



# 4

## The Role of Technology as a Trade Facilitator in Upgrading Export Performance of ASEAN Countries in 2008–2014

Amalia Wardhani, Fithra Faisal Hastiadi,  
and Muhammad Rifki Shihab

### Introduction

Krugman and Obstfeld state that international trade is one of the two branches of the theory of international economics which explains goods and services are exchanged either by using money as a means of transaction or through investment. International trade is conducted with the goals of each country. Krugman and Obstfeld explain that the parties involved in trade relations—in this case is a country that conducts international trade, both acting as a seller or buyer—will get something from a transaction that aims to make each of the parties involved in the transaction to be better off. Judging from the producer who will receive profit, it can be analyzed that effectiveness of production strategy is determined by the producer. With limited resources, each country must

---

A. Wardhani (✉) • F. F. Hastiadi • M. R. Shihab (✉)  
Universitas Indonesia, Depok, Indonesia  
e-mail: [wamalia6@gmail.com](mailto:wamalia6@gmail.com); [shihab@cs.ui.ac.id](mailto:shihab@cs.ui.ac.id)

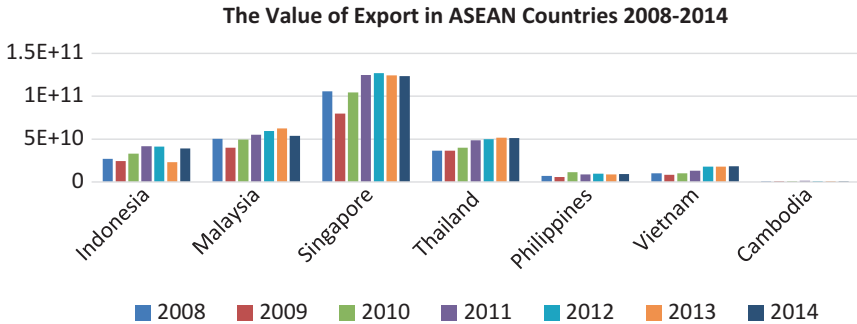
establish the choice of goods or services to be produced with the most effective strategy in terms of both expenditure and income. Then, each country sells goods and services produced to other countries so that trade among countries takes place.

In this study, the authors examine the effect of the quality of trade facilities by using four indicators of real exports in ASEAN (Association of Southeast Asian Nations) countries. Trade facilities become one of the issues in the spotlight of policy makers to improve the quality and quantity of economic growth in ASEAN countries. A report entitled the ASEAN Trade Facilitation Framework (ATFF) (<http://asean.org/storage/2016/08/ASEAN-Trade-Facilitation-Framework.pdf>) suggests that trade facilities play an important role in promoting economic development and regional integration among ASEAN countries. Trading facilities play a pivotal role in achieving the ASEAN goal of being a large market and stable production base with high levels of competition and an integrated economy.

In 2016, ASEAN as a form of economic integration initiated an idea of trade facilities within the ATFF. This idea aims to improve the quality of the economy by improving the quality of regional trade facilities. The main focus of the ATFF is to streamline the implementation of obligations, commitments, and instruments relating to trade facilities among ASEAN countries. There are four groups of distribution of trade facilities such as licensing and transportation, transparency of trade rules and procedures, uniform quality of trade facilities, and private sector involvement, as well as business facilities.

The ASEAN Trade Facilitation Framework seeks to create efficiencies in the movement of goods that become the object of trade among ASEAN countries. It also aims at increasing trade and production networks, becoming more participative in global value chains, and enhancing economic integration. In addition, the ATFF endeavors to improve the oversight mechanisms against the implementation of trade facilities.

This study analyzes the role of trade facilities to trade to substantiate evidence from other research results conducted in several other countries. This research belongs to the scope of bilateral trade between countries in ASEAN.



**Fig. 4.1** The value of export in ASEAN countries 2008–2014. Sources: Authors, from *Comtrade*

Figure 4.1 illustrates that countries in ASEAN are engaged in trading activities, namely exports. From 2008 to 2014, Malaysia and Singapore became the most exporting countries to ASEAN countries, followed by Thailand and Indonesia. This was indicated by the highest export value. This signifies that countries in ASEAN are actively engaged in trade activities which are shown from the export value of each country to other countries in the ASEAN region. Trade activities of ASEAN countries need to be maintained and enhanced to improve the economies of ASEAN countries. In order to improve the economies of ASEAN countries, trade facilities owned by a country play a crucial part in supporting the trade of a country. Within the ASEAN Trade Facilitation Framework, it has been explained that trade facilities encourage economic development and economic integration.

Trade facilities are closely related to the trade costs borne by countries that engage in trading activities, particularly exports. Figure 4.2 denotes the costs incurred by countries in ASEAN in conducting trade activities, that is, exports. The Philippines has the highest trade (export) costs compared to other ASEAN countries, followed by Cambodia. The trade costs included in the border compliance are the trade costs borne by these countries which are related to matters of economic and regulatory boundaries of certain institutions. Figure 4.3 indicates the costs borne by countries in ASEAN in trading, that is, exports. Indonesia has the highest cost

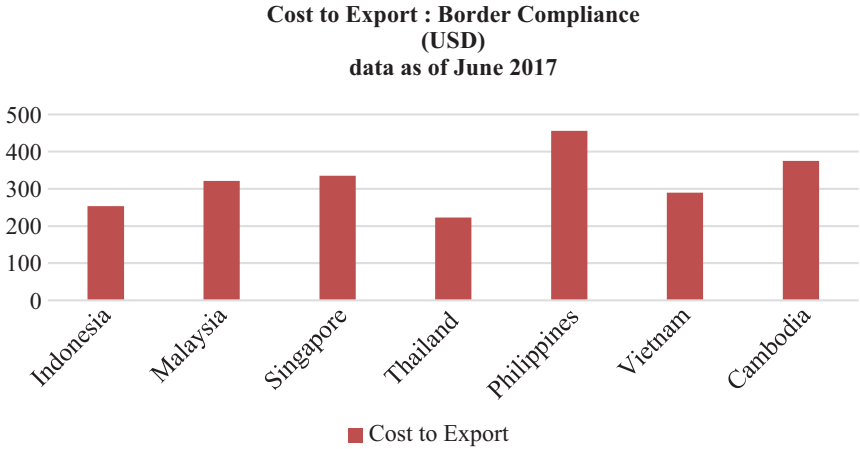


Fig. 4.2 Cost to export: border compliance. Source: Authors, from *Doing Business*

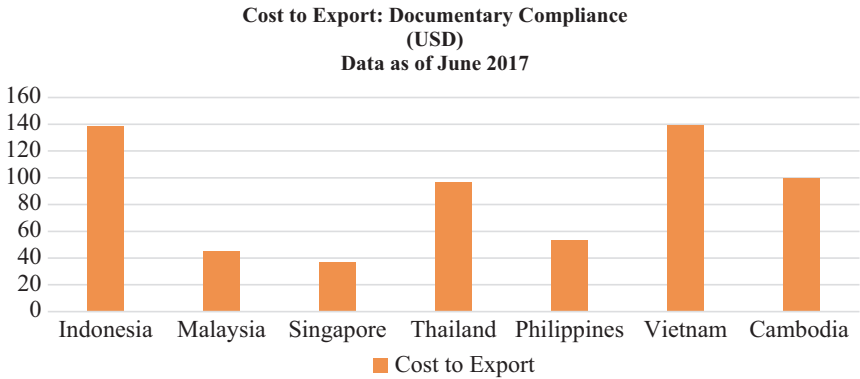


Fig. 4.3 Cost to export: documentary compliance. Source: Authors, from *Doing Business*

in terms of trade costs related to documents required to conduct trading activities, that is exports, followed by Vietnam and Cambodia. Meanwhile, Singapore has the lowest cost.

## Theoretical Review

### Trade Facilities in International Trade Economics Theory

Trading facilities in economic theory are essential in and are closely related to trade costs. Ricardian explains the effect of trade costs on a particular country trade in classical trading theory. In his theory, Ricardian explains that the motivation of a country in trading is the difference in labor productivity of these countries. When these countries do not trade, each country will have a different price relative. If it is assumed that the absence of trade costs on trade occurs between countries, the price difference of goods traded between countries becomes an opportunity for countries in the world to improve their welfare because the price is determined by consumer preferences and its relative size. Inefficient trade procedures will lead to high trade costs and cause differences in goods across the country. Each country will specialize in the production of goods that they are capable of producing, but will reduce consumption which then leads to a decline in economic welfare. Van Marrewijk states that factors such as abundance of natural resources, technological differences, or various preferences of society influence or shape trade flows. Both the poor trade facilities affect the trade flows of one country. The poor trade facilities cause the cost of transportation or trade costs to be more expensive, so it is considered trade barrier. Thus, the trade facility in the logistics sector gives effect to the trade flows. Baldwin and Wyplosz argue that poor trade facilities and inefficient trading procedures include non-tariff trade barriers. Asian Development Bank and the United States in its report entitled *Designing and Implementing Trade Facilitation in Asia and the Pacific* highlight that trade facilities are the keys that can be used to increase profits caused by trade conducted by a country to another country. Tariff is no longer a barrier for a country to trade more than 60 years ago. Since 1970, non-tariff barriers such as import quotas or export restriction agreements have decreased significantly. The cost of trade or often referred to as trade cost becomes significant affecting trade international.

Trade facilities are able to capture the movement of trade costs, which is influenced by several things such as trading procedures which then affect the time spent by a country so that the longer it takes to trade due to complicated procedures, the more trade costs that must be borne by the country involved in trading. The World Trade Organization in the Asian Development Bank and United Nations report states that trade facilities are a form of simplification and harmonization of international trade procedures, in which international trade procedures comprise activities, actions, and formalities that include collection, offerings, communication and data processing, and other information used to assist the movement of traded goods. The United Nations Center for Trade Facilitation and Electronic Business (UN/CEFACT) utters that trade facilities are a form of simplification, standardization, and harmonization of trade procedures and information associations related to the flow of goods traded from seller to buyer through payment system. The Asia-Pacific Economic Cooperation (APEC) asserts that trade facilities are a form of simplification and rationalization of licensing and other administrative procedures that imply a decrease in the costs incurred in trading by shipping goods from one country to another and/or from several countries to some other countries. Based on the definition of trade facilities above, it can be concluded that trade facilities are closely related to trade costs. This is explained in the theory of A Simple “Iceberg” Partial Equilibrium Model. World Trade Report entitled *The WTO Trade Facilitation Agreement* elaborates the partial equilibrium theory of Iceberg by Samuelson. It points out how the inefficiency of trade procedures increases trade costs and leads to a significant price difference between the price received by the producer and the price received by the consumer. This can be seen from the increased value of deadweight loss.

## **ASEAN Trade Facilitation Framework**

Trade facilities in sectors that are not less important to be improved is an effort to improve the export performance of countries in both international and regional trades such as that of ASEAN. ASEAN as a tangible form of economic integration is paying full attention to efforts to improve

the quality of trade facilities, one of which is the establishment of the ASEAN Trade Facilitation Framework. The ASEAN Trade Facilitation Framework defines trade facilities as an imperative factor in economic development and regional integration. It is a form of realization of the ASEAN objectives of becoming a single market and stable production base, increasing revenue, having high level of competition, and being economically integrated with the existence of an effective trading facility for trading and investment that will facilitate the movement of trade in goods and services as well as investment.

## Technology in Theory of Economics

Technology is one of the important variables in the economy. World Economic Forum shed light on the importance of technology as the world grows and the world becomes increasingly unlimited from the ongoing flow of globalization, technology increases and becomes an important element for companies to compete and directly and indirectly affect the economy. Mankiw Gregory (2012) suggests that technology can be explained through the Solow growth model. The term used in the theory is technological progress.

## Effective Workers (The Efficiency of Labor)

In analyzing the role of technology in economic growth through the Solow growth model, the following production functions are utilized:

$$Y = F(K, L) \quad (4.1)$$

$$Y = F(K, L \times E) \quad (4.2)$$

Equation (4.1) denotes the initial production function, while Eq. (4.2) signifies a production function consisting of K capital and the effective worker  $L \times E$ . Effective workers reflect the people of certain countries who have knowledge of the production method caused by the increasing quality of technology, thereby causing the increase in effective workers.

Technology—specifically termed as technological progress—is very influential on the productivity of each worker which then contributes to the increase in production of goods and services. In this model, technological progress is also called labor augmenting. The steady state with technological progress that improves the quality of technology within an economy does not cause the number of workers in the economy to increase, but causes an increase in the number of effective workers. In analyzing steady state of an economy, the following equation is used:

$$k = K / (L \times E) \quad (4.3)$$

$$y = Y / (L \times E) \quad (4.4)$$

$$\Delta k = sf(k) - (\delta + n + g)k \quad (4.5)$$

Equation (4.3) indicates the effective capital per worker, Eq. (4.4) shows the output per worker is effective, while Eq. (4.5) depicts changes in capital stock that can explain the analysis of economic growth. Steady state can be achieved when establishing  $k$  becomes constant,  $\delta k$  to replace capital depreciation,  $nk$  to provide new workers and to produce effective workers created through technological progress.

## Empirical Studies

Seetanah et al. (2016) utilize data from 20 African countries in the 2007–2014 period in their research on trade facilities arguing that trade facilities amplified trade flows in some African countries. In addition, economic growth, investment, and the existence of international trade agreements are also found to have an effect on trade flows. In the analysis, the researchers used the Logistic Performance Index (LPI) data from 2007 to 2014. The researchers argue that LPI is a data that can be used to calculate how a country can be connected with international logistics network. Based on information obtained from the World Bank, it is stated that LPI helps a country in identifying the challenges and opportunities they face in improving the quality of the logistics sector and the steps that can be taken to improve it. LPI is an index used to analyze the



performance quality of a country's logistics sector which includes assessment of several aspects. LPI does not only describe the quality of the logistics sector of a country, but also reveals the development trend of the sector over time. Hoekman and Nicita employ the Logistic Performance Index as the economic indicator variable that describes the trade facilities. Logistic Performance Index is considered to describe the condition of a country's supply chain. The index is built on several supporting aspects, such as the length of travel time of distribution of goods and the infrastructure of each component that has their respective scoring numbers. However, the LPI is not the only variable approach that can be used to analyze trade facilities. Zarzoso, Ramos, and Wilmsmeier conducted a study on the impact of trade facilities on sectoral trade in Latin America. In the study, the researchers apply three variables which are used as maritime transport infrastructure and other trading facilities such as the number of port container, the time lag of goods distribution, and the number of bureaucratic procedures. In the study, it is found that natural trade barriers that transport costs play a more crucial role than institutional trade barriers or factors of trade facilities in Latin American trade. In general, however, transport infrastructure and trade procedures are the determinants of transportation costs. Fernandes, Hillberry, and Matto argue that trade facilities affect the decline in transportation costs and the decline in time distribution of goods so as to affect the standard of living and boost the acceleration of economic growth. Economic indicators that can be used as a proxy indicator that is considered able to describe the trade facility is exceptionally diverse. Freund and Rocha suggest that the length of transit time augments the country's exports. Indicators applied to describe the quality of trade facilities are domestic transit, documentation, ports, and fees for entry and exit of traded goods. Wilson, Mann, and Otsuki state that trade facilities affect the export of manufactured goods. The researchers utilize several indicators of trading facilities, namely port efficiency; port and airport quality measure; customs environment; measuring the quality of transparency and administration of trade facilities measure, regulatory environment; measuring economic regulations relating to trade facilities and e-business usage; measuring supporting infrastructure that improves economic acceleration. Shepherd and Wilson reveal that improvements

to trade facilities result in a country increasing its trade. The study employs data of ASEAN countries from 2000 to 2005 using four indicators of trade facilities, namely the quality of marine infrastructure, air infrastructure quality, irregular payment in trade transactions, and Internet Service Provider (ISP) competition level.

The research results indicate that the quality of air infrastructure and competition levels of ISPs affect trade flows, but some other indicators including trade facility indicators do not significantly affect the imports of these countries, such as import tariffs, marine infrastructure quality, and irregular payments in export/import transactions. The authors opine that this is due to the relative lack of data used to have an insignificant impact. For example, import tariff rates are inversely correlated with the quality of infrastructure and various payment systems that are not in accordance with the provisions. Perez and Wilson (2011) argue that trade facilities have a significant impact on exports. Based on earlier studies, trade facilities are central in determining trade flows by using different indicators. Hoekman and Nicita contend that trade facilities are part of the cause in influencing trade flows. Based on the results of their research, Hoekman and Nicita suggest that a policy to improve the quality of trade facilities is needed because it gives an enormous and significant impact compared to trade policies implemented to reduce trade costs, that is, the cost to be paid by a country to finance the trading procedures. The research model was prepared using panel data of countries in ASEAN from 2008 to 2014. The model specifications are logarithmic equations and utilize gravity model. Jan Tinbergen's gravity model is used to predict trade volume between two countries. In this study, the gravity model is applied to analyze the bilateral trade flows of the countries studied. The model applied in this study was adopted from that of Perez and Wilson (2011) studies. The research model is formulated as follows:

$$\begin{aligned} \ln\text{Trade}_{ijt} : & \beta + \beta_1 \ln\text{TR}_{it} + \beta_2 \ln\text{BTE}_{it} + \beta_3 \text{WGI}_{it} + \beta_4 \ln\text{TDASAR}_{ijt} \\ & + \beta_5 \ln\text{GDPPC}_{-it} + \beta_6 \ln\text{GDPPC}_{-jt} + \beta_7 \ln\text{POP}_{-it} + \\ & \beta_8 \ln\text{POP}_{-jt} + \beta_{10} \ln\text{DIST}_{-ijt} + e_{ijt} \end{aligned}$$

## Type and Source of Data

Research result: This study is conducted to identify and analyze the indicators of trade facilities and other economic factors in the export performance of ASEAN countries (Table 4.1). The estimation method used is fixed effect. Exports are influenced by several variables: technological readiness, border and transport efficiency, and world governance indicator as trade facilities, import tariff, GDP per capita, population, and distance between countries.

**Table 4.1** Type and source of data

No.	Variable	Definition	Unit	Source
1	Real export	The nominal export value has been adjusted to the CPI value	Million dollar (US\$)	<i>Comtrade</i>
2	<i>Technological readiness</i>	Indicators showing the speed of an economy in improving the productivity of a particular industry using information and communication technologies (ICT) on daily activities and production processes to improve the efficiency and level of a company's competition. This indicator demonstrates the ability of firms in certain countries to have access in using technology to increase the number of products produced and blueprint and the ability to use them.	Index 1–7	<i>Global Competitiveness Report</i>

(continued)

**Table 4.1** (continued)

No.	Variable	Definition	Unit	Source
3	<i>Border and transport efficiency</i>	The BTE indicator shows the time to trade between countries.	Days and Documents	<i>World Bank</i>
4	<i>Worldwide Governance Index (WGI)</i>	The WGI indicator exposes the quality of the business environment that supports to improve the quality of the economy.	Index	<i>Worldwide Governance Index (WGI)</i>
5	Import tariff	Tariffs imposed on the imported goods of a particular country	Percentage (%)	<i>Trade Analysis Information System (TRAINS)</i>
6	GDP per capita	Gross domestic product value per capita	Million dollar (US\$)	<i>World Bank</i>
7	Population	The population of a particular country	People	<i>World Bank</i>
8	<i>Distance</i>	Economic distance of a country to another particular country		<i>World Bank</i>

## Discussion

Pursuant to the Hausman test results, it can be seen that the best estimation method applied in this research is fixed effect method. Estimation results in Table 4.2 denote that the most significant trading facility indicator influencing trade flow is technological readiness variable. Based on the results of regression estimation above, it is shown that technology is a variable that affects real exports significantly. It is clear that the  $p$ -value of the variable is 0.012 and the sign of positive coefficient which is in accordance with the hypothesis and research conducted by Perez and Wilson (2011). The study discusses technological variable which have a significant positive effect on export performance, although the results of research conducted by Shepherd and Wilson using ISP or Internet Service Provider variables as technology proxy variables indicate a positive relationship between variables with export value, but with different level of significance, that is, significant at the level of 10%. Nevertheless,

**Table 4.2** Regression estimation result

Variables	Pooled OLS	Fixed effect	Random effect
lnTR	2.57 (0.001)***	2.12 (0.009)***	2.56 (0.001)***
lnBTE	-0.95 (0.266)	-1.77 (0.09)*	-0.95 (0.266)
WGI	0.11 (0.168)	0.155 (0.05)**	0.11 (0.168)
lnTDASAR	0.02 (0.475)	0.007 (0.815)	0.02 (0.475)
lnGDPPC_i	1.01 (0.001)***	0.91 (0.186)	1.101 (0.001)***
lnGDPPC_j	1.05 (0.000)***	-1.033 (0.094)*	1.05 (0.000)***
lnPOP_i	1.07 (0.000)***	8.13 (0.023)**	1.07 (0.000)***
lnPOP_j	0.44 (0.01)*	7.403 (0.068)*	0.44 (0.010)
lnDISTij	-0.09 (0.412)	-0.11 (0.314)	-0.09 (0.412)
_cons	-24.86 (0.000)***	-252.89 (0.000)***	-24.86 (0.000)***
<i>Observation</i>	206		

Number of countries: 7

Estimated by fixed effect methods

\*Significant at 10%, \*\*Significant at 5%, \*\*\*Significant at 1%

it can be concluded that technology is a significant variable affecting export performance. This is also supported by the results of research conducted by Nasir and Kalirajan (2013) which argue that new technologies play an important role in increasing trade in service trade in the modern era. Their research also says that internet usage variables show a positive sign and are significantly good for countries that do export and import activities, but more estimation results indicate that internet usage variables more significantly affect the countries that do export. The second indicator is the business environment indicator that uses the World Governance Index (WGI) and significantly affects the trade flow with the level of significance at the same level of 5% with the value of  $p$ -value 0.20 and has a sign of influence in accordance with the research hypothesis. This indicates that the business environment indicator used to conduct

trading activities plays a chief role which signifies the real export value of the country.

These results are supported by research conducted by Perez and Wilson (2011) which states that business indicators affect export performance positively: the better the quality of business in the country, the more the value of real exports of the country. The third variable is the border and transport efficiency variable which is the variable that becomes the indicator of the trading facility that describes the length of time and the number of documents required for trading. These variables have different levels of significance in affecting exports. The border and transport efficiency variables are negatively related to real export values and both are significant at the same level of significance. This signifies that the technology and administrative quality which is the proxy of time required for a country to trade is a key trade facility which, when quality is improved or enhanced, will result in the increase of value of real exports. These results are supported by research conducted by Perez and Wilson (2011). In their research, they argue that the technology has a positive effect on export performance. In the study it is also stated that countries that increase exports are likely to obtain higher returns which are then used to improve the quality of infrastructure. The relationship between export performance and the quality of infrastructure as a trade facility has a causal relationship so that it can be explained by using another perspective that the better the quality level of infrastructure as a trading facility including the quality of trading facilities associated with the trade administration, the greater the direct impact on the amount of export value that can be done by the country. The next variable is the GDP variable per capita of the importing country. The GDP per capita of the importing country has a sign of a significant positive coefficient at the 5% significance level. This designates that GDP per capita has a positive and significant effect on the value of real exports. When the per capita GDP of the imported country surges, the real export value of the exporting country also enhances. GDP per capita of exporting countries does not significantly affect the value of real exports. This is apparent in the significance level of above 10%, but with the sign of a positive coefficient corresponding to the hypothesis. It can be concluded that the higher GDP per capita of a country in ASEAN, the more encouraged are other countries located

in the same ASEAN region to increase exports to the country. The population variables of exporting and importing countries significantly affect the value of exports and have a positive relationship albeit at different levels of significance. This is reflected in the significance value of the population variable of the exporting country which stands at 5% level with positive sign of coefficient as well as by the significance value of the population variable of the importing country which is at the 10% level with the sign of the negative coefficient. This implies that the greater the population of exporting countries, the higher the export value of the country. Such result is supported by the research conducted by Perez and Wilson (2011) and Hoekman and Nicita in a World Bank study which also shows a significant positive relationship between the total population of the exporting country and the country's export value. Import tariff variables and distance calculated using the economic approach of ASEAN countries do not significantly affect the export due to the relatively few data utilized in the research. The study by Shepherd and Wilson also supports this fact as it generates estimation of import tariff variables, indicator of trade facilities, that is, ports and irregular payments in trading transactions as well as other dummy variables that do not significantly affect trade flows due to the relatively small amount of data used.

## Conclusion

Following the results of regression estimation which employ fixed effect method, it can be concluded that technological readiness variable is the most significant trading facility indicator affecting export performance of ASEAN countries. Moreover, the WGI indicator is significant in influencing export performance. WGI is an indicator of business environment as a trading facility that comprises six indicators, namely voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. The next indicators that affect the export performance of ASEAN countries are border and transport efficiency which serve as indicators of time and amount of documents required for trading. These three indicators are those of trade facilities that play a great role

in influencing export performance of ASEAN countries. This argument is supported by the research conducted by Perez and Wilson (2011) which suggest that the above three variables, which serve as indicators of trade facilitation, have a significant effect on the trade flows of export performance. The results of this study also support the policies adopted for ASEAN countries through the ASEAN Trade Facilitation Framework. This framework contains a plan to develop the quality of trade facilities of countries in ASEAN to improve the quality and quantity of trade flows since trade facilities are assessed as drivers of economic development and regional integration and are considered playing an essential role as a form of realization of ASEAN goals of becoming a single and stable market as well as a competitive and economically integrated production base. Moreover, the total population of exporting countries and GDP per capita of export destination countries affect export performance of ASEAN countries. Technology is the most significant indicator of trade facilities affecting export performance. The role of technology is also explained through the Solow growth model which signifies that in the long term, technology or technological progress is a determining factor of economic resilience because technology plays a role in creating effective workers and eventually provides a significant effect on the economy.

In designing trade policy, analysis of the effect of trade facilities on export performance is needed because trade facilities are an important variable in analyzing export performance and a supporting factor in trading. The estimation results reflect the priority scale of efforts to improve the quality of trade facilities. Further, the estimation results demonstrate that technology as an indicator of trade facilities mostly influences export performance, so the policy to improve the quality of technology should be increased which eventually can increase production capacity and will give impact to the economy, particularly export performance. Policies on technology are also explained by Jall who divide technological policies applied by a country into two goals. First, the policy is implemented to address market failures. Second, the policy is implemented for long-term development. Jall also argues that policy to improve the quality of technology is an imperative policy in industrial development. The technological differences of each country will have an impact on the



country's dependence on information and knowledge such as firms, consultants, suppliers of capital goods, and technological institutions. Further, it is also explained that imported technologies indirectly provide the best input to technological developments in developing countries. On the other hand, it has been elaborated that not all technologies that are indirectly imported enhance technological development since it is also related to the availability of technological complement factors.

Furthermore, policies to create a sound business environment must also be made to improve export performance and to improve ease of doing business. This can be analyzed from the policies made on the six indicators of the World Governance Index, one of which relates to government efforts in improving the quality of the private sector. Policies to create time and administrative efficiency in trading should also be the focus of governments of ASEAN countries as this will also determine the export performance of each country. Analysis of the effect of trade facilities on export performance is extremely important in an effort to increase the export of a country, especially that of ASEAN. The analysis can be used to strengthen and create policies related to improving the quality of trade and can be useful in establishing trade facilities that are prioritized for strengthening and enhancement.

*Suggestion.* Therefore, further research that can be developed from this research is the use of other trading facility indicators that can affect the export performance of a country and can analyze the difference of trade facilities among certain regions.

## References

- Analyzing the Effect of Trade Facilitation on International Trade Using a Simultaneous Approach. Retrieved January 20, 2017, from <https://www.gtap.agecon.purdue.edu/resources/download/4610.pdf>.
- Mankiw Gregory, N. (2012). *Macroeconomics*. Retrieved from [https://books.google.co.id/books/about/Principles\\_of\\_Macroeconomics.html?id=EwhMBt-DvwYC&redir\\_esc=y](https://books.google.co.id/books/about/Principles_of_Macroeconomics.html?id=EwhMBt-DvwYC&redir_esc=y).
- Nasir, S., & Kalirajan, K. (2013). *Export Performance of South and East Asia in Modern Services*. Crawford School of Public Policy, The Australian National University. ASARC Working Paper 2013/07.

- Perez, A. P., & Wilson, J. S. (2011). *Export Performance and Trade Facilitation Reform: Hard and Soft Infrastructure*. World Bank. Science Direct.
- Seetanah, B., Sannasse, R. V., & Fauzel, S. (2016). *Trade Facilitation and Trade Flows: Evidence from Africa*. Sweden: World Trade Organization.