

**ERIA Discussion Paper Series****AEC Blueprint Implementation Performance  
and Challenges: Trade Facilitation**

Ponciano INTAL Jr.\*

*Economic Research Institute for ASEAN and East Asia*

May 2015

---

**Abstract:** *As the intra-ASEAN tariffs are virtually eliminated, it is the non-tariff measures and trade costs associated with moving goods and services across border that hinder intra-ASEAN trade. This paper focuses on reviewing the state of trade facilitation initiatives in ASEAN, especially on customs modernization, National Single Window, and National Trade Repository. The study uses questionnaires and interviews with the government officials of eight ASEAN Member States (Malaysia and Singapore are excluded). The questionnaires are similar to the ones for the ERIA Mid-Term Review Study 2011, thus, allowing for monitoring of progress across period. The result shows there has been significant progress in trade facilitation in the region in recent years. Nonetheless, there remains a huge gap between the front runners and the tail-enders. The main challenges include inadequacy of funds, availability of technical talent, long process of development of the technical infrastructure of the system, and coordination issues among agencies. For initiatives post-2015, the paper recommends amplification of the WTO Trade Facilitation Agreement at the regional level. The paper also notes that political will, human capital, and persistence are the key determinants for the success of trade facilitation initiatives in the region.*

**Keywords:** ASEAN Economic Community, trade facilitation, custom modernization, national single window, trade repository.

**JEL Classification:** F13, F14, F15

---

---

\* The paper draws, to some extent, from the country reports under the ASEAN Economic Community Scorecard Phase 4 project. The author thanks the country authors for their contribution as well as Rully Prasetya for his excellent research assistance.

## 1. Trade Facilitation and Logistics Matter a Lot

The critical role of trade facilitation in the economic integration and development of the Association of Southeast Asian Nations (ASEAN) is best expressed by the ‘Roadmap for an ASEAN Community 2009–2015’ which emphasizes, with respect to trade facilitation, ‘simple, harmonized and standardized trade and customs, processes, procedures, and related information flows are expected to reduce transactions costs in ASEAN which will enhance export competitiveness and facilitate the integration of ASEAN into a single market for goods, services and investments and a single production base’ (p.23).

With virtually zero tariffs to consider, it is the nontariff measures and trade costs associated with moving goods and services across borders that prevent countries from fully participating in the international economy. Trade costs have become more critical in the present era of growing global and regional value chains and production networks and accelerating trade in parts and components.

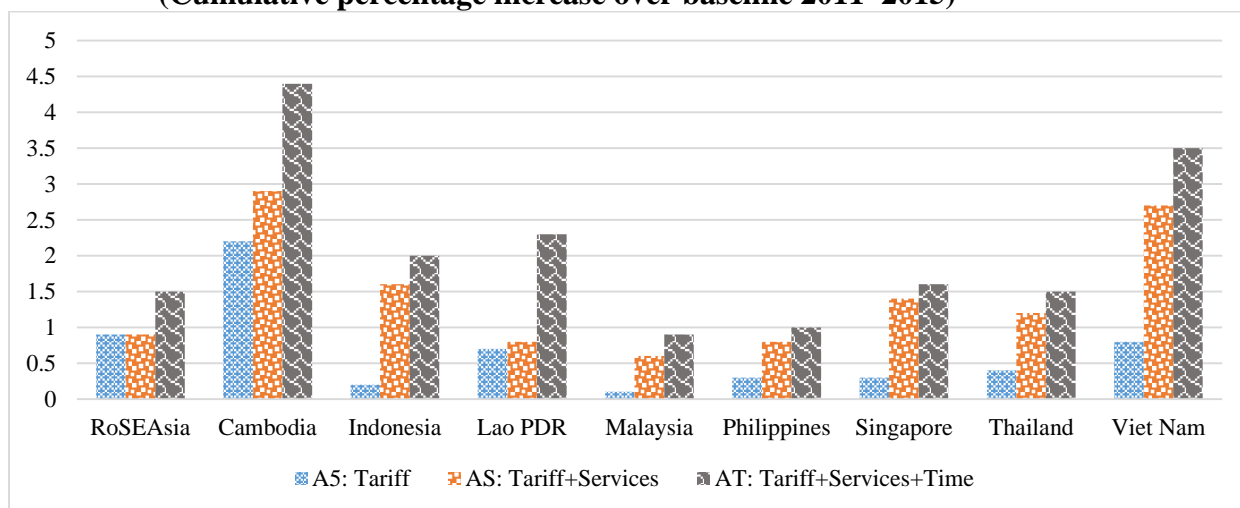
Improved trade facilitation effectively reduces trade costs. In turn, lower trade costs and lower export costs increase a country’s propensity to export as firms with sufficiently high levels of productivity could export successfully, a greater number of small and medium enterprises become more internationally engaged, and resources are reallocated from the low-productivity to high-productivity firms (Shepherd and Wilson, 2008, p.4). Indeed, Li and Wilson (2009) show that **time is a determinant of comparative advantage for countries**: in countries with shorter required time to export, firms in time-sensitive industries (e.g., electrical and electronic equipment) are more likely to export and do export more when they enter the foreign market. This finding also has implications on foreign direct investment. This means that other things being equal, countries where it takes longer to export are likely to be less successful in enticing export-oriented foreign direct investments in time-sensitive industries unless such countries develop export enclaves where the trade facilitation regime and infrastructure facilities are much better than in the rest of the country, thereby substantially reducing the time cost of exporting and importing. Herein lies the importance of trade facilitation on economic growth and employment and, of course, on international trade.

**Impact on economic growth.** It is thus apparent that improved trade facilitation would benefit ASEAN significantly since this organization is tightly intertwined with the world’s most elaborate production networks in East Asia. Simulation results from Itakura (2013) using a dynamic Global Trade Analysis Project (GTAP) model indicate that reducing by 20 percent the time to export and import (proxy for improved trade facilitation) among ASEAN Member States (AMSs) would lead to additional average growth rate of gross domestic product (GDP) over the baseline growth rate. See **Figure 1** (Itakura, 2013):

- 0.20 percentage points for the Philippines and Singapore
- 0.30 percentage points for Malaysia and Thailand
- 0.40 percentage points for Indonesia
- 0.60 percentage points for Brunei Darussalam (but including Timor-Leste)
- 0.80 percentage points for Viet Nam
- 1.50 percentage points for Cambodia and Lao PDR

(There are no computations for Myanmar but the impact is likely similar to Lao PDR, if not higher, because of serious trade facilitation problems in the country until about two years ago. Also, the growth impact of improved trade facilitation for the Philippines and Indonesia would likely be higher than what the Itakura simulation indicates because the trend in foreign direct investment in the Philippines and Indonesia has markedly shifted upward in recent years compared to the 2004–2007 base year in the Itakura simulations.)

**Figure 1: Impact on GDP from AEC Measures  
(Cumulative percentage increase over baseline 2011–2015)**



*Notes:* Brunei Darussalam is proxied by ‘Rest of South East Asia’ in the simulation. No estimates for Myanmar because of serious data problems. The policy scenario assumes the following: (a) Tariff - complete elimination of tariffs over the specified period of time (from 2011 to 2015); (b) Service - reduction of ad valorem equivalents of service trade barriers by 20 percent; and (c) Time - improvements in logistics cutting the ad valorem time cost by 20 percent.

*Source:* Itakura (2013).

Wilson, Mann, and Otsuki (2003) and, more recently, Otsuki (2011) undertook a related simulation of the impact on GDP of selected AMSs of improved trade facilitation but defined more broadly to include trade-related infrastructure (e.g., ports), regulatory environment, and information technology. Wilson, Mann, and Otsuki (2003) show that the per capita GDP of a number of ASEAN members that are also part of the Asia-Pacific Economic Cooperation (APEC) would increase if those AMSs with values less than the average value of APEC were to improve those values halfway to the average value of APEC through trade facilitation measures. Specifically, the per capita GDP increase would be 10.4 percent for the Philippines, 7.4 percent for Indonesia, 5.3 percent for Thailand, 4.2 percent for both Viet Nam and Singapore, and 2.8 percent for Malaysia. Note that the substantial GDP effect in Singapore reflects the induced growth of increased exports resulting from better access to export markets brought about by the simultaneous improvement in the trade facilitation environment in the APEC region.

A similar, more recent study by Otsuki (2011) shows that Indonesia, Thailand, and the Philippines gain the most in absolute terms while Viet Nam, Cambodia, and the Philippines gain the most in percentage terms from the improvement in trade facilitation measures halfway towards the global average. Improvements in port efficiency and in the regulatory environment are also important drivers of benefits in the study. In both the Wilson, Mann, and Otsuki (2003) study and the Otsuki (2011) study, the countries with the largest growth benefit are those that lag behind particularly in trade facilitation measures relative to the best in APEC, according to Wilson, Mann, and Otsuki (2003), or the world (Otsuki, 2011). These countries, therefore, have to improve the most in the simulations. On the whole, improved trade facilitation matters for growth especially for the lagging AMSs.

***Impact on intraregional trade.*** Improved trade facilitation can be expected to increase intraregional trade. One good way of understanding the magnitude of the importance of trade facilitation to intraregional trade is to compare the effect of improved trade facilitation on trade with the effect of tariff elimination. This simulation was done for intra-APEC trade by Wilson, Mann, and Otsuki (2003) based on 1990s data for APEC countries. The simulation results suggest that complete elimination of tariffs on manufactured goods in APEC countries in the 1990s, which

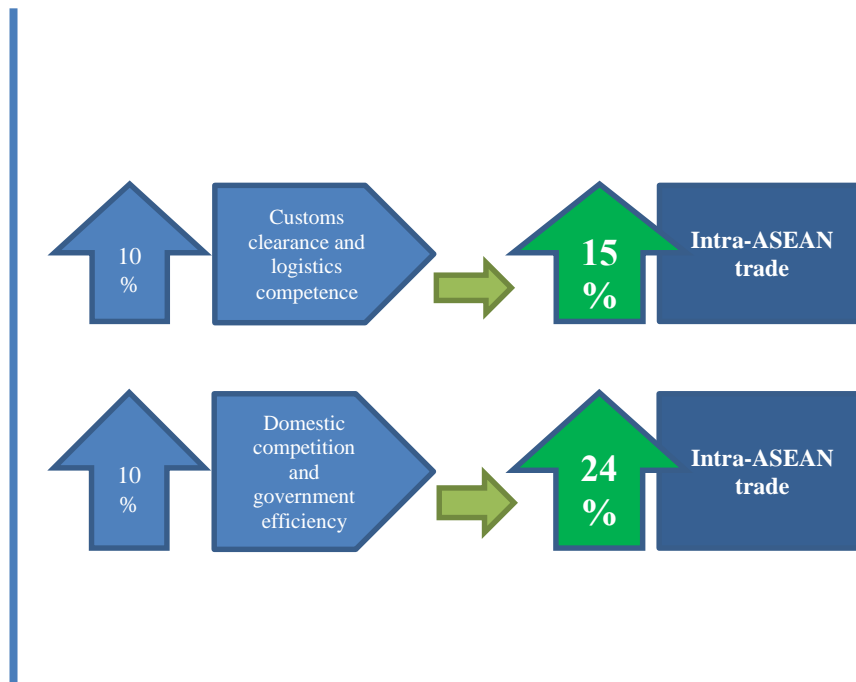
averaged at 6.5 percent, would increase intra-APEC trade by USD27.8 billion during the period. The same level of increased intra-APEC trade arising from tariff elimination could arise from 5.5 percent equiproportionate improvement among APEC economies in customs environment.<sup>1</sup> The measures in Wilson, Mann, and Otsuki's customs environment (e.g., irregular payments, import fees, hidden import barriers) are, in most cases, addressed by a well-performing single window and trade repository, the two key elements of the ASEAN Economic Community (AEC) trade facilitation programme.

The large impact of improved trade facilitation on intra-ASEAN trade is also shown in the study undertaken by the Economic Research Institute for ASEAN and East Asia (ERIA) last year, the AEC Scorecard Phase III. The study examined regulatory structures and trade facilitation in ASEAN and estimated the impact on intra-ASEAN trade of improvements in customs and logistics competence as well as in the overall domestic competition environment, including the logistics services and transport sector (see **Figure 2**). The ERIA study indicates that a 1 percent improvement in customs and logistics competence in both the exporting and importing AMSs would raise intra-ASEAN trade by 1.5 percent. Thus, if there were an improvement by 10 percent in customs and logistics competence in both the importing and exporting AMSs, intra-ASEAN trade would increase by 15 percent.

---

<sup>1</sup> The same level of increased intra-APEC trade can arise from a 0.55 percent improvement in port efficiency and port logistics or a 1.5 percent improvement in regulatory environment or a 3.65 percent increase in e-business usage (see Wilson, Mann, and Otsuki, 2003, Table 14, p.35). The relatively low rate of improvement needed in port efficiency is due to the fact that the major intra-APEC trading economies (e.g., Japan, United States) have efficient port systems and port logistics.

**Figure 2: Impact on Intra-ASEAN Trade**



Source: Computed by Narjoko and Dee.

The results of a similar gravity modelling on intra-ASEAN agricultural trade (Okabe and Urata, 2013) suggests that a 1 percent reduction in time to export and import would lead to about 1.1 percent increase in intra-ASEAN total agricultural trade. A similar percentage reduction in cost to export and import would lead to an even bigger two percent increase in intra-ASEAN total agricultural trade. There are a few commodities where the impact of improved trade facilitation is even bigger than the impact of cost or time reduction. These commodities include HS 18 (cocoa and cocoa products), HS 15 (animal and vegetable fats and oils), and HS 9 (coffee, tea, etc.). The greater sensitivity of intra-ASEAN trade to cost reductions compared to time reductions reflect the fact that a significant portion of intra-ASEAN agricultural trade is not as time-sensitive compared to some manufacturing industries like electrical and electronic equipment where air transport tends to be used instead of shipping.

At the same time, however, the ERIA study by Narjoko and Dee also shows that a 1 percent improvement in the overall domestic competition environment and government efficiency in both the exporting and importing AMSs would lead to an

increase of 2.4 percent in intra-ASEAN trade. Put more boldly, a 10 percent improvement in the overall domestic competition environment (including logistics services and transport sector) and government efficiency in both the exporting and importing AMSs would lead to growth of nearly a quarter in intra-ASEAN trade (see **Figure 2**). The larger impact of greater domestic competition environment and government efficiency on intra-ASEAN trade is probably not surprising because such improvements are generally expected to result in economy-wide productivity effects. Moreover, there would likely be increased investments which are usually not well captured in the gravity modelling approaches that the ERIA study utilized.

Arguably, liberalization in the services sector, including the logistics services and transport sector, as well as foreign investment liberalization in the goods sector will improve the domestic competition environment. As indicated earlier, such improvement has an even larger impact on intra-ASEAN trade than improvements in customs and clearance process alone. If improvements in trade facilitation and in the domestic competition environment were achieved concurrently, then the impact on intra-ASEAN trade would really add up. Specifically, it would result in 3.5 percent trade growth for every concurrent 1 percent improvement in trade facilitation and in the domestic competition environment (arising from services and investment liberalization), reflecting the multiplier effect of such concurrent improvements.

The upshot of the discussion above is that it shows that trade facilitation and services and investment liberalization have at least a **complementary** relationship, and possibly even a **synergistic** relationship, towards increased intra-ASEAN trade (and the implied deeper economic linkages among AMSs).

## **2. Trade Facilitation in ASEAN: Progress and Challenges**

AMSs have registered substantial progress in aspects of trade facilitation over the past half-decade or so but significant challenges remain in order to have a sufficiently well-performing and efficient trade facilitation in the whole region in support of a well-integrated economic community in ASEAN.

Improvements in trade facilitation in AMSs are reflected in the popular Ease of Doing Business -Trading Across Borders indicators, Logistics Performance Index (LPI) indicators, and Enabling Trade indicators (see **Tables 1a, 1b, 2, and 3**). Thus, time to export or import has declined in all AMSs except in Singapore which is already almost the world's fastest anyway (see **Table 1a**). Lao PDR, Cambodia, Brunei Darussalam, Myanmar, Thailand, and Malaysia registered the greatest reduction in 2006–2014 (for Myanmar, over a much shorter period of 2012–2014)<sup>2</sup> while the reduction in time is more modest in the other AMSs. It must be noted that the methodology used in estimating the time to export or import excludes special cases like export zones. In effect, the methodology tries to capture the situation faced by regular small and medium enterprises in a country and, as such, the reduction in time is suggestive of the improved trading environment for such enterprises in the country.<sup>3</sup>

**Table 1b** shows the decomposition of the days to export and import indicated in **Table 1a**. As **Table 1b** shows, the remarkable reduction in the days to export or import in Cambodia, Myanmar, Lao PDR, and Brunei Darussalam was almost virtually due to the reduced time needed for document preparation (Cambodia, Myanmar) or in tandem with the marked reduction in time for inland transportation and handling (Lao PDR) or customs clearance and technical control (Brunei Darussalam) as well as some reduction in the number of days required for ports and terminal handling of imports in Cambodia. Note that in Cambodia, Lao PDR, and Myanmar, the number of days was very high to start with and, therefore, there were large opportunities for marked reduction.

This makes the significant reduction in the number of days for document preparation in Malaysia particularly noteworthy because the country had one of the shortest days already among the AMSs. The sharp reduction in the number of days for document preparation from 9 to 3 days (and from 14 to 8 days in total) for import and from 10 to 5 days (and from 17 to 11 days in total) for export brings Malaysia so much

---

<sup>2</sup> Note that the years indicated are based on the Ease of Doing Business reports. The actual data is usually based on the year before the year indicated for the report (e.g., 2014 data for the Ease of Doing Business report for 2015).

<sup>3</sup> It is generally presumed that the time to import and export for firms in special zones like export zones is significantly less than the time to import and export indicated in the Trading Across Borders indicators, except for Singapore which is effectively one whole special zone.



closer to the Singapore ‘gold standard’ of 4 days and 6 days in total number of days to import and export, respectively.<sup>4</sup>

**Table 1a. Ease of Doing Business and Logistic Performance Index in ASEAN**

Economy	Year	Trading Across Borders						LPI Score
		Documents to export (number)	Time to export (days)	Cost to export (USD per container)	Documents to import (number)	Time to import (days)	Cost to import (USD per container)	Customs
Brunei Darussalam	DB2007	5	27	515	5	19	590	..
	DB2015	5	19	705	5	15	770	..
Cambodia	DB2007	9	37	722	10	45	852	2.19
	DB2015	8	22	795	9	24	930	2.67
Indonesia	DB2007	4	22	486	8	27	675	2.73
	DB2015	4	17	571.8	8	26	646.8	2.87
Lao PDR	DB2007	12	55	1,420	15	65	1,690	2.08
	DB2015	10	23	1,950	10	26	1,910	2.45
Myanmar	DB2007	..	..	..	..	..	..	2.07
	DB2015	8	20	620	8	22	610	1.97
Malaysia	DB2007	4 (6)*	13 (17)*	432	4 (7)*	10 (14)*	385	3.36
	DB2015	4	11	525	4	8	560	3.37
Philippines	DB2007	6	17	755	8	18	800	2.64
	DB2015	6	15	755	7	15	915	3.00
Singapore	DB2007	3	6	416	3	4	367	3.90
	DB2015	3	6	460	3	4	440	4.01
Thailand	DB2007	9	24	848	12	22	1,042	3.03
	DB2015	5	14	595	5	13	760	3.21
Viet Nam	DB2007	5	24	468	8	23	586	2.89
	DB2015	5	21	610	8	21	600	2.81

Note: The Logistics Performance Index (LPI) is based on LPI 2007 and 2014 database.

\* Data based on Malaysia 2007 Doing Business country report.

Source: World Bank Ease of Doing Business and LPI database.

<sup>4</sup> Remarkable as the performances of many AMSs have been, the performance of Georgia is even more impressive. Georgia reduced the number of documentation requirements for export and import clearance in 2005–2013 from 54 to 2, and the bills of lading and invoices may now be submitted electronically in tandem with the 95 percent reduction in Georgia’s (suspected) hitherto corrupt customs workforce (Khvedelidze, 2013, p.8).

**Table 1b. Decomposition of the Number of Days to Export and Import in ASEAN**

Indicators	Export		Import		Export		Import		
	DB2010	DB2015	DB2010	DB2015	DB2010	DB2015	DB2010	DB2015	
Document preparation	17	11	16	11	29	14	34	15	
Customs clearance and technical control	6	2	1	1	3	3	3	3	
Ports and terminal building	2	3	1	1	3	2	5	2	
Inland transportation and handling	3	3	1	2	2	3	4	4	
<b>Total</b>	<b>28</b>	<b>19</b>	<b>19</b>	<b>15</b>	<b>37</b>	<b>22</b>	<b>46</b>	<b>24</b>	
<b>Indonesia</b>				<b>Lao PDR</b>					
Indicators	Export		Import		Export		Import		
	DB2010	DB2015	DB2010	DB2015	DB2010	DB2015	DB2010	DB2015	
Document preparation	14	11	15	13	33	15	33	13	
Customs clearance and technical control	2	1	4	4	3	2	8	7	
Ports and terminal building	2	2	6	7	4	3	2	2	
Inland transportation and handling	3	3	2	2	10	3	7	4	
<b>Total</b>	<b>21</b>	<b>17</b>	<b>27</b>	<b>26</b>	<b>50</b>	<b>23</b>	<b>50</b>	<b>26</b>	
<b>Malaysia</b>				<b>Myanmar</b>					
Indicators	Export		Import		Export		Import		
	DB2010	DB2015	DB2010	DB2015	DB2010	DB2015	DB2010	DB2015	
Document preparation	10	5	9	3	17	12	15	10	
Customs clearance and technical control	1	1	1	1	3	3	4	4	
Ports and terminal building	3	2	2	2	3	3	6	6	
Inland transportation and handling	3	3	2	2	2	2	2	2	
<b>Total</b>	<b>17</b>	<b>11</b>	<b>14</b>	<b>8</b>	<b>25</b>	<b>20</b>	<b>27</b>	<b>22</b>	
<b>The Philippines</b>				<b>Singapore</b>					
Indicators	Export		Import		Export		Import		
	DB2010	DB2015	DB2010	DB2015	DB2010	DB2015	DB2010	DB2015	
Document preparation	6	8	8	8	1	2	1	1	
Customs clearance and technical control	2	2	4	2	1	1	1	1	
Ports and terminal building	3	3	4	3	1	1	1	1	
Inland transportation and handling	6	2	2	2	2	2	0	1	
<b>Total</b>	<b>17</b>	<b>15</b>	<b>18</b>	<b>15</b>	<b>5</b>	<b>6</b>	<b>3</b>	<b>4</b>	
<b>Thailand</b>				<b>Viet Nam</b>					
Indicators	Export		Import		Export		Import		
	DB2010	DB2015	DB2010	DB2015	DB2010	DB2015	DB2010	DB2015	
Document preparation	9	8	8	8	12	12	12	12	
Customs clearance and technical control	1	2	2	2	5	4	5	4	
Ports and terminal building	4	3	2	2	3	3	4	4	
Inland transportation and handling	3	2	2	1	4	2	2	1	
<b>Total</b>	<b>17</b>	<b>15</b>	<b>14</b>	<b>13</b>	<b>24</b>	<b>21</b>	<b>23</b>	<b>21</b>	

Source: Various editions of Ease of Doing Business country report, World Bank.

As shown in **Table 2**, there are a number of reasons for the significant reduction in the number of days to import and export, including the reduction in the number of documents to be prepared and the number of agencies to go to; improvement in the processes of permit and certificate application; reduction in the physical inspection rate; and improvement in domestic transport linkages. The first three reasons stated

above are closely linked to customs modernization as well as the preparations for, and the implementation of, national single windows (NSWs) that are at the heart of the trade facilitation initiatives in ASEAN. The importance of the last stated reason on transport linkages is reflected in the rise in the number of days needed to import in 2014 compared to 2013 in Indonesia and the Philippines (based on the Doing Business reports for 2014 and 2015) because of congestion in the key ports of Jakarta and Surabaya (for Indonesia) and Manila. In the case of Manila, the port congestion was a result of an ordinance passed in the city of Manila restricting truck traffic. The ordinance has since been rescinded after it became very clear that the resulting port congestion had hurt economic growth and trade in the country.

The LPI indicator on customs in **Table 1a** is perception data and is somewhat more volatile than the Trading Across Borders indicators. Nonetheless, the data indicates that perception by key global stakeholders on customs has improved in most AMSs, most especially in Cambodia, Lao PDR, the Philippines, and Thailand. The marked volatility in Myanmar is understandable in light of the marked change in the economic environment in the country which has led to a substantial increase in trade flows in the face of a seriously inadequately equipped customs. The issue of Myanmar's customs modernization challenges is discussed further later in the chapter.

**Table 2** showing the results from the domestic LPI provides some basis for the improved perception on customs performance by key global stakeholders in some AMSs. Specifically, Lao PDR stands out with the drastic drop in the number of agencies and corresponding documents needed to export or import, the decline in the clearance time with and without physical inspection, and the drastic near-elimination of multiple physical inspection rate. Cambodia is also noteworthy in the halving of the number of agencies that firms and traders have to deal with for export and import and the marked reduction in the clearance time with physical inspection in tandem with the significant reduction in the physical inspection rate. One likely source of the improved perception on customs for the Philippines and Thailand is the marked reduction in the physical inspection rate despite mixed performance on the clearance times in exporting and importing. **Table 2** also shows marked improvement for Myanmar in terms of clearance times, drastic reduction in multiple inspection rate despite increased physical

inspection rate, and a reduction in the agencies needed for exporting or importing. Indonesia also reduced its physical inspection rate during the period.

The Enabling Trade indicators in **Table 3** are also perception data. These indicators complement the LPI indicators and, to some extent, the Trading Across Borders indicators. The indicators are the index of efficiency of the clearance process, the customs services index, the irregular payments index, and the time predictability of import procedures. All of them were rebased into the zero to one range, with one being the best. As the table indicates, many AMSs experienced significant improvement in the range and quality of customs services in the 2009–2014 period, particularly Indonesia, Viet Nam, and Cambodia. The performance of AMSs in terms of the efficiency of the clearance process as well as the irregular payments index is more mixed. The Philippines, Indonesia, Thailand, and Singapore saw some improvement in the perception on the efficiency of the clearance process in 2009–2014. However, most AMSs registered deterioration in the irregular payments index, except the Philippines which had marginal improvement and Cambodia which maintained the same level (although both countries have some of the lowest scores). However, the declines are minor in most cases (except Thailand and Viet Nam) and, as such, may not be statistically significant considering that the indicator is based on perceptions.

**Table 2. Domestic Logistics Performance Index Indicators**

Indicator	Year	East Asia & Pacific	China	India	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
Number of agencies-exports	7	4	4	3	4	3	n.a.	3	4	4	2	4	5
	10	4	4	3	6	3	n.a.	3	5	3	2	2	3
	12	4.5	3	3	3	5	11	2	3	7	2	5	4
	14	3	3	3	3	3	3	2	2	4	1	3	4
Number of agencies-imports	7	4	4	2	4	3	n.a.	3	4	4	2	4	4
	10	4	4	4	7	4	n.a.	3	4	3	3	2	6
	12	4	3	3	3	5	11	3	4	3	1	4	4
	14	3	3	3	3	4	3	2	3	5	1	4	4
Number of documents-exports	7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	10	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	12	5	6	6	5	5	11	2	3	6	1	5	5
	14	4	4	4	3	4	5	4	5	4	1	2	3
Number of documents-imports	7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	10	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	12	4	5	5	5	3	11	2	4	3	1	4	4
	14	5	5	4	3	5	5	4	5	7	1	2	5
Clearance time without physical inspection	7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	10	2	2	2	1	2	n.a.	1	2	2	1	1	1
	12	2	2	2	1	1	3	1	2	2	0	1	1
	14	1	2	1	1	2	1	1	0	2	0	1	1
Clearance time with physical inspection	7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	10	3	3	3	6	5	n.a.	2	3	3	1	1	3
	12	2	4	4	1	4	2	1	3	4	1	1	2
	14	2	3	2	1	5	1	2	1	5	1	1	2
Physical inspection (%)	7	22	7	25	12	15	n.a.	6	56	32	3	9	14
	10	25	9	14	29	11	n.a.	6	50	19	2	9	42
	12	28	17	35	11	31	75	6	75	6	1	5	8
	14	31	7	22	17	8	75	2	75	10	5	3	54
Multiple inspection (%)	7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	10	10	2	6	11	3	n.a.	3	15	2	1	1	4
	12	18	5	16	3	18	75	3	75	2	1	2	8
	14	4	2	8	3	3	1	1	3	4	3	2	7

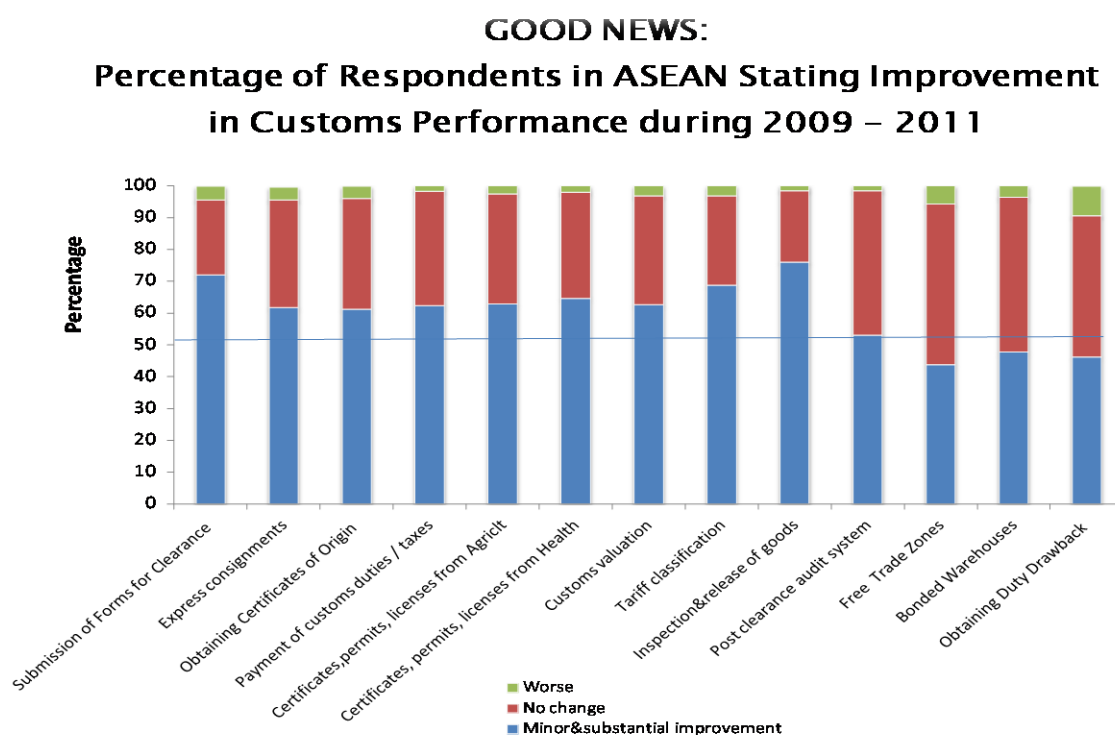
Source: World Bank, Logistics Performance Index database.

**Table 3. Enabling Trade Indicators**

Country	Customs services index		Efficiency of clearance process		Irregular payments in exports and imports		Time predictability of imports procedures
	2009	2014	2009	2014	2009	2014	2014
Brunei Darussalam	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cambodia	0.38	0.58	0.44	0.4	0.34	0.34	0.53
Indonesia	0.46	0.75	0.54	0.58	0.46	0.44	0.54
Lao PDR	n/a	n/a	n/a	0.48	n/a	0.4	0.56
Malaysia	0.52	0.47	0.68	0.68	0.65	0.63	0.71
Myanmar	n/a	n/a	n/a	0.4	n/a	0.31	0.43
Philippines	0.67	0.71	0.52	0.6	0.37	0.39	0.5
Singapore	0.92	0.97	0.78	0.8	0.94	0.93	0.84
Thailand	0.63	0.72	0.6	0.64	0.53	0.43	0.54
Viet Nam	0.17	0.4	0.58	0.56	0.42	0.33	0.5

Source: WEF, Global Enabling Trade reports.

**Figure 3. Customs Performance in ASEAN, 2009–2011**



Source: ERIA AEC Mid-term Review Study (ERIA, 2012).

The progress in trade facilitation in ASEAN was also confirmed by the survey results obtained by the ERIA study. Said study’s respondents were from the private sector in ASEAN. The study was done as part of the AEC Blueprint Mid-Term Review (see **Figure 3**). Indeed, a

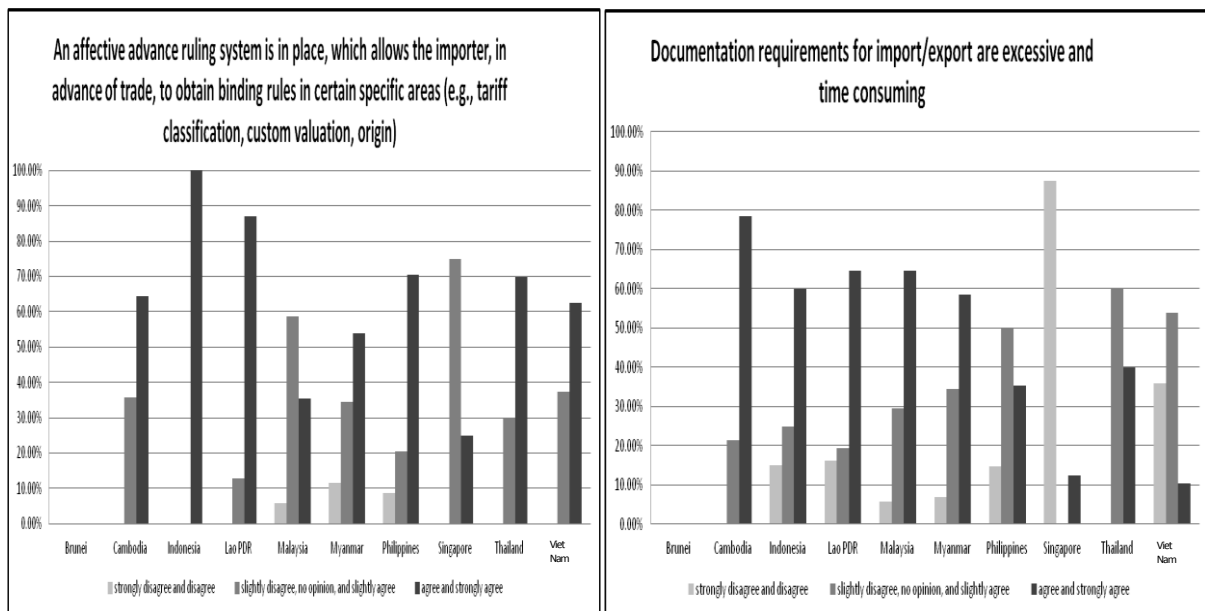
look at **Figure 3** shows that virtually all the major import clearance processes saw improvements in 2009–2011, especially in the submission of forms for clearance, inspection and release of forms, and tariff classification. The results shown in the figure corroborates the progress shown in the results from the Trading Across Borders, the LPI, and Enabling Trade indicators in 2006–2014.

Nevertheless, while **Tables 1–3** and **Figure 3** give robust indications of overall progress in many aspects of trade facilitation in ASEAN in recent years, the tables also highlight the very wide gap in performance among AMSs. For example, there is a huge gap between the time required to import of 21 to 26 days in Cambodia, Lao PDR, Myanmar, and Viet Nam, on the one hand, and 4 days for Singapore and 8 days in Malaysia, on the other hand. Similarly, there is also a huge gap in the time to export between the 20 to 23 days in the four countries, on the one hand, and 6 days in Singapore, on the other hand. There is a stark difference in perception on incidence of irregular payments between the near-perfect score for Singapore (indicating that irregular payments are almost non-existent) and the low scores for Myanmar, Viet Nam, and Cambodia. Lao PDR, the Philippines, Indonesia, and Thailand had slightly higher scores, suggesting that irregular payments in the clearance process are perceived to be a significant occurrence in these countries. In addition, the data on time predictability of import procedures also suggest that most AMSs are perceived to have barely satisfactory performance, with the exception of Singapore and, to a lesser extent, Malaysia. The results in the LPI largely corroborate the findings in the Trading Across Borders and Enabling Trade indicators, albeit at somewhat narrower gaps among the AMSs even if Singapore and Malaysia remain the two best performers in trade facilitation in ASEAN.

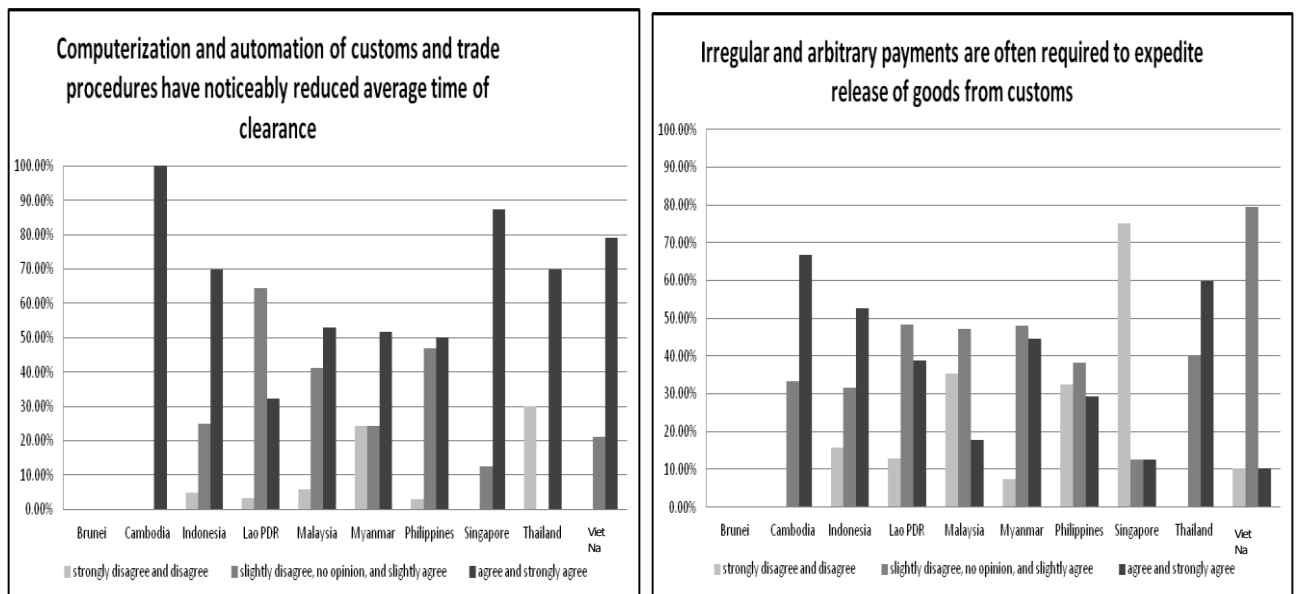
It is worth referring to the results of the ERIA survey on the perception of private sector respondents in ASEAN in 2011 on a number of aspects related to customs and trade procedures undertaken as part of the AEC Blueprint Mid-Term Review (see **Figure 4**). The responses provide a window to the degree of concern of the private sector in AMSs regarding a number of trade facilitation issues which, although made in 2001, might remain relevant today. For example, majority of the respondents in Cambodia, Thailand, and Indonesia and about a quarter to about two-fifths of the total number of respondents in the Philippines, Lao PDR, and Myanmar strongly agreed with the statement ‘irregular and arbitrary payments are often required to expedite release of goods from customs’. Indeed, only the Singapore respondents and, to a lesser extent, Malaysian and Philippine respondents disagreed with this statement. It is noteworthy that it is in the two best-performing AMSs in terms of logistics performance index and trade facilitation (Singapore and Malaysia) where more respondents unanimously

disagreed with the statement on irregular and arbitrary payments presented above. That this still seems to be the case now is reflected in the low scores of most AMSs in the irregular payments index in **Table 3**. Interviews in Cambodia, Lao PDR, Myanmar, and Viet Nam (CLMV countries) made by Piewthonggam and Vijitnopparat (2014) echo the same finding—that traders in these four countries are typically forced to ‘make...informal payments in order to expedite...shipment’ (ibid., p.27) because of the inadequacy and high cost of container storage (which would effectively increase costs and time, especially during peak season).

**Figure 4. Agreement or Disagreement by Private Sector Respondents with Selected Statements**







*Note:* Data for Brunei Darussalam is missing.  
*Source:* ERIA (2012).

**Figure 4** also indicates that the majority of respondents in many AMSs consider the documentation requirements for import or export to be excessive and time consuming except, most notably, by Singapore respondents. The figure also suggests that the majority of respondents in most AMSs voiced strong support for an effective advance-ruling system to obtain binding rules although the support is more muted among the private sector respondents in Singapore and Malaysia, the two countries with the most advanced NSWs in the region. Nonetheless, there is a great majority consensus among the private sector respondents that computerization and automation of customs and trade procedures have noticeably reduced average time of clearance, except most obviously in Lao PDR where in 2011 the private sector still faced quite a number of agencies and documents to deal with when exporting or importing.

The Organisation for Economic Co-operation and Development (OECD) also developed a set of trade facilitation indicators that closely match the key elements of the World Trade Organization (WTO) Trade Facilitation Agreement. The indicators on import, export, and transit trade are on the availability of information; involvement of the trade community; advance rulings; appeal procedures; fees and charges; formalities related to documents, procedures, and automation; internal and external cooperation; consularization;<sup>6</sup> governance

<sup>6</sup> Imposition of consular transactions requirements or the procedure of obtaining from a consul of the importing country/economy in the territory of the exporting country/economy or in the territory of a third

and impartiality; transit fees and charges; transit formalities and guarantees; and transit agreements and cooperation. Many of the OECD trade facilitation indicators are similar or complementary to the indicators discussed above. **Annex A** presents the OECD results for most AMSs (no data for Lao PDR and Myanmar). For the most part, the ranking among the AMSs in the OECD is similar to those implied by the ranking based on Doing Business - Trading Across Borders, Enabling Trade, and LPs. Thus, Singapore is among the global standards, if not the global standard, while Cambodia ranks the lowest among the AMSs. Malaysia and Thailand trail Singapore, with Thailand appearing somewhat better than Malaysia relative to upper middle-income countries. Indonesia, the Philippines, Brunei Darussalam, and Viet Nam are in between the top three AMSs and Cambodia, with Viet Nam having the largest number of relative deficiencies vis-à-vis its comparator international groups among the four AMSs. A close look at the areas where a number of AMSs are relatively deficient vis-à-vis their global comparator groups (i.e., high-income countries for Brunei Darussalam and Singapore, upper middle-income countries for Malaysia and Thailand, lower middle-income countries for Indonesia, the Philippines, and Viet Nam, and low-income countries for Cambodia) are information availability and streamlining of procedures. Note that the problem of information availability is addressed by a well-performing national (and regional) trade repository while streamlining of procedures is linked to a well-performing NSW.

The gist of the preceding discussion is that efficient and seamless trade facilitation remains a major challenge in the region, particularly the challenge of narrowing the performance gap in trade facilitation between the top two or three leading AMSs in trade facilitation and the rest of the AMSs, most especially the tail-enders. Clearly, narrowing the performance gap has to be done through marked improvement in most of the AMSs to catch up with the AMS leaders in trade facilitation.

In many ways, the key AEC Blueprint measures of ASEAN and NSW (with the implied requirement of having modern customs) and the ASEAN and National Trade Repository would effectively narrow the performance gap among the AMSs. This is because of the basic reason that well-performing single windows and trade repositories demand narrow performance gaps among AMSs. In addition, the development and implementation of the single windows and trade repositories at the country level addresses many of the bottlenecks that underpin the

---

party, a consular invoice or a consular visa for a commercial invoice, certificate of origin, etc., or any other customs declaration in connection with the importation of the good (Moise and Sorescu, 2013, p.48)

scoring in Trading Across Borders, the LPI, and Enabling Trade indicators as well as the concerns voiced by the private sector in the ASEAN region.

### **3. Trade Facilitation Measures in the AEC Blueprint: Progress and Challenges**

The two key trade facilitation measures in the AEC Blueprint are national and ASEAN single windows as well as national and ASEAN trade repositories. A well-performing national and ASEAN single window rests on a modern customs. Hence, this paper starts with a review of customs modernization, especially among the lagging AMSs.

#### **3.1. Customs Modernization**

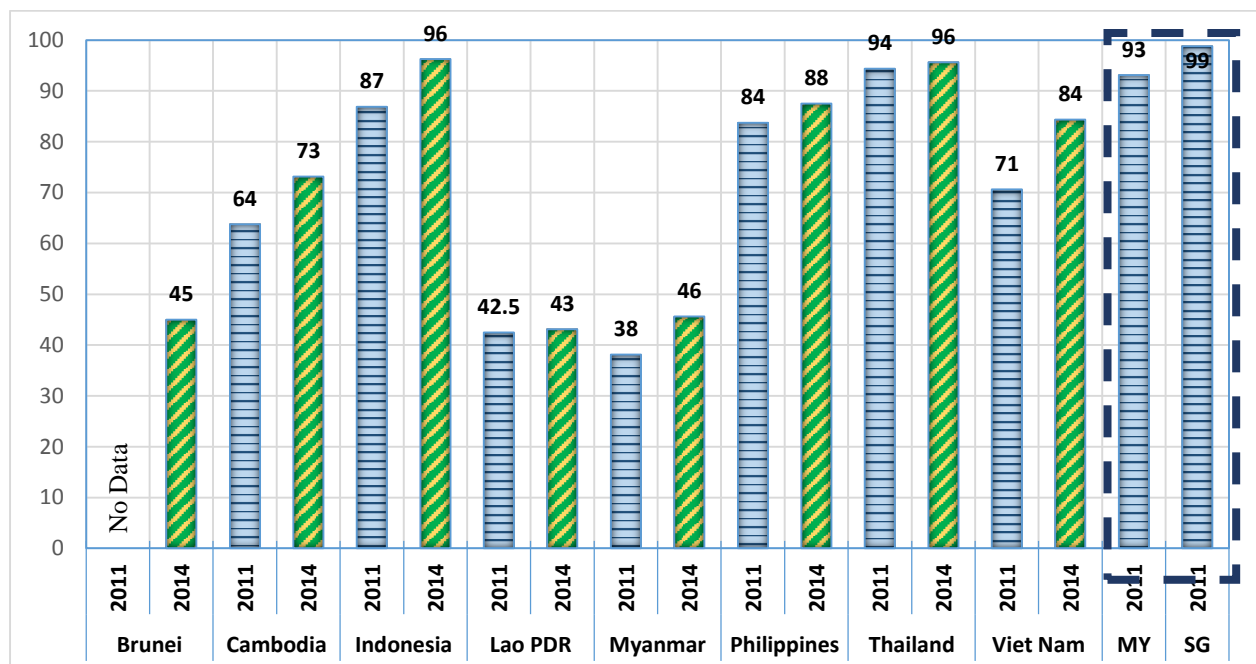
A modern customs is anchored on the use of standardized commodity codes in line with international best practices as well as automated implementation of tariff management, valuation, manifest processing (or, better still, as in the case of Singapore, manifest submission is not even required), goods declaration, risk management and selectivity, inspection management, customs- bonded warehouse management, cargo release notification, post-clearance audit, transit cargo tracking, and raw materials liquidation system (for countries with tariffs and with schemes and zones for duty-free access of inputs for exports). A modern customs relies on e-payment and facilitates trusted partners through customs with the implementation of authorized economic operators (AEO) schemes, preferably with AEO mutual recognition with other countries. A modern customs must necessarily have information on customs issuances, rules, regulations, and procedures readily accessible to the public online via the Internet, for example.

**Figure 5** presents the scoring on customs modernization for 2011 under the AEC Scorecard Phase II and 2014 under AEC Scorecard Phase IV (please see **Annex B** for the scoring system). Singapore and Malaysia were excluded from scoring for 2014 because they are actually the, or nearly the, global leaders. Given their lower scores in 2011 under phase II, the project gives special emphasis on the readiness of Myanmar, Lao PDR, and Cambodia for customs

modernization and implementation of the NSW (there was no score for Brunei Darussalam under phase II). Thus, this report has a much more detailed discussion on the three countries.

**Figure 5** shows that Singapore and Malaysia were the leaders in ASEAN in 2011 and likely today as well, followed by Indonesia and Thailand. At the other end of the spectrum are Myanmar and Lao PDR. **Figure 5** also shows improvements especially in Cambodia and Viet Nam and, to some extent, Myanmar. The improvement in the Philippines has been marginal while the score for Lao PDR has been flat.

**Figure 5: Customs Modernization in ASEAN**



MY = Myanmar, SG = Singapore.

*Note:* The phase II data of Brunei is missing. Malaysia and Singapore are not covered in the trade facilitation study of phase IV and thus, the phase II results are shown as indicative data.

*Source:* Based on the survey questionnaire results in ERIA’s AEC Scorecard Phase II and Phase IV studies.

### 3.2. Readiness Report on Cambodia, Lao PDR, and Myanmar, and others

The following is the readiness report on Cambodia, Lao PDR, and Myanmar as of mid-2014 by Koh and Guan (2014).

## **1. Cambodia**

### **Current Customs System**

The Cambodia General Department for Customs and Excise is using Automated System for Customs Data (ASYCUDA) World as its customs management system/customs automation clearance system. ASYCUDA World is an established customs automation software from the United Nations Conference on Trade and Development (UNCTAD). Used in over 90 countries, it is a suitable and appropriate tool for customs modernization and reform. ASYCUDA supports all or most of the features recommended for progress in customs modernization.

### **Status of Automation, Modernization, and Reform**

Cambodia is in the final stages of automation, modernization, and reform through the ongoing implementation of ASYCUDA World. The current state of implementation indicates a customs administration that has made significant progress. A large number of key functionalities have already been implemented and are operational.

Some functionalities have not been implemented but many of these are planned for implementation. Implementation of features that are supported by ASYCUDA but have not been enabled should be relatively straightforward. Major border points are automated and full rollout is under way.

### **Key Functionalities Already Implemented**

- Standardized HS Commodity codes used through automated systems
- Tariff management
- Valuation system (database, verification, and updating)
- Electronic submission and processing of manifest
- Electronic goods declaration submission and clearance
- Inspection management (except for automated assignment)
- AEO management (manual)
- Risk management and selectivity
- Non-intrusive inspection (scanning)
- Post-clearance audit or PCA (except for automated assignment)

## **Key Functionalities for Implementation**

- Inspection automated assignation
- PCA automated assignation
- Electronic implementation of AEO management and mutual recognition
- Transit cargo tracking
- Electronic payment
- Raw materials liquidation

## **Assessment**

Cambodia has made significant progress in modernization and reform and is well on its way to achieving full success. Certain key implementations still remain, and these remaining implementations have disproportionately high impact on customs reforms efforts.

## **Recommendations and Way Forward**

All remaining border points with significant trade should be automated; current border points operating on manual processes represent gaps in the system. Remaining functionalities should be implemented. Automated assignation of inspectors and auditors will highly impact customs reform.

## **2. Lao PDR**

### **Current Customs System**

Like Cambodia, Lao PDR Customs is using ASYCUDA World as its customs management system/customs automation clearance system.

### **Status of Automation, Modernization, and Reform**

Lao PDR is in the process of automation, modernization, and reform through the ongoing implementation of ASYCUDA World. The current state of implementation indicates a customs administration in a state of positive transition. Some key functionalities have already been implemented and are operational. A number of other functionalities have not yet been implemented but will be. Implementation of features that are supported by ASYCUDA, but

have not been enabled, should be relatively straightforward. Major border points are automated, and full rollout was expected by the end of 2014.

### **Key Functionalities Already Implemented**

- Standardized HS Commodity codes used through automated systems
- Tariff management
- Electronic goods declaration submission and clearance
- Risk management and selectivity (partial, import only)
- Non-intrusive inspection (scanning)
- PCA (except for automated assignation)
- Manual transit cargo tracking system

### **Key Functionalities for Implementation**

- Valuation system (database, verification, and updating)
- Electronic submission and processing of manifest
- Risk management for export
- Inspection management
- PCA automated assignation
- AEO management and mutual recognition
- Electronic transit cargo tracking
- Electronic payment
- Raw materials liquidation

### **Assessment**

Lao PDR is on the right track for significant customs process modernization and reform achievable by 2015 with the right effort. Significant progress has been made but many key functionalities still need to be implemented.

### **Recommendations and Way Forward**

All remaining border points with significant trade should be automated because current border points operating on manual processes represent gaps in the system. Remaining functionalities should also be implemented. Electronic manifest, extension of risk management to cover export, and inspection management should be implemented as priority measures. Also, 55

percent red lane selectivity indicates that risk management criteria and targets could benefit from adjustment for more effective implementation.

### **3. Myanmar**

#### **Current Customs System**

Myanmar Customs is using a self-developed customs system, which was developed using FoxPro as well as Microsoft.Net development tools. Their first automated data processing system was introduced on 1 April 1995, with the installation of a local area network (LAN) at Yangon. This LAN network was used for the compilation of import/export trade statistics and duty calculations. Subsequently, a customs database was implemented for data sharing and communication with other customs-related trade communities. At present, information data collected from customs declaration forms are fed through input terminals placed at customs headquarters and transferred to the main computer unit installed at the Central Statistical Organization for compilation of balance of foreign trade statistics. The system can electronically store the customs declarations of the head office and six large border customs stations, which represents about 90 percent of all customs declarations in Myanmar. It cannot store the customs declarations of five border customs stations due to logistical difficulties. The customs declarations from these five stations represent about 10 percent of total.

#### **Status of Automation, Modernization, and Reform**

The country's various customs acts have remained unchanged for decades and need to be updated. Key legislation related to customs and trade facilitation includes:

- The Control of Imports and Exports (Temporary) Act: 1947
- The Sea Customs Act (India Act No. VIII, 1978 )
- The Foreign Exchange Regulation Act. 1974

The amended Customs Act, which takes into account provisions to comply with the Revised Kyoto Convention, transit trade, as well as NSW, has already been prepared and is ready for submission to the Cabinet. The amended Customs Act is expected to be ratified in 2015.

Currently, there is risk assessment whereby:



10 percent of cargo is physically inspected

30 percent of cargo is X-rayed

~ 60 percent is granted green lane

Generally, the percentage of cargo for inspection (~40 percent) is high compared to best practices in other countries (which is ~10 percent). It is noteworthy that green lane declarations are subject to documentary checks. This is not in line with internationally accepted definitions of green lane and effectively means that 100 percent of all declarations are subject to documentary checks.

There is currently no risk management (as opposed to risk assessment) being practised; neither is there PCA or AEO. Capabilities for risk management and PCA are being initiated but the implementation of these best practices depends on the Myanmar Automated Cargo and Port Consolidated System/Myanmar Customs Intelligence Database System (MACCS/MCIS) time frame.

### **Key Implementations**

In late 2013, the Government of Myanmar accepted, under Japan's grant aid scheme, a new automated cargo clearance system named the MACCS/MCIS which is modelled after the Nippon Automated Cargo and Port Consolidated System of Japan. The grant was valued at JPY3.9 billion (~USD39.2 million), and was earmarked for reforming and modernizing Myanmar Customs by introducing e-customs and NSW functionalities based on Japan's Nippon Automated Cargo and Port Consolidated System and its Customs Intelligence Database System.

As of July 2014, the basic design of the MACCS/MCIS has been completed, and the first test run of the new system is envisaged to take place either by the third quarter or end of 2015.

The MCIS shall include the following:

- e-Declaration, e-Manifest, Single Window, Selectivity, e-Payment
- Risk profile/risk criteria management (within MCIS)
- Database of past records (within MCIS)

## **Assessment and Recommendations**

Myanmar Customs modernization is still a work in progress. The revised and updated Customs Act needs to be urgently ratified. Implementation of risk management and PCA needs to be introduced as early as possible to reduce the volume of inspected cargo, especially in view of the growth in trade by 25 percent per year. The development of the MACCS/MCIS will be a critical step, and tangible results are likely to be realized in late 2015.

## **Brunei Darussalam**

The score for Brunei Darussalam, one of the lowest among the AMSs in **Figure 5**, is comparable to that of Lao PDR and Myanmar. Considering that Brunei Darussalam is a high-income country (while Lao PDR is a lower middle-income country and Myanmar is a low-income country), it is worth understanding that the country's low score in **Figure 5** stems from serious inadequacies in the risk management and inspection systems and the lack of PCA, raw materials liquidation system, and AEO management.

The country, however, ranks very high in Ease of Doing Business - Trading Across Borders, the fourth-highest among the AMSs after Singapore, Malaysia, and Thailand. Indeed, Brunei Darussalam has better performance on the 2014 Trading Across Borders indicators than the average for East Asia and the Pacific. In sharp contrast, both Lao PDR and Myanmar belong to the lower half to the lowest-third of all countries in the world in terms of Trading Across Borders.

That the country has a very high ranking despite the weaknesses in its customs system compared to the 'best practice' may be due to the fact that it is a very small country with a very small population and that its economy relies heavily on oil and gas exports and very little else. This means that the volume of non-oil and gas trade is very small compared to other AMSs. As such, the more involved processes that are needed for the efficient processing of a high volume of flow of goods may not be that critical for Brunei Darussalam (e.g., PCA, AEO management). Neither does the country need a raw materials liquidation system since it does not have the manpower to grow a labour-intensive export trade industry involving processing, which the raw materials liquidation system is essentially meant for. Considering that the country has one of the highest per capita incomes in the world based on purchasing power parity, it may well be that Brunei Darussalam does not consider it compelling enough to invest in a customs system as efficient as Singapore's. This might also be because the country's trade

is low in volume and is domestically oriented compared to Singapore and the other bigger economies of the region.

At the same time, it can be argued that Brunei Darussalam could have had an even much higher global ranking and better performance if the country practised a customs environment that is much closer to the 'best practice.' Thus, for example, using the World Bank Trading Across Borders methodology, customs clearance and technical control for exports takes only one day in Indonesia and Malaysia compared to Brunei's two days despite the much larger volume of exports in Indonesia and Malaysia. The same can be said for ports and terminal handling for exports where the three days for Brunei Darussalam contrast with the two days for both Indonesia and Malaysia.

A close look at the decomposition of the days to export or import shows that it is the number of days to do the documentation where a huge gap between Brunei Darussalam and the best-performing AMSs in trade facilitation such as Singapore and Malaysia exists. In many ways, this is where the greatest potential benefit from a good implementation of the NSW lies. The status of the implementation of the NSW in Brunei Darussalam and other AMSs is discussed in the next section.

## **Viet Nam**

Viet Nam offers a success story on what modern customs can deliver for the benefit of a country's enterprises and, therefore, of the whole economy. Customs modernization, under NNACCS/VCIS funded by Japan, includes e-declaration, e-manifest, e-invoice; e-payment; e-C/O; risk management and selectivity; release and clearance; and supervision and control. These key elements of what is essentially e-customs are the reason for the sharp rise in scoring in **Figure 5**, which exceeded the 80 percent 'threshold passing' score.

What is important is that e-customs is operational in 148 out of 174 (or 85 percent) customs offices in the country as of the end of 2013. More important, about 96 percent of all trading enterprises in the country used e-customs in 2013 compared to only 11 percent in 2005. One key outcome has been the dramatic reduction in the average time for clearance in the green channel from about 60 to 180 minutes to only 5 to 10 minutes. More than three-fifths of imports pass through the green channel against approximately a quarter in the yellow channel and about a tenth in the red channel. Another key outcome is the reduction in the compliance costs of firms by about a third due to the simplification of 42 procedures and the elimination of 3 procedures (Vo *et al.*, 2014).

The awareness campaign conducted with the business community through training workshops and information dissemination, the investment in technical infrastructure and information technology, and the capacity building undertaken for staff were all instrumental in the near-total usage of e-customs by firms and the reduction in clearance time and compliance cost (Vo *et al.*, 2014).

### 3.3. National Single Window

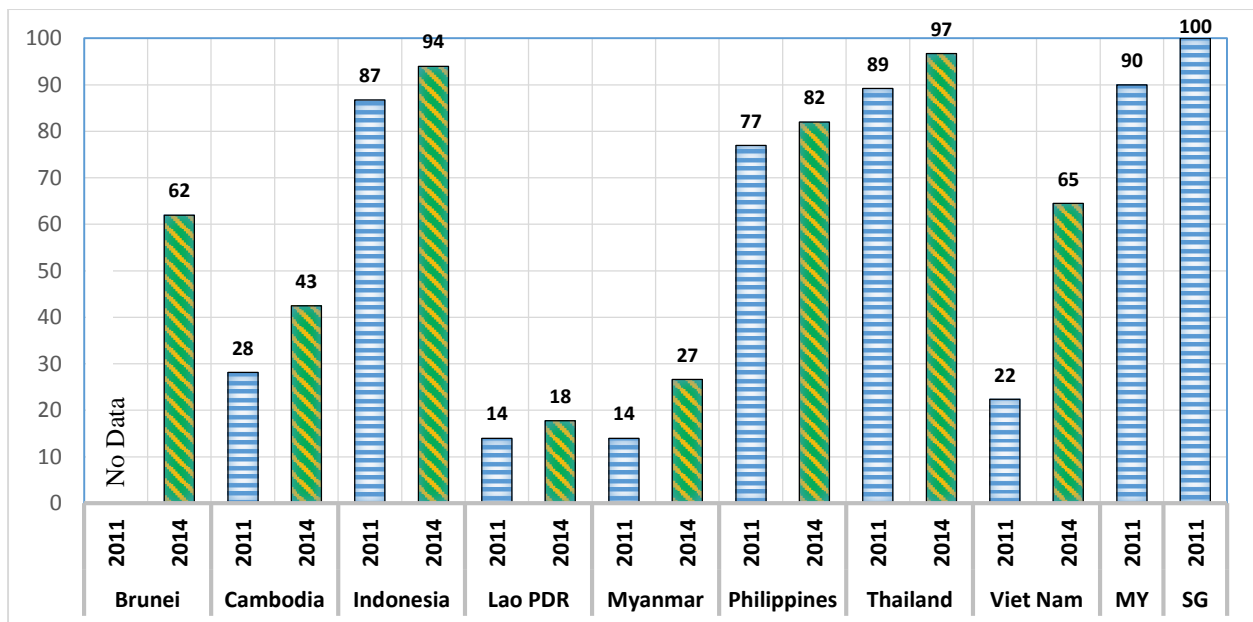
The NSWs and the ASEAN Single Window (ASW) is the centrepiece of the ASEAN in trade facilitation. If operational by 2015, this could be the earliest region-wide single window in the developing world. However, as is apparent below, there are tremendous challenges to having an ASW involving all 10 AMSs by 2015 despite the apparently strong political will among the lagging AMSs. The ASW may well be an evolving initiative, starting in 2015 with a smaller group of AMSs and involving a narrow set of documents and then expanding over the next few years in terms of country coverage, documents handled, and ports involved. A possible target year for a fully operational ASW involving a wide range of documents over all major ports, airports, and border posts in all the AMSs could be 2020, the original target year for AEC.

Singapore, Malaysia, Thailand, Indonesia, and the Philippines have operational NSWs even if there is more to be done to ensure an efficient and well-performing single window in at least one of them. Singapore, of course, is a global pioneer and leader in single windows. Malaysia is also among the early implementers of NSW and is acknowledged to be among the best performing in trade facilitation globally. Given the above, the study excluded Singapore and Malaysia for monitoring on the implementation of the NSW. As in customs modernization, Cambodia, Lao PDR, and Myanmar face the most challenges in the implementation of the NSW moving into 2015. The study gave special attention to the readiness of the three countries to the live implementation of their NSWs by 2015.

**Figure 6** presents the scoring on the implementation of the NSW under phase II (2011) and the current phase IV (2014). There was no information for Brunei Darussalam under phase II. As stated earlier, there was no scoring done for Malaysia and Singapore under the current phase IV. The scoring for the implementation of the NSW involves weighted scores on the various steps needed for the live implementation of the NSW (please see **Annex C** for the scoring system). One group of steps consist of preparatory or institutional steps such as the political mandate and organization of the NSW committee, stakeholder engagement, legal

framework, and document and process simplification and harmonization. The biggest weight is given to the development of the technical infrastructure including front-end systems; functionalities, especially with respect to permits and certificates; integrated risk assessment; and international data exchange. The last group of steps is related to the single window rollout that includes user testing, communication and sensitization on NSW, staff training, provision of helpdesk and user support, and the publication of regulations and requirements.

**Figure 6: Implementation of National Single Window**



MY = Myanmar, SG = Singapore.

*Note:* The phase II data of Brunei Darussalam is missing. Malaysia and Singapore are not covered in the trade facilitation study of phase IV because of the high standards of trade facilitation in these countries; thus, the phase II results are shown as indicative data.

*Source:* Based on the survey questionnaire results in ERIA’s AEC Scorecard Phase II and Phase IV studies.

As **Figure 6** shows, in 2011 Singapore led with an essentially perfect score, followed by Malaysia, Thailand, and Indonesia being clustered around 90. Malaysia and Thailand were still undergoing process and document simplification and harmonization in some government agencies being linked to NSW. By 2014, Thailand had generally completed its implementation of the NSW while Indonesia continued to improve, albeit slowly, towards the best practice regimes of Singapore and was nearly at Malaysia’s level. The Philippines, the last AMS with operational NSW, had a significantly lower score. This was due to its particular strategy of postponing some of the important steps necessary for a well-performing NSW into the second phase of implementation (that was about to be implemented) in order to proceed with the live

implementation of the NSW. Although not scored in **Figure 6**, that Malaysia's NSW under Dagang Net is nearly best practice is reflected in the following performance indicators (ASEAN Single Window, n.d.):

- 100 percent coverage of electronic Preferential Certificate of Origin (ePCO), which means the total phaseout of the manual application of the certificate of origin
- 100 percent electronic Manifest System (eManifest), available in 23 ports nationwide and even in some private jetties
- 99.4 percent electronic application allowing users to prepare and submit customs-related documentation (eDeclare), available in 166 out of 167 customs stations in the country
- 96.3 percent electronic licenses, permits, certificates, and other forms (ePermit), with 19 agencies on paperless implementation
- 100 percent electronic permit application for products falling under Malaysia's Strategic Trade Act of 2010 (ePermitSTA), and
- 42.8 percent electronic payment.

Both Brunei Darussalam and Viet Nam are much more advanced in the development of their NSWs toward live implementation while Cambodia, Lao PDR, and Myanmar have the lowest scores.

### **3.4. Readiness Report on Cambodia, Lao PDR, and Myanmar**

It is best to start the country review with the last three drawn from the assessment of Koh and Guan (2014) and country authors.

#### **1. Cambodia**

##### **Status of the National Single Window**

The Cambodia NSW is in the planning stage. The NSW Blueprint funded by the World Bank and the legal gap analysis funded by the ASEAN have recently been completed.

### **Political Readiness**

The NSW Steering Committee is being reorganized by the prime minister. It is understood that the steering committee will be headed by the minister of economy and finance. This development indicates the highest level of political support for the concept of the single window but also indicates a time of transition for Cambodia as it tries to move forward. From stakeholder interviews, it is understood that Cambodia has, in one form or another, been exploring implementation of an NSW for at least 10 years.

### **Legal and Infrastructure Readiness**

A legal gap analysis has been prepared. The resulting recommendations are being acted on but the time frame is unclear. The National Information Communication Technology Development Authority has a potential role in the national-level information technology framework and standards. However, the very early stages of NSW in Cambodia make its role unclear.

### **Integration with Other Systems**

Currently, the integration of other government regulatory agencies in the trade clearance process is being done manually.

### **Assessment**

Cambodia must urgently move from the planning stage to the implementation stage. This is, of course, easier said than done. Of all the challenges currently facing Cambodia's NSW implementation (technical support, public awareness, change management), funding support is probably the most important.

### **Recommendations and Way Forward**

Stakeholder sensitization and knowledge-sharing exercises are recommended. Funding options need to be explored, including nontraditional funding models (e.g., PPP, concessions).

## **2. Lao PDR**

### **Status of National Single Window**

The NSW of Lao PDR is in the early stages of design. The country's Ministry of Finance has engaged a vendor on a consignment basis, and both parties are currently negotiating the details of the implementation.

## **Political Readiness**

Lao PDR has established a national NSW Steering Committee with high level of support at the ministerial level and cross-stakeholder involvement. Stakeholder interviews indicate that the Lao PDR trading community, especially the private stakeholders, would benefit from additional sensitization and knowledge sharing.

## **Legal and Infrastructure Readiness**

The legal framework recognition for electronic documents is in place. A specific decree that will support implementation of a NSW has been drafted and is in the process of endorsement. The Ministry of Science and Technology supports a national backbone connecting government agencies. A national data centre is planned, and a feasibility study is being conducted. The ministry also acts as a digital certificate authority. The exact role of the Ministry of Science and Technology in the implementation of the NSW has not been finalized.

## **Integration with Other Systems**

Currently, integration of other government regulatory agencies in the trade clearance process is manual. With the notable exception of the Ministry of Health, regulatory agencies indicate a relatively low level of automation maturity. Implementation of the NSW would require coordination and interfacing with existing processing systems at the Ministry of Health. Other than this system-to-system interfacing, it is likely that cross-agency integration would be predominantly extension of services outwards from the NSW.

## **Assessment**

Specific design, scope, functionalities, and processes for the NSW have not yet been defined. As such, proper assessment of the suitability of functionality, models, and processes for the planned NSW is not practical. Lao PDR seems to be on the right track. However, given the early stages of design and the significant time challenge, it is unlikely to reach full implementation by 2015. Rather, it is more likely to be in the partial or beginning stages of implementation by 2015.

## **Recommendations and Way Forward**

Great care must be taken to stay on the right track. A significant margin for error remains because the actual detailed design of the NSW has not yet been done.



### **3. Myanmar**

#### **Status of National Single Window**

The Myanmar MACCS project shall include a Single Window component, covering four other government agencies (OGAs): Food & Drugs, Agriculture, Fisheries, and Animal Quarantine. There is no Certificate of Origin (preferential/nonpreferential) functionality planned for in the NSW. The target test run of the NSW is within the same time frame—end of 2015. These OGAs shall use the MACCS to process and approve. No back-end systems of OGAs are slated for integration.

The MACCS would not be the single entry point but is planned for integration with the following:

- The Ministry of Commerce Licensing and Permit System (currently under planning) shall also be the portal for traders to apply and receive licenses and permit, which will be interfaced with MACCS.
- Port EDI System (also currently under planning)

#### **Political Readiness**

Myanmar has established a 23-member NSW Steering Committee which is chaired by the deputy minister of finance with the director general of customs as secretary. It has two working groups. Technical and legal interviews conducted with the customs brokers and the freight forwarder associations indicate that both of these stakeholders are not part of the NSW Steering Committee. It would be good to have more private/business sector representation in this NSW Steering Committee. There is another ‘Trade Facilitation’ Steering Committee set up by the Ministry of Commerce. It would be good for both the two steering committees to jointly harmonize their activities.

#### **Legal and Infrastructure Readiness**

The right steps and mechanisms have been put in place to facilitate this. With the implementation of MACCS/MCIS, the necessary changes in the law to facilitate the introduction of the new system will be identified and recommended. Recommendations from the MACCS/MCIS team shall be forwarded to Myanmar’s lawmakers through the Legal Working Group of the NSW Steering Committee. Likewise, the MACCS/MCIS project will put together the necessary hardware and networking system but these would come in later when software development is completed.

## **Integration with Other Systems**

The MACCS project includes the NSW component, covering four other government agencies: Food & Drugs, Agriculture, Fisheries, and Animal Quarantine. Target test run of NSW is end 2015. The aforementioned OGAs shall use the MACCS to process and approve. There are no OGA back-end systems to be integrated.

The initial idea of incorporating four OGAs for license and permits is a good start. Eventually, MACCS would have to extend to the OGAs not included in the NSW test run. The inclusion of these OGAs should be planned at the outset, not later. The Ministry of Commerce's existing Import and Export License and Permit System should also be interfaced with the MACCS at some point during the User Acceptance Testing so that when the MACCS is ready for production, integration with the Ministry of Commerce system would already be in place.

Preferably, Myanmar should explore the idea of incorporating the newly planned Ministry of Commerce's import and Export License and Permit in MACCS rather than have it as a separate system outside of MACCS (because then it would need to be integrated with MACCS later on).

## **Assessment and Recommendations**

The current NSW is planned in a limited form with four OGAs. It should be planned to cover the whole range of government trade regulatory agencies. Interfacing with other NSWs in ASEAN is currently not factored into the basic design. This should be considered as early as possible in the basic design.

There is no Certificate of Origin (preferential/nonpreferential) functionality planned for in the NSW. This should also be factored in as early as possible.

As was stated in the preceding section, it is recommended that Myanmar explore the idea of incorporating the newly planned Import and Export License and Permit of the Ministry of Commerce in MACCS rather than have it as a separate system outside of MACCS (which would then need to be integrated with MACCS later on).

## **Bottlenecks in Cambodia, Lao PDR, and Myanmar**

To a large extent, Cambodia, Lao PDR, and Myanmar share similar bottlenecks. The first is the lack of skilled human resources and technical expertise. The second is budget constraints,

which were voiced especially by the Lao PDR and Cambodia teams. The third has to do with teamwork and coordination, either among the various stakeholders as was highlighted by the Lao PDR team or at the more technical level of information technology (IT) projects among relevant government agencies, as highlighted by the Cambodia team. The fourth is change management, perhaps most forcefully put by the Myanmar team in terms of the need to change the mindset in the public and the business sectors. The last is the need for public awareness and communication with various stakeholders, as expressed by the Cambodia team.

### **Viet Nam**

As **Figure 6** shows, Viet Nam made significant progress in the implementation of the NSW that its development is already in the advanced stage. Three core agencies are already technically connected with Customs in the NSW: the ministries of finance, transportation, and industry and trade. Three more core agencies are to be technically connected to Customs and the NSW by the end of 2014: the ministries of health, agriculture and rural development, and natural resources and environment. In the process, 43 administrative procedures would be simplified. Indeed, process and document simplification and harmonization are very much under way.

On the technical infrastructure of the NSW, the front-end systems for trader, electronic manifest submission, and electronic goods declaration are included or already under way. There are no plans yet to implement functionality for integrated risk management (cross-agency). Likewise, there are no plans for electronic port connectivity to interface with the port community system, for international data exchange, and for track and trace. Technical infrastructure and informatics technology have been upgraded to allow e-payment by 2015. There is no rollout yet in any port or airport although the initial expectation was that the rollout would start at the Noi Bai airport and the Ho Chi Minh ports.

The key challenges in the implementation of the NSW include the differences in the information and communications and technology (ICT) application among the various government agencies, inconsistency in the regulatory framework such as with respect to licensing and quarantine, and the inadequacy of human technical capacity in specialized fields such as valuation, risk management, and informatics technology.

### **Brunei Darussalam**

Brunei Darussalam is also in the advanced stage of developing its NSW. Indeed, the operationalization in the Muara Ports, Kuala Lurah, and Sg Tujuh was expected in the last

quarter of 2014. Most of the preparatory activities, including process simplification and harmonization, have been finished. Document harmonization for e-MIPR and e-Ports is still under way. The technical infrastructure is being finalized, including the front-end systems for trader, electronic manifest submission, electronic goods declaration, electronic payment, and electronic port connectivity. Brunei's NSW technical infrastructure does not include a functionality for integrated cross-agency risk assessment as well as functionality for track and trace.

Although planned for rollout in August 2013, the NSW system is still being migrated to e-Customs which was not yet operational as of June 2014. Also, the NSW was meant to integrate/interface with other agencies like the Ministry of Industry of Primary Resources (e-MIPR), Department of Ports (e-Ports), Ministry of Health, and Ministry of Foreign Affairs and Trade (MoFAT). However, these agencies have not yet completed their individual portals and back-end systems. The e-payment system was supposed to be rolled out in the second half of 2014.

As in the other AMSs, the rollout of Brunei Darussalam's NSW can be expected to be a gradual process, initially involving a few core agencies and then gradually spreading to other agencies. As the Brunei study team highlighted, the integration with the other agencies would require intervention at the ministerial level. It is interesting to note that the Brunei study team also suggested that it is important for end-users to receive support and incentives for them to become confident and productive in using the NSW system. A strong support system from the vendor of the NSW system would be helpful as well.

## **Philippines**

**Figure 6** shows that the Philippines has the lowest score among the AMSs with operational NSWs. Indeed, the Philippines's score is substantially lower than the rest of these countries, which can be attributed to the unique approach that it took to develop the NSW within a relatively short time. Specifically, the Philippines took a two-phase approach where the first phase was essentially one of automation but without much process, and document simplification and data harmonization in the various agencies to co-opt them into the NSW. The second phase involved the conduct of process and document simplification and data harmonization as well as the implementation of the network infrastructure linking the Philippine NSW with the Customs e-customs system called e2m, which computerizes the customs clearance process. Phase 2 will also link the Philippine NSW with the ASW. However,

phase 2 which was meant to be completed in 2013 is yet to be started since the procurement process for the selection of the implementer of the ‘Design, Implementation, Operation, and Maintenance of the Integrated Enhanced Customs Processing System and National Single Window’ (the phase 2 project) effectively started only in end October 2014, the deadline for the submission of eligibility documents (Llanto, 2014).

The two-phase approach, which left much of the document simplification and data harmonization to the second phase and aimed instead for wider agency coverage (subsequently delaying the implementation of the second phase for a number of years), has proven to be less than satisfactory. The technical infrastructure and process flow was complicated, especially because Philippine Customs has two customs systems: one for the free trade/export zones and another for firms outside of those zones. Users also have to use value-added providers. More complicated still, the developer of the NSW is different from the developer of the customs system. In the end, and given the delayed implementation of the second phase, ‘...some traders indicated that the process has reverted to manual transaction (i.e., submission of original documents and hard copies to Customs for verification)’ (Llanto, 2014, p.16). And despite the apparent emphasis on wider agency coverage, as of October 2014, only half of the 40 or so agencies that issue import and export licenses, permits, and clearances have been linked to the NSW, and only 11 of them are completely connected (ibid.). Thus, the wide gap between the Philippine case and the Malaysian case is apparent, which likely explains the much higher and better metrics of Malaysia compared to the Philippines in a number of indicators and rankings on Trading Across Borders and logistics performance.

Arguably, a key reason for the relatively less satisfactory performance of the Philippine NSW initiative is that the country bypassed process and document simplification as well as data harmonization which are usually done, to a large extent, while developing the NSW systems before live implementation. The process of streamlining and data harmonization is, in fact, usually considered a significant source of the benefits arising from the implementation of the NSW. Indeed, in many ways, a well-performing NSW involves more of government-wide rationalization, process streamlining, standardization, and harmonization rather than an ICT initiative per se. The Philippine case appears to have hewed more towards an NSW as an ICT technology initiative so far. It is clear that the implementation of phase 2 is critical for a well-performing NSW that delivers significant benefits to the business community and the country.

When simplification and harmonization of both processes and documents are done under phase 2 for the 40 or so agencies, then that would effectively result in a major administrative simplification in the national government. Indeed, only a few agencies had reduced their

processing time and documentary requirements. For example, based on the results of the survey questionnaire, the processing time in the Fertilizer and Pesticide Authority of 15 days before NSW implementation was reduced to just 1 day; for the Bureau of Product Standards, from 10 days to 3 days; Board of Investments, from 7 days to 2 days; the Sugar Regulatory Administration, from 5 days to 2 days; and the National Telecommunications Commission, from 3 days to half day. Part of the reason for the sharp decline in processing time is the reduction in documentary requirements (e.g., from 9 documents to 6 documents at the Fertilizer and Pesticide Authority, from 11 documents to 6 documents at the Sugar Regulatory Agency, and from seven to three documents at the NTC).

However, as indicated earlier, the implementation of the NSW appears to have been less than ideal. The Customs' e2m and NSW have different, and competing, vendors and there appears to be less-than-great interoperability between the two systems. Also, Customs still requires paper (hard copy) documents even if some agencies would like to go paperless, which negates the usefulness of the NSW and can potentially add more burden to the firms/trading community (Llanto *et al.*, 2014). Since most of the agencies involved in trade and customs clearance have not yet accomplished process and document simplification and harmonization, it is probably not surprising that the Philippines still ranks as one of the worst among the AMSs when it comes to perception of irregular payments in the clearance process as indicated in **Table 3**.

Given the major efforts that remain to be done to make the Philippine NSW perform well, the Philippine study team (i.e., Llanto *et al.*, 2014) recommends the drafting of an executive order—better still, a strong, legal framework to mandate agencies to actively participate in the NSW—to strengthen the implementation of the NSW. The team also wants to harness the support of the Philippine president and sees the need for a strong, firm, and consistent directive from the NSW Steering Committee. Perhaps the Philippines may find it useful to emulate Indonesia in making the NSW implementation a ‘whole of government’ reform effort and not just a technical initiative involving automation of trade-related processes.

### **Thailand**

The significant rise in the score of Thailand means that the country is closing in to the ‘best practice’ as exemplified by Singapore in the ASEAN. The NSW is now fully operational in 58 ports and border posts. Nineteen agencies are now linked together in the NSW, with another twelve agencies integrated during the June–August 2014 period. All technical functionalities including integrated (cross-agency) risk assessment, international data exchange, and track and trace are completed. A number of agencies are fully integrated into what the NSW is meant to

be: ‘a secure, safe, and efficient electronic exchange of trade-related documents through a single point of entry in order to fulfil all import, export, and transit-related regulatory requirements and to expedite the smooth flow of information of goods either for import, export, or transit’ (TDRI, 2014).

Nonetheless, there are still a few important gaps to be filled to ensure a truly well-performing Thai NSW. Thus, some product items concerning some OGAs are not registered in the interfaced system under the NSW so much so that the permit submission for those products would have to be done separately, either manually or electronically. The Thailand study team (Thailand Development Research Institute or TDRI) gives an example of an OGA that has many product items in one permit but some of the products are not registered in the NSW system, which prevents the submission process from being done the way it should be done. Perhaps the most important operational bottleneck is the need of some agencies and institutions (e.g., the Board of Trade of Thailand, the Thai Chamber of Commerce) for some documents that cannot be electronically submitted before they can issue permits or certificates. It is for this reason that the **key recommendation** of the Thailand study team is the legal approval of the draft of the ‘Regulation of the Prime Minister on NSW for Import, Export, Transit, and Logistics, B.E.’ which will resolve the issue concerning the issuance of permits and certificates of agencies and institutions such as the Board of Trade and the Thai Chamber of Commerce. The approval of the above-mentioned draft regulation would put the Thailand NSW on the cusp of a truly well-performing NSW.

## **Indonesia**

Like Thailand, Indonesia has inched up very close to the ‘best practice.’ For most related agencies, the system interfaces with the NSW are already fully automated. Nine major ports and airports accounting for 90 percent of Indonesia’s foreign trade are already connected to the NSW. Eight more major ports were expected to be linked to NSW by the end of 2014, which means that by early 2015, 17 major ports and airports accounting for 98 percent of Indonesia’s foreign trade would be linked to the NSW. Indonesia’s NSW also has an operational trade repository that the business sector considers as the most important feature of their country’s NSW. Indonesia has also finalized the Protocol on Legal Framework on cross-border data exchange which has been agreed on by all AMSs through the ASW Steering Committee.

All told, Indonesia’s NSW is now fully functioning. There are plans for the improvement of the NSW by making it truly a front-end single integrated portal as what is envisaged in a true NSW instead of the multiple window system wherein the NSW ‘...integrates information

from all agencies and redirects users from the NSW portal to those agencies' system interfaces before once again returning users to the NSW portal' (Damuri *et al.*, 2014, p.50). Presidential Regulation No. 76/2014 stipulates the establishment of an INSW Committee that will manage the NSW portal currently managed by the Preparation Team for NSW. Indonesia is designing a national agenda based on the above-mentioned presidential regulation.

## **Malaysia**

Although Malaysia was not included in the scoring for 2014, it is worth bringing out key characteristics of the Malaysian NSW in as much as it provides a reasonably good picture of what many ASEAN countries may aim for. Malaysia launched its NSW portal in September 2012 called **myTRADELINK**, a single point of referral through which the six core services of Malaysia's NSW are done. The six core services are the e-Manifest, e-Declare, e-Payment, e-Permit, e-PermitSTA, and e-PCO.<sup>7</sup>

- ePCO, or ePreferential Certificate of Origin, is implemented in all offices of the Ministry of International Trade and Industry nationwide and offers 14 schemes online to manufacturers and exporters that include five ASEAN FTA + or AFTA+), ASEAN Trade in Goods Agreement (ATIGA), seven bilateral, Generalized System of Preferences (GSP), and textile. All manual applications of certificates of origin have been phased out since January 2013 and all applications must now be coursed online via the ePCO service.
- eManifest aims to be 'the virtual port for real-time cargo arrangements' that reduces delays in turnaround time for trade documentation and increases processing efficiencies of authorities with a streamlined process flow. With eManifest, users submit cargo manifest and vessel information to respective authorities online, have their berth numbers assigned, and keep track of their cargos. It connects 23 ports nationwide with 18,000 transactions daily. As of 2013, 900 shipping agents and freight forwarders were subscribed to the eManifest.
- eDeclare, where it is implemented in 166 out of 167 Customs nationwide, is being transformed into what is called uCustoms with 'ubiquitous' features that support self-assessment implementation and centralized clearance processes. Designed to be the leading edge in the use of technologies and usability, uCustoms aims for end-to-end

---

<sup>7</sup> This section is taken, in most cases verbatim, from Malaysia's information paper 'National Single Window (NSW) Initiatives in Malaysia' referenced in the ASW website: [asw.asean.org](http://asw.asean.org).



solution with interfacing and integration with all players in the trading community, an integrated back-end application to support complex requirements for customs clearance, sound risk management system, and compliance with international standards. The ultimate objective is for Malaysia to have world-class customs administration by 2015.

- ePermit, an electronic permit application system for both application and approval, has 26 agencies participating, of which 19 are completely paperless as of 2013.
- ePayment, an online facility that allows users to prepare and submit duty payment, offers three modes of payment with eight local banks participating as of 2013.

It may be noted that Malaysia has also a National Trade Repository, which is a legally binding repository of all public regulations currently pertaining to customs, tariff code, import/export procedures, etc. It is still under development.

### **3.5. Trade Repository**

The ASEAN Trade Repository and the cooperating National Trade Repository (NTR) are meant to provide a one-stop ‘...online system for accessing trade laws and procedures of all the AMSs...Both Repositories will be a one-stop reference point for all tariff and nontariff measures to be applied to goods entering, exiting, and transiting a member state, including all government requirements regarding specific commodities’ (asean.org/news). The repositories are in support of greater transparency and predictability in the trading environment, thereby encouraging greater economic interlinkages within the region. Ideally, the repositories have to be user-friendly, comprehensive, reliable, authoritative, and up to date in order to be useful to traders and firms, the most important beneficiaries of the repositories.

The ASEAN Trade Repository initiative was embodied in the 41<sup>st</sup> Meeting of the ASEAN Economic Ministers held in Bangkok on 13–14 August 2009. **Table 4** presents the status of implementation of the NTRs in the ASEAN. Indonesia established the first NTR in ASEAN in 2011. As the table shows, Indonesia and Thailand have working NTRs. Indonesia had the first NTR system (operational since 2007) in ASEAN. The other member states are still developing their systems. (The study did not ask Malaysia and Singapore about their NTR implementation since they were not part of the trade facilitation study.)

**Table 4. Status of Implementation of the National Trade Repository**

Indicators	Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Philippines	Thailand	Viet Nam
<b>1. Development Status of National Trade Repository</b>							
1a. Has your country already started to develop a national trade repository	1	1	1	1	1	1	1
<b>2. Political Mandate of National Trade Repository</b>							
2a. Is there a committee or lead responsible for implementing the National Trade Repository	1	1	1	1	1	1	1
<b>3. National Trade Repository Features Planned or Completed</b>							
3a. HS Code and tariff information	0.5	0.25	1	1	0.5	1	0.5
3b. National Customs rules and regulations	0.5	0.25	1	1	0.5	1	0.5
3c. Import-Export prohibition and restriction (prohibitions, permits & license by HS Code)	0.5	0.25	1	1	0.5	1	0.5
3d. Regulations on licensing application and processing	0.5	0.25	1	1	0.5	1	0.5
3e. Rules of Origin (ATIGA origin criteria)	0.5	0.25	1	1	0.5	1	0.5
3f. Manifest information and requirements	0.5	0.25	1	1	0	1	0.5
3g. Goods declaration information and requirements	0.5	0.25	0	0	0.5	1	0.5
3g. Exchange rates	0.5	0.25	1	1	0.5	0	0.5
3h. Trade simulation (estimation of costs, duties, licensing)	0.5	0.25	1	0	0	1	0.5
3i. Excise Tax information	0.5	0.25	1	1	0	1	0.5
3j. Administrative Rulings and references	0.5	0.25	0	0.5	0.5	1	0.5
<b>Translated in English</b>							
3a. HS Code and tariff information	1	0	1	1	1	1	
3b. National Customs rules and regulations	1	0	0	1	1	1	
3c. Import-Export prohibition and restriction (prohibitions, permits & license by HS Code)	1	0	0	1	1	1	
3d. Regulations on licensing application and processing	1	0	0	1	1	1	
3e. Rules of Origin (ATIGA origin criteria)	1	0	1	1	1	1	
3f. Manifest information and requirements	1	0	1	1	1	1	
3g. Goods declaration information and requirements	1	0	1	0	1	1	
3g. Exchange rates	1	0	1	1	1	0	
3h. Trade simulation (estimation of costs, duties, licensing)	1	0	1	0	1	1	
3i. Excise Tax information	1	0	1	1	1	1	
3j. Administrative Rulings and references	1	0	1	0	1	1	

*Note:* 1 means 'yes' or 'completed'  
0.5 means under way  
0.25 means planned  
0 means 'no plans to implement' or 'none'

Note also that Malaysia and Singapore were not covered by the survey questionnaire.

*Source:* AEC Scorecard Phase IV Survey.

### **3.6. ASEAN Single Window (ASW) and WTO Agreement on Trade Facilitation**

*ASEAN Single Window.* Alongside the development of the NSWs discussed above were the critical efforts at putting in place the fundamental technical, legal, and institutional components of the ASW as well as the design and implementation of a pilot project to test out the system in the exchange of trade and customs data among the AMSs. The United States, through the United States Agency for International Development (USAID)–funded ADVANCE ASW Project from 2008 to 2013, provided the needed financial and technical support in the development and setting up of the ASW.

It is technically complex to integrate 10 NSW systems of AMSs, ‘requiring careful decisions about data and documents to be exchanged, data formats, messaging standards, communication systems, and routing mechanisms’ (Nathan Associates, 2013, p.vi). The ADVANCE ASW Project identified, analysed, and prioritized trade, customs, and transport data to be exchanged electronically among AMSs; developed the ASEAN data set; developed two software applications and the electronic exchange of ASEAN certificates of origin (Form D) and the ASEAN customs declaration document (ACDD); and designed, implemented, and evaluated a scaled-down pilot project involving seven AMSs and the two aforementioned documents, Form D and ACDD. Over a million messages were exchanged among the participating AMSs in the pilot test. The ASW is really a single window connectivity initiative as an integrated, secured communication network operating in a federated manner without a central server on the basis of standardized information exchange, procedures, formalities, and international best practices (Nathan Associates, 2013, p.1).

The other critical anchor of ASW, in addition to the technical infrastructure, is the legal framework ‘for a predictable rules-based environment for the electronic exchange of data. (Specifically)...a framework (that) ensures that confidential information is protected when exchanged, that information security standards are adequate, that electronic data can be accessed and used in case of disputes, and that a dispute settlement mechanism is in place’ (Nathan Associates, 2013, p.vi). The ADVANCE ASW Project’s legal advisers provided information, analysis, and draft text of the memorandum of understanding signed by all AMSs to provide basic legal coverage for the ASW pilot project. Equally important, the advisers also helped AMSs develop the legal text for the Protocol on the Legal Framework (PLF) to Implement the ASW (Nathan Associates, 2013, pp. 8–9), which was completed in September 2014 after two years of negotiation and has been agreed upon by all AMSs through the ASW Committee (Damuri *et al.*, 2014, p.50).

The evaluation of the pilot ASW project indicates that the project met all its objectives. The challenge now is how to scale it up to a full-blown ASW, which necessarily requires funding and the appropriate business model to ensure its financial sustainability. The full-blown system must necessarily deal with more documents to be exchanged cross border within ASEAN. The results of a survey of the ADVANCE ASW project suggest that the private sector considers the electronic exchange of air waybills, bills of lading, invoices, and packing lists as the first priority for the ASW (see ASEAN Single Window—Potential Impact Survey on the ASW website [asw.asean.org](http://asw.asean.org)). None of these is in the pilot ASW project, which focused on the certificate of origin Form D and the ACDD.

The agreement on the protocol is a big step in providing a predictable and rules-based legal environment to intra-ASEAN electronic exchange of cross-border documents. The challenge now is to ensure that national laws in each AMS support ASW/NSW interoperability and interconnectivity.

In addition, ensuring the seamless movement of goods within the ASEAN may require the effective exchange of pre-arrival information among AMSs to enable more effective risk targeting as well as the support of the expedited movement of goods through the mutual recognition of AEOs among the AMSs. Also, there would be a need to have common identifiers for traders and consignments to support risk management, pre-arrival clearance, track and trace, etc. All of the above would call for national-level capacity building and awareness campaigns in the government and the private sectors. (See Summary of Discussion and Recommendations, Symposium on the ASW and NSW, 18 September 2012, Jakarta on the ASW website, [asw.asean.org](http://asw.asean.org).)

***WTO Agreement on Trade Facilitation.*** The WTO Ministerial Meeting in Bali in December 2013 produced the landmark WTO Agreement on Trade Facilitation.<sup>8</sup> That the agreement was agreed upon in Bali is itself worth noting as it is consistent with the high priority that ASEAN gives to trade facilitation initiatives in the ASEAN Economic Community (AEC) Blueprint. Clearly, the WTO Agreement would need to provide the overarching framework of ASEAN trade facilitation initiatives since the WTO Agreement is a global agreement. Thus, at the very least, trade facilitation initiatives would need to be at least consistent with the WTO

---

<sup>8</sup> The World Trade Organization (WTO) Trade Facilitation Agreement is part of the ‘Bali Package’ agreed upon at the Bali Ministerial Conference. The agreement will enter into force when two-thirds of WTO members have ratified it. As per decision in Bali, WTO members adopted on 27 November 2014, the Protocol Amending the Marrakesh Agreement Establishing the World Trade Organization, effectively inserting the trade facilitation agreement into Annex 1A of the WTO Agreement (see United Nations Economic Commission for Europe, or UNECE, website).

Agreement. Better still, ASEAN may aim for better and faster implementation of the WTO Agreement under the AEC Blueprint post 2015.

Of the three major sections of the WTO Trade Facilitation Agreement, it is the first two that are of importance for the paper. The first section is the most substantive one as it contains the provisions for expediting the movement, release, and clearance of goods, including goods in transit (i.e., Articles 1 to 12). The second section deals with special and differential provisions, specifically the three categories of commitments on the individual provisions of the agreement that developing and especially least-developed countries are allowed to undertake (Articles 13–22).<sup>9</sup> Provisions in Section One can be broadly classified into three areas; namely, (a) transparency and predictability provisions such as publication and availability of information, Internet publication, enquiry points, notification, opportunity to comment and information before entry into force, consultations, advance rulings, and disciplines on fees and charges; (b) procedural simplification and streamlining, including harmonization and simplification of documentary requirements, pre-arrival lodgement and processing of data, separation of release from final determination of customs duties, taxes, charges and fees, risk management, post-clearance audit, authorized economic operators, and expedited shipments; and (c) border agency cooperation and coordination as well as formalities on goods in transit, including the establishment of single window and application of common border procedures and uniform documentation requirements.

It is apparent from the listing of the key provisions under Section One of the WTO Trade Facilitation Agreement that they are captured by the ASEAN trade facilitation initiatives, including AMSs efforts. The national and regional trade repositories are at the heart of ASEAN transparency (and, to some extent, consultation) initiatives. The components of customs modernization and the implementation of a national single window in the ERIA scoring system for customs modernization and national single window capture virtually all the elements under Group B above on procedural simplification and streamlining and, to some extent, on transit of goods. Thus, to a large extent, the challenge for AMSs with respect to the implementation of the WTO Trade Facilitation Agreement is essentially one of greater resolve to implement as soon as possible the key ASEAN trade facilitation initiatives, including the corollary investments in human and institutional capacity building.

---

<sup>9</sup>The third section (Articles 23 and 24) focuses on institutional arrangements and final provisions, most importantly the creation of a permanent Committee on Trade Facilitation.

Moise (2013) provides indications of the costs and challenges of implementing the trade facilitation measures listed in the WTO Trade Facilitation Agreement based on the experiences and plans of several developing and least-developed countries in the world, including Cambodia, Lao PDR, Malaysia, the Philippines, and Thailand from ASEAN. The study indicates that trade facilitation measures are, for the most part, relatively inexpensive to put in place and maintain, requiring primarily sustained political commitment to adopt and maintain over the longer term (as sufficient time is necessary to overcome resistance to change). The most expensive measures are those that use information technologies (e.g., single window, e-customs). Nonetheless, the costs are significantly smaller than the benefits from the implementation of such trade facilitation measures. The study also emphasized the importance of two support measures to the effective implementation of trade facilitation measures: human resource and institutional capacity building as well as a communications strategy for raising the awareness of the private sector and for the change management of concerned bureaucracy, especially customs.

It is worth noting that based on the results of Moise and Sorescu (2013), the trade facilitation measures in lower middle-income countries that have the most significant cost-reduction impact on trade costs are the reduction of documentary requirements, the streamlining of procedures, and automation while those for upper middle-income countries, the most important trade costs reducers are the streamlining of procedures, automation, and governance and impartiality. These measures are, for the most part, included in the major initiatives on trade facilitation of ASEAN.

#### **4. Conclusion and Key Recommendations**

The paper showed that there has been significant progress in trade facilitation in the region in recent years. Nonetheless, a huge gap remains between the front runners and the tail-enders. Cambodia, Lao PDR, and Myanmar have been working hard at modernizing their customs, a key prerequisite to the operationalization of their NSWs, and there has been huge progress. The development of their NSWs is still in the early stages, constrained to some extent by the inadequacy of funds, the availability of technical talent, and the long process of development of the technical infrastructure of the system. Coordination issues among agencies and the

inadequate information on the NSWs available to the stakeholders are also constraints. Viet Nam shows the promise of customs modernization for the CLM countries, and the benefits from it have been considerable in terms of a much-reduced processing time and lower transaction costs for traders and firms. Viet Nam is also well advanced in the development of its NSW.

The operationalization of the NSW is just the start of the continually evolving system, expansion of reach in terms of agencies involved, and ports/border posts/airports where NSW is implemented, and even the changing technical infrastructure as new demands and technology crop up. Even Singapore's NSW has evolved and improved over time since the early 1990s. Much process and document simplification and harmonization in tandem with technical infrastructure improvements need to be done in the Philippine NSW to make the system efficient and effective. Thailand's agencies linked to the NSW are undertaking further process and document simplification and harmonization after the completion of the initial efforts toward the establishment of the NSW. Not all the prerequisites for a truly well-performing NSW can be expected to be operative at the start of the operationalization of the NSW. Thus, some issues remain that need to be addressed to make the Thai NSW truly efficient and facilitative. Indonesia is planning to redesign its NSW to become truly a front-end, single, integrated portal rather than the multiple window it currently is. It is also improving its customs environment more by implementing the AEO by early 2015. Malaysia's Dagang Net and myTRADELINK offer one good picture of what a well-performing NSW is, which a number of AMSs may aspire to.

Trade repository efforts are still under way in a number of AMSs. Very few AMSs have operational trade repositories. Trade repositories are, in fact, very important components of well-performing NSWs as the Indonesian country report highlights. Malaysia's NSW also has an embedded trade repository although it is also being improved and developed further.

As noted above, the key ASEAN trade facilitation initiatives are very much in line with the WTO Trade Facilitation Agreement, arguably the most significant outcome of the WTO Ministerial Conference in Bali in December 2013.

## Key Recommendations:

Considering that ASEAN is the venue of the WTO Trade Facilitation Agreement and given that it is unrealistic to expect the completion of the ASEAN trade facilitation initiatives in the AEC Blueprint in 2015, it may be best to frame the ASEAN trade facilitation initiatives post-2015 in terms of the **amplification of the WTO Trade Facilitation Agreement** at the regional level, something like an **ASEAN Trade Facilitation Agreement and Action Plan Post-2015**. This ASEAN agreement **reiterates** the key provisions of the World Trade Organization (WTO) Agreement and **specifies activities to be undertaken with agreed-upon timeline or targets at the national and regional levels**. The ASEAN trade facilitation agreement and action plan post-2015 (e.g., 2016–2020) maps out the full implementation of the ASEAN and NSWs and the ASEAN and national trade repositories and ensures that they are well performing with outcomes and coordination targets coupled with human resource and institution capacity building. It also includes expanded implementation of other trade facilitation initiatives like self-certification as well as new initiatives like mutual recognition of authorized economic operators and shared or common border posts where feasible.

Thus, given the above, the following key recommendations stand out for consideration as **key deliverables for 2015 and post-2015 (2016–2020) as part of the ASEAN Trade Facilitation Agreement and Action Plan Post–2015**:

- **To enhance transparency and predictability:**
  - *Accelerate the operationalization of the National and ASEAN Trade Repositories by 2015 as targeted in the ASEAN Trade in Goods Agreement (ATIGA) or by 2016 at the latest.* The initiative highlights the importance given to regulatory transparency in the region. It also shows that there are things that can be finished on target or pretty close to target in ASEAN. Both are important messages that ASEAN can present to the global public. Ensure that each AMS has appropriate institutional mechanism for sustainability of operations, effective inter-agency coordination, and legal clarity. Similarly, at the regional level, there is a need for institutional arrangements for effective inter-country coordination and sharing of responsibilities towards the sustainable and well- performing operations of the ASEAN Trade Repository.



- *Ensure operationalization of a sustainable institutional mechanism at the national level* for consultations with, or comments from, concerned stakeholders and other member states on proposed introduction or amendment and/or before entry into force of laws and regulations of general application related to the movement, release, and clearance of goods, including goods in transit.
  - *Implement an efficient advance ruling mechanism in all AMSs where needed.*<sup>10</sup>
- **To ensure expeditious movement, release, and clearance of goods, including goods in transit:**
    - In preparation for or to enhance further the implementation of the NSW, where necessary (as in some AMSs) *institute a major government-wide initiative, preferably with the participation of concerned private sector, on process and document simplification, reduction and harmonization in all the important government agencies related to trade, including for permits, licenses, and certificates, and preferably with success stories by end-2015* even if the process of review and business process re-engineering as well as data harmonization could take a few years. This is similar to Malaysia's PEMUDAH Task Force of modernizing business regulations. In Malaysia, a small team from Customs, Malaysian Administrative Modernization and Management Planning Unit (MAMPU), Malaysian Productivity Corporation (MPC), and line experts worked for over three years re-engineering more than 250 business processes in the areas of import, export, transit, trans-shipment, free zones, and excise (Moise, 2013, pp.9–10). This is likely a key reason for the further reduction in the number of days to import or export in Malaysia in recent years as the Doing Business Trading Across Borders indicators show.

---

<sup>10</sup> This may not be as critical for Singapore given that the country has zero tariffs in virtually all goods. This is because advance rulings are usually requested for tariff classification and for valuation.

Most of the early benefits from the NSW initiative come from the process and document simplification, reduction, and/or harmonization. In addition, this improves business climate, will likely increase the ease of doing business ranking, and raises investment attractiveness. Also, the improvement in regulations and processes helps contribute to overall regulatory improvement in the AMSs. Thus, the institution of this initiative in 2015 gives strong message of **continued reform, not stalled reform**, in ASEAN.

- *Ensure live implementation of the NSW in all AMSs in 2015 (or 2016 at the latest)*, considering the length of time it takes to develop, install, and test the technical infrastructure of the single windows and to ensure that government agencies' systems are well integrated into it. (Haste makes waste, as the Philippine experience seems to suggest.) Enhance the effective implementation of the NSW into a truly single portal in each AMS and in all major ports in all AMSs that are linked through the ASEAN Single Window during 2016–2020. The single window provides the platform for effective and streamlined coordination among trade-related agencies. Establishing a well-performing NSW is a complex process that takes some time. For the tail-ender countries such as Myanmar, Lao PDR, and Cambodia, the plan would be to establish it first with a limited number of government agencies by the end of 2015 or in 2016 at the latest.
  
- *Endeavour to have live implementation of the ASW in 2015 covering a small group of AMSs well prepared to participate in it as well as few documents. Consider ASW as an evolving and radiating initiative*, considering the difficulty of some AMSs in getting themselves technically prepared for it by 2015, *expanding to more AMSs and covering more documents post-2015*, perhaps aiming for full operationalization with all the AMSs and involving all the most important trade documents over time during 2016–2020 to have a well-performing system in the region with relatively seamless NSW/ASW interoperability and interconnectivity. Given the successful

- implementation of the ASW Pilot Project, the challenge now is to undertake a full scale operationalization and with appropriate and robust legal environment for cross-border exchange of data needed for seamless intra-ASEAN movement of goods, including goods in transit.
- Ensure effective implementation of the AEO programme and undertake mutual recognition of AEOs in ASEAN. The AEO programme, together with self-certification, would be especially important for firms deeply involved in regional production networks in ASEAN and East Asia.
  - Strengthen border cooperation among neighbouring AMSs through efforts at alignment of working hours, procedures, and documentation as well as sharing facilities where feasible. This includes the full implementation of the ASEAN Framework Agreement on the Facilitation of Goods in Transit (AFAFGIT).
  - Undertake a programme of human resource and institutional capacity building at the national and regional levels in support of effective and efficient trade facilitation in AMSs and ASEAN. As highlighted by Moise (2013), ‘training often appears as the most essential cost component of trade facilitation measures’ (p.11) because of ‘...its fundamental role in bringing about sustained change in the business practices of border agencies’ (p.4). In the case of Lao PDR, the comprehensive human resource development programme under the World Bank Customs and Trade Facilitation Project included the establishment of a customs training centre, conduct of competency assessments, and the development of a comprehensive training curriculum and training materials, including the translation of WCO e-learning modules into Lao language (Moise, 2013, p.11).

The list above provides the key general recommendations. Country-specific recommendations from the country studies under the project are listed in **Table 5**.

**Table 5: Country-Specific Recommendation for ASEAN Trade Facilitation Initiatives**

Country	Recommendation
Brunei Darussalam	(1) Improving coordination among related agencies (e.g., Ministry of Finance, Ministry of Industry and Primary Resources, Ministry of Communication and Ministry of Home Affairs) for the implementation of the NSW; (2) Improving information security (confidentiality, integrity, and availability) in the electronic transaction; (3) Designing incentives for shipping/freight operators to adopt a unified NSW/ASW portal and standardized IT system; (4) Improving communication and coordination with relevant stakeholders, particularly on time frame and change-over processes; (5) Improving e-government bandwidth at the borders and customs agencies; and (6) Providing incentives to small and medium enterprises to acquire and adopt the necessary IT system.
Cambodia	(1) Improving the connectivity between the ASYCUDA World and Risk Management System; (2) Mapping the existing procedures to streamline and fill the legal gaps; (3) Committing resources to electronically link the core and noncore agencies with customs and NSW system; (4) Embarking on change management at the crucial levels of administration; and (5) Continuing concerted efforts to improve coordination and human resources challenges, especially through a clear project plan and political support from the leaders.
Indonesia	(1) Mobilizing resources to redesign the INSW to be a front-end, single, integrated portal; (2) Continuing investment in the supporting infrastructure, especially electricity infrastructure and IT system; (3) Accelerating the implementation of port networks electronic connection, in addition to the trade networks, in the INSW; and (4) Providing more practical and detailed information on trade repositories.
Lao PDR*	(1) Renewing initiatives to improve the implementation of valuation system, manifest processing, inspection management, cargo release notification, and post-clearance audit; and (2) Directing more resources to improve IT readiness, such as in the areas of e-manifest, e-goods declaration, and e-payment.
Myanmar	(1) Allocating more resources to provide an updated tariff database, fully automated pre-arrival manifest submission, inspection management, and other IT features of custom modernization and NSW; (2) Improving the security of electronic links among agencies involved in NSW; and (3) Renewing concerted initiatives to improve the legal basis, human resources, and trade policy.
Philippines	(1) Renewing commitment and initiatives to upgrade the IT infrastructure and network for full automation as well as smooth policy transition between the management officials of the Bureau of Customs; (2) Improving the implementation of inspection management, CBW management, post-clearance audit, AEO management, and raw materials liquidation system; (3) Harmonizing technological readiness of other government agencies (OGAs) related to NSW as well as promoting harmonization, standardization, and simplification of data/documents among OGAs; and (4) Filling the legal gaps for the implementation of NSW and PNTR.
Thailand	(1) Continuing effort to improve the quality of data set for import, export, and logistics; (2) Promoting more participation in the NSW environment and its paperless service nationwide; (3) Revising relevant laws and regulations for a paperless environment (especially with regard to electronic signatures/permits); (4) Enhancing cross-border data linkage with the region's single window system; (5) Allocating more resources on NTR related to system maintenance and new trade measures notification; and (6) Improving the coordination among the OGAs.
Viet Nam	(1) Continuing efforts to improve coordination among OGAs (especially with regard to information standards and data format) as well as harmonizing its technological readiness; (2) Mapping the regulations related to license, quarantine,

Country	Recommendation
	standards and conformance, to amend the inconsistencies as well as to align with international commitments; (3) Directing more resources toward improving infrastructure and human resources, particularly in the area of valuation, risk management, and information technology.

*Note:* \*Lao PDR's country report is not yet submitted or final.

*Source:* ERIA questionnaire and Research Institutes Network member country reports.

**Finally**, it is worth highlighting again that, as the OECD studies show, most of the trade facilitation initiatives do not involve inordinately high amounts of financial resources, with the exception of single windows. Even in single windows, the preparatory work of process, document and data simplification, streamlining and harmonization does not entail significant financial resources and yet produce significant benefits. Indeed, much of trade facilitation provides significant benefits, even for single windows, which makes them worthwhile to undertake. In the end, political will, human capital, and persistence determine the success of the implementation of trade facilitation initiatives. It is well worth it for ASEAN to pursue them with vigour.

## References

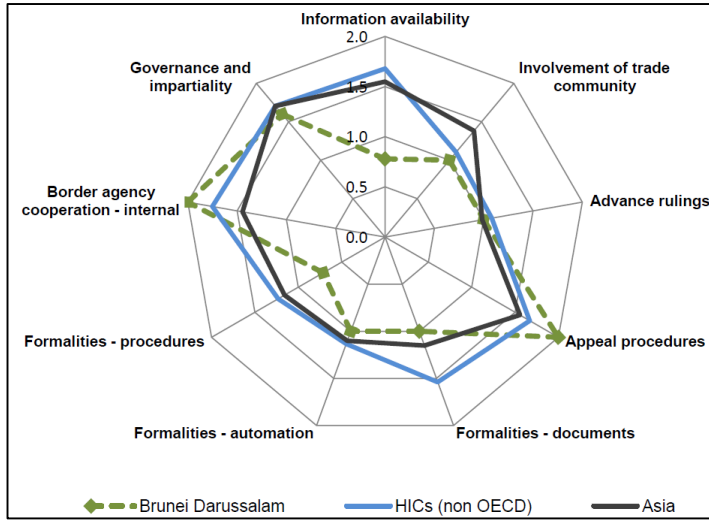
- Association of Southeast Asian Nations (ASEAN) (2009), *The Roadmap for the ASEAN Community 2009–2015*, Jakarta: ASEAN Secretariat.
- ASEAN Single Window (n.d.), Malaysia NSW Services. Retrieved from ASEAN Single Window: <http://asw.asean.org/nsw/malaysia/malaysia-nsw-services>.
- Chap, S. (2014), 'ASEAN Economic Community Scorecard Phase IV: Cambodia' (unpublished). Phnom Penh: Cambodian Institute for Cooperation and Peace (CICP).
- Damuri, Y.R., I. Setiadi, D. Christian, and E. Sasmito (2014), 'ASEAN Economic Community Scorecard Phase IV: Indonesia' (unpublished). Jakarta: Centre for Strategic and International Studies. (CSIS).
- ERIA (2012), *ASEAN Economic Community Blueprint Mid-Term Review: Integrative Report*, Jakarta: ERIA.
- Intal, P., D. Narjoko, and M. Simorangkir (2011), *Integrative Report: ERIA Study to Further Improve the ASEAN Economic Community Scorecard Phase II*, Jakarta: ERIA.
- Itakura, K. (2013), 'Impact of Liberalization and Improved Connectivity and Facilitation in ASEAN for the ASEAN Economic Community', *ERIA Discussion Paper 2013-01*.
- Khvedelidze, M. (2013), 'Institutional Reforms in Georgian Customs', Presentation at Integrated Trade Facilitation 'at the border' and 'behind the border': Reforms and Implementation, ADBI Conference, Tokyo, Japan, 10 April 2013.
- Koh, J. and K. Guan (2014), *Readiness Report for Custom Modernization and National Single Window of Cambodia, Lao PDR, and Myanmar*, prepared for AEC Scorecard Study Phase IV (mimeo).
- Li, Y. and J.S. Wilson (2009), 'Trade Facilitation and Expanding the Benefits of Trade: Evidence from Firm Level Data', *Asia-Pacific Research and Training Network on Trade Working Paper Series*, No. 71.
- Llanto, G., R. Serafica, E. Medalla, K. Ortiz, K. Detros, F. Del Frado, M. Mantaring, V. Ulep, D. Ortiz, P. Padronia, and A. Maddawin. (2014), 'ASEAN Economic Community Scorecard Phase IV: the Philippines (unpublished). Manila: Philippine Institute for Development Studies.
- Moise, E. (2013), 'The Costs and Challenges of Implementing Trade Facilitation Measures', *OECD Trade Policy Papers*, No. 157, Paris: OECD.
- Moise, E. and S. Sorescu (2013), 'Trade Facilitation Indicators', *OECD Trade Policy Papers*, No. 144, Paris: OECD.
- Nathan Associates (2013), *ASEAN Single Window Task Order: Final Report*. Available at [http://pdf.usaid.gov/pdf\\_docs/pa00jkpp.pdf](http://pdf.usaid.gov/pdf_docs/pa00jkpp.pdf) (accessed 5 December 2014).
- Okabe, M. and S. Urata (2013), 'The Impact of AFTA on Intra-AFTA Trade', *ERIA Discussion Paper Series*, 1-37.
- Otsuki, T. (2011), 'Quantifying the Benefits of Trade Facilitation in ASEAN', *OSIPP Discussion Paper*, No. DP-2011-E-006, Japan: Osaka University.
- Piewthongngam, N. and P. Vjijttopparat (2014), *Trade Facilitation: Cost of Non-Cooperation to Consumers in the ASEAN Economic Community*, Jakarta: The Asia Foundation.

- Shepherd, B. and J.S. Wilson (2008), 'Trade Facilitation in ASEAN Member Countries: Measuring Progress and Assessing Priorities', *World Bank Policy Research Working Paper*, No. 4615, Washington DC: World Bank.
- TDRI (2014), 'ASEAN Economic Community Scorecard Phase IV: Thailand' (unpublished). Bangkok: Thailand Development Research Institute Foundation (TDRI).
- Vo, T. T., B.M. Tran, A.D. Nguyen, Q.L. Trinh, and T.H. Dinh (2014). 'ASEAN Economic Community Scorecard Phase IV: Viet Nam' (unpublished). Ha Noi: Central Institute for Economic Management. (CIEM).
- Wilson, J.S., C.L. Mann, and T. Otsuki (2003), 'Trade Facilitation and Economic Development: Measuring the Impact', *World Bank Policy Research Working Paper*, No. 2988, Washington DC: World Bank.
- World Trade Organization (2014a), *Agreement on Trade Facilitation*. WT/L/931 (15 July 2014), Geneva: WTO.
- World Trade Organization (2014b), *Protocol Amending the Marrakesh Agreement Establishing the World Trade Organization*. WT/L/940 (28 November 2014), Geneva: WTO.
- Yong, C.T. (2014), 'ASEAN Economic Community Scorecard Phase IV: Brunei Darussalam' (unpublished). Bandar Seri Begawan: Brunei Darussalam Institute of Policy and Strategic Studies (BDIPSS).
- YUE (2014), 'ASEAN Economic Community Scorecard Phase IV: Myanmar' (unpublished). Yangon: Yangon University of Economics.

## Annex A

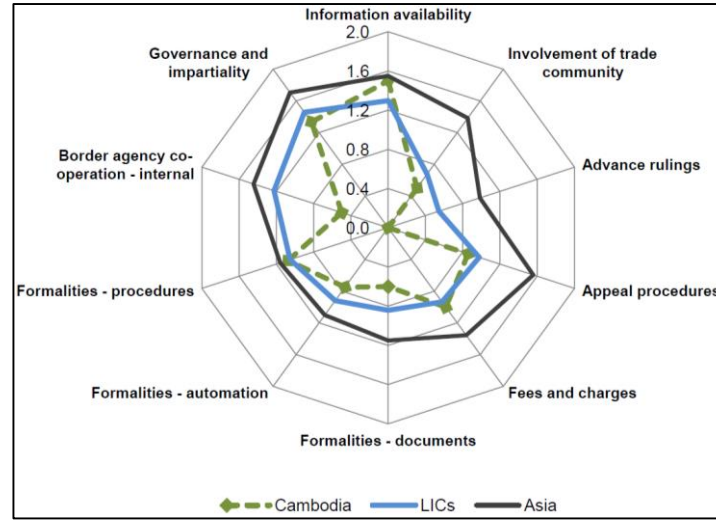
### OECD Trade Facilitation Indicators – AMSs Country Data

#### Brunei Darussalam



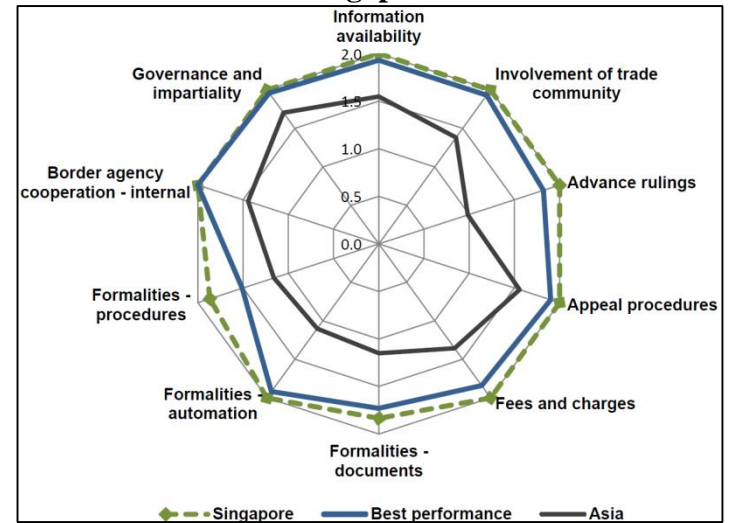
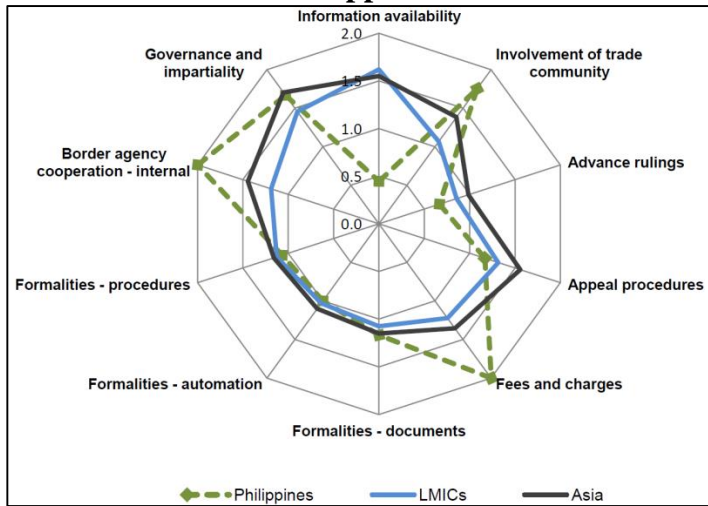
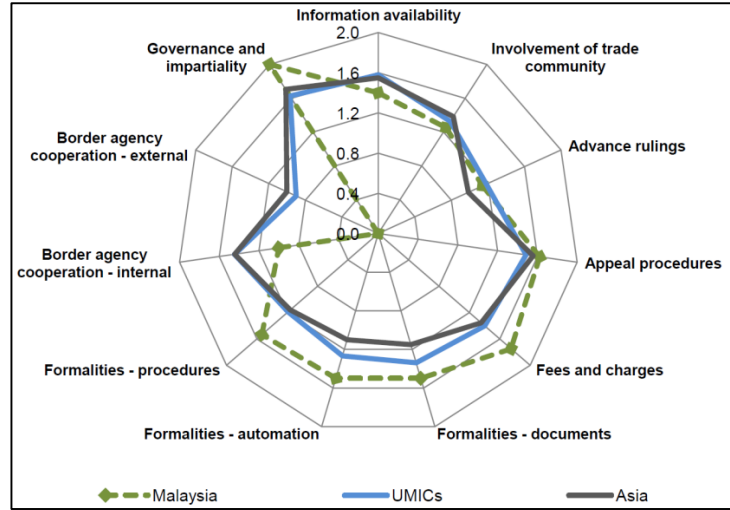
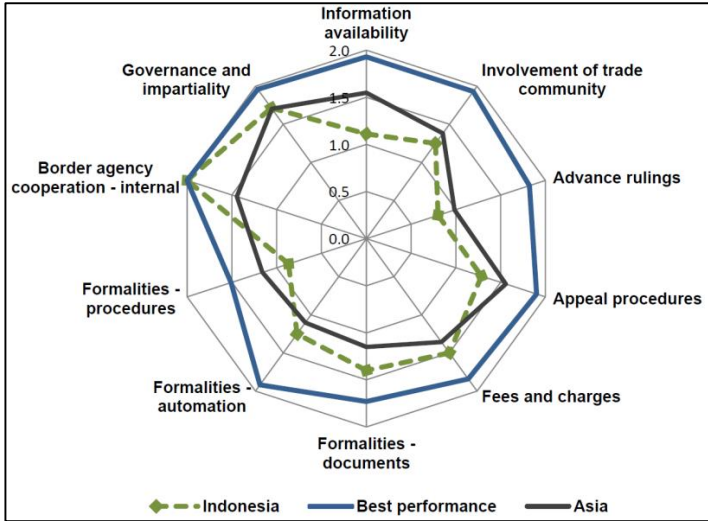
#### Indonesia

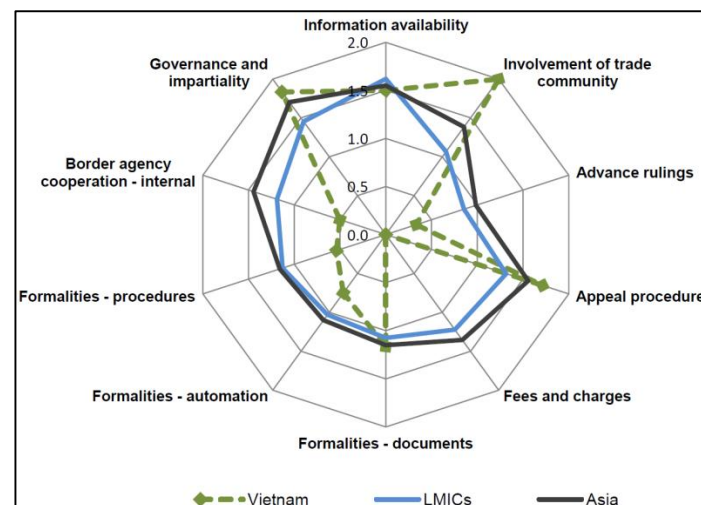
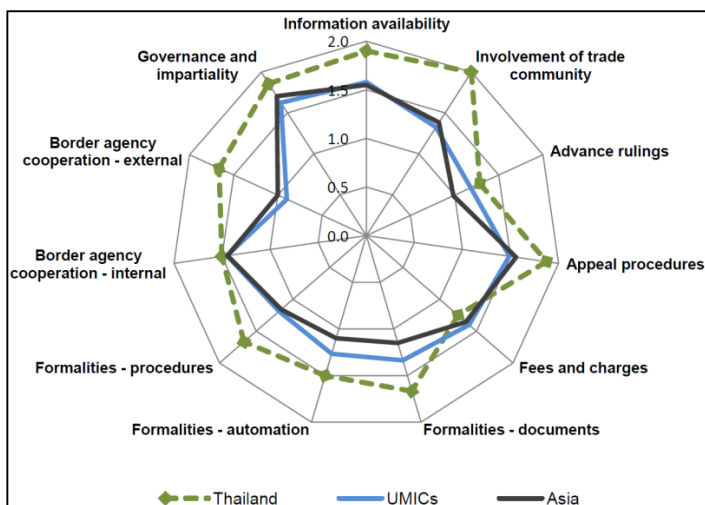
#### Cambodia



#### Malaysia







Note: HIC = High-Income Countries non-OECD; UMICs = Upper Middle-Income Countries; LMICs = Lower Middle-Income Countries; and LICs = Low-Income Countries. Border agency's external cooperation score is available only for Malaysia and Thailand. Furthermore, there is no sufficient information on 'Fees and charges' for Brunei Darussalam.

Source: OECD.

## Annex B

### ERIA Customs Modernization Questionnaire Scoring System

Question	Indicators	Weight (%)	Score
<b>1</b>	<b>Standardized HS Commodity Codes</b> Measures usage of standardized commodity codes in line with international best practices		
1a.	IT system to maintain and implement HS Code	50	<b>5</b>
1b.	HS code used as standardized means of commodity classification across all functions	50	
<b>2</b>	<b>Implementation of Tariff Management</b> Measures implementation of system for management and application of tariff rates		
2a.	Automated system to calculate and manage tariffs	50	<b>5</b>
2b.	Tariff database contain historical and current tariff rates	25	
2d.	Advance ruling system for tariff classification	25	
<b>3</b>	<b>Implementation of Valuation System</b> Measures implementation of automated valuation verification system and maintenance of valuation reference database and related support activities.		
3.	Automated system for the valuation verification process and updating of values	100	<b>5</b>
<b>4</b>	<b>Implementation of Manifest processing</b> Measures level of process automation for manifest processing		
4a.	Require pre-arrival of manifest for sea-based import	25	<b>5</b>
4b.	How manifest is submitted	25	
4c.	IT system to support submission	50	
<b>5</b>	<b>Implementation of Goods Declaration processing</b> Measures level of process automation for goods declaration processing		
5a.	An IT system that allows electronic lodgement processing of goods declaration	50	<b>5</b>
5b.	Data validation on declaration before official submission	50	
<b>6</b>	<b>Implementation of Risk Management and Selectivity</b> Measures level of organized risk management processes, implementation of automated risk management implementation, and outcomes of risk assessment		
6a.	Risk management	25	<b>15</b>
6b.	Cargo profiling	25	
6c.	Risk management techniques WCO	12.5	
6d.	Risk assessment information shared	12.5	
6e.	An IT system	25	
<b>7</b>	<b>Implementation of Inspection Management</b> Measures implementation of automation and best practices in management of inspection process		
7a.	Use of non-intrusive inspection using NII equipment	50	<b>10</b>
7b.	IT system that supports inspection management	50	
<b>8</b>	<b>Implementation of Customs-Bonded Warehouse Management</b> Measures implementation and automation of bonded warehouses to support suspension of import duties and related taxes		
8b.	IT system	100	<b>5</b>

Question	Indicators	Weight (%)	Score
<b>9</b>	<b>Implementation of Cargo Release Notification</b> Measures implementation of automated notification/communication system to inform traders of clearance/release of goods from customs controlled area for purpose of efficiency of transport		
9a.	An IT system	100	<b>5</b>
<b>10</b>	<b>Implementation of Post-Clearance Audit</b> Measures implementation of automation and best practices in management of post-clearance audit		
10a.	Post-clearance audit (PCA)	25	<b>10</b>
10b.	An IT system	50	
10c.	System generate the audit schedule and assign auditors on a random or otherwise unbiased basis	25	
<b>11</b>	<b>Implementation of AEO Management</b> Measures implementation of Authorized Economic Operators (AEO) as a means of facilitating trade through accreditation by Customs of trusted partners in the supply chain		
11a.	Programme that is similar to WCO	50	<b>2.5</b>
11b.	An IT system	50	
<b>12</b>	<b>Implementation of AEO Mutual Recognition</b> Measures AEO integration with other countries		
12a.	Signed mutual recognition agreements	50	<b>2.5</b>
12c.	IT system	50	
<b>14</b>	<b>Implementation of Transit Cargo Tracking system</b> Measures implementation of a nationwide cargo tracking system to track movement of bonded cargo through national territory from customs border point or customs office to another customs border point or customs office (including movement of goods to/from free trade zones and inland container depots)		
14a.	Have an operational national transit cargo tracking	50	<b>5</b>
14b.	System automated	50	
<b>16</b>	<b>Implementation of Electronic Payment System</b>		
16a.	E-payment	100	<b>5</b>
<b>17</b>	<b>Implementation of Raw Materials Liquidation System</b> Measures implementation of a system that manages and tracks raw materials that are imported for the purpose of manufacturing or other transformative process before re-export. Includes reconciliation of materials used (liquidation) as well as procedures for suspension and/or refund of duties.		
17a.	Automated raw materials liquidation	100	<b>5</b>
<b>18</b>	<b>Publication of Customs rules</b> Measures availability and transparency of customs rules, regulations, and associated information		
18a.	Accessible to the public online via Internet	100	<b>10</b>
	<b>Total</b>		<b>100</b>

## Annex C

### ERIA National Single Window (NSW) Questionnaire Scoring System

Question in the questionnaire	Indicators	Weight (%)	Score
<b>A</b>	<b>Preparatory Measure</b>		
1	Development status of Single Window		<b>5</b>
2	<b>Political Mandate of NSW</b> Measures political support and organizational structure		
2a.	The political mandate of NSW	67	<b>3</b>
2b.	Committee that coordinates the planning and implementation of NSW	33	
3	<b>Stakeholder Engagement</b> Measures involvement and engagement of key national stakeholders for successful NSW implementation		
3a.	Government agencies consulted and participating	50	<b>2</b>
3b,c	Industry stakeholders consulted, industry stakeholders members of NSW Committee	50	
4	<b>Legal Framework</b> Measures implementation of legal framework to support electronic documents and processing as a key requirement for successful NSW		
	An electronics transactions act (ETA), digital signatures act, evidence act or decree or equivalent that acknowledges the legal status of electronic submissions		<b>5</b>
8d.	<b>Standardization to International Standard, Harmonization for Efficient NSW</b>		
	Document simplification and harmonization that follows WCO data model, document simplification and harmonization		<b>10</b>
8c.	<b>Workflow Mapping</b>		
	Process simplification and harmonization		<b>10</b>
<b>B</b>	<b>Implementation of the SW and Technical Component</b>		
9	<b>Reporting (import, export, transit, trans-shipment)</b> Measures operational status of key NSW functions		
	Front-end for trader		<b>2</b>
	Front-end e-manifest submission, advance e-manifest submission		<b>4</b>
	Front-end e-goods declaration		<b>2</b>
	Front-end e-payment		<b>2</b>
	Integrated risk assessment		<b>2</b>
	Port connectivity		<b>2</b>
	International data exchange, online track and trace		<b>4</b>
18a.	Online information (from customs modernization)		<b>2</b>

Question in the questionnaire	Indicators	Weight (%)	Score
<b>6</b>	<b>Permits Certification</b> Measures level of process integration, taking into account system automation implementation between NSW and OGA throughout the goods clearance process		
	System interface/interchange of permit application and issuance and in declaration clearance [full score for OGA own system interface, or single window provides facility]		<b>30</b>
<b>C</b>	<b>LIVE Implementation</b>		
<b>8</b>	Conduct user testing	15	<b>15</b>
	Staff training	10	
	Communication	10	
	Help desk	10	
	Open publication	10	
	Single window rollout	45	
<b>TOTAL</b>			<b>100</b>

## ERIA Discussion Paper Series

No.	Author(s)	Title	Year
2015-41	Ponciano INTAL Jr.	AEC Blueprint Implementation Performance and Challenges: Trade Facilitation	May 2015
2015-40	Fukunari KIMURA, Tomohiro MACHIKITA, and Yasushi UEKI	Technology Transfer in ASEAN Countries: Some Evidence from Buyer-Provided Training Network Data	May 2015
2015-39	Dionisius NARJOKO	AEC Blueprint Implementation Performance and Challenges: Services Liberalization	May 2015
2015-38	Kazunobu HAYAKAWA, Nuttawut LAKSANAPANYA KUL, Shujiro URATA	Measuring the Costs of FTA Utilization: Evidence from Transaction-level Import Data of Thailand	May 2015
2015-37	Kazunobu HAYAKAWA, Nuttawut LAKSANAPANYA KUL, Pisit PUAPAN, Sastra SUDSAWASD	Government Strategy and Support for Regional Trade Agreements: The Case of Thailand	May 2015
2015-36	Dionisius A. NARJOKO	AEC Blueprint Implementation Performance and Challenges: Non-Tariff Measures and Non-Tariff Barriers	May 2015
2015-35	Kazunobu HAYAKAWA, Tadashi ITO, and Fukunari KIMURA	Trade Creation Effects of Regional Trade Agreements: Tariff Reduction versus Non- tariff Barrier Removal	Apr 2015
2015-34	Kazunobu HAYAKAWA, Tadashi ITO	Tariff Pass-through of the World-wide Trade: Empirical Evidence at Tariff-line Level	Apr 2015
2015-33	Kazubobu HAYAKAWA, Nuttawut LAKSANAPNYAK	Firm-level Impact of Free Trade Agreements on Import Prices	Apr 2015

No.	Author(s)	Title	Year
	UL, and Shujiro URATA		
2015-32	Ponciano INTAL, Jr.	AEC Blueprint Implementation Performance and Challenges: Investment Liberalization	Apr 2015
2015-31	Emily Christi A. CABEGIN	The Challenge of China and the Role of Deepening ASEAN Integration for the Philippine Semiconductor Industry	Apr 2015
2015-30	Venkatachalam ANBUMOZHI, Alex BOWEN and Puthusserikunnel Devasia JOSE	Market-Based Mechanisms to Promote Renewable Energy in Asia	Apr 2015
2015-29	Venkatachalam ANBUMOZHI	Low Carbon Green Growth in Asia: What is the Scope for Regional Cooperation?	Apr 2015
2015-28	Tan LI and Larry D. QIU	Beyond Trade Creation: Free Trade Agreements and Trade Disputes	Mar 2015
2015-27	Mai Anh NGO	Exporting and Firm-Level Credit Constraints – Evidence from Ghana	Mar 2015
2015-26	Sunghoon CHUNG, Joonhyung LEE, Thomas OSANG	Did China Tire Safeguard Save U.S. Workers?	Mar 2015
2015-25	Esther Ann BØLER, Beata JAVORCIK, Karen Helene ULLTVEI-MOE	Globalization: A Woman’s Best Friend? Exporters and the Gender Wage Gap	Mar 2015
2015-24	Tristan Leo Dallo AGUSTIN and Martin SCHRÖDER	The Indian Automotive Industry and the ASEAN Supply Chain Relations	Mar 2015
2015-23	Hideo KOBAYASHI and Yingshan JIN	The CLMV Automobile and Auto Parts Industry	Mar 2015
2015-22	Hideo KOBAYASHI	Current State and Issues of the Automobile and Auto Parts Industries in ASEAN	Mar 2015
2015-21	Yoshifumi FUKUNAGA	Assessing the Progress of ASEAN MRAs on Professional Services	Mar 2015



No.	Author(s)	Title	Year
2015-20	Yoshifumi FUKUNAGA and Hikari ISHIDO	Values and Limitations of the ASEAN Agreement on the Movement of Natural Persons	Mar 2015
2015-19	Nanda NURRIDZKI	Learning from the ASEAN + 1 Model and the ACIA	Mar 2015
2015-18	Patarapong INTARAKUMNER D and Pun-Arj CHAIRATANA and Preeda CHAYANAJIT	Global Production Networks and Host-Site Industrial Upgrading: The Case of the Semiconductor Industry in Thailand	Feb 2015
2015-17	Rajah RASIAH and Yap Xiao SHAN	Institutional Support, Regional Trade Linkages and Technological Capabilities in the Semiconductor Industry in Singapore	Feb 2015
2015-16	Rajah RASIAH and Yap Xiao SHAN	Institutional Support, Regional Trade Linkages and Technological Capabilities in the Semiconductor Industry in Malaysia	Feb 2015
2015-15	Xin Xin KONG, Miao ZHANG and Santha Chenayah RAMU	China's Semiconductor Industry in Global Value Chains	Feb 2015
2015-14	Tin Htoo NAING and Yap Su FEI	Multinationals, Technology and Regional Linkages in Myanmar's Clothing Industry	Feb 2015
2015-13	Vanthana NOLINTHA and Idris JAJRI	The Garment Industry in Laos: Technological Capabilities, Global Production Chains and Competitiveness	Feb 2015
2015-12	Miao ZHANG, Xin Xin KONG, Santha Chenayah RAMU	The Transformation of the Clothing Industry in China	Feb 2015
2015-11	NGUYEN Dinh Chuc, NGUYEN Ngoc Anh, NGUYEN Ha Trang and NGUYEN Ngoc Minh	Host-site institutions, Regional Production Linkages and Technological Upgrading: A study of Automotive Firms in Vietnam	Feb 2015
2015-10	Pararapong INTERAKUMNER D and Kriengkrai TECHAKANONT	Intra-industry Trade, Product Fragmentation and Technological Capability Development in Thai Automotive Industry	Feb 2015
2015-09	Rene E. OFRENEO	Auto and Car Parts Production: Can the Philippines Catch Up with Asia	Feb 2015

No.	Author(s)	Title	Year
2015-08	Rajah RASIAH, Rafat Beigpoor SHAHRIVAR, Abdusy Syakur AMIN	Host-site Support, Foreign Ownership, Regional Linkages and Technological Capabilites: Evidence from Automotive Firms in Indonesia	Feb 2015
2015-07	Yansheng LI, Xin Xin KONG, and Miao ZHANG	Industrial Upgrading in Global Production Networks: Te Case of the Chinese Automotive Industry	Feb 2015
2015-06	Mukul G. ASHER and Fauziah ZEN	Social Protection in ASEAN: Challenges and Initiatives for Post-2015 Vision	Feb 2015
2015-05	Lili Yan ING, Stephen MAGIERA, and Anika WIDIANA	Business Licensing: A Key to Investment Climate Reform	Feb 2015
2015-04	Gemma ESTRADA, James ANGRESANO, Jo Thori LIND, Niku MÄÄTÄNEN, William MCBRIDE, Donghyun PARK, Motohiro SATO, and Karin SVANBORG- SJÖVALL	Fiscal Policy and Equity in Advanced Economies: Lessons for Asia	Jan 2015
2015-03	Erlinda M. MEDALLA	Towards an Enabling Set of Rules of Origin for the Regional Comprehensive Economic Partnership	Jan 2015
2015-02	Archanun KOHPAIBOON and Juthathip JONGWANICH	Use of FTAs from Thai Experience	Jan 2015
2015-01	Misa OKABE	Impact of Free Trade Agreements on Trade in East Asia	Jan 2015
2014-26	Hikari ISHIDO	Coverage of Trade in Services under ASEAN+1 FTAs	Dec 2014
2014-25	Junianto James LOSARI	Searching for an Ideal International Investment Protection Regime for ASEAN + Dialogue Partners (RCEP): Where Do We Begin?	Dec 2014
2014-24	Dayong ZHANG and David C. Broadstock	Impact of International Oil Price Shocks on Consumption Expenditures in ASEAN and East Asia	Nov 2014

No.	Author(s)	Title	Year
2014-23	Dandan ZHANG, Xunpeng SHI, and Yu SHENG	Enhanced Measurement of Energy Market Integration in East Asia: An Application of Dynamic Principal Component Analysis	Nov 2014
2014-22	Yanrui WU	Deregulation, Competition, and Market Integration in China's Electricity Sector	Nov 2014
2014-21	Yanfei LI and Youngho CHANG	Infrastructure Investments for Power Trade and Transmission in ASEAN+2: Costs, Benefits, Long-Term Contracts, and Prioritised Development	Nov 2014
2014-20	Yu SHENG, Yanrui WU, Xunpeng SHI, Dandan ZHANG	Market Integration and Energy Trade Efficiency: An Application of Malmqvist Index to Analyse Multi-Product Trade	Nov 2014
2014-19	Andindya BHATTACHARYA and Tania BHATTACHARYA	ASEAN-India Gas Cooperation: Redefining India's "Look East" Policy with Myanmar	Nov 2014
2014-18	Olivier CADOT, Lili Yan ING	How Restrictive Are ASEAN's RoO?	Sep 2014
2014-17	Sadayuki TAKII	Import Penetration, Export Orientation, and Plant Size in Indonesian Manufacturing	July 2014
2014-16	Tomoko INUI, Keiko ITO, and Daisuke MIYAKAWA	Japanese Small and Medium-Sized Enterprises' Export Decisions: The Role of Overseas Market Information	July 2014
2014-15	Han PHOUMIN and Fukunari KIMURA	Trade-off Relationship between Energy Intensity-thus energy demand- and Income Level: Empirical Evidence and Policy Implications for ASEAN and East Asia Countries	June 2014
2014-14	Cassey LEE	The Exporting and Productivity Nexus: Does Firm Size Matter?	May 2014
2014-13	Yifan ZHANG	Productivity Evolution of Chinese large and Small Firms in the Era of Globalisation	May 2014
2014-12	Valéria SMEETS, Sharon TRAIBERMAN, Frederic WARZYNSKI	Offshoring and the Shortening of the Quality Ladder: Evidence from Danish Apparel	May 2014
2014-11	Inkyo CHEONG	Korea's Policy Package for Enhancing its FTA Utilization and Implications for Korea's Policy	May 2014

No.	Author(s)	Title	Year
2014-10	Sothea OUM, Dionisius NARJOKO, and Charles HARVIE	Constraints, Determinants of SME Innovation, and the Role of Government Support	May 2014
2014-09	Christopher PARSONS and Pierre-Louis Vézina	Migrant Networks and Trade: The Vietnamese Boat People as a Natural Experiment	May 2014
2014-08	Kazunobu HAYAKAWA and Toshiyuki MATSUURA	Dynamic Two-way Relationship between Exporting and Importing: Evidence from Japan	May 2014
2014-07	DOAN Thi Thanh Ha and Kozo KIYOTA	Firm-level Evidence on Productivity Differentials and Turnover in Vietnamese Manufacturing	Apr 2014
2014-06	Larry QIU and Miaojie YU	Multiproduct Firms, Export Product Scope, and Trade Liberalization: The Role of Managerial Efficiency	Apr 2014
2014-05	Han PHOUMIN and Shigeru KIMURA	Analysis on Price Elasticity of Energy Demand in East Asia: Empirical Evidence and Policy Implications for ASEAN and East Asia	Apr 2014
2014-04	Youngho CHANG and Yanfei LI	Non-renewable Resources in Asian Economies: Perspectives of Availability, Applicability, Acceptability, and Affordability	Feb 2014
2014-03	Yasuyuki SAWADA and Fauziah ZEN	Disaster Management in ASEAN	Jan 2014
2014-02	Cassey LEE	Competition Law Enforcement in Malaysia	Jan 2014
2014-01	Rizal SUKMA	ASEAN Beyond 2015: The Imperatives for Further Institutional Changes	Jan 2014
2013-38	Toshihiro OKUBO, Fukunari KIMURA, Nozomu TESHIMA	Asian Fragmentation in the Global Financial Crisis	Dec 2013
2013-37	Xunpeng SHI and Cecilya MALIK	Assessment of ASEAN Energy Cooperation within the ASEAN Economic Community	Dec 2013
2013-36	Tereso S. TULLAO, Jr. And Christopher James CABUAY	Education and Human Capital Development to Strengthen R&D Capacity in the ASEAN	Dec 2013
2013-35	Paul A. RASCHKY	Estimating the Effects of West Sumatra Public Asset Insurance Program on Short-Term Recovery after the September 2009 Earthquake	Dec 2013

No.	Author(s)	Title	Year
2013-34	Nipon POAPONSAKORN and Pitsom MEETHOM	Impact of the 2011 Floods, and Food Management in Thailand	Nov 2013
2013-33	Mitsuyo ANDO	Development and Resructuring of Regional Production/Distribution Networks in East Asia	Nov 2013
2013-32	Mitsuyo ANDO and Fukunari KIMURA	Evolution of Machinery Production Networks: Linkage of North America with East Asia?	Nov 2013
2013-31	Mitsuyo ANDO and Fukunari KIMURA	What are the Opportunities and Challenges for ASEAN?	Nov 2013
2013-30	Simon PEETMAN	Standards Harmonisation in ASEAN: Progress, Challenges and Moving Beyond 2015	Nov 2013
2013-29	Jonathan KOH and Andrea Feldman MOWERMAN	Towards a Truly Seamless Single Windows and Trade Facilitation Regime in ASEAN Beyond 2015	Nov 2013
2013-28	Rajah RASIAH	Stimulating Innovation in ASEAN Institutional Support, R&D Activity and Intelletual Property Rights	Nov 2013
2013-27	Maria Monica WIHARDJA	Financial Integration Challenges in ASEAN beyond 2015	Nov 2013
2013-26	Tomohiro MACHIK ITA and Yasushi UE KI	Who Disseminates Technology to Whom, How, and Why: Evidence from Buyer-Seller Business Networks	Nov 2013
2013-25	Fukunari KIMURA	Reconstructing the Concept of “Single Market a Production Base” for ASEAN beyond 2015	Oct 2013
2013-24	Olivier CADOT Ernawati MUNADI Lili Yan ING	Streamlining NTMs in ASEAN: The Way Forward	Oct 2013
2013-23	Charles HARVIE, Dionisius NARJOK O, Sothea OUM	Small and Medium Enterprises’ Access to Finance: Evidence from Selected Asian Economies	Oct 2013
2013-22	Alan Khee-Jin TAN	Toward a Single Aviation Market in ASEAN: Regulatory Reform and Industry Challenges	Oct 2013

No.	Author(s)	Title	Year
2013-21	Hisanobu SHISHID O, Shintaro SUGIYAM A,Fauziah ZEN	Moving MPAC Forward: Strengthening Public-Private Partnership, Improving Project Portfolio and in Search of Practical Financing Schemes	Oct 2013
2013-20	Barry DESKER, Mely CABALLERO- ANTHONY, Paul TENG	Thought/Issues Paper on ASEAN Food Security: Towards a more Comprehensive Framework	Oct 2013
2013-19	Toshihiro KUDO, Satoru KUMAGAI, So UMEZAKI	Making Myanmar the Star Growth Performer in ASEAN in the Next Decade: A Proposal of Five Growth Strategies	Sep 2013
2013-18	Ruperto MAJUCA	Managing Economic Shocks and Macroeconomic Coordination in an Integrated Region: ASEAN Beyond 2015	Sep 2013
2013-17	Cassy LEE and Yoshifumi FUKUNAGA	Competition Policy Challenges of Single Market and Production Base	Sep 2013
2013-16	Simon TAY	Growing an ASEAN Voice? : A Common Platform in Global and Regional Governance	Sep 2013
2013-15	Danilo C. ISRAEL and Roehlano M. BRIONES	Impacts of Natural Disasters on Agriculture, Food Security, and Natural Resources and Environment in the Philippines	Aug 2013
2013-14	Allen Yu-Hung LAI and Seck L. TAN	Impact of Disasters and Disaster Risk Management in Singapore: A Case Study of Singapore's Experience in Fighting the SARS Epidemic	Aug 2013
2013-13	Brent LAYTON	Impact of Natural Disasters on Production Networks and Urbanization in New Zealand	Aug 2013
2013-12	Mitsuyo ANDO	Impact of Recent Crises and Disasters on Regional Production/Distribution Networks and Trade in Japan	Aug 2013
2013-11	Le Dang TRUNG	Economic and Welfare Impacts of Disasters in East Asia and Policy Responses: The Case of Vietnam	Aug 2013

No.	Author(s)	Title	Year
2013-10	Sann VATHANA, Sothea OUM, Ponhrith KAN, Colas CHERVIER	Impact of Disasters and Role of Social Protection in Natural Disaster Risk Management in Cambodia	Aug 2013
2013-09	Sommarat CHANTARAT, Krirk PANNANGPETCH, Nattapong PUTTANAPONG, Preesan RAKWATIN, and Thanasin TANOMPONGPHAN DH	Index-Based Risk Financing and Development of Natural Disaster Insurance Programs in Developing Asian Countries	Aug 2013
2013-08	Ikumo ISONO and Satoru KUMAGAI	Long-run Economic Impacts of Thai Flooding: Geographical Simulation Analysis	July 2013
2013-07	Yoshifumi FUKUNAGA and Hikaru ISHIDO	Assessing the Progress of Services Liberalization in the ASEAN-China Free Trade Area (ACFTA)	May 2013
2013-06	Ken ITAKURA, Yoshifumi FUKUNAGA, and Ikumo ISONO	A CGE Study of Economic Impact of Accession of Hong Kong to ASEAN-China Free Trade Agreement	May 2013
2013-05	Misa OKABE and Shujiro URATA	The Impact of AFTA on Intra-AFTA Trade	May 2013
2013-04	Kohei SHIINO	How Far Will Hong Kong's Accession to ACFTA will Impact on Trade in Goods?	May 2013
2013-03	Cassey LEE and Yoshifumi FUKUNAGA	ASEAN Regional Cooperation on Competition Policy	Apr 2013
2013-02	Yoshifumi FUKUNAGA and Ikumo ISONO	Taking ASEAN+1 FTAs towards the RCEP: A Mapping Study	Jan 2013
2013-01	Ken ITAKURA	Impact of Liberalization and Improved Connectivity and Facilitation in ASEAN for the ASEAN Economic Community	Jan 2013
2012-17	Sun XUEGONG, Guo LIYAN, Zeng ZHENG	Market Entry Barriers for FDI and Private Investors: Lessons from China's Electricity Market	Aug 2012

No.	Author(s)	Title	Year
2012-16	Yanrui WU	Electricity Market Integration: Global Trends and Implications for the EAS Region	Aug 2012
2012-15	Youngho CHANG, Yanfei LI	Power Generation and Cross-border Grid Planning for the Integrated ASEAN Electricity Market: A Dynamic Linear Programming Model	Aug 2012
2012-14	Yanrui WU, Xunpeng SHI	Economic Development, Energy Market Integration and Energy Demand: Implications for East Asia	Aug 2012
2012-13	Joshua AIZENMAN, Minsoo LEE, and Donghyun PARK	The Relationship between Structural Change and Inequality: A Conceptual Overview with Special Reference to Developing Asia	July 2012
2012-12	Hyun-Hoon LEE, Minsoo LEE, and Donghyun PARK	Growth Policy and Inequality in Developing Asia: Lessons from Korea	July 2012
2012-11	Cassey LEE	Knowledge Flows, Organization and Innovation: Firm-Level Evidence from Malaysia	June 2012
2012-10	Jacques MAIRESSE, Pierre MOHNEN, Yayun ZHAO, and Feng ZHEN	Globalization, Innovation and Productivity in Manufacturing Firms: A Study of Four Sectors of China	June 2012
2012-09	Ari KUNCORO	Globalization and Innovation in Indonesia: Evidence from Micro-Data on Medium and Large Manufacturing Establishments	June 2012
2012-08	Alfons PALANGKARAYA	The Link between Innovation and Export: Evidence from Australia's Small and Medium Enterprises	June 2012
2012-07	Chin Hee HAHN and Chang-Gyun PARK	Direction of Causality in Innovation-Exporting Linkage: Evidence on Korean Manufacturing	June 2012
2012-06	Keiko ITO	Source of Learning-by-Exporting Effects: Does Exporting Promote Innovation?	June 2012
2012-05	Rafaelita M. ALDABA	Trade Reforms, Competition, and Innovation in the Philippines	June 2012
2012-04	Toshiyuki MATSUURA and Kazunobu HAYAKAWA	1.1 The Role of Trade Costs in FDI Strategy of Heterogeneous Firms: Evidence from Japanese Firm-level Data	June 2012
2012-03	Kazunobu HAYAKAWA,	1.2 How Does Country Risk Matter for Foreign Direct Investment?	Feb 2012



No.	Author(s)		Title	Year
	Fukunari KIMURA, and Hyun-Hoon LEE			
2012-02	Ikumo ISONO, Satoru KUMAGAI, Fukunari KIMURA	1.3	Agglomeration and Dispersion in China and ASEAN:	Jan 2012
		1.4	A Geographical Simulation Analysis	
2012-01	Mitsuyo ANDO and Fukunari KIMURA	1.5	How Did the Japanese Exports Respond to Two Crises in the International Production Network?: The Global Financial Crisis and the East Japan Earthquake	Jan 2012
2011-10	Tomohiro MACHIKITA and Yasushi UEKI		Interactive Learning-driven Innovation in Upstream-Downstream Relations: Evidence from Mutual Exchanges of Engineers in Developing Economies	Dec 2011
2011-09	Joseph D. ALBA, Wai-Mun CHIA, and Donghyun PARK		Foreign Output Shocks and Monetary Policy Regimes in Small Open Economies: A DSGE Evaluation of East Asia	Dec 2011
2011-08	Tomohiro MACHIKITA and Yasushi UEKI		Impacts of Incoming Knowledge on Product Innovation: Econometric Case Studies of Technology Transfer of Auto-related Industries in Developing Economies	Nov 2011
2011-07	Yanrui WU		Gas Market Integration: Global Trends and Implications for the EAS Region	Nov 2011
2011-06	Philip Andrews- SPEED		Energy Market Integration in East Asia: A Regional Public Goods Approach	Nov 2011
2011-05	Yu SHENG, Xunpeng SHI		Energy Market Integration and Economic Convergence: Implications for East Asia	Oct 2011
2011-04	Sang-Hyop LEE, Andrew MASON, and Donghyun PARK		Why Does Population Aging Matter So Much for Asia? Population Aging, Economic Security and Economic Growth in Asia	Aug 2011
2011-03	Xunpeng SHI, Shinichi GOTO		Harmonizing Biodiesel Fuel Standards in East Asia: Current Status, Challenges and the Way Forward	May 2011
2011-02	Hikari ISHIDO		Liberalization of Trade in Services under ASEAN+n : A Mapping Exercise	May 2011
2011-01	Kuo-I CHANG, Kazunobu HAYAKAWA		Location Choice of Multinational Enterprises in China: Comparison between Japan and Taiwan	Mar 2011

No.	Author(s)	Title	Year
	Toshiyuki MATSUURA		
2010-11	Charles HARVIE, Dionisius NARJOKO, Sothea OUM	Firm Characteristic Determinants of SME Participation in Production Networks	Oct 2010
2010-10	Mitsuyo ANDO	Machinery Trade in East Asia, and the Global Financial Crisis	Oct 2010
2010-09	Fukunari KIMURA Ayako OBASHI	International Production Networks in Machinery Industries: Structure and Its Evolution	Sep 2010
2010-08	Tomohiro MACHIKITA, Shoichi MIYAHARA, Masatsugu TSUJI, and Yasushi UEKI	Detecting Effective Knowledge Sources in Product Innovation: Evidence from Local Firms and MNCs/JVs in Southeast Asia	Aug 2010
2010-07	Tomohiro MACHIKITA, Masatsugu TSUJI, and Yasushi UEKI	How ICTs Raise Manufacturing Performance: Firm-level Evidence in Southeast Asia	Aug 2010
2010-06	Xunpeng SHI	Carbon Footprint Labeling Activities in the East Asia Summit Region: Spillover Effects to Less Developed Countries	July 2010
2010-05	Kazunobu HAYAKAWA, Fukunari KIMURA, and Tomohiro MACHIKITA	Firm-level Analysis of Globalization: A Survey of the Eight Literatures	Mar 2010
2010-04	Tomohiro MACHIKITA and Yasushi UEKI	The Impacts of Face-to-face and Frequent Interactions on Innovation: Upstream-Downstream Relations	Feb 2010
2010-03	Tomohiro MACHIKITA and Yasushi UEKI	Innovation in Linked and Non-linked Firms: Effects of Variety of Linkages in East Asia	Feb 2010
2010-02	Tomohiro MACHIKITA and Yasushi UEKI	Search-theoretic Approach to Securing New Suppliers: Impacts of Geographic Proximity for Importer and Non-importer	Feb 2010
2010-01	Tomohiro MACHIKITA	Spatial Architecture of the Production Networks in Southeast Asia:	Feb 2010

No.	Author(s)	Title	Year
	and Yasushi UEKI	Empirical Evidence from Firm-level Data	
2009-23	Dionisius NARJOKO	Foreign Presence Spillovers and Firms' Export Response: Evidence from the Indonesian Manufacturing	Nov 2009
2009-22	Kazunobu HAYAKAWA, Daisuke HIRATSUKA, Kohei SHIINO, and Seiya SUKEGAWA	Who Uses Free Trade Agreements?	Nov 2009
2009-21	Ayako OBASHI	Resiliency of Production Networks in Asia: Evidence from the Asian Crisis	Oct 2009
2009-20	Mitsuyo ANDO and Fukunari KIMURA	Fragmentation in East Asia: Further Evidence	Oct 2009
2009-19	Xunpeng SHI	The Prospects for Coal: Global Experience and Implications for Energy Policy	Sept 2009
2009-18	Sothea OUM	Income Distribution and Poverty in a CGE Framework: A Proposed Methodology	Jun 2009
2009-17	Erlinda M. MEDALLA and Jenny BALBOA	ASEAN Rules of Origin: Lessons and Recommendations for the Best Practice	Jun 2009
2009-16	Masami ISHIDA	Special Economic Zones and Economic Corridors	Jun 2009
2009-15	Toshihiro KUDO	Border Area Development in the GMS: Turning the Periphery into the Center of Growth	May 2009
2009-14	Claire HOLLWEG and Marn-Heong WONG	Measuring Regulatory Restrictions in Logistics Services	Apr 2009
2009-13	Loreli C. De DIOS	Business View on Trade Facilitation	Apr 2009
2009-12	Patricia SOURDIN and Richard POMFRET	Monitoring Trade Costs in Southeast Asia	Apr 2009
2009-11	Philippa DEE and Huong DINH	Barriers to Trade in Health and Financial Services in ASEAN	Apr 2009
2009-10	Sayuri SHIRAI	The Impact of the US Subprime Mortgage Crisis on the World and East Asia: Through Analyses of Cross-border Capital Movements	Apr 2009

No.	Author(s)	Title	Year
2009-09	Mitsuyo ANDO and Akie IRIYAMA	International Production Networks and Export/Import Responsiveness to Exchange Rates: The Case of Japanese Manufacturing Firms	Mar 2009
2009-08	Archanun KOHPAIBOON	Vertical and Horizontal FDI Technology Spillovers: Evidence from Thai Manufacturing	Mar 2009
2009-07	Kazunobu HAYAKAWA, Fukunari KIMURA, and Toshiyuki MATSUURA	Gains from Fragmentation at the Firm Level: Evidence from Japanese Multinationals in East Asia	Mar 2009
2009-06	Dionisius A. NARJOKO	Plant Entry in a More Liberalised Industrialisation Process: An Experience of Indonesian Manufacturing during the 1990s	Mar 2009
2009-05	Kazunobu HAYAKAWA, Fukunari KIMURA, and Tomohiro MACHIKITA	Firm-level Analysis of Globalization: A Survey	Mar 2009
2009-04	Chin Hee HAHN and Chang-Gyun PARK	Learning-by-exporting in Korean Manufacturing: A Plant-level Analysis	Mar 2009
2009-03	Ayako OBASHI	Stability of Production Networks in East Asia: Duration and Survival of Trade	Mar 2009
2009-02	Fukunari KIMURA	The Spatial Structure of Production/Distribution Networks and Its Implication for Technology Transfers and Spillovers	Mar 2009
2009-01	Fukunari KIMURA and Ayako OBASHI	International Production Networks: Comparison between China and ASEAN	Jan 2009
2008-03	Kazunobu HAYAKAWA and Fukunari KIMURA	The Effect of Exchange Rate Volatility on International Trade in East Asia	Dec 2008
2008-02	Satoru KUMAGAI, Toshitaka GOKAN, Ikumo ISONO, and Souknilanh KEOLA	Predicting Long-Term Effects of Infrastructure Development Projects in Continental South East Asia: IDE Geographical Simulation Model	Dec 2008
2008-01	Kazunobu HAYAKAWA, Fukunari KIMURA, and Tomohiro MACHIKITA	Firm-level Analysis of Globalization: A Survey	Dec 2008