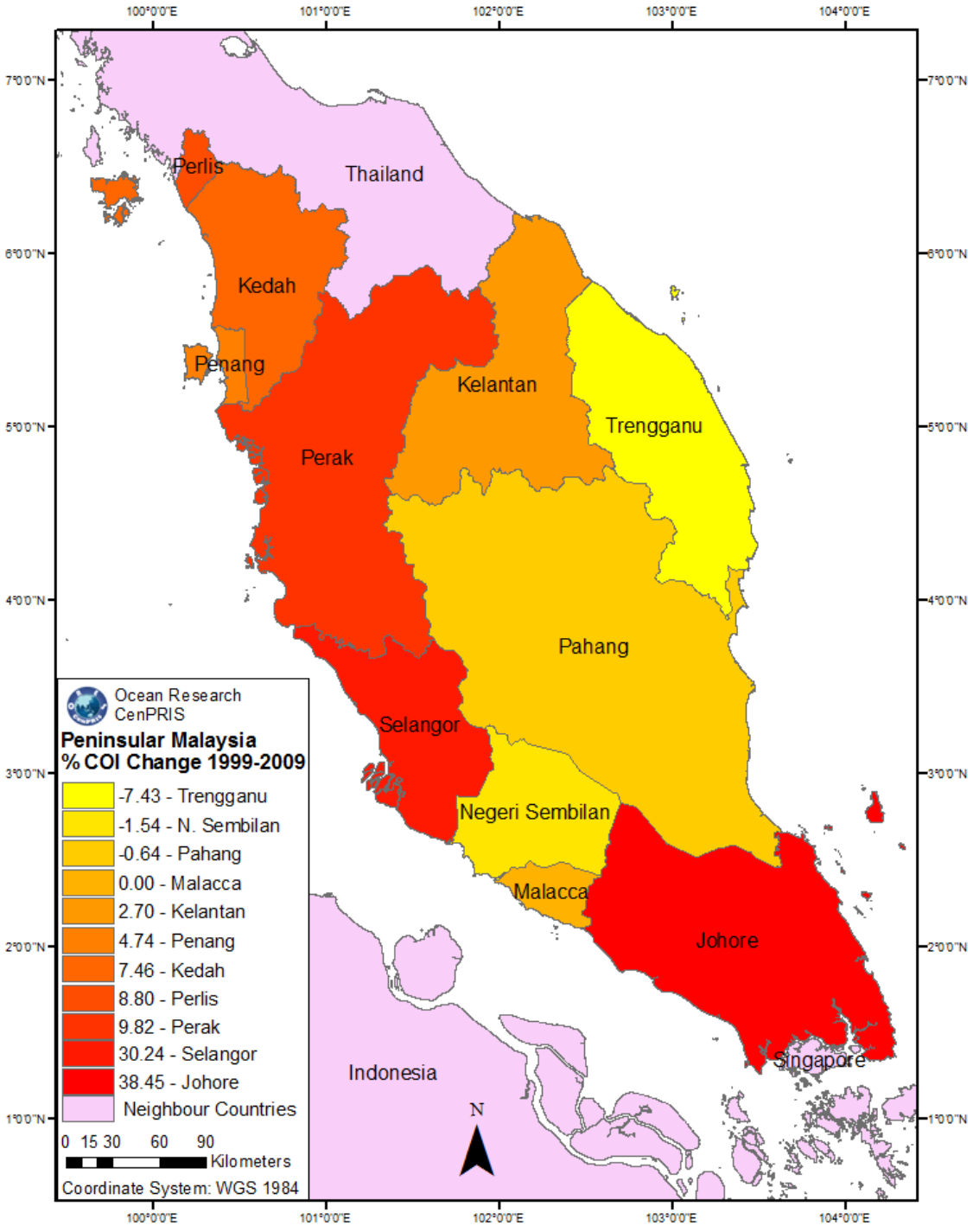


TABLE 6 : Malaysian COI Average

State	COI 2009	Difference to COI - AVERAGE
Perlis	48.12	-3.31
Kedah	32.09	-19.34
Penang	11.21	-40.22
Perak	76.65	25.23
Selangor	63.70	12.28
Negeri Sembilan	47.52	-3.90
Malacca	0.00	-51.42
Kelantan	100.00	48.58
Terengganu	25.24	-26.18
Pahang	99.30	47.88
Johor	44.98	-6.44
Sabah	32.06	-19.37
Sarawak	87.65	36.23
Average	51.42	0.00

FIGURE 4 : State below and above Malaysian Average, 2009

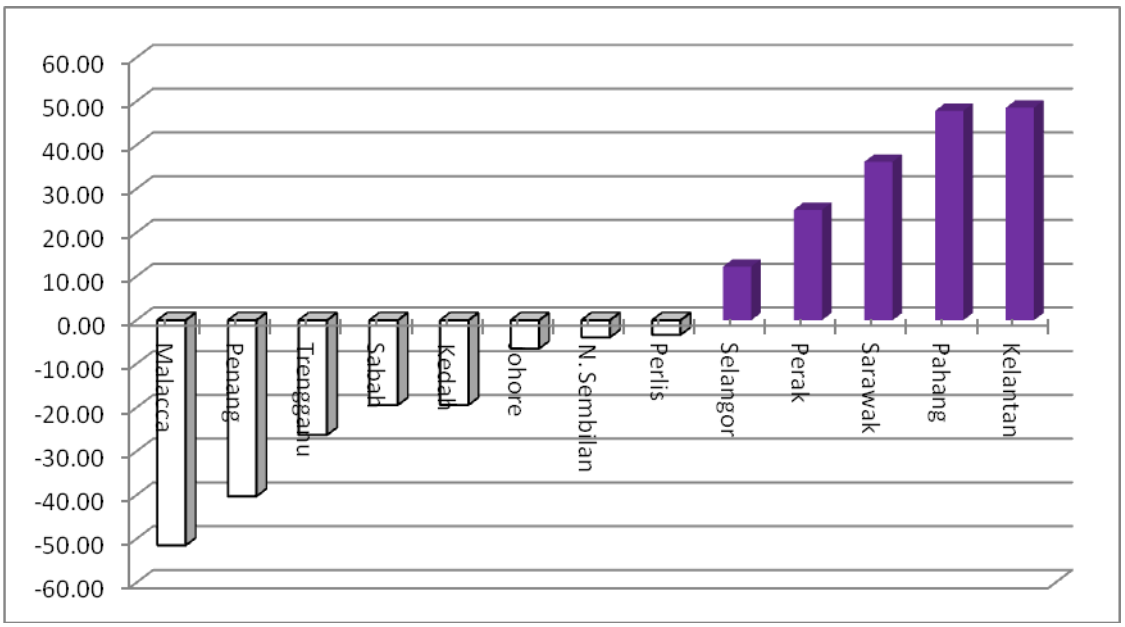
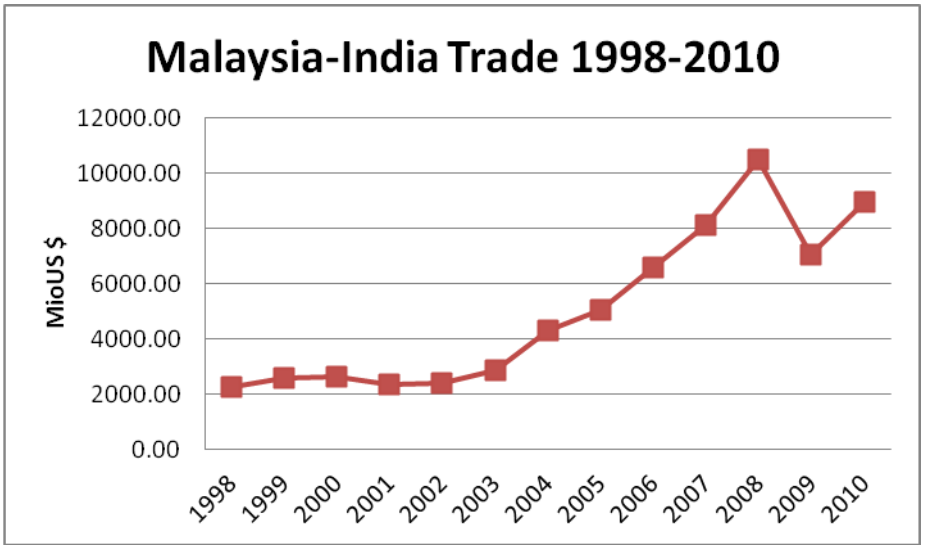


TABLE 7: The main activities linked to Penang's maritime economy sector

1.	Inshore and offshore fishing
2.	Ocean and coastal shipping
3.	Marine tourism and leisure
4.	Ship building and repairing
5.	Port services
6.	Shipping services
7.	Maritime auxiliary services i.e. banking, insurance, legal and consultancy

Source: SERI 20072

FIGURE 7: Growth of Total Trade between Malaysia and India 1998-2010



Source: http://www.indianhighcommission.com.my/ec.php

5. CONCLUSION: THE HIDDEN MARITIME ECONOMY OF PENANG

The strategic importance of the Straits of Malacca for world trade and ASEAN security could hardly be over-emphasized. The straits are not only rich in marine resources but are one of the oldest and busiest shipping lanes in the world. They serve as a primary conduit for the movement of cargo and human traffic between the Indo-European region and the rest of Asia and Australia. They are the shortest East-West sea route compared to Indonesia's Lombok Strait. Every year billions of Euro worth of goods and services pass through the region (Gerke and Evers 2008:8, 2011). There are conflicting estimates, but it appears

that about 50.000 ships pass through the Straits annually, transporting a third of world's trade. More than 16 million TEU of containers pass through Malaysia's ports (2009), and this figure is likely to increase with growing trade with India and China. The Indian Ocean region and India itself have steadily increased in geopolitical importance. "India's total trade volume with East Asian economies now exceeds that with the European Union or the United States, while more than half of India's trade now goes through the Malacca and Singapore Straits" (Wall Street Journal 05-09-2011; http://online.wsj.com). Penang, as the gateway to the Indian Ocean should gain from India's rise, unless its maritime potential is grossly neglected. Malaysian-Indian trade that increased 27% in value last year (2010) alone, has certainly supported the growth of Port Klang, but apparently less so the port and the maritime industry of Penang.

"Penang's one great asset is its location" (Kharas, Zeufack, Hamdan 2010:12), but as our Ocean Index shows, Penang has only partially made use of its maritime potential. It is surprising that major development plans and publications hardly touch on the maritime industry of Penang. Maritime studies are generally underrepresented in the social sciences (Azhari-Karim 2011, Steinberg 1999); it is even more puzzling that the Pilot Study for a New Penang of SERI (Ooi and Goh 2010) does not contain a single chapter on the maritime industry in general, nor on shipping or fisheries. The comprehensive World Bank/Khazanah Study on Penang touches only occasionally on the maritime sector and does not include the maritime sector in the proposed levers of change (Kharas, Zeufack, Hamdan 2010:77 ff.); nor is it highlighted as one of the main policy recommendation of "positioning Penang" (subtitle of the book)[4]. The new "Economic Transformation Programme" has no separate chapter on the maritime economy (PM Department 2010). This poses the question, why a country with a huge maritime potential including the island state of Penang has turned a blind eye on the oceans. Given its ethnically diverse population and its long maritime history the question arises, why high-rise property development and ICT manufacturing has taken precedence over shipbuilding, overseas trade and

4. There was a background paper prepared on „Agriculture as a source of growth for the Penang region and the Northern Corridor" by Lamb. Velez and Harichandra, but non on fisheries, shipping or shipbuilding!

fishing. Its most potent economic and cultural development organisation is called “Think City” rather than “Ocean City”. Modern Malay culture is linked to the images of paddy field and *kampong*, rather than to *perahu* and *lautan*. The “New Malay” is expected to be highly motivated and entrepreneurial (Shamsul 1999, Milner 2011:15), but this apparently does not specifically involve the maritime sector. There may be differences between East coast and West coast Malays, but the question could, indeed, be extended to the more general problem, when and why Penang’s and Malaysia’s majority ethnic group, the Malays, a people with Polynesian connections and a long history of seafaring across oceans, have turned away from the sea, looking inward to land areas rather than the maritime “space between the islands”, the *Nusantara*, and beyond. As the maritime anthropologist Horst Liebner described it, “today’s inhabitants of the Archipelago inherit the perhaps most sophisticated maritime tradition of our World; and, it was this bequest of seafaring and trade that unified the immense diversity of people and customs of more than 17.000 islands into a cultural zone once known as the Malay World” (Liebner 2004). This is a challenging research question, thrown up by looking at a simple analytical tool in form of a statistical exercise and the construction of an index. Given the renewed interest in ocean research (Andaya 1990; Azhari-Karim 2011; Forbes 1995; Kauz 2009; IORG. 2010), it is hoped that historians and social scientists will, some day, take up this challenge and provide an answer that may help to discover Malaysia’s maritime potential.

FIGURE 5: Penang Trawlers, Teluk Bahang

FIGURE 6 : Swettenham Pier passenger terminal.

FIGURE 7 : Butterworth container terminal (Source: Penang Port Commission Website 2011)

In a report, published in its Penang Economic Monthly, SERI (now the Penang Institute) asked “why can’t Penang seize the opportunity to become a centre of maritime excellence?” (SERI 2007:1). This is, indeed, the crucial question, which is not easily answered. The loss of its free port status in 1971 certainly had a negative impact on Penang’s shipping industry. Another factor was the change of shipping and ship building under conditions of globalisation. Ever larger container vessels lead to a concentration on fewer and larger ports of call. The approach to Penang harbour is too shallow to allow access of super vessels of 100.000 tdw, though currently the North Channel is being dredged. Last not least the economic problems of the Indian Ocean states reduced Penang’s position as a gateway to South Asia. With India’s rise towards one of the world’s largest economy, new opportunities have arisen. Will Penang rise up to his challenge and make use of its maritime potential and its longstanding historical position as an Indian Ocean port city?

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