FACTORS AFFECTING THE CO-MOVEMENT OF PRICES BETWEEN PENINSULAR MALAYSIA AND SABAH: A FOCUS ON CABOTAGE POLICY

BY

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A dissertation submitted in fulfilment of the requirement for the degree of Doctor of Philosophy (Economics)

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JUNE 2018

ABSTRACT

The issue of price disparity between Peninsular Malaysia and Sabah has always been an important topic of debate for a long time. Different stakeholders pinpoint different causes of this issue. The objective of this study, therefore, is to analyse the extent of integration between Peninsular Malaysia and Sabah by observing the co-movement of prices between those two markets, paying particular attention on the liberalisation of the cabotage policy in 2009 as the main driving factor. For this purpose, this study utilised the disaggregated monthly price data (consumer price index) for nine categories of goods and services in Peninsular Malaysia and Sabah from year 2004 to 2015, applying several empirical tests to determine whether any structural break(s) occurred within the period of the study (with the year 2009 as the reference). The stationarity of data is first being tested using the classical unit root test including ADF, PP and KPSS; and the unit root test with the break of Zivot and Andrews (ZA) and Perron test. The findings show different periods of structural break for each unit roots that have structural break(s), with most outcome of the unit root test showing breaks occurring between 2008 and 2010. However, the "furnishings, household equipment and routine household maintenance" and "housing, water, electricity, gas and other fuels" groups show the breaks occurring from 2012 to 2014. Consequently, this study does not show a stable long-run term relationship and co-movement of price between consumer price indexes (CPIs) for most groups, which indicates that the variables are not cointegrated in the Johansen Cointegration Test. Nevertheless, the Gregory and Hansen test shows that there is some form of cointegration with structural break(s) especially in 2008, albeit only for a few groups. This further cements that it is rather "inconsequential" to relate the break of CPIs with the liberalisation of the cabotage policy in 2009. This may imply that other factors could have affected the comovement of price between Peninsular Malaysia and Sabah. Overall, the price for both Peninsular Malaysia and Sabah were not fully co-moved with structural break; as well as it is not directly linked with the liberalisation of the cabotage policy in 2009. Despite the lack of quantitative evidence, many still believe that, it is the "cabotage effect" that is the primary driver of the price disparity between Peninsular Malaysia and Sabah. As such, it seems imperative to study the other possible factors that might have caused this issue, based on inputs from selected stakeholders, applying the forcefield analysis. The proposed idea for the cabotage policy and its relation to the higher price was divided into "forces for change" and "forces against change". Subsequently, a force-field analysis was developed based on the stakeholder impact analysis, through the summarised list of pros and cons on the issue of cabotage policy and the price disparity it is affecting. The participants included shipping providers, port authorities, the government and special interest group. The main outcome depicted from the forcefield analysis was that the price disparity between Peninsular Malaysia and Sabah could not be attributed to the cabotage policy alone. Several arguments on this issue had emerged, with most points referring to the economic condition in Sabah, including (i) the poor condition of ports, (ii) trade imbalances, (iii) economic activities remained sluggish (iv) poor accessibility between the port and retailers, (v) insufficient infrastructure and technical facilities, and (vi) political sentiments.

ملخص البحث

طالما كانت قضية التفاوت في الأسعار بين شبه جزيرة ماليزيا وولاية صباح موضوعًا مهمًا للنقاش منذ وقت طويل، يحدد أصحاب المصلحة المختلفون أسبابًا مختلفة لهذه المشكلة. إنَّ الهدف من هذه الدراسة هو تحليل مدى التكامل بين شبه الجزيرة الماليزية وولاية صباح من خلال مراقبة الحركة المشتركة للأسعار بين هذين السوقين، مع إيلاء اهتمام خاصِّ لتحرير سياسة الكابوتاج في عام 2009م، بوصفه عامل قيادة رئيس. ولهذا الغرض، استخدمت هذه الدراسة بيانات الأسعار الشهرية التفصيلية (مؤشر أسعار المستهلك)، لتسع فئات من السلع والخدمات في شبه جزيرة ماليزيا، وفي ولاية صباح من عام 2004م إلى عام 2015م ، وذلك بتطبيق عديد من الاختبارات التجريبية لتحديد ما إذا كانت هناك أي فواصل إنشائية حدثت في غضون فترة الدراسة (مع عام 2009م بوصفه مرجعًا). لذا يتمّ أولاً اختبار مدى دقة البيانات باستخدام اختبار وحدة الجذر الكلاسيكية بما في ذلك ADF و PP و KPSS ؛ واختبار وحدة الجذر مع كسر Zivot و Perron ، واختبار Perron. وتبيّن النتائج فترات مختلفة من الانكسار الهيكلي لكل جذور وحدة ذات فواصل (انكسارات) بنيوية، مع أنّ معظم نتائج اختبار جذر الوحدة تُظهر فواصل بين عامي 2008م و 2010م. ومع ذلك ، فإنّ "الأثاث، والمعدات المنزلية، والصيانة المنزلية الروتينية" و"الإسكان، والماء، والكهرباء، والغاز وغيرها من أنواع الوقود الأخرى"، تظهر مجموعات الفواصل التي تحدث من عام 2012م إلى عام 2014م. وبناءً عليه؛ فإنَّ هذه الدراسة لا تُظهر علاقةً مستقرةً طويلةً الأجل وحركةً مشتركة للسعر بين مؤشرات أسعار المستهلكين بالنسبة لمعظم المجموعات، مما يدلُّ على أنّ المتغيرات لا تتكامل في اختبار التكامل المشترك Johansen. ومع ذلك، يظهر اختبار غريغوري وهانسن أنَّ هناك نوعًا ما من التكامل مع الفواصل الإنشائية (التركيبات)، خاصةً في عام 2008م، وإنْ كان ذلك بالنسبة لبعض المجموعات فقط. هذا يزيد من كونه "غير منطقي" لربط كسر مؤشرات أسعار المستهلكين مع تحرير سياسة الكابوتاج في عام 2009م. قد يعني هذا أن هناك عوامل أخرى يمكن أن تؤثِّر في الحركة المشتركة للسعر بين شبه جزيرة ماليزيا، وولاية صباح. بشكل عام، لم يكن السعر في كل من شبه الجزيرة الماليزية وولاية صباح متحركًا بالكامل مع الاستراحة الهيكلية؛ فضلاً عن أنه لا يرتبط ارتباطًا مباشرًا بتحرير سياسة الكابوتاج في عام 2009. على الرغم من عدم وجود أدلة كمية، ما زال كثيرون يعتقدون أنّ "تأثير الكابوتاج " هو المحرك الأساس لتفاوت السعر بين شبه الجزيرة الماليزية وولاية صباح. على هذا النحو، يبدو من الضروري دراسة العوامل المحتملة الأخرى التي ربما تسببت في هذه القضية، بناءً على مدخلات من أصحاب المصلحة المختارين، وتطبيق تحليل مجال القوة. تمّ تقسيم الفكرة المقترحة لسياسة الكابوتاج وعلاقتها بالسعر الأعلى إلى "قوى التغيير" و "القوى ضد التغيير". في وقت لاحق، تمّ تطوير تحليل مجال القوة بناءً على تحليل تأثير أصحاب المصلحة، من خلال قائمة موجزة من الإيجابيات والسلبيات في قضية سياسة الكابوتاج والتفاوت في السعر الذي يؤثّر فيه. وكان من بين المشاركين مقدمي خدمات الشحن، وسلطات الموانئ، والحكومة، ومجموعة المصالح الخاصة. كانت النتيجة الرئيسة التي تمّ تصويرها من تحليل مجال القوة هي أنّ التباين في الأسعار بين شبه جزيرة ماليزيا وولاية صباح؛ لا يمكن أنْ يعزي إلى سياسة الكابوتاج وحدها. وقد ظهرت عدّة حجج في هذه المسألة، حيث تشير معظم النقاط إلى الوضع الاقتصادي في ولاية صباح، بما في ذلك (1) سوء حالة الموانئ، (2) الاختلالات التجارية، (3) الأنشطة الاقتصادية ماز الت بطيئة (4) ضعف الوصول بين الميناء وتجار التجزئة، (5) البنية التحتية غير كافية والمرافق التقنية، و (6) المشاعر السياسية.

APPROVAL PAGE

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DECLARATION

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DEDICATION

To my parents, Kartini Abd. Latiff @ Latiff Azmi and Mhd Ruslan bin Abd. Rahman,
may Allah reward both of you abundantly...

ACKNOWLEDGEMENTS

"In the name of Allah, the most gracious the most merciful"

Alhamdulillah, all the praises go to Allah who permits me to complete this thesis. It was such a challenging, beautiful, yet a rewarding journey throughout of the period. Along the way, I have met with many people who have generously contributed to this research, directly and indirectly. Some of them were together with me since Day One, while some others were happened to be for certain period. Certainly, all of them have left a great impact in my life.

My utmost appreciation goes to both of my supervisors, Assoc. Prof Dr. Gairuzazmi Mat Ghani and Dr. Haniza for their tremendous support and guidance. Dr Haniza always reminds me about the "technical" aspect of writing, while Dr Gairuzazmi taught me about "focusing on things that matter" rather than "explaining the whole content". Without their immense help and tutoring, I do not think that I will ever reach to this moment. My greatest gratitude also goes to those lecturers who had taught me during the core and pre-requisite classes; special thanks goes to Prof Dr. Mohamed Aslam Haneef, Dr. Noorihsan, Prof Dr. Mansor H. Ibrahim, Prof Dr. Mohamad Yusof and Prof Dr. Arif Hasan; in which without them I will not be able to grasp basic thoughts and concepts on economics.

Also not forgotten are the members of Center of Islamic Economics for giving me an opportunity to learn more about the research world. Thank you to Dr. Mohamad Nizam, Dr. Mohamad Nahar and Sis Sharifah Nehran for their kind guidance and friendly gestures towards me, as well as the team members of ERGS and NRGS. It was a brief period, but meaningful.

Nonetheless, all of this cannot happen without the assistance from my financial providers. For that, I thank the Ministry of Education, Malaysia and Universiti Malaysia Terengganu for sponsoring my study in these four years period.

Last but not least, my infinite love goes to my family, especially to both of my parents, Kartini Abd Latiff and Mhd. Ruslan Abd. Rahman, for always being there for me. It was not an easy-ride all the time, but thanks for putting your trust on me. Only Allah can ever pay your kindness and good deeds.

Finally, I also would like to thank the "generation" of Ph.D lab that shared so many stories, tips and reminders with me. The emotional supports that I received most of the time had always meant a lot. Some of them have already left, while some others are still pursuing their dreams. To Sis Farea, Sis Aisha, Sis Rulia, Sis Monsurat, Sis Rohila, Sis Farizah, Sis Fariza, Sis Roslina, Sis Ratna and Sis Ezza, may Allah bless all of you throughout of your life.

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LIST OF ABBREVIATION

ADF Augmented Dickey and Fuller test

AEC Asian Economic Community

APEC Asia-Pacific Economic Cooperation

ASEAN Association of Southeast Asian Nations

CPI Consumer price index

DLSB Domestic Shipping and Licensing Board

DSL Domestic Licensing Board

EC European Community

ECM Error Correction Modelling

EOC Equal Opportunity Commission

EPU Economic Planning Unit

GATT General Agreement on Tariff and Trade

GST Goods and Services Tax

IRF Impulse response function

JJ Johansen-Juselius test

JML Johansen's maximum likelihood

KPSS Kwiatowski, Phillips, Schmidt and Shin

LOP Law of One Price

MASA Malaysia Shipowner Association

MIGHT Malaysia Industry-Government Group for High Technology

MISC Malaysia International Shipping Corporation

MOT Ministry of Transport

MSO 1952 Merchant Shipping Act 1952

MSMP Malaysian Shipping Master Plan

NEM New Economic Model

NEP New Economic Policy

PP Phillips and Perron Unit Root Test

PPP Purchasing Power Parity

PR1MA Projek Perumahan 1Malaysia

SME Small and Medium Enterprises

SRI Strategic Reform Initiatives

STRAITREP Marine Department of Malaysia's Strait Reporting System

TEU Twenty-foot equivalent units

U.S United States of America

VDC Variance decomposition analysis

VECM Vector Error correction model

WTO World Trade Organization

ZA Zivot and Andrews Unit Root Test

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Price disparity between Peninsular Malaysia and Sabah has been a long debated issue. Over the years, industry players, political parties, and non-governmental organisations have argued that that one of the main reasons for price differences for Sabah's manufacturing and export industry's stunted growth was due to the imposition of cabotage policy. Despite the case, pundits started to raise issues pertaining to the issue of price disparity, claiming the government has a hidden agenda to entertain certain interested parties to rake more profits and benefits out of this policy¹. Whilst in Sabah, regardless of other attributed causes that could lead to the adversarial effects on the prices, the public still pointed out that, it is the cabotage policy that held accountable to the major causes of shortcomings happened in the state².

The cabotage policy sets out to restrict the operation of sea, air, or other transport services, within or into a particular country to that country's own transport services. Traditionally, the policy is applied to shipping along coastal routes and port to port; however it also includes aviation, railways, and road transport (Takebayashi and Miyoshi, 2003; Hodgson and Brooks, 2004; Kusumaningrum, 2015). Notwithstanding, the scope of this study is confined to shipping sea routes, also known as short sea shipping. Cabotage sea regulation aims to limit foreign trade cargo

¹ Free Malaysia Today, 11th January 2013: "Cabotage Policy for Sabah's High Cost of Living"

² https://www.academia.edu/3822380/Cabotage_Policy_a_Flash_in_the_Pan?: retrieved on 20th March 2018

ship into domestic waters. Such protection policy determines that only Malaysian-owned shipping companies with vessels flying the Malaysian flag can conduct trade between ports in the country. The cabotage trade is currently administered by the Domestic Shipping and Licensing Board (DLSB), part of the Maritime Division of the Ministry of Transport (Khalid, 2008).

Many countries, including the United States, China, India, Japan and Australia have implemented a cabotage policy. World Trade Organization (WTO) recognises it as an instrument for national security reason. This policy is excluded from the bilateral or multi-way negotiations between different countries, and the General Agreement on Tariff and Trade (GATT). One of the countries that adopts a strict cabotage policy is the United States (U.S) Section 27 of the Jones Act (1920), the law of shipping, does not only set that the cargo transported between ports in the country must use U.S registered ships, the ships must also be built in U.S shipyards and operated by the crew or citizens who are permanent residents of the U.S (Hurst, 2014). Such a policy is not surprising given the importance of the shipping sector for a country that is based on external trade as an engine of economic growth.

The Malaysian cabotage policy began in 1980 with the purpose of developing Malaysian ownership and local shipping in general while minimising Malaysia's dependence on foreign vessels and capital outflow in the form of freight payments (Khalid, 2008). In addition, the cabotage policy also acts as a platform for local shipping companies to gradually expand and reach out to international waters (Novianti, Rifin, Panjaitan, and Wahyu, 2014).

Even though the cabotage policy is implemented with the aim of protecting national interest, it has been claimed to trigger the large price differences between Peninsular Malaysia and Sabah when foreign ships from the Far Eastern countries,

such as Korea, Taiwan, and China, passes through the Borneo Island while heading to Port Klang and Tanjung Pelepas Port to unload their cargo, before a special cargo carried by ship to domestic Sabah through the south of Singapore, across the South China Sea before continuing along the west coast of Kalimantan to Sabah in the north³. In addition, the absence of competition from international shipping companies has lead the domestic shipping companies to impose higher shipping charges, inadvertently increasing cost of business higher than the company's business in Peninsular Malaysia. The high import costs were passed through to the wholesale and retail market, mainly impacting the Small and Medium Enterprises (SME) and low-income people of Sabah⁴.

Therefore, the underlying issues are whether the negative impact on the prices of goods is directly related to the imposition of the policy and to what extent it has affected trader's competitiveness in Sabah. Other factors that affect the price include taxes and subsidies or price controls measures implemented by the government, in particular on basic necessities such as oil, sugar, flour and other goods across the country⁵. On the other hand, it has also been argued that traders take advantage of blaming the cabotage policy in order to increase price. There are other potential factors contributing to the high prices within Sabah such as the cost of inland shipping, the lack of competition, and inefficient distribution channels to reach consumers; thus, affecting the distribution of each component in the supply chain⁶.

Shipping companies have denied the existence of price-fixing cartels or monopolistic behaviour in the presence of protective or special rights granted by the policy for them. They emphasised that the imposition of carriage charges is influenced

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³ Free Malaysia Today, 11th January 2013: "Cabotage Policy for Sabah's High Cost of Living"

⁴ The Borneo Post, 14th July 2013: "Higher Cost of Living in Sabah and Sarawak"

⁵ The Malay Mail, 21st Jan 2017: "Ministry: Government cannot control prices of all goods"

⁶ Daily Express, 27th March 2016: "Sabah's costly living and economic future"

by the quality of port infrastructure in Sabah. Before Port Sepanggar was refurbished, most large ships had to dock far away from the port, causing an increase in cost and time to transport goods from ship to shore⁷. Secondly, shipping companies also incur higher insurance costs due to the instability of maritime security in general and particularly in the Eastern waters of Sabah. The third factor is a small-scale trading from within and outside the state. Even though the policy was liberalised in 2009, most international shipping companies prefer to continue to Port Klang as the demand and population in the Peninsular are more than Sabah⁸. This saves much of their logistics cost. The fourth factor is because of the trade imbalance from within and outside the state. Current issue that has been raised relates to the freight rates that are being charged; which resulted in the imbalanced trade pattern between East and West Malaysia. As anecdotal on news report for now, and it has been so ever since, there is less backhaul cargo from East Malaysia to West Malaysia⁹. Nevertheless, such an imbalance and the consequent freight rate level are perceived as a normal phenomenon and even exist on other routes like in Europe and the Far East countries.

As most container ships that pass through Sabah while heading to Peninsular Malaysia are returned empty, it forces shipping companies to double their charges to cover the cost of the return shipping. As at 2014, total imports and exports are estimated at 80 percent and 20 percent, respectively. Therefore, domestic shipping operations are limited to sending cargo to Port Klang compared to Sabah or Sarawak, which means shipping companies had to compete with each other to get a reasonable cargo density as not to get high carriage charge ¹⁰.

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⁷ The Star, 15th April 2015: "Plans for Sepanggar Port to be Transshipment Hub"

⁸ The Star, 8th March 2009: "Shipping rates not the only factor in high price of goods in Sabah and Sarawak"

⁹ The Star, 5th April 2014: "Leveraging on Logistics Strength"

¹⁰ Free Malaysia Today, 4th July 2014: "Free Sabah and Sarawak from Cabotage Policy"

Meanwhile, the cabotage policy should not be blamed solely for the high costs of goods without taking into account the costs of transportation and logistics ashore including the port costs and the high surcharges in Sabah. The low productivity at the ports in Sabah also adds towards additional shipping costs. Freight is only one component which makes up 46 percent of the total price whilst others such as forwarding, trucking, storage, and others make up the rest (Khalid, 2008).

Considering the significant importance of studying the price mechanism, it makes sense to understand how the function of market are executed in practice and how this type of setting take effect, pertaining to its relationships among players. Therefore, instead of solely focusing on the cabotage policy, this research is also aiming to study the price behaviour by looking at the relationship of price comovement for several groups of goods between Peninsular Malaysia and Sabah and other possible factors that might influence the market price by referring to literatures, current issues and theories about the degree of market integration that influence the price, particularly on price co-movement which will eventually indicate the existence of market integration between the two region.

1.2 STATEMENT OF THE PROBLEM

The lifeline of global trade is really dependent on the sea passages, and is vital to the economies of many countries. Thus, it is not surprise to find that an estimated 90 percent of Malaysia's trade is carried by seaborne transport owing to its economic advantages over other modes of transport. As the growth in global population as well as trade and economy grow together alongside the demands for all raw materials and manufactured goods, nation's sea transport is set to figure prominently in charting economic growth (Khalid, Ang, and Hasan, 2011). Due to this enormous and influential

role, the related activities such as port operations, ship repairing and shipbuilding, shipping and cabotage, among many others, are expected to build up in the future.

Nonetheless, considering a different way of situation, the cabotage policy has been regarded as a stumbling block to trade which restrain foreign competition that may prevent national interest in local shipping industry to flourish (Suffian, Karim, Rosline, and Fadzil, 2013). One of the substantial evident that lead to this argument is, cabotage policy may aim to promote the local shipping industry with the benefaction of Malaysia International Shipping Corporation (MISC), as a matter of fact of its ever increasing role as a member of Malaysia Shipowner Association (MASA) to become self-adequate; however after 33 years, this policy seems to be "conspicuously old-fashioned" as it does not really seems to serve the motive of transforming the Malaysia shipping industry to be more competitive, rather it has wounded domestic growth and contorted competition in the local maritime industry (Suffian et al., 2013).

In brief, the policy has inadvertently became an obstruction that cause industry unable to mobilise their capital according to their ability to carry out the economic activity at a lower cost and more efficiently, and creates inefficiency in resource allocation. Because of that, industry is said to mark by doubt to achieve its economies of scales and does not grow welfare gain. For example, the cabotage policy remains an impediment for Sabah and Sarawak's economic growth, due to its enforcement and restrained market access. According to a media article¹¹, the cabotage policy has failed to accommodate the domestic shipping lines and subsequently lead to the high cost of goods in Sabah and Sarawak, which in such interventionist context make price becomes less competitive¹². It is quite challenging to argue that the policy has clear causal relationship to higher cost of goods in Sabah and Sarawak. Nevertheless, with

¹¹ Free Malaysia Today, 11th Jan 2013: "Cabotage policy for Sabah's high cost of living"

¹² The Malay Mail, 9th Feb 2017: "What is the cabotage policy and why is it a big deal in Sabah?"

the existence of protectionist policy, evidently it would restrain participation of firm in the economic activities. Due to that case, this study is intended to investigate the contentions that price distortion in the East Malaysia occurs due to cabotage policy, by taking the case in Sabah as the representative of the whole population; since most of the cases reported found (either in mainstream or alternative media) were basically concentrated on the issues of Sabah.

At the same time, other factors that lead to the price differential between both parts, in this case, Peninsular Malaysia and Sabah also need to be investigated. Several other possibilities might be the existence of market power which gives certain group of enterprises acting collectively (Aguiar and Santana, 2002; Meyer and Cramon-Taubadel, 2004; Xiao and Yu, 2006), competitiveness among players (from suppliers to retailers) (El Ouardighi and Kim, 2010; von Cramon-Taubadel, 1998; Yao, Leung, adn Lai, 2008), government intervention through policies that might lead to series of gradual marketing reforms (Badiane and Shively, 1998; Kinnucan and Forker, 1987; Liu, Keyzer, van den Boom, and Zikhali, 2012) and product characteristics (i.e. durable, non-durable perishable, and services) (Holloway, 1991; Méndez, Oubiña, and Rubio, 2008; Wagner, Grosse-Ruyken, and Erhun, 2012).

Hence, this study intend to bring out the issue of the price disparity and further investigate whether there is any "price connection" (co-movement) between Peninsular Malaysia and Sabah by extracting out the factors that might lead to the causes. The issue of the market price needs to be studied thoroughly so that a definite "cause and effect" can be seen in a bigger picture without concentrating on just a single factor.

1.3 OBJECTIVES OF THE STUDY

Considering the issue of cabotage policy with respect to the price disparity between Sabah and Peninsular Malaysia, as well as to understand the underlying factors contributing to the cause, this research intends to achieve several objectives, including:

- To study whether there is price co-movement for goods and services market between Peninsular Malaysia and Sabah;
- To study whether liberalisation of cabotage policy in 2009 have any impact on co-movement prices between Peninsular Malaysia and Sabah;
 and
- iii. To examine factors that affect market integration between Peninsular Malaysia and Sabah.

1.4 RESEARCH QUESTIONS

In order to relate with the objectives, therefore the research questions are as follows:

- i. a. Is there any long-run and short-run co-movement of prices between
 Peninsular Malaysia and Sabah?
 - b. Which of the main product group shows the strongest price comovement?
- ii. Does the 2009 liberalisation have any impact on co-movement prices between Peninsular Malaysia and Sabah?
- iii. a. How does the existing cabotage policy structure influence the prices in Peninsular Malaysia and Sabah?
 - b. What are other issues that affect the price co-movement in Peninsular Malaysia and Sabah?

1.5 SIGNIFICANCE OF THE STUDY

The main purpose of this research is to conduct a study and evaluation on the prices between Peninsular Malaysia and Sabah market for pre- and post- 2009 cabotage policy liberalisation. Therefore, the research intents to examine not only the evolution and current status of Malaysian cabotage policy but also whether it affects on the price disparity, concerning on the issues of market integration that affect price comovement in Peninsular Malaysia and Sabah.

Also, the study aims to shed light on such issues as the nature of the considerations to which Malaysia's cabotage policy is intended to respond, and whether these considerations have changed at all since they were last evaluated in 2009, refer back to its legislation in 1980 (before the latest announcement of its abolishment in June 2017¹³), Besides, the study has an objective to address whether the current protectionist measures (principally access control and tariff protection) provide the most appropriate and effective policy response to these threats, and to examine the degree to which any negative impacts from these measures offset the positive elements.

On the other hand, it examines whether the current maritime cabotage controls establish the most suitable regime for attaining Malaysia's domestic shipping policy objectives. In achieving this objective, the study aims to focus in particular on a more essential issue. Recognising that current cabotage policy constructs a regulatory division between domestic and international shipping operations; it effectively imposes a choice upon Malaysian operators of ships. This choice is between either participation in the domestic market (in which case vessels must be Malaysian registered and applicable duty paid) or in international trade. Cabotage measures have had as their fundamental goal the provision of a protected environment in which Malaysian shipping could

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¹³ The Star, 8th May 2017: "No more cabotage from June 1"