Indonesian Logistics Infrastructure: The Performance and Fiscal Support

Sigit Setiawan

Senior Researcher at Fiscal Policy Agency, Ministry of Finance Indonesia

Abstract

In the globalization and ASEAN Economic Community era, the competitiveness of Indonesian industries to sell goods and services is facing more severe challenges. It is partly due to the low performance of Indonesian logistics sector, and one of the contributing factors to the unsatisfactory logistics is poor logistics infrastructure. In this regard, this paper has several research objectives. The first is to analyze the performance of Indonesia logistics infrastructure in the past decade. The second is to analyze Indonesian logistics infrastructure development with its relevant fiscal policy support and evaluate its short-term progress. The research method adopted in this study is descriptive analytical method. In comparison with other countries, especially ASEAN region, the performance of Indonesian logistics infrastructure over the past decade tends to be steadily incompetent, below the average of ASEAN countries. It is found to be one of the prime determinants of the high logistics costs in Indonesia. The government serious attention and the consistency of its policy towards improving logistics infrastructure during the 2014-2019 period has been partially seen, but the program sustainability is required in subsequent periods. In the short term, a temporary evaluation until 2017 of the sea toll program integrated with the construction of logistics infrastructure shows a positive impact. The positive impact is indicated from the decreasing prices of basic necessities in the eastern region of Indonesia by 20%-40%, and the economic revival of Eastern Indonesia region due to currently cheaper transportation costs.

Keywords: Logistics Infrastructure; Competitiveness; ASEAN; Fiscal Policy

JEL classification: H30, O57, O23

Submitted: 14.09.2018

Accepted 10.11. 2018

Introduction

Globalization has created the dynamics of change and broad impact to the economies of countries in the world, including Indonesia and other Southeast Asian countries as the members of the ASEAN Economic Community (AEC). In order to encourage its connectivity and free flow of goods, services and people, in 2010 ASEAN countries adopted the Master Plan on ASEAN Connectivity (MPAC) and the ASEAN Strategic Transport Plan (ASTP).

In the globalization and ASEAN Economic Community era, there are two sides of coins to take place: wider and larger business opportunities, on the other hand, the increasing and more severe competition. In order

to remain to survive and become the winner, industrial competitiveness is the key. Observing the current conditions, Indonesian industrial competitiveness to be able to sell goods and services competitively in the global market in general is still facing severe challenges. The main problem is partly due to the unsatisfactory performance of the Indonesian logistics sector. The weaknesses in infrastructure support, especially logistics infrastructure, are very likely to have contributed to the low performance of Indonesian logistics sector. Such a condition has escalated the cost of Indonesian logistics sector and made it harder to be competitive at the regional and global level.

In that regard, this paper aims: the first, to analyze the performance of Indonesian logistics infrastructure in the last decade (period 2007-2016 in general plus some updates in 2017 and 2018) compared to other countries, especially in ASEAN region. The second, to analyze Indonesian logistics infrastructure development with its relevant fiscal policy support and evaluate its short-term progress.

Literature Review

The Coalition of Service Industries defines logistics as the process of planning, implementing, managing and controlling the flow and storage of goods, services and related information, from the point of origin to the point of consumption. Meanwhile, logistics services themselves are a variety of services needed to efficiently manage the delivery of materials, components and finished goods from producers to consumers (Tongzon, 2009)..

If the definition of logistics is put into the national context, it can be described as a process of planning, implementing, and controlling the efficient flow and storage of raw materials, intermediate goods, finished goods and effective related information. The above process should be able to conduct procurement of strategic commodities and public basic needs which makes them available and affordable, and eventually to be able to increase the industrial competitiveness (Mulyadi, 2011).

Logistics is one of the 12 priority sectors integrated in the ASEAN Economic Community. The roadmap to guide the integration of logistics services in ASEAN or the so-called Roadmap for Integration of Logistics Services (RILS) was endorsed in 2008 (Yean & Basu, 2016). The range of policies covered in RILS includes six issues. The first issue is related to increasing ASEAN national logistics system integration. The second issue relates to increasing progressive logistics services liberalization. The next issue in RILS is increasing trade, logistics and investment facilitation. The next is the issue of ASEAN logistics capacity building. The last issue is associated with the development of multimodal transportation capacity, specifically container transportation (ASEAN Secretariat, 2007). The policy on RILS itself has been harmonized with the ASEAN Strategic Transport Plan 2011-2015 (ASEAN Secretariat, 2015).

The Indonesian logistics sector is facing a period of rising demand along with increased consumer and industrial activities in Indonesia, as well as an expansion of external trade volumes. The Indonesian logistics sector records a strong growth, thanks to continuous economic development which is driven by strong domestic demand. The logistics sector in Indonesia has grown since 2007 at 12.5% per year, and it is estimated that the potential for accelerated growth until 2017 becomes 14.8% yoy (year on year) in line with infrastructure improvement, FDI inflows and the raising volume of foreign trade (The data is from Frost and Sullivan (2016)).

The big potential of Indonesian logistics sector has attracted the interest of global logistics companies to enter Indonesian market. In the ASEAN region, they generally choose to establish a regional office in Singapore and set up a local office in each country including Indonesia. The global top logistics company like DHL and UPS have made a dominant position in the Indonesian logistics market by initially focusing on sending local and international documents, and then expanding into supply chain logistics, freight forwarding and other aspects of third-party logistics. Those multinational logistics businesses have been operating in the Indonesian market for decades working with local partners especially in the field of express domestic and international documents courier and supply chain solutions. The overall market is very fragmented among several large companies and thousands of small and medium sized logistics players that create tight price competition in the market.

Research and Methodology

The research method adopted in this study is descriptive analytical method based on literature review and data analysis. Data is taken from from the Ministry of Finance, Bappenas, World Bank (Logistics performance index), ASEAN Secretariat, International Association of Ports and Harbors, Jones Lang LaSalle and various related literature. Jones Lang LaSalle is a world-class property consulting institution with branches in more than 80 countries, which is related to its business interests has carried out ASEAN countries infrastructure assessments.

Periodically since 2007 to date, the World Bank has published its assessment on the logistics performance of the countries in the world. In conducting its assessment, the World Bank adopts an index called the Logistics Performance Index (LPI). The LPI index issued by the World Bank takes six assessment dimensions, i.e. customs, infrastructure, logistics services competency, ease of shipment, tracking capability, and timeliness. The last assessment when this paper is written is 2016 LPI index.

Findings

The Performance of Indonesian Logistics Infrastructure

The survey results of the 2016 World Bank logistics performance index shows that Indonesia's ranking still lags behind in ASEAN region, and also with other Indonesian FTA partner countries such as Japan, China, South Korea and India. In 2016, Indonesia's logistics performance ranking in the world is in the 63rd of 160 countries - outperforming the Philippines (71) and Vietnam (64), but not yet able to surpass Singapore (5), Malaysia (32) and Thailand (45). So far the Indonesian best LPI index in the past decade takes place in 2014.

The lower logistics performance in Indonesia has been indicated as the main contributing factor to the high cost of logistics in Indonesia so far. When compared to some developed countries, the share of overall Indonesian logistics costs compared to GDP is still too high (Mulyadi, 2011); it means that the contribution of logistics costs to the product price incurred by consumers is still very significant. For Indonesian industry, logistics cost is the second largest of cost components after the purchase of materials, goods and services (Mulyadi, 2011).

The lower logistics performance of Indonesia is partly due to the poor logistics infrastructure condition. It is obviously indicated by the lower infrastructure index value, which is always below the "moderate (3)" value on the scale of 5 (1 = very low, 5 = very high). In the 2007, the value is 2.83; then declines to 2.54 in the period 2010-2012, rises again in 2014, before falls to 2.65 in 2016.

The 2016 poor logistics infrastructure index value – which is 2.65 – is below the average of the ten ASEAN countries - which is 2.79 - and belongs to the second-tier group, it ranks the sixth out of ten ASEAN countries. In comparison with logistics infrastructure index, Indonesia logistic performance index value itself is higher – which is 2.83. Moreover, the assessment by LaSalle (2013) on the infrastructure of Indonesia and ASEAN member states in Table 1 can provide a clearer picture of the poor Indonesian logistics infrastructure.

Table 1: LaSalle Assessment of ASEAN Member States Logistics Infrastructure

No.	Negara	Land line (road network)	Railway Line (railroad network)	Maritime line (Quality of sea port)	Sky line (Quality of air port)
1.	Indonesia	Poor	Poor	Moderate	Moderate
2.	Malaysia	Good	Good	Good	Good
3.	Philippines	Moderate	Poor	Poor	Poor
4.	Singapore	Good	Good	Good	Good
5.	Thailand	Good	Good	Good	Good
6.	Vietnam	Moderate	Moderate	Poor	Poor

Source : LaSalle (2013)

As illustrated in Table 1 above, the quality of Indonesian logistics infrastructure in the road, railroad and maritime lines still lags behind when compared to other major ASEAN countries, especially Singapore, Malaysia, and Thailand. The quality of Indonesia's logistics infrastructure is equivalent to Vietnam, and superior to the Philippines. More detailed descriptions on each lines are as follows.

1. Road network

Land transportation plays an important role in connecting most of ASEAN countries. The investment has been disbursed to integrate road networks in ASEAN countries. The main priority of investment is to reduce bottlenecks and improve road conditions to class III standards, the minimum road quality standards in Asia required in the Asia Highway Master Plan. All ASEAN countries take part in the Master Plan, as an effort to improve land routes designed to integrate areas with effective main road networks (see Table 6).

Based on Jones Lang LaSalle (2013), the road quality in Indonesia is still considered poor, its quality lags behind the Philippines and Vietnam (categorized quite well), even more from Malaysia, Thailand and Singapore (fairly good) on road infrastructure. In addition, Indonesia vast territory compared to other ASEAN countries does require a lot of road infrastructure projects, either for repairing damaged old roads or building new roads (see Table 2). Indonesian number of projects is only under Vietnam, which builds road infrastructure vigorously.

Table 2: The Details of the ASEAN Logistics Infrastructure Network Project

No.	Country	Number of Network Projects			
		Road network	Railway	Seaport	Airport
1.	Brunei	0	0	0	0
2.	Indonesia	17	16	9	4
3.	Cambodia	1	2	0	1
4.	Lao PDR	0	3	n.a.	0
5.	Malaysia	3	6	2	1
6.	Myanmar	1	1	1	0
7.	Philippines	1	4	0	1
8.	Singapore	2	4	1	1
9.	Thailand	2	13	1	3
10.	Vietnam	25	10	7	7
	Total	52	59	21	18
	Total value (US\$)	100 bill.	200 bill.	35 bill.	34 bill.

Source: BMI study in Jones Lang LaSalle (2013).

2. Railway network

Jones Lang LaSalle's (2013) assessment on the quality of Indonesia railroad infrastructure is also no different than the quality of road. When compared to other ASEAN countries, the poor quality of Indonesia railroad infrastructure is as poor as the Philippines. Indonesia lags behind Vietnam - which has good quality – and with Malaysia, Thailand and Singapore as well.

In the ASEAN region, overall the railway network is currently underdeveloped, thus the investment in a more efficient railway network will provide significant benefits. The ASEAN member states community have targeted the railroad as the main investment sector, and have agreed to build a more integrated railway network.

The investment priority goes to the part of line that connects ASEAN with China. Although the railway network will provide benefits especially for the economies on the peninsula, the benefits will also be enjoyed by the broader ASEAN region, including Indonesia and the Philippines. The currently scheduled

investments in the ASEAN region for the railway network amounts US \$ 200 billion (see Table 6). Indonesia has the most railway network development projects in ASEAN, followed by Thailand.

Both government and the association of logistic players similarly view that infrastructure barriers have also become a major issue in land transportation, where Indonesian logistics agents still depend much on the use of highways to transport goods, given the lack of major railroad infrastructure. Such a condition also affects Indonesian ability to meet the challenges in the ASEAN single market era. The use of railroad lines will become a favorite transportation route for logistics service businesses, considering that travel time will be shorter and free from traffic congestion. In addition, the issue around dwelling time due to the slower flow of goods out of port will also be minimized. In this regard, Indonesia needs to further increase the use of cargo railway lines from industrial areas in Bekasi, Cikampek and Karawang to Tanjung Priok port or Patimban port (still developed). The increased use can be conducted by improving transport capacity and adding more lines for cargo railway lines to Tanjung Priok, or building a new freight railway line to the new port in Patimban later.

Currently the use of the cargo railway line is still limited to the Cikarang Dry Port (CDP) route in Jababeka Bekasi to the port of Tanjung Priok with minimal capacity - as confirmed by the Indonesian Logistics Association - at an average of 25-30 boxes per day (such data is taken from Kemenko Maritim (2018)). The problem lies in the absence of a special freight railway line. At present the Tanjung Priok - Cikarang cargo railway line still overlaps with the Jakarta - Bekasi passenger train railway line. As a matter of fact, industrial estates in Indonesia continue to grow and develop rapidly. In Cikarang alone there are 7 (seven) other industrial areas outside Jababeka which also need to be connected with the dry port. The seven other industrial zones are Lippo Cikarang industrial area, Delta Mas, East Jakarta Industrial Park (EJIP), Megapolis Manunggal Industrial Development (MM2100), Bekasi Fadjar Hungkang, Greenland International Industrial Center (GIIC) Kota Deltamas, and Hyundai Inti Development Park Dae Woo. It has not taken into account various other industrial areas in Bekasi and Karawang.

3. Maritime Route

The geographical profile of Southeast Asia shows that sea lanes are the key to achieving an effective supply chain network. The ASEAN region has great potential to improve and capitalize the shipping industry, due to its strategic location on the world main shipping routes. Southeast Asia is an important hub for cargo flow, due to its important location and advanced port infrastructure. The main shipping lane of the world is through the ASEAN region; it describes the important and strategic position of ASEAN countries in the global trade network with its large trading volume. The Malacca Strait is the lane of cruising ships of one-fourth volume of world trade. This strait is one of the most important shipping lanes in the world and the main shipping lane between the Indian Ocean and the Pacific Ocean (Jones, 2013).

Table 3: Quality of Sea Port Infrastructure

No.	Country	Year					
		2011	2012	2013	2014	2015	2016
1.	Brunei	4.4	4.5	4.7	na	na	na
2.	Indonesia	3.6	3.6	3.9	4	3.8	3.8
3.	Cambodia	4	4.2	4	3.6	3.7	3.7
4.	Lao PDR	na	na	2.6	2.6	2.2	2.2
5.	Malaysia	5.7	5.5	5.4	5.6	5.6	5.6
6.	Myanmar	na	na	2.6	2.6	2.6	2.6
7.	Philippines	3	3.3	3.4	3.5	3.2	3.2
8.	Singapore	6.8	6.8	6.8	6.7	6.7	6.7
9.	Thailand	4.7	4.6	4.5	4.5	4.5	4.5
10.	Vietnam	3.4	3.4	3.7	3.7	3.9	3.9

Source: World Bank (2016)

Regarding the quality of sea port infrastructure, Table 3 illustrates the quality of port infrastructure for the six main ASEAN countries. Port infrastructure varies from level 1 (extremely left behind) to level 7 (extremely very advanced and efficient based on international standards).

Based on the assessment in Table 3, the quality of ports in Singapore is considered very good, able to handle and deliver goods in large volumes in transit positions to be sent to various export destinations. The quality of ports in Malaysia and Thailand is also good, while the quality of ports in Indonesia, Philippines and Vietnam and other ASEAN countries is considered “lag behind”.

With the help of the linear connectivity index contained in the World Bank database (2016), the position of a country between global shipping lines and the relevance of a country to the global trade network can be illustrated. This index shows the location of ports in the world main shipping lanes, thus this index is strongly influenced by the importance of a port. For illustration, as seen from the high index value, in 2012 Singapore ranks the 3rd in the quality of the best ports in the world. The index value in the period of 2011 to 2016 is shown in Table 4.

Table 4: Linear Connectivity Index (maximum value year 2004=100)

No.	Country	Year					
		2011	2012	2013	2014	2015	2016
1.	Brunei	4.7	4.4	4.6	4.3	4.6	3.9
2.	Indonesia	25.9	26.3	27.4	28.1	27	27.2
3.	Cambodia	5.4	3.5	5.3	5.6	6.7	5.6
4.	Lao PDR	na	na	na	na	na	na
5.	Malaysia	91	99.7	98.2	104	110.6	106.8
6.	Myanmar	3.2	4.2	6	6.3	6.2	6.4
7.	Philippines	18.6	17.2	18.1	20.3	18.3	17.8
8.	Singapore	105	113.2	106.9	113.2	117.1	122.7
9.	Thailand	36.7	37.7	38.3	44.9	44.4	44.3
10.	Vietnam	49.7	48.7	43.3	46.1	46.4	62.8

Source : World Bank (2016)

This index value places Singapore in the world rank number 2. Malaysia is ranked the 4th in the world because, like Singapore, the port is located on the strategic route of Malacca Strait. This position makes Malaysia a country with strong prospects in the future. Meanwhile all ports of other ASEAN countries currently rank above the 21st, and Indonesia itself occupies the 108th rank in the world.

However, the rank of ports importance of Indonesia can improve if its ports can attract greater trading volumes (see Table 5). For the competition in ASEAN region, the index value places Singapore, Malaysia and Vietnam in the first, second and third position. Furthermore, the 4th and the 5th positions are for Thailand and Indonesia.

Table 5: Sea Port Capacity

No.	Country (Name of Port)	Throughput (million TEU's) 2014
1.	Brunei	0.1*
2.	Indonesia (Tanjung Priok)	6.5
	Indonesia (Tanjung Perak)	3.1
3.	Cambodia	0.3*
4.	Lao PDR	na
5.	Malaysia (Klang)	11
	Malaysia (Tanjung Pelepas)	8.6
6.	Myanmar	0.2*
7.	Philippines (Manila)	3.7
8.	Singapore (Singapore)	33.9
9.	Thailand (Laem Chabang)	6.6
10.	Vietnam (Ho Chi Minh)	6.4

Source: Adopted from *International Association of Ports and Harbors/IAPH* (2016) and World Bank (2016)

Note : Data with a sign () is data per country, not per port*

The world shipping strategy shows changes, where large ports are needed along with the need for increased cargo handling capacity. New ships entering the shipping market today require large ports to be able to handle larger loads. Southeast Asia currently has two ports in Singapore and Malaysia that can accommodate those new types of ships. In the case of Indonesia, when the New Priok Port project is completed as scheduled, then in 2023 Indonesia will have a new port with a capacity of 18 million TEU, above the capacity of the regional hub port owned by Malaysia.

Various projects either to expand and maintain existing ports or to build new ports continue to be carried out intensively. In this regard, Indonesia and Vietnam compete fiercely, with Indonesia records the largest number of projects, followed by Vietnam.

In the Blueprint for the Development of the Indonesian National Logistics System it is mentioned that Indonesia has a variety of infrastructure obstacles that are not found in some other ASEAN members: congestion in the port and inadequate loading and unloading capabilities to dock large ships. These challenges plus the high logistics costs have made Indonesia's dependence on Singapore and Malaysia as a hub for trans-shipment.

4. Airway

The ASEAN aviation industry plays a crucial role in connecting the ASEAN community. In LaSalle (2013), the quality of Indonesian airports is considered quite good, above Vietnam and the Philippines, which are considered to be of poor quality. In ASEAN region, Singapore, Malaysia and Thailand are considered to have airports with good quality.

Based on LaSalle (2013), ASEAN countries have scheduled an investment plan worth US \$ 34 billion for the development of their airports. Some investments are already in the construction phase, while other investments are still in the planning stage and are scheduled to be completed no later than 2020. In ASEAN, the number of Indonesian airport projects occupies the second largest position after Vietnam. Vietnam is the most proactive country in terms of investment in the air transportation sector, with investment approaching US \$ 12 billion for seven projects to catch up with other ASEAN countries.

Logistics Infrastructure Development and Relevant Fiscal Policy

Investment in strategic infrastructure will have a huge impact on the growth and sustainability of a country's economy. Each US \$ 1 investment in public infrastructure will increase the country's gross domestic product by US \$ 0.05 to US \$ 0.25 (WEF & PwC, 2012). ADB and ADBI estimate the Asian region requires infrastructure investment of US \$ 8 trillion in the period 2010 to 2020 (ADB & ADBI, 2009). Infrastructure investment is very important for Indonesia - as part of a dynamic Asian region - to be able to maintain its current level of economic growth (PWC, 2014).

Indonesia as part of the ASEAN Economic Community requires an integrated, effective and efficient logistics system to improve its competitiveness - reflected in lower logistics costs and responsive, satisfactory services. But on the other hand, Indonesia is facing with the challenges of an archipelagic country, a uniquely different geographical condition compared to most countries in the world (Mulyadi, 2011). Efficient and effective logistics management will help businesses to excel in competition through the creation of higher added value. Improved logistics performance will facilitate the process of sectoral reallocation between industries, including for export-oriented industries, so that this will thus promote national economic growth (Shepherd, 2011).

The current condition of Indonesia's infrastructure, both ports, airports, roads and railways, is still inadequate to support smooth traffic and logistics performance. The lack of optimal port and airport infrastructure has an impact on the lack of smooth transportation access with intermodal or multimodal transportation systems, from production centers to ports and airports or vice versa. It causes service quality to be low and service rates to be expensive.

In the midst of such conditions, a number of large-scale infrastructure projects along with coherent strategies between the government and the private sector have become part of the Indonesian National Logistics Blueprint. The ongoing and future steps to be taken in the construction of logistics infrastructure are intended to make Indonesia's logistics sector competitive on a regional and global scale. The existence of the ASEAN Connectivity Plan and 2015 AEC adds a sense of urgency in an effort to improve the performance of Indonesian logistics sector.

To increase support for logistics infrastructure financing, the government has taken strategic fiscal policy measures. Since taking office at the end of 2014, President Joko Widodo has stressed the importance of infrastructure development and outlined an ambitious infrastructure spending plan worth tens of billions of dollars for the construction of 3,650 km of new roads, 15 new airports, 24 new seaports, the addition of 3,258 km of railway lines and improvement of public transportation through the construction of Bus Rapid Transit in 29 cities, and the construction of rapid mass transit in urban areas which includes six metropolitan cities and 17 major cities (Kementerian PPN/Bappenas, 2014).

An integrated and inseparable program with the construction of logistics infrastructure is a sea highway program, a program that connects connectivity between the territory of Western Indonesia and that of Eastern Indonesia. The sea highway program launched by President Jokowi on November 4, 2015 is part of inclusive development and aims to eliminate the huge price disparity between the regions in Western Indonesia and Eastern Indonesia and other isolated areas. This program is carried out by providing low-cost, routine, and scheduled shipping services to reach certain ports with certain cargo allocations. With the existence of sea tolls, it is expected to create equitable growth into eastern Indonesia, reduce logistics costs, and ensure the availability of strategic basic needs in all regions of Indonesia at relatively the same prices as well, so that the people welfare is more evenly distributed.

All of this things will be facilitated by the government which at present has been able to reallocate a large fuel subsidy fund for infrastructure expenditure, so that the central government allocation for infrastructure spending since 2010 to date continues to rise. The sharp increase in the value of infrastructure spending occurred in 2015, where the expenditure allocation - compared to 2014 - rose by almost 50% to a value of Rp 290 trillion. Whereas in 2016 the government increased its ceiling in the APBN to Rp317.1 trillion, and similarly in 2017 it increased again to IDR 387.3 trillion. The government has also set 30 priority projects

and commissioned a special unit KPPIP (Committee for the Acceleration of Provision of Priority Infrastructure) to ensure priority projects can be completed on time with good quality.

President Jokowi has submitted a report on the realization of infrastructure development since he took office in 2015 until 2017 at the Annual Session of the DPD (Regional Representative Council) Republic of Indonesia 2018 on 16 August 2018. The ports, airports, railroads, roads and toll roads are built integrated with the growth centers of regional economy to improve connectivity in the Indonesian region. The construction of modern mass transportation infrastructure in the cities, such as LRT (Light Rapid Transit) and MRT (Mass Rapid Transit) is still underway. Sea toll connectivity continues to rise with the construction and development of ports that have reached 477 port locations.

Moreover, accumulatively the railway line has been built with a length of about 369 kilometers of railroad, 11 new airports have been built, and 397 kilometers of toll roads have been operational. Trans Sumatra, Trans Java, and Trans Papua roads are still being built and integrated. The new roads have contributed to smoother traffic management of the 2018 Eidil Fitr homecoming ritual. However, to find out the conclusive impact of infrastructure development on the whole economy certainly takes time; it should be measured in the medium and the long term.

In this short term, the temporary evaluation of the sea toll program shows that the sea toll has a positive impact in the form of decreasing price index value for certain commodity prices, i.e. cooking oil by an average of 4.652% and beef at an average of 4.85% (Vitasari, 2017). Based on the explanation from the Office of the Presidential Staff, sea toll gradually succeeds in diminishing price disparities with the decline in the prices of basic necessities in the eastern region of Indonesia by around 20% - 40%. For example, in the Papua province, the price of cement in the Wamena area has fallen by around 35% from Rp. 500,000 per sack to Rp. 300,000 per sack. In the Wasior area, the prices of rice fall 4%, cement 8%, iron 10% and zinc 9%. The price declines also occur in the East Nusa Tenggara (NTT) province. In Larantuka, the decline in the prices of basic necessities reaches 5% to 15%. In Rote there is a decline in the prices of basic necessities from 6% to 13%.

Besides that, it is found that sea tolls are able to encourage the utilization of existing economic potentials in the East as well as to open new markets for products which are produced in the eastern Indonesia. It is found that there has been an increase in the human and goods mobility, cheaper transportation prices and logistics costs. Local economic activities begin to expand in line with the existence of guaranteed and affordable transportation links carrying wet fish products from NTT to Surabaya.

If the government policies in the period of 2019-2024 is able to continuously improve the quality and quantity of logistics infrastructure, the author believes it will potentially raise the positive image in the perceptions of respondents of LPI World Bank survey. In such a scenario, the performance of logistics infrastructure in the next five years will probably increase above "3 = moderate" surpassing the value of past decade which has been always below "moderate" with the maximum value of 2.92 reached in 2014, and so does with the 2018 LPI updated value for infrastructure which is 2.90.

In that regard, it will potentially surpass Indonesian rivals Malaysia and Thailand whose respective values are 3.45 (2016) and 3.12 (2016), assuming their values are constant or do not change much. In the past decade, the performance of the logistics infrastructure of Malaysia and Thailand has always been above "moderate" with the highest scores of 3.56 and 3.40 (2014) respectively. Competing with Malaysia and Thailand in the next five years is an ambitious but achievable target, while Singapore will still be difficult to match in the near term. Singapore - the mini country has become the only country in the ASEAN region that has a value of logistics performance above "good/high = 4" in the past decade.

Conclusion

In comparison with ASEAN member states, Indonesia's logistics performance over the past decade tends to be steadily low, under Singapore, Malaysia, Thailand and Vietnam. The stagnation and lower logistics performance is found out to be associated with the poor Indonesia's logistics infrastructure, which also tends to be stagnant and below the average of ASEAN countries. Such a condition contributes to the

higher cost of logistics in Indonesia, which restricts the Indonesia competitiveness in encountering the challenges of the ASEAN Economic Community implementation and global market.

The government serious attention and the consistency of its policy towards improving logistics infrastructure during the 2014-2019 period has been partially seen in the priority projects. However, the future politics reality will determine its sustainability. Ideally, the program sustainability is required in subsequent periods to continue improving the quality and quantity of logistics infrastructure as well as to reduce logistics transportation costs.

In the short term, a temporary evaluation until 2017 of the sea toll program integrated with the construction of logistics infrastructure shows a positive impact in the eastern Indonesia economy. The positive impact is indicated from the decreasing prices of basic necessities in the eastern region of Indonesia by 20%-40%, and the economic revival of Eastern Indonesia region due to currently cheaper transportation costs and the existence of regular shippings.

Acknowledgement

The gratitude and appreciation goes to Irfa Ampri, PhD., the Deputy Head of Fiscal Policy Agency – Ministry of Finance, Indonesia for his insightful comments and suggestions.

References

- ASEAN Secretariat (2007). *Roadmap for the Integration of Logistics Services*. 39th ASEAN Economic Ministers.
- ASEAN Secretariat (2015). *Implications of the ASEAN Economic Community to Logistics Industry*. Asian Development Bank & Asian Development Bank Institute (2009). *Infrastructure for a Seamless Asia*.
- Global Business Guide Indonesia (2013). Indonesia's Logistics Sector. http://www.gbgindonesia.com/en/services/article/2013/indonesia_s_logistics_sector.php. Accessed on 22 Sept 2016.
- Kemenkeu (2016). *Informasi APBN 2016*.
- Kementerian PPN/Bappenas (2014). *Konektivitas Infrastruktur Wilayah dan Antar Wilayah*. Deputi Bidang Sarana dan Prasarana Kementerian PPN/Bappenas.
- Jones LangSalle (2013). *Southeast Asia's Rising Logistics Market: Discovering the growing wealth of ASEAN economies*.
- Mulyadi, D. (2011). Pengembangan Sistem Logistik yang Efisien dan Efektif dengan Pendekatan Supply Chain Management. *Jurnal Riset Industri Vol. V, no.3*.
- PWC (2014). *Developing Infrastructure in Asia Pacific: Outlook, Challenges and Solutions*.
- Shepherd, B. (2011). *Logistics Costs and Competitiveness: Measurement and Trade Policy Applications*. Transport Research Support Program – World Bank.
- Tongzon, J. L. (2009). *Indonesia's Interests in Logistics Services at International Trade Negotiations*.
- Vitasari, L. N. (2017). *Analisis Evaluasi Implementasi Kebijakan Tol Laut*. Undergraduate thesis. Institut Teknologi Sepuluh Nopember.
- World Economic Forum & PwC (2012). *Strategic Infrastructure: Steps to prioritise and deliver infrastructure effectively and efficiently*.
- Yean, T. S., & Basu, S. (2016). Logistics Integration in ASEAN Faces Serious Challenges. *Perspective Issue No. 55*. ISEAS – Yusof Ishak Institute, Singapore.