The Impacts of the Marine Transportation Openness Policies against the Transportation Costs

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Abstract

Transportation costs are the driving factors of the world trade growth, lower transportation costs can increase the competitiveness of a commodity. With the openness of the transportation services sector, transportation costs due to the removal of tariff and non-tariff barriers will be lower. Some of the commodities exported and imported by Indonesia are farm commodities thus how the policies influence their transportation cost needs to be known. Analysis was performed using the 2010 cross section data of 15 countries. The analysis result indicated that the transport services sector openess did influence the transport costs of imports yet it didn't significantly influence the export transport costs.

Keywords: transportation costs, openess, restriction index

1. Introduction

Krugman (2002), Baier and Bergstrand (2001) mentioned that the decline in transport costs is the factor that encourages the growth of world trade. Krugman (1991), Deardorff (1995), Henderson et al. (2001), Hummels et al. (2001), Limao and Anthony (2001), stated that the transportation cost's role had increasingly risen since the advent of trade openess where trade barriers in the forms of both tariff and non-tariff are reduced and even eliminated. Behar and Anthony (2010) agreed it by stating that the transportation cost is one of the factors that influence the volume of trade and its pattern.

Salvatore (2004) stated that the transportation cost provide both direct and indirect influences on the economy. The immediate impact can be observed from the the side of the trade in the raise of the traded commodity's price, while the indirect influence effects the production venue and the industrial centers. The diminishing transport costs is thought to be caused by changes in modes of used transportation-related technologies that are used such as the development of the jet engine (air transport), types of ships and containers (marine transport) (Harley 1980; Mohammed & Williamson, 2004).

Table 1. Logistics cost burden of production costs and gross domestic product (%)

Countries	Share to GDP	Share to Cost Transportation
Japan	10	5
Singapore	8	6
Malaysia	13	8
Indonesia	27	17
Thailand	15	10
China	19	12.5

Source : Kadin and LPEM UI available at http://www.indii.co,id/upload_file/201206210835460/

Radelet and Sachs (1998) noted the importance of transport costs influence on trade and its growth through three channels. First, high transport costs reduce exports and its the economic growth. Second, higher transportation costs reduce the natural resources' advantages or the benefits which eventually resulting in lower savings for investment. Third, countries with higher transport costs reduce their trade and also foreign direct investment

(FDI), while trade and FDI are the main sources of technology transfer. The reduction of transportation costs would cause the price of the imported goods become cheaper, so the cost of production of goods that use those imported goods as intermediate inputs also become cheaper and be more competitive in the international market. As well as the final product, the cheaper transport costs will lead to cheaper products' price at the final consumers' level.

Transportation cost is one component of the logistics costs other than the handling and administration costs. A good state of logistics costs is a very important prerequisite for a country so that it can have strong competitiveness in the international market and to maintain the supply of goods in the domestic market. Based on the 2011 data acquired from the Chamber of Commerce and Industry (Kadin), Indonesia's logistics costs was accounted for 17 percent of Indonesian total production costs, or about 27 percent of Indonesian Gross Domestic Product (GDP). This figure was relatively much higher than other countries' logistics cost in like 5 percent in Japan (10% of GDP), 6 percent in Singapore (8% of GDP), 8 percent in Malaysia (13% of GDP), 10 percent in Thailand (15% of GDP) and 12.5 percent in China (19% of GDP).

Based on logistics performance index (LPI) in 2012, out of the 155 countries surveyed, Indonesia ranked 59 with a score of 2.94, an improvement from the year 2010 rank of 75 with a score of 2.76. Despite the improvement, Indonesia is still relatively far behind other ASEAN countries, namely Singapore, Malaysia, Thailand, Philippines, and Vietnam (Table 2).

Table 2. Rank and score of logistic index ASEAN+3, 2007-2012

Countries	2007	2010	2012
Singapore	1 (4.19)	2 (4.11)	1 (4.13)
Malaysia	27 (3.48)	29 (3.44)	29 (3.49)
Indonesia	43 (3.01)	75 (2.76)	59 (2.94)
Thailand	31 (3.31)	35 (3.29)	38 (3.18)
Philipina	65 (2.69)	44 (3.14)	52 (3.02)
Vietnam	53 (2.89)	53 (2.96)	53 (3.00)
China	8 (4.00)	13 (3.88)	2 (4.12)
Japan	6 (4.02)	7 (3.97)	8 (3.93)
South Korea	25 (3.52)	23 (3.64)	21 (3.70)

Source : World Bank 2007, 2010 and 2012

Logistics Performance Index (LPI) measures various aspects that reflect a country's efficiency level of logistics. There are six dimensions of logistics performance indicators used by LPI namely: the efficiency of the "clearance" process (customs); the trade's transportation and infrastructure; the ease of obtaining competitive shipping prices, including the ease of shipping scheduling; logistics competence and logistics services quality including warehousing services; the *tracking* and *tracing* facility which would be very helpful to make the goods arrival estimation at their respective destination; and timeliness. Based on the six categories measured in LPI, Indonesia's logistics sector performance was worse than the five ASEAN countries in almost all categories, except at the timeliness indicator which still slightly better than the Philippines. Customs and infrastructure were the Indonesian two lowest performing indicators.

Bertho (2010) conducted a remaritimerch on the restriction index that can be used as a liberation indicator on transportation service sector based on ten sub-indicators. That restriction index data was used in this study to determine whether the more open or the fewer barriers in Indonesian trading partners' maritime ports will further lower the transportation cost? Several previous studies have been conducted to determine how the openess affects the transportation cost. However, those studies did not specifically use the index restriction as the remaritimerch conducted by Bertho (2010).

2. Literature Review and Novelty

De (2006) stated that the trading cost is the sum of all costs to get the goods to the end user including, transportation cost (freight costs and time costs), policy-related costs (tariff and non-tariff), information costs, contract enforcement costs, costs related to the different exchange rates, laws and rules, and distribution costs (whole sale and retail). According to De (2006), industrial countries' trade costs consist of the transportation costs (21%), the border costs (44%) and the wholesalers and retailers distribution costs (35%). In the case of maritime trading, the transportation costs include the shipping cost and the shipping insurance from the export

port to the import port or vice versa. Similarly according to Salvatore (2004) who said that the transportation costs cover the shipping costs, the cost of loading and unloading at ports, insurance premiums, and various charges as the traded commodities are temporarely stored at transit points. Limao and Anthony (2001) found out that the increase in transport costs would reduce the United States' volume of imports. On the other hand, Baier and Bergstrand study (2001) showed that transport costs' raise will reduce the volume of exports and imports in most countries.

To estimate the trading cost and the transport costs, there are several approaches used, such as using the difference between the cif (cost, insurance and freight) and fob (free on board), which could be retrieved from the IMF, the UNCTAD, or the International Transport Data Base (BTI), as used by Limao and Venables (2001), Baier and Jeffrey (2001), Radelet and Sachs (1998). Other proxies use the distance and the cost of shipping (shipping cost).

Several studies were conducted by Hummels (1999), Limao and Anthony (2001), Radelet and Sachs (1998), Micco and Perez (2001), Fink et al. (2001), Sanchez et al. (2002), Kumar and Hoffman (2002), Zarzoso et al. (2006), and Korinek and Patricia (1999) to identify the trading costs' determinants, especially the cost of transportation. The explanatory variables used in these analyses are generally associated with distance and connectivity. Other variables which were also thought to influence the transportation costs are the infrastructure quality, the commodities' values, and the weight and export value ratio, export volume (tons), and the trade imbalance. The geographical distance is a variable that commonly used in trade analysis using the gravity model. Kuwamori (2006), Zarzoso et al. (2006), Limao and Anthony (2001) and Gordon W (2007) mentioned that the transportation costs will increase in line with the increase in distance. It meant, the farther the distance would result in greater transportation costs. The results of Limao and Anthony's study (2001) showed that each 1000 km of additional distance will increase the transportation cost for $ 380. The study also mentioned that landlocked countries face higher transport costs than coastal countries.

Bertho (2010) mentioned that the restriction was a factor that affecting marine transportation. This restriction was described in ten indexes such as quotas, competition penalties exemptions, forms of ownership, ownership percentages, the acquisitions of ownership, citizenships of employees, citizenships of BODs, sabotages, cargo handlings and independent regulatory authorities. Those ten indexes which were used in the Bertho's study (2010) had included restrictions undertaken by countries which involved in the trade, such as the restriction to sabotage, restriction of cargo handling, cargo quota for private and public companies, the presence of treaty exemptions for competition rules and the presence of independent supervising institutions. In this remaritimerch, Bertho mentioned that sabotage restriction is the most dominant factor in the trade among APEC countries. UNCTAD (2012) also mentioned that sabotage is the most widely used regulation in international trade. In many countries, sabotage is carried out by forcing the use of domestic ships to reduce their competition against foreign ships. Indonesia, for example, bans the import of old ships as a sabotage to boost domestic ships demand.

Connectivity variable, as one of the determinant factor of transport costs, is commonly associated with the condition or the quality of the infrastructure of the trading countries. Limao and Anthony (1999) in their remaritimerch on infrastructure, adverse geography, and transportation costs indicated that infrastructure, either infrastructure itself or infrastructure that's formed by the nature of "landlocked countries", significantly negatively affected the transport costs and bilateral trade flows. Infrastructure improvements in the destination country with one standard exchange will reduce 6500 miles maritime trip or 1000 km land trip worth of transportation costs. Landlocked countries' condition would increase transportation costs by about 50 percent compared to coastal countries and the infrastructure improvement in the landlocked countries would reduce losses by 12 percent. Meanwhile, as the other related variable, imports' value had an inversely proportional correlation with the transportation costs. So, the cheaper the transport cost will enhance the import value, or vice versa. By adding these two variables, the import and infrastructure variable, in the model would enhance its diversity for about 50 percent. In addition to distance, Limao et al. (2000) showed that infrastructure was an important determinant factor of transport costs. Using the CIF/FOB ratio, the study indicated that the improvement in the infrastructure's quality could reduce transportation costs by 40 percent for coastal countries and 60 percent in landlocked countries.

Other related research showed that port efficiency affects the trade's transportation costs. The improvements in port efficiency would reduce the shipping cost for more than 12 percent or equivalent to a distance of 5000 miles. On the other hand, port inefficiencies will increase the handling costs. Another interesting thing is correlation of international trade with the organized crime variable which significantly affected the port services negatively thus increased transportation costs. A 25-75 percent increase in organized crime's activities would decrease in the port efficiency from 50 to 25 percent. a 25-75 percent reduction in port inefficiency (related to transportation

costs) would increase the bilateral trade by about 25 percent (Micco & Natalia, 2002; Clark, David, & Alejandro, 2004).

Nordas and Roberta (2004), in their research on infrastructure and trade using a gravity model, indicated that a significantly positive infrastructure's quality had a relatively large impact on bilateral trade flows. Among the individually used infrastructure indicators namely roads, ports, telecommunications, and customs related time usage, it turned out that ports' quality/efficiency was the one that had the greatest impact on bilateral trade. Punctuality and information access (telecommunications) variables are relatively more important to enhance the competitiveness of the textile and automotive sectors.

Similarly, the remaritimerch conducted by Ahmad (2011) on the effect of port efficiency in Indonesia's bilateral trade with the EU using the gravity model approach, stated that the transportation cost was one of the barriers in trade cooperation for both parties. One of the factors that determined the transportation cost was port efficiency, while the proxies used in measuring port efficiency is the quality of port infrastructure (QPI) and logistics performance index (LPI) along with their components. The results indicated that the port efficiency had a positive effect on the total efficiency of Indonesia's bilateral trade with the EU. The infrastructure quality, the port logistics' quality and the shipping punctuality were the detail components of port efficiency that had the most influence in Indonesia's total trade with the EU.

Korinek and Patricia (1999) stated that the trade imbalance between the trading countries illustrated the many freight services that were forced to transport empty containers on their way back. Hence, the charge/cost of one way shipping is not the same as on the way home. Fuchsluger (2000) showed that this phenomenon was observed in the bilateral trade between the United States and the Caribbean. In 1998, for example, 72 percent of the containers shipped by the Caribbean to U.S. were empty. The containers excess supply to the north implied that the U.S. exporters paid 83 percent higher than the U.S. importers for ships carrying the same kind of merchandise between Miami and Port of Spain. Trade imbalances has become one of the peculiarities of the shipping industry because all containers (not only freight ships) have to go back to their place of origin so that the carriers would often transport goods with negative added value to help cover the costs to of going back.

3. Data and Model

The analysis was done using two methods which were by using a *cross section* data of 15 countries of Indonesia's trading partners and the panel analysis. This was done because there were limited restriction index data (an index that shows the openness of maritime transport services sector). The restriction index data is only available for 1 year only for the 15 Indonesia's trading partners (Bertho, 2010). The countries which were analyzed in the cross section data are: Australia, Canada, China, Hong Kong, Japan, South Korea, Malaysia, Mexico, New Zealand, Peru, Philippines, Russia, Singapore, Thailand, and USA. By using the restriction index, we could analyze how the transportation services sector openess influenced transport costs on Indonesian exports and imports with its trading partners.

The model on the maritime transportation service sector openess influenced (restriction) on the export and import transportation cost

$$LnTC\_FOB = \alpha + \beta restriction + \varepsilon \tag{1}$$

$$LnTC\_CIF = \sigma + \pounds restriction + \mathbb{C} \tag{2}$$

Legends:

LnTC_FOB: Export transportation cost which derived from the following approach

$$LnTC\_FOB = \frac{\textit{(export value/export volume)}}{\textit{Indonesian cif}}$$

LnTC_CIF: Import transportation cost which derived from the following approach

$$LnTC\_CIF = \frac{\textit{(import value/import volume)}}{\textit{Indonesian trading partner's cif}}$$

Restriksi: An index which shows a country's transportation sector openness by the value between 0 (closed) and 1 (open).

The value and the volume analysed were the value and the volume of Indonesian agricultural exports and imports with its 15 trading partner countries in 2010 which were adjusted with the available restriction index on that year.

4. Result and Discussion

Openness in the maritime transport services sector was shown by the excalating number of restriction index based on Bertho's remaritimerch result (2010). The restriction index ranges between 0 (full restriction/closed) and 1 (no restriction/open). The restriction index on maritime transportation was derived from the average index of quotas, competition law Exemptions, form of ownership, percentage of ownership, acquisition domestic entity, nationality reqt employees, nationality reqt BOD, cabotage, cargo handling, an independent regulatory authority. Indonesia adopts the cabotage shipping system as mandated in Law. 21 of 1992 on Shipping, Article 73, paragraph 1, a system which is also adopted by the Singapore, Philippines, and the United States.

Based on the Bertho's results (2010), Hongkong is the most liberal APEC member followed by New Zealand, and Australia. Meanwhile Indonesia's system was still half restriction with a restriction index of 0.65. On the other hand, Vietnam was the least liberal. Like Indonesia, Vietnam also does not have any deep maritime port so the traded goods had to stop in Hong Kong and Singapore ports, as well as Malaysia's before they could arrive at their final destination. A description of the inhibition level in the maritime transport services sector can be seen in Table 3.

Table 3. Restriction index in maritime transport sector

Negara	quotas	competition law exemptions	form of ownership	percentage of ownership	acquisition domestic entity	nationality reqt employees	nationality reqt BOD	cabotage	cargo handling	independent regulatory authority	restriction
Australia	1	0	0.5	1	1	0	1	1	1	1	0.75
Canada	1	1	0.5	1	1	0	0	0	Na	1	0.61
China	1	1	0.5	0.49	0	1	1	0	1	0	0.60
Hongkong	1	1	1	1	na	na	na	nr	1	na	1.00
Indonesia	0.5	1	0.5	0.49	1	1	1	0	1	0	0.65
Japan	1	0	0.5	1	1	na	0	0	1	1	0.61
Korea	1	0	0.5	1	1	0	1	0	Na	1	0.61
Malaysia	1	1	1	0.3	0	na	na	0	Na	1	0.61
Mexico	1	1	1	1	1	0	1	0	Na	1	0.61
New Zealand	1	0	0.5	1	1	na	na	1	1	1	0.81
Peru	1	1	1	1	1	0	0	0	Na	0	0.56
	0	1	0.5	0.4	na	1	0	0	0	1	0.43
Philippines											
Russia	0	1	0.5	1	1	1	1	0	1	0	0.65
Singapore	1	0	0.5	1	na	na	na	nr	1	na	0.70
Thailand	0.5	1	1	0.49	0	1	0	0	0	0	0.40
USA	0	0	0.5	1	1	0	0	0	1	1	0.45
Vietnam	1	1	0	0	0.5	0	0	0	0	0	0.25

Source: Bertho (2010)

Note: na=not available; nr=not relevant; 0=close, 1=open

The results of the *cross section* data analysis indicated that transportation service openess had a significant impact on transportation costs of Indonesian imports from its 15 trading partner countries and did not significantly affect the export transport costs. It meant, Indonesia had not been able to take advantage of the maritime transportation service openess performed by its trading partner countries. The impact of openess was actually an increase in the amount of imported goods which resulted in increased transportation costs. It indicated that Indonesia was not yet ready to face the AEC which is scheduled to begin in 2015. However, it is inevitable for Indonesia to face the AEC since it had been agreed by all ASEAN countries.

The effect of the transportation service sector openess was greater on the imports' transportation costs rather than to the exports'. This result is shown by the magnitude of the openess (restrictions) coefficient of 0.33 on exports' costs to 2.38 on imports' cost. Judging from Indonesia's position as a country which imports 80 percent of its domestic industrial raw materials then of course the openess can have some negative impacts on the industry.

Table 4. The impact of the maritime transportation service sector openess (restriction) on the export and import transportation costs

Dependent Variables	Independent Variables	
	LnTC_FOB	LnTC_CIF
Restriction	0.33[0.59]	2.38[0.00]**
Constant	965.77[0.09]*	-1.06[0.04]*
R-squared	0.31	0.45

Note: *) signicant on 10% significance level; **) signicant on 5% significance level; [ ] prob.

The more Indonesian trading partners' ports open (less restriction), the greater the transportation costs of Indonesian agricultural commodities imports from those countries. In terms of exports, Indonesia has not been able to take advantage of the ease in trading partners' ports to boost its exports of agricultural commodities from Indonesia to those destination countries. In fact, as stated in the theory, the restriction should lower the transport costs so the commodities' prices could become cheaper and the commodities could compete with those of other countries'.

It's not without reason to say Indonesia has not been able to take advantage of the maritime transport sector openess well. This has happened due to the complicated problems faced by Indonesian maritime transportation. There are at least four major problems that are faced by Indonesian maritime transportation, namely:

1. Something dealing with the volume and balance of commodity (input and output). The ships are loaded with goods when they come from Jakarta to Papua; but on the way home from Papua to Jakarta, they are empty. Similarly, the same things happen with the minerals brought from East Kalimantan to Java, which makes transportation costly.

2. Ships. Law No. 17 of 2008 has explained that the shipping routes are decided by the market's mechanism. The markets may pick their own route and determine their ships' size. Thus, there are thin routes and thick routes. For example, the Surabaya - Merauke route costs 20 million IDR/TEUs, yet the Surabaya - Jayapura which has the same distance costs 10 million IDR/TEUs. Then, there are ships that are too big and there are ships that are too small. Thus, we should start building various kinds of ports such as *feeder port*, *collector port* and *hard port*. What hinder Indonesian inter-islands maritime transportation business growth is the presence of regulations that have not supported them. For example, the absence of government incentives which are acceptable to financial institutions and banks that support these businesses thus there's no pressure to lower the high lending rates. With the high interest rates, as high as the commercial lending rates, it would be difficult for the inter-islands companies to request for fleet rejuvenation financing. In some other Asian countries, 0-5 percent interest rates are applied for the new ships procurement as a form of government support to promote maritime transportation business.

Another thing that is aggravating this business is the high import duty regulation which applied to ships' raw materials and spare parts, while 90 percent of ships' spare parts are still imported. Indonesian inter-islands shipping tariff policy is still hasn't adequately refer itself to what the inter-islands shipping operational needs. Currently, Indonesian inter-islands transport rates are among the cheapest rates which applied among all ASEAN countries. As a comparison, the highest rate in the pioneering route was the Namlea-Sanana route which charged Rp 112,005 for a distance of 120 miles, which means every mile on that route cost Rp 933.4. Meanwhile, the lowest rate is applied in the Philippines, on the 27 miles Batangas-Kalapani route which charge Rp 39,981 or Rp 1,481 per mile. To compare the Indonesian lag in applied tariff policies, Table 5 shows its comparison with ones that applied in other ASEAN countries.

Table 5. Tariff/ miles for commercial strategic trajectory in Indonesia and abroad

No	Trajectory	Distance/ Miles	Tariff/ Miles/ Rupiah	Description
1	Padangbaik (Bali)-Lembar (NTB)	38	856.2	Highest
2	Ketapang (Jatim)-Gilimanuk Bali)	5	800.0	
3	Rajoe (Sulsel)-Kolaka (Sultra)	85	675.2	
4	Merak (Banten)-Bakauheni (Lampung)	15	621.7	
5	Sape-Labuhan Bajo (NTB-NTT)	75	556.0	Lowest
6	Don San (Surat Tani)-Pulau Samui	16.5	2682	Thailand
7	Kamoike-Tarumizu	15	3344	Japan
8	Batangas-Kalapani (Pulau Mindoro)	27	1481	Phillipina

Source: Dermaga (2013)

1. Port. Whether a port is good or not is indicated by how long do ships have to dwell at that port. Short dwelling time means that the port is quite good, but if it takes days then the port is not in a good condition. Nowadays, the dwelling time at Tanjung Priok port takes seven days and currently being shortened to 2.5 days improve its service.

2. Regulatory system. A service regulatory system should have a *cabotage* system. If the goods are carried by Indonesian ships, then it's taxable; but if they were carried by overmaritimes ships then it's tax-free.

Similar things happened to Indonesian logistic service export systemwhich is still dominated by foreign ships, domestic ship industry businesses are still unable to compete with them. As the result, import-export activities do not provide additional revenue for the state, because they use Free on Board (FOB) methods or borne by the importers in the destination country. Exporters are expected to begin switching their exports terms of delivery cost from the currently used FOB terms to CIF (cost of insurance freight), because up until now most of the exporters still use the FOB term on their exports and use foreign-flagged cargo ships. By using the CIF terms, the exporters will have the opportunity to choose to use Indonesian-flagged ships, so the Indonesian shipping industry can have a greater opportunity to contribute to the export and eventually increase the chances of the national economy.

The potential losses from the lack of domestic transport ships usage are very large. For example, the benefit of transporting palm oil or coal falls to Singaporean ships. The magnitude of the potential losses from the foreign ships usage on exports and imports has reached USD 15-20 billion or IDR 120 trillion annually. That number is obviously burdening Indonesian national budget. Appart from the transporting ships, logistics business also absorb a lot of money to abroad, because the exporters uses the FOB delivery system and make the costs to be borne by the importers, including the boat rentals. Other logistic business components that also fled are insurance and the interest from foreign banks that serve the exports. Actually if the services sector could gradually reduce its dependence on foreign exporters and importers, then it would certainly help the national foreign exchange reserves.

Another issue that must soon be addressed is the fact that many exporters have choosen the FOB terms to save them the trouble because if they were to use domestic ships they will have to pay more expensive transport costs with limited number of ships. Unfortunately, approximately 91 percent of Indonesian domestic ships only serve domestic logistics while the remaining 9 percent do overmaritimes shipping. Therefore, we are confident that CIF could increase the use of domestic ships by 12 to 20 percent. The development of maritime transportation in Indonesia is still dominated by foreigners. In terms of maritime transportation, Indonesia has yet to have an adequate fleet in terms of number and capacity.

2001 data showed that the national fleet's *share* capacity only reached 5.6 percent compared to those of foreign's which reached 345 million tons. The share of the national fleet to the domestic transportation which reached 170 million tons had only reached 56.4 percent. These kind of conditions must be very disheartening, especially at the door of free trade era. Until 2001, there were 1,762 shipping companies. Out of those 1,762 shipping companies, there were 126 companies that had ships weighing up to 174 Gross Tonnage (GT), 6,070 companies had 175 GT-4999 GT, and 129 companies had 5000 GT 129 companies. As for the rest, those 809 shipping companies did not have any boat or just chartered other boats. Shipping companies that actually had ships were PT Pelni (44 ships), Pertamina (35 ships), Meratus (19 ships), PT Arpeni (18 ships), Berlian Laju Tanker (9 ships), and PT Pusri and Noah Adiguna (respectively 7 ships) (Directorate General of Maritime Transportation). Surprisingly, the companies which have ships are not really companies with maritime transportation as their core businesses, but they operate those ships as means of supporting its industrial activities.

The dominance of foreign shipping is seen on how their ships' freight of overmaritimes cargo (export/import) which ammount to as much as 92.5 percent (322.5 million M/T). As for the domestic freight, foreign ships controled 50 percent of the total transported goods (89.8 million M/T). This means that most national shipping companies are mere agents for the foreign ships. The impact of this condition is the lack of authority to reduce the sources of inefficiency in maritime transportation.

Another thing that needs to be developed is the hub port in the Eastern and Western Regions of Indonesia to improve the national economy, which has been flowing to Singapore or Malaysia. Excluding Tanjung Priok, other hub ports also needed to be considered/maintained are the Port of Sabang in Aceh and Port of Makassar in South Sulawesi. These considerations/maintenances could reduce the annual foreign exchange reserves loss of Rp 2.7 trillion as a result of the harboring on other countries' hub ports (Kamaluddin, 2003).

According to the World Bank (2011), Indonesian cross-border trade rank is 47, which is relatively far compared to Singapore, Thailand, and Malaysia who respectively ranked ranked 1, 13 and 37. Cross-border trade compiles

all procedural requirements in the export-import activities which done through maritime transportation, which includes the number of documents, time and cost (Table 4.4). Based on Table 4.4, the number of documents needed in export activities in 2011 was 5 documents, the time required for the export was 20 days, while the export cost reached USD 704 per container. Compared to 2006 condition, there has been a slight improvements in number of documents (from 7 to 5) and time needed (from 25 days to 20 days), but Indonesia was still lag behind other ASEAN countries in term of days needed and costs of container exports. From the number days, Indonesia was just a little better than Vietnam, but in terms of cost, Indonesian export's cost was the most expensive while the Malaysia and Singapore cost the cheapest.

Table 6. Procedural export ASEAN countries, 2010-2011 Year

Countries	2010			2011		
	Document (number)	Time (day)	Cost (US$/container)	Document (number)	Time (day)	Cost (US$/container)
Indonesia	5	21	704	5	20	704
Singapore	4	5	456	4	5	456
Thailand	4	14	625	4	14	625
Malaysia	7	18	450	7	18	450
Philipina	8	16	816	8	15	675
Vietnam	6	22	756	6	22	555

Source: World Bank, 2010-2011

5. Conclusion and Policies Recommendation

Based on the analysis, it can be concluded that the transport services sector openess (restriction lowering) may affect the import transporting cost of Indonesian agricultural commodities. However, the low restriction in ports can not affect the export transportation cost of Indonesian agricultural commodities. This result showed that Indonesia had not been able to take advantage of the eases presented in ports (openess) to increase its agricultural exports.

In order to support the logistics development to enhance the Indonesian trade competitiveness in ASEAN Logistics Integration Logistics which starts in 2013, ASEAN Market Integration and the ASEAN Economic Community (AEC) which starts in 2015 and Global Market Integration which starts in 2020, the presence of international hub ports establishment needs to be facilitated right away by the government or private companies, so that Indonesian large capacity transportation will no longer have to pass through Singapore and Malaysia and will be able to increase Indonesia's income.

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