CHAPTER 7

Analysis of Priority Integration Sectors

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CHAPTER 7

ANALYSIS OF PRIORITY INTEGRATION SECTORS

Reaffirming ASEAN's commitment to fast-track integration towards the ASEAN Economic Community (AEC), ASEAN Leaders in 2004 agreed to accelerate the integration of 11 priority sectors under the Framework Agreement for the Integration of Priority Sectors and 11 ASEAN Sectoral Integration Protocols. One additional sector (logistics services) was added as the 12th Priority Integration Sector (PIS) in 2006. It was envisaged that sector-level integration and AEC building would nurture and help in the proliferation of regional linkages forward and backward, facilitating the transformation of ASEAN into a single market and production base, as well as sustaining the region as a dynamic and competitive player in global value chains and production networks. These selected sectors accounted for more than 50% of intra-ASEAN trade in 2003 and contributed US$48.4 billion and US$43.4 billion of intra-ASEAN exports and imports, respectively.

In this chapter, we study nine key sectors – (1) agriculture, (2) processed agriculture, (3) electronics, (4) automotive, (5) textiles & apparels, (6) fisheries, (7) healthcare, (8) rubber-based products, and (9) wood-based products, where agriculture (Chapters 1–14 of the HS Code) and processed agriculture (Chapters 15–24) are the modified sectors from the original agro-based products sector of the Framework Agreement for the Integration of Priority Sectors. The number of AHTN 2012 and 2017 tariff lines for each sector is shown in **TABLE 7-1**. In terms of the number of tariff lines, electronics, textiles and apparel, agriculture, and automotive are the largest sectors comprising 1,000 tariff lines each in 2018. Altogether, the PIS sectors comprise just over half of the tariff lines. Note that some product lines are classified under multiple PIS sectors. Different sectors had different degrees of protection before the liberalisation period, which means that each sector is going to evolve differently due to the tariff provisions in ATIGA. Thus, is it important to analyse the sectors separately.

Table 7-1. Number of tariff lines categorised into PIS Sector

PIS Sector	Number of tariff lines in AHTN 2012 (N = 9,558)	Number of tariff lines in AHTN 2017 (N = 10,813)
(1) Agriculture	995	1,080
(2) Processed agriculture	599	645
(3) Electronics	1,129	1,165
(4) Automotive	728	1,194
(5) Textiles & apparel	1,081	1,177
(6) Fisheries	380	437
(7) Health-related	366	416
(8) Rubber-based	254	270
(9) Wood-based	126	166

Source: Authors' calculation.

A. Trade patterns

The importance of PIS sectors in terms of trade volumes and intra-ASEAN share varies quite a lot. **TABLE 7-2** shows the value of ASEAN imports by PIS sector in 2018 along with the share of all AMS imports coming from within ASEAN. Overall, PIS sectors still account for half of global imports of ASEAN and 65% of ASEAN exports. Electronics is by far the most important amongst the PIS sectors, constituting just under 30% of imports and over 35% of exports. In fact, the import value of electronics is larger than for all other PIS sectors combined, so what happens in this sector greatly influences the overall characteristics of ASEAN trade. It is therefore not surprising that this sector's ASEAN share was very close to the overall average ASEAN share of 21% in 2018.

Automotive is the second most important trade sector, with total imports of US$71 billion and exports of US$79 billion, although its total size is only one-sixth of the electronics sector. The automotive production network is very strong is ASEAN, and this is indicated by a larger-than-average ASEAN share in imports and exports of more than 30% each. The next most important PIS sector is processed agriculture, with US$136 billion in total trade volume in 2018. The importance of this sector also lies in the fact that AMS have a strong comparative advantage in it. This is evident from the fact that of the total volume of imports of this sector in ASEAN, almost 38% comes from within ASEAN. At the same time, intra-ASEAN exports constitute only 25% of total exports, meaning that AMS are not only exporting the products in this sector within ASEAN, but across the world. The shares of automotive and processed agriculture in total intra-ASEAN trade are less than 7% each.

The textiles & apparel PIS sector is also significant for ASEAN, with US$52 billion in imports and US$76 billion in exports. This is also one of the fastest growing sectors in ASEAN, particularly in Cambodia, Lao PDR, Myanmar, and Viet Nam. However, this sector has one of the smallest ASEAN shares of imports and exports, making it the most globally oriented sector in ASEAN. Raw materials for this sector are imported mostly from China, and the output sold in the US and European markets.

The other PIS sectors are quite small in terms of volume relative to total ASEAN trade, but individually quite important for ASEAN. The agriculture PIS sector is the largest apart from the ones previously discussed, with import and export volumes of less than 4% of the ASEAN total. This sector also has average values for the ASEAN share of imports and exports. Fisheries, rubber-based, and wood-based PIS sectors have shares higher than the average ASEAN share in imports and lower than the average ASEAN share in exports. This means that these sectors include products with comparative advantage for AMS producers, and the output is sold globally. These sectors also are likely to involve more small and medium-sized firms. To the extent that ATIGA tariff reductions in these sectors create opportunities for production sharing, it creates opportunities for ASEAN growth. Finally, the non-PIS sector is by far the largest sector and quite heterogenous. This also seems to be the most regionally traded, with the ASEAN share of exports at 32%, which is higher than that of any PIS sector, and also higher than the average ASEAN share in imports. A closer examination of goods not included in the current list of PIS sectors and updating the list to include some promising tariff lines currently excluded would help ASEAN integration. Given that the PIS sectors were designated as such over 15 years also, the list should be updated to reflect current trends in global and ASEAN trade.

Table 7-2. ASEAN share by PIS sector category in 2018

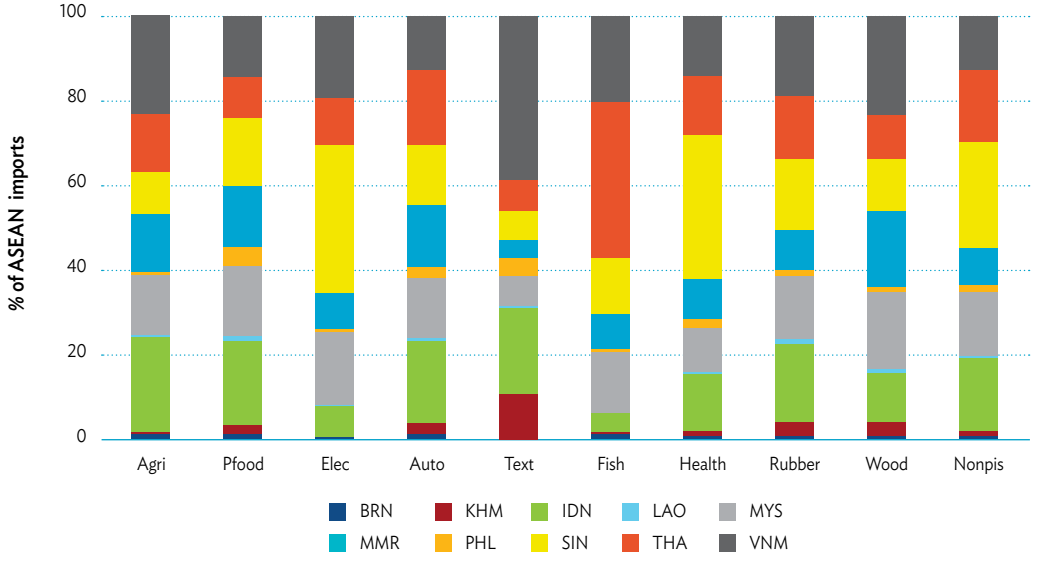
PIS Sector	Total imports by AMS (US$billion)	ASEAN Share in AMS imports (%)	Total exports by AMS (US$Billion)	ASEAN Share of AMS exports (%)
(1) Agriculture	52.98	19.20	54.10	19.34
(2) Processed agriculture	48.14	37.55	88.06	24.77
(3) Electronics	412.16	20.96	509.64	20.97
(4) Automotive	71.16	31.64	78.69	30.05
(5) Textiles & apparel	52.46	11.03	76.07	8.24
(6) Fisheries	7.82	24.77	21.60	11.18
(7) Health-related	38.97	12.61	41.64	16.60
(8) Rubber-based	20.18	27.18	56.68	10.03
(9) Wood-based	5.44	32.85	23.14	7.00
(10) Non PIS	694.28	22.04	508.22	32.30
Total ASEAN	**1,388.39**	**21.91**	**1,435.69**	**23.99**

Note: Tariff lines not classified as any of the PIS sectors is included in Non PIS.

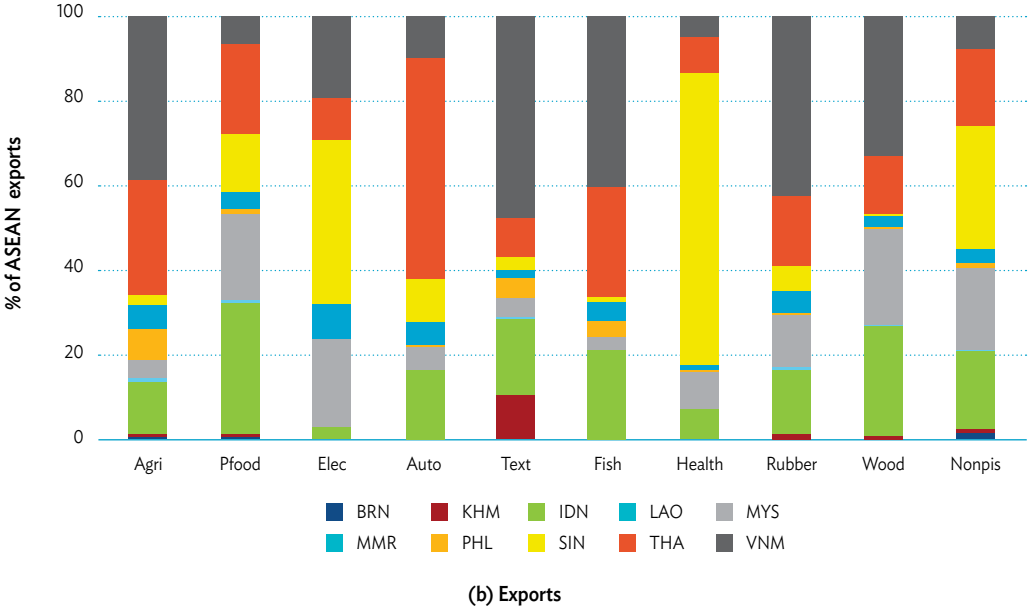
Source: Authors' calculation from ASEANStats data.

Each AMS has a different pattern of intra-ASEAN imports and exports in each PIS sector, as depicted in **FIGURE 7-1**. In agriculture, Indonesia and Viet Nam have large import shares of 20% each, while Viet Nam has the largest export share at 40%. Intra-ASEAN imports of processed agriculture is evenly distributed between Indonesia, Malaysia, the Philippines, Singapore, and Viet Nam, while the export share of Indonesia is the highest at over 30%. Singapore has a larger than average share in electronics imports and exports. ASEAN's automotive imports are distributed fairly evenly across AMS (in proportion to their market size), while Thailand has a share of almost 50% of intra-ASEAN exports. In the textiles and garments PIS, Viet Nam's share is quite large in both imports and exports, while Cambodia's share is also larger than for other products. Thailand has a larger share in fisheries imports, while Viet Nam's share in exports is the largest. In health related PIS, Singapore has the largest share in both exports and imports. For both rubber-based and wood-based PIS sectors, imports are also evenly distributed, while Viet Nam's export share is large. Indonesia's share in wood-based exports is also higher than average.

Figure 7-1. Share of AMS in total ASEAN trade by PIS sector, 2018



(a) Imports



(b) Exports

Source: Authors' calculation from ASEANStats data.

To examine the specialisation of each AMS in different PIS sectors, we compute the relative comparative advantage (RCA) of each AMS for each PIS sector. The RCA expresses the share of a particular product in AMS exports relative to the share of the product in total ASEAN imports. For example, if a product constitutes 10% of a AMS's exports, while its share in ASEAN exports is 5%, the RCA is 2. A value greater than 1 means that the product's importance in the AMS's exports is greater than that for ASEAN overall. While normally the comparison is made against world's exports, in the case of PIS we focus on total ASEAN exports as the definition is relevant only for ASEAN. The calculated RCA is shown in **TABLE 7-3**. In agriculture PIS, all AMS except Brunei, Malaysia, and Singapore have values greater than one, meaning that seven AMS are relatively more intensively exporting agriculture PIS products. The highest RCA is found for Malaysia. In processed agriculture, Indonesia has the highest RCA, followed by Lao PDR, Malaysia, and Thailand. In electronics, a high RCA is found for Malaysia, the Philippines, Singapore, and Viet Nam. The RCA for automotive is above 1 in Indonesia, the Philippines, and Thailand, the latter of which has strong specialisation in this sector with an RCA of over 3. In textiles and apparel PIS, Cambodia's RCA is very high at 11, indicating the strong specialisation of the country in this sector. Myanmar and Viet Nam are also quite high, with Indonesia being the other country with a RCA above 1 in this sector. Myanmar and Viet Nam have a RCA above 2 in the fisheries PIS. In the health PIS, Singapore is the only country with a RCA above 1. Five AMS have a RCA above 1 in rubber-based products, with the highest value for Viet Nam at 2.5. Finally, Indonesia and Viet Nam have RCAs above 2 in wood-based products. The specialisation of AMS in various PIS sectors means that the growth trajectory of each sector is influenced by development in the respective member states.

Intra-ASEAN linkages vary a lot across sectors, depending on comparative advantage of the producing AMS and market conditions in consumption AMS. Thus, different strategies may be needed to further integrate these sectors within ASEAN.

Table 7-3. Revealed comparative advantage of AMS in PIS sector

	Agri	P. agri	Elec	Auto	Text	Fish	Health	Rubber	Wood
Brunei	0.04	0.01	0.03	0.02	0.03	0.08	0.02	0.02	0.02
Cambodia	1.06	0.24	0.12	0.29	11.90	0.00	0.06	1.58	0.97
Indonesia	1.02	2.52	0.17	1.21	1.39	1.65	0.50	1.21	2.01
Lao PDR	2.86	1.31	0.36	0.12	0.70	0.00	0.07	0.44	0.77
Malaysia	0.24	1.21	1.22	0.35	0.25	0.19	0.54	0.72	1.31
Myanmar	6.02	0.86	0.04	0.03	4.78	2.94	0.20	0.61	0.76
Philippines	1.07	0.79	1.79	1.14	0.33	0.89	0.22	1.07	0.54
Singapore	0.08	0.48	1.25	0.35	0.10	0.06	2.40	0.18	0.02
Thailand	1.63	1.29	0.74	3.12	0.55	1.58	0.57	1.06	0.75
Viet Nam	2.31	0.38	1.15	0.62	2.84	2.36	0.27	2.47	2.02

Note: Data is for 2018. Agri = Agriculture, P. agri = Process Agriculture, Elec = Electronic, Auto = Automotive, Text = Textiles & Apparels, Fish = Fisheries, Health = Healthcare, Rubber = Rubber-based Products, Wood = Wood-based Products.

Source: Authors' calculation based on ASEANStats data.

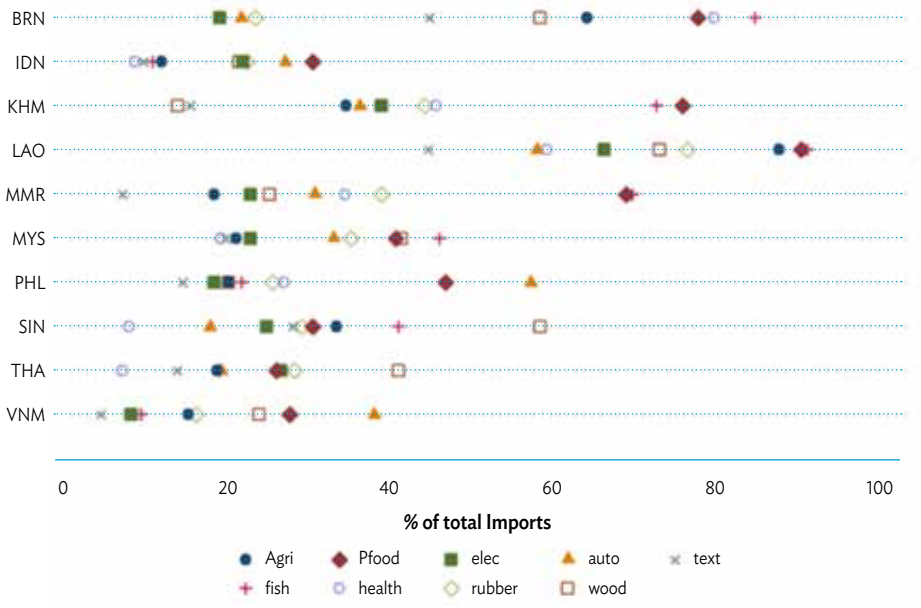
Formation of intra-ASEAN production networks requires that AMS that are competitive in certain sectors also source inputs from other AMS. In many cases, domestic endowment of resources usually determines comparative advantage, but with a single production base, the ideal case would be ASEAN's overall resources being combined with the resources and know-how of individual AMS to produce globally competitive goods. Examining the status of such linkages for each PIS sector would require us to understand the input–output relationship between each product and studying the imports of relevant inputs from other AMS. Unfortunately, we do not have detailed knowledge of the inputs required to produce a particular PIS product. As a first step, we just examine whether there is large intra-PIS sector sourcing from ASEAN in sectors where certain AMS have high revealed comparative advantage. For each sector, we pick the AMS with the top RCA and check their ASEAN share of imports in that sector. The analysis is more relevant for processed agriculture, electronics, automotive, and textiles as these require a greater degree of processing and have the potential to form supply chain linkages and are also the most important sectors in terms of trade volume.

FIGURE 7-2 depicts each ASEAN share in each AMS' imports of various PIS sector products for 2018. The figure shows that AMS vary in terms of their sourcing of imports from within ASEAN. The highest ASEAN share is found in imports of processed agriculture to Myanmar at about 90%, as well as imports of agriculture and fisheries-based products in

Lao PDR. In the top ASEAN imported sector – electronics – the ASEAN share is highest in Lao PDR at 66% and lowest in Viet Nam at 8%. Likewise, the ASEAN share is high in automotive imports to Lao PDR and the Philippines at above 57%, and lowest in Singapore and Thailand at below 20%. For textile-related products, the ASEAN share is highest in Brunei and Lao PDR at above 44%, and lowest in Viet Nam at below 5%

We make a rough comparison of AMS' RCA in a PIS sector and their ASEAN share in their imports. In processed agriculture, Indonesia's RCA is highest amongst ASEAN countries but its sourcing of agriculture products from ASEAN is very low. This is likely because the country makes greater use of domestic inputs and only imports consumption goods within this sector. The Philippines has the highest RCA in electronics, but its imports from within ASEAN in this category is just 20%. Thailand's RCA is the highest in automotive but its ASEAN share of automotive is also small at 20%. Indonesia, the Philippines, and Viet Nam have the highest ASEAN share in automotive, presumably imported from Thailand. In textiles, Cambodia, Myanmar, and Viet Nam have the highest RCA but for each their ASEAN share of imports is quite small. This is related to the overall small ASEAN share of imports in this sector and is a result of sourcing of inputs mostly from China. It is a reflection of the current state of technology in the region but does not mean that there not a potential to form intra-ASEAN supply chain linkages in these sectors. But it does require greater capacity to produce important inputs with the region, by attracting relevant foreign direct investment and developing domestic human capital.

Figure 7-2. ASEAN share in AMS imports by PIS sector, 2018



Source: Authors' calculation. Malaysia is excluded to ensure consistency with previous analysis.

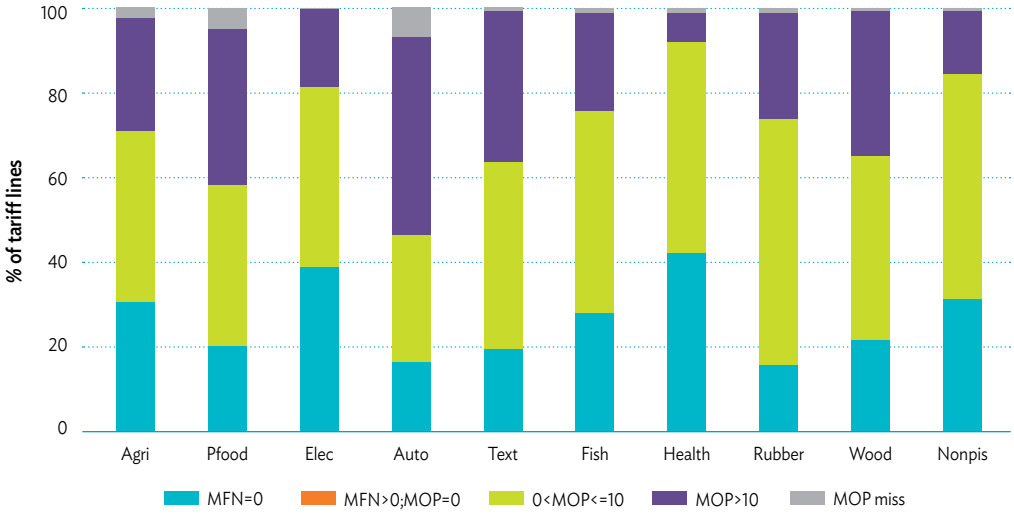
B. Tariff structure

ATIGA tariffs of PIS products, except those in the sensitive (Schedule D), highly sensitive (Schedule E) and general exception lists (Schedule H), in ASEAN-6 were eliminated in 2007. Sensitive (Schedule D) and highly sensitive (Schedule E) products are under the Agriculture and Processed Agriculture Sectors. The changes of the MOP are also due to the unilateral liberalisation of MFN tariffs by AMS. As before, the margin of preference plays a big role in dictating the trends in ASEAN trade in PIS sectors.

FIGURE 7-3 shows the distribution of tariff lines under each PIS sector by MOP structure in 2018, aggregating over all AMS. The PIS sectors differ in their degree of external liberalisation. About 40% of tariff lines under the electronics and health PIS sectors have a MOP of zero, meaning that there is no tariff advantage of using ATIGA preference. Thus, while electronics is the largest sector in terms of trade within ASEAN, it is also the sector with a small percentage of tariff lines that has the highest MOP. If fact, if we were to only examine the tariff structure of the largest AMS economies except Singapore (Indonesia, Malaysia, Philippines, Thailand, and Viet Nam), the percentage of tariff lines with MOP zero is almost 50%. This provides an additional perspective on why overall ATIGA utilisation in ASEAN is low.

This percentage of tariff lines with MFN zero is slightly lower in other sectors but not lower than 20% in any of them. At the other end, tariff lines classified under automotive are most likely to offer high MOP, with about 50% of the tariff lines in automotive showing a MOP above 10%. Processed agriculture, textiles, and wood products also have a high percentage of tariff lines that have MOP above 10%. The high MOP in the automotive and processed agriculture sectors is due to the significantly high MFN tariffs in three sectors, i.e. the automotive, processed agriculture, and agriculture sectors. Many tariff lines in these three sectors have MFN tariffs above 30%. In the agriculture sector, since there are still sensitive (Schedule D) and highly sensitive (Schedule E – rice, chapter 10) products in this sector, the MOP is not as high as for the other two sectors. In the textile and wood-based sectors, the high MOP are also due to the fact that most tariff lines in these sectors have relatively high MFN tariffs, i.e. between 10% and 20%.

Figure 7-3. Distribution of tariff lines by MOP structure by PIS sector in ASEAN



Source: Authors' calculation from tariff data. Singapore is not included in the calculation.

Below we discuss each PIS sector in turn and examine the tariff structure and FTA utilisation rates. The calculation of FTA utilisation is based on the liberal ASEAN Stat method described in Chapter 6. This choice is made due to the need to convert 2012 8-digit trade data to the AHTN 2007 classification scheme to be able to merge the information on Form D trade for some countries. Because the number of product lines is smaller, any errors in the data are likely to create a greater impact on the accuracy of estimation.

C. Agriculture

This sector comprises mostly of tariff lines in HS Chapters 1 to 14. **TABLE 7-4** reports average MFN and ATIGA tariffs in the agriculture sector and the average margin of preference. In agriculture, MFN tariffs remain close to or above 10% in the Philippines, Thailand, Cambodia, Lao PDR, and Viet Nam, while the ATIGA tariffs have declined. This provides opportunities for expansion of intra-ASEAN trade to these countries. The lowest tariffs are found in Brunei and Malaysia. As a result, MOP remains high in these countries (close to or above 10%). Amongst product lines where MFN is greater than ATIGA, the highest MOP is found in Thailand at 24%. Cambodia, Lao PDR, and Viet Nam have MOPs between 10% and 15%, and those of the rest of the AMS are below 10%.

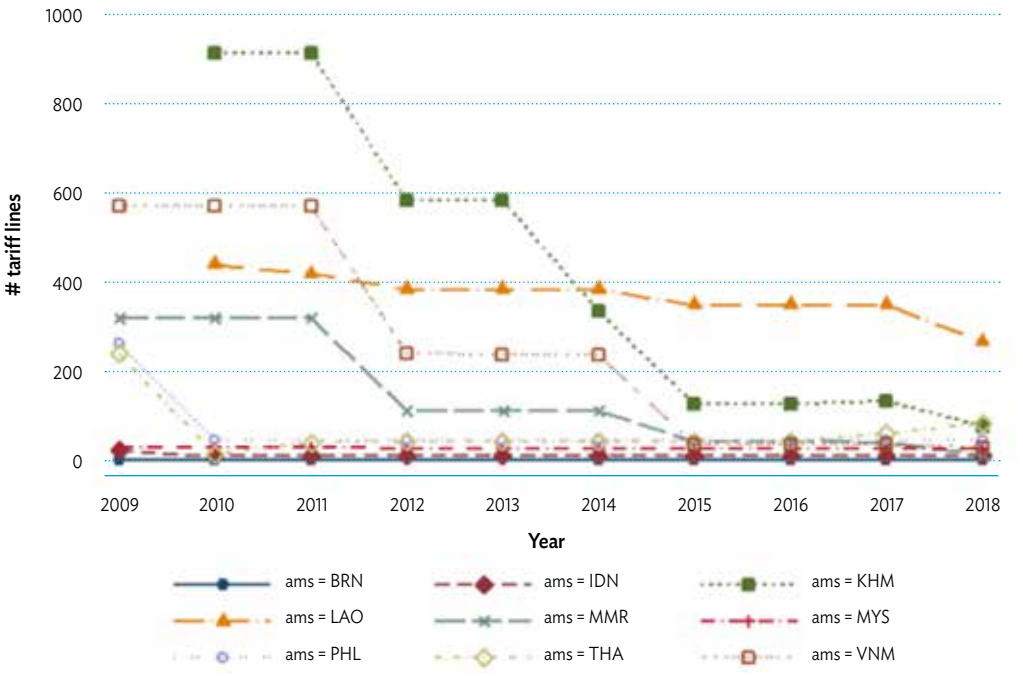
Table 7-4. Tariffs and margin of preference in PIS agriculture

	2010			2018		
	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA
Brunei D.	0.00	0.00	n.a.	0.00	0.00	n.a.
Indonesia	5.12	0.37	5.81	5.29	0.23	5.75
Malaysia	1.61	0.31	7.90	1.06	0.27	8.30
Philippines	9.12	0.68	9.01	9.11	0.48	9.41
Singapore		0.00			0.00	
Thailand	16.78	0.09	22.02	17.98	0.07	24.05
Cambodia	15.31	5.35	12.19	10.92	0.30	11.77
Lao PDR	19.29	4.08	15.92	17.96	1.21	16.95
Myanmar	7.52	1.12	8.99	7.57	0.05	9.13
Viet Nam	13.91	2.88	15.05	13.56	0.13	15.81

Note: Average MOP is calculated by taking a difference between MFN and ATIGA rates for tariff lines where MFN is greater than ATIGA and taking an average across these product lines, whereas all tariff lines are used to calculate average MFN and average ATIGA. Hence, average MOP does not equal (average MFN – average ATIGA).

Source: Authors' calculation from tariff information.

Figure 7-4. Number of non-zero ATIGA tariff lines in agriculture by year



Source: Authors' calculation from tariff information.

FIGURE 7-4 examines how the ATIGA tariffs were reduced in this sector. Most of the ATIGA tariffs had been eliminated in this sector by 2015 by all AMS except Lao PDR, which still had over 200 product lines at 5% ATIGA rate. Due to the high number of non-zero ATIGA tariffs, Lao PDR's margin of preference was 8 percentage points smaller than Thailand's even though both countries have similar average MFN rates. Cambodia, which had the highest number of non-zero tariff lines in 2011, brought them down quickly and had eliminated many of them by 2015.

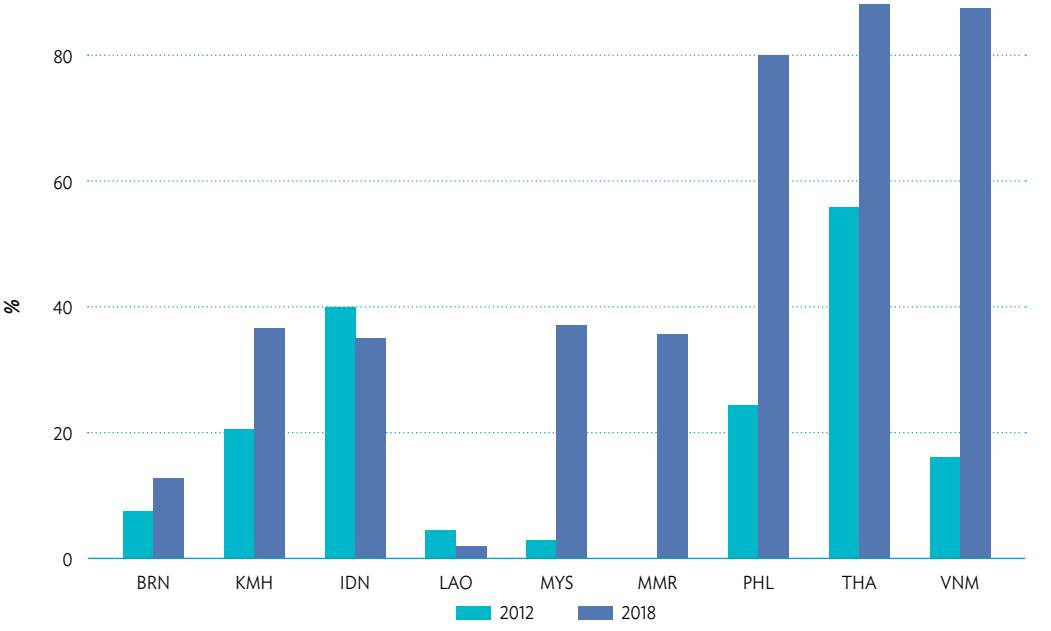
FIGURE 7-5 presents the FTA utilisation rates by AMS in this sector. FTA utilisation rates in agriculture increased dramatically between 2012 and 2018 in the Philippines, Thailand, and Viet Nam, and are amongst the highest of all AMS. Over 80% of imports in Thailand and Viet Nam products where the MOP is greater than zero were imported under ATIGA, which is an increase from around 20% in Viet Nam and the Philippines. FTA utilisation in Thai imports of agriculture products was already high at almost 60% in 2012. As expected, these are also the countries with the highest MOP afforded in this sector. In fact, the ASEAN share of the Philippines, Thailand, and Viet Nam rose somewhat between 2012 and 2018, which could partly be due to ATIGA. These countries had ASEAN shares in agriculture imports of 18%, 14%, and 13%, respectively, in 2012, which had increased to 20%, 19%, and 16%, respectively. This trend is oppositite to the one seen in the overall ASEAN share.

Cambodia, Indonesia, Malaysia, and Myanmar have close to 40% utilisation rates, with increased utilisation observed in Cambodia, Malaysia, and Myanmar. The MOP of these countries was around 10%. Utilisation rates remained lowest in Lao PDR, which is surprising given its high MOP. It is possible that this is due to a high cost of compliance related to trade procedures or the existence of some other scheme for this product, since 77% of their imports come from Thailand and another 10% from Viet Nam.

The growth in the Philippines' FTA utilisation is worth exploring further, given that there has been no discernible change in its tariff structure since 2010. The Philippines imported most of this sector's products in 2018 from Thailand and Viet Nam, with an FTA utilisation rate of about 80%. Back in 2012, Viet Nam had a much larger share in the Philippines' imports in this sector, but with a utilisation rate of only 19%. The strongest growth in Form D trade is posted by imports from Thailand, growing over 900% over this period, compared to 'only' a 500% growth in total imports. Furthermore, the FTA utilisation rate of Thai imports to Philippines were 13% in agriculture PIS products with zero MOP, 63% with moderate MOP, and 88% with MOP above 10%. Thus, trade in agriculture PIS between the Philippines and Thailand has growth swiftly since ATIGA came into force. Note that as a result of ATIGA, the Philippines brought down ATIGA tariffs in over 200 product lines in 2010 (when expressed in AHTN 2012 classification). In terms of AHTN 2007,

the Philippines had only 72% of tariff lines at ATIGA zero. This reduction may have played some role in growing ATIGA Form D trade. Overall, although many factors may have contributed to changing the structure of intra-ASEAN trade in agriculture, ATIGA could have played a part.

Figure 7-5. FTA utilisation rate in agriculture



Note: Percentage is calculated with total intra-regional imports excluding tariff lines where MOP less than or equal to zero.

Source: Authors' calculation from tariff information.

D. Processed agriculture

Processed agriculture mostly includes products in HS chapters 15 to 24. This is a sector with very high MOPs in many AMS, as reported in **TABLE 7-5**. MFN tariffs remained above 17% for five AMS, but below 5% for three AMS. We note a sharp increase in MFN between 2010 and 2018 for Indonesia and Thailand. For Indonesia it was due to the MFN tariffs increase of products under chapter 16 (prepared foodstuffs) and some tariff lines under chapter 22 (alcoholic beverages). In case of alcoholic beverages, specific duties were applied in 2010, which were difficult to measure, but in 2018 high ad-valorem tariffs were applied (90%–150%). For Thailand, the increase in the average MFN tariffs were due to the MFN tariff increase of animal or vegetable fats (Chap 15), prepared or preserved fish or fish products (HS 1604), prepared or preserved vegetables, fruits and nuts (Chap 20), extracts, essences and concentrates of coffee (HS 2101), and unmanufactured tobacco (HS 2401). For Cambodia, Lao PDR, and Viet Nam, MOP has increased, as ATIGA tariffs

were reduced in 2012 for PIS products, and in 2015 for the rest. As a result, the MOPs in 2018 were close to or above 10% in all AMS except Brunei and Singapore, with four AMS having them at close to or above 20%.

Table 7-5. Tariffs and margin of preference in PIS processed agriculture

	2010			2018		
	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA
Brunei D.	0.05	0.00	5.00	0.00	0.00	n.a.
Indonesia	7.93	0.41	7.46	18.27	0.09	9.19
Malaysia	4.70	0.30	9.72	3.68	0.27	9.22
Philippines	9.84	0.35	9.77	0.04	10.16	10.16
Singapore		0.00			0.00	
Thailand	16.39	0.00	30.09	23.35	0.00	27.61
Cambodia	16.15	5.00	12.21	17.75	0.00	18.93
Lao PDR	18.75	3.52	15.82	18.90	0.10	19.12
Myanmar	11.80	1.72	11.75	11.65	0.00	11.72
Viet Nam	25.88	4.98	21.45	24.97	0.22	24.69

Note: Average MOP is calculated by taking the difference between MFN and ATIGA rates for tariff lines where MFN is greater than ATIGA and taking an average across these product lines, whereas all tariff lines are used to calculate average MFN and average ATIGA. Hence, average MOP does not equal (average MFN – average ATIGA).

Source: Authors' calculation from tariff information.

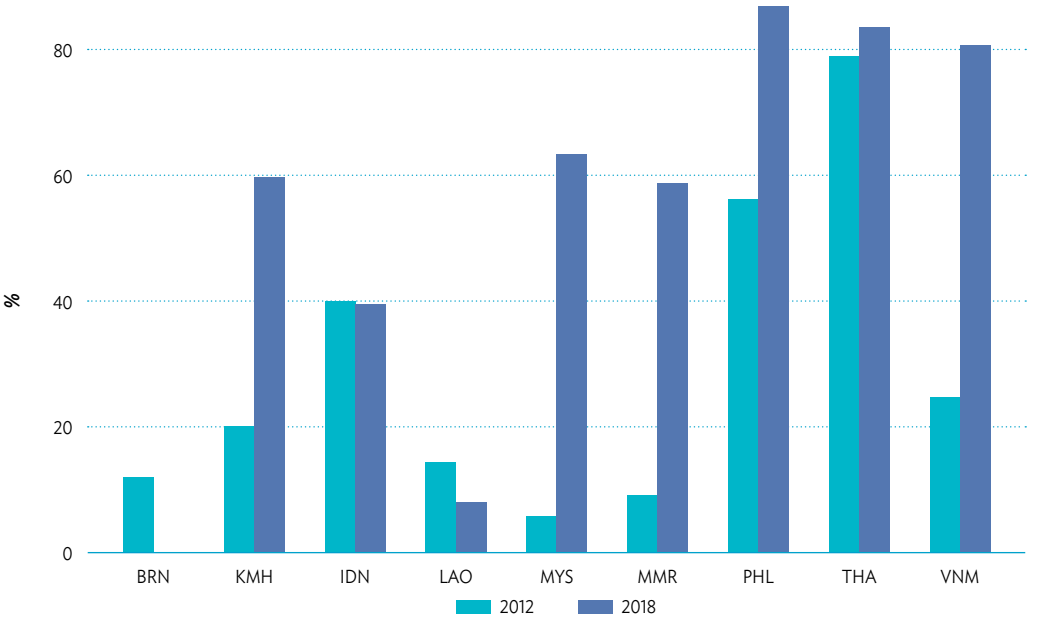
Figure 7-6. Number of non-zero ATIGA tariff lines in processed agriculture by year

Source: Authors' calculation from tariff information.

FIGURE 7-6 shows the ATIGA tariff reduction timeline, while FIGURE 7-7 shows the FTA utilisation rates in 2012 and 2018. In terms of ATIGA tariffs, almost all AMS had fewer than 200 tariff lines with non-zero rates by 2015, with further reductions in 2018. Especially, Cambodia, Lao PDR, and Viet Nam made rapid reductions between 2014 and 2015. As a result of high and rising MOP, FTA utilisation in processed agriculture was above 60% in 2018 in Cambodia, Malaysia, the Philippines, Thailand, and Viet Nam, with above 80% utilisation amongst the last three. While the Philippines and Thailand reported high utilisation as far back as 2012, for others this was a substantial increase. Lao PDR's low utilisation rate again stands out for being quite low despite the large MOP offered by its tariff structure. Again, the fact that 80% of imports to Lao PDR in this sector come from Thailand and the existence of the Thailand–Lao PDR FTA could be behind the low utilisation of ATIGA.

Malaysia's large increase in utilisation is noteworthy, despite little change in its MOP. Diving deeper into this, we note that Malaysia imports processed agricultural products mostly from Indonesia. In 2012, Indonesia accounted for 32% of Malaysia's global imports of processed food, mostly crude oil and cocoa. Between 2012 and 2018, there was a 10-fold increase Malaysia's Form D imports from Indonesia, while the total value of imports did not increase very much. This is the main reason behind Malaysia's overall high utilisation rates in processed food. However, because this trade is dominated by highly specialised products, it is not clear to what extent ATIGA helped stimulate new trade.

Figure 7-7. FTA Utilisation rate in processed agriculture



Note: Percentage is calculated with total intra-regional imports excluding tariff lines where MOP less than or equal to zero.

Source: Authors' calculation from tariff information.

E. Electronics

The 1,129 tariff lines classified under electronics (in AHTN 2012 version) came mostly from HS chapter 84 and 85 (75% of electronics PIS tariff lines belonged to these two chapters), and from chapter 90 (comprising 10% of the tariff lines in this PIS sector). **TABLE 7-5** shows this sector's tariff structure. The electronics sector has some of the lowest MFN tariffs in ASEAN – around or below 10%, except for Cambodia. Cambodia's products that have high MFN tariffs are mostly household electronic appliances. There was a sharp decline in MFN tariffs in Brunei on electrical equipment (chap 84), electrical machineries (chap 85) and, photographic equipment (chap 90).

ATIGA tariffs were completely eliminated by CLMV between 2010 and 2018. Although the average MFN tariffs in ASEAN are already below 10%, the average MOPs of Malaysia, Thailand, Cambodia, and Viet Nam are above 10%. Products that have high MOP in Malaysia include air conditioning machines, refrigerators and freezers, reception apparatus for television, and insulated wire, cable, and other insulated electric conductors. In **Thailand** these are air conditioning machines, refrigerators and freezers, electro-mechanical domestic appliances, and electro-thermic appliances of a kind used for domestic purposes. Cambodia has many more products with high MFN tariffs. In Viet Nam, fans, air conditioner, refrigerators, sound recorders, video recorders, and radio-broadcast receivers have high MOP.

Nonetheless, in the few remaining tariff lines where MOP is present, the average tariff rates are quite high, leading to above 10% MOPs in Cambodia, Malaysia, Thailand, and Viet Nam. Interestingly, Malaysia's MOP is higher than Cambodia's, even though the latter has higher average MFN rates. This is because only a few product lines in Malaysia have a MOP, and those have very high MFN tariffs. On the other hand, Cambodia has many tariff lines with a gap between MFN and ATIGA tariffs, but they are small on average. As depicted in **FIGURE 7-8**, the electronics sector was fully liberalised quickly under ATIGA, with the number of tariff lines with non-zero tariff having been

Table 7-6. Tariffs and margin of preference in PIS electronics

	2010			2018		
	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA
Brunei D.	10.47	0.00	14.15	0.11	0.00	5.00
Indonesia	4.67	0.00	7.71	5.67	0.00	7.63
Malaysia	3.77	0.00	14.91	4.34	0.00	16.87
Philippines	3.41	0.00	4.63	3.31	0.00	5.69
Singapore		0.00			0.00	
Thailand	5.97	0.00	8.19	5.47	0.00	10.76
Cambodia	16.30	4.15	12.54	14.27	0.00	15.55
Lao PDR	7.74	0.20	7.54	7.88	0.00	7.88
Myanmar	4.18	1.00	4.46	4.06	0.00	4.11
Viet Nam	6.20	1.50	11.72	6.71	0.00	14.13

Note: Average MOP is calculated by taking a difference between MFN and ATIGA rates for tariff lines where MFN is greater than ATIGA and taking an average across these product lines, whereas all tariff lines are used to calculate average MFN and average ATIGA. Hence, average MOP does not equal (average MFN – average ATIGA).

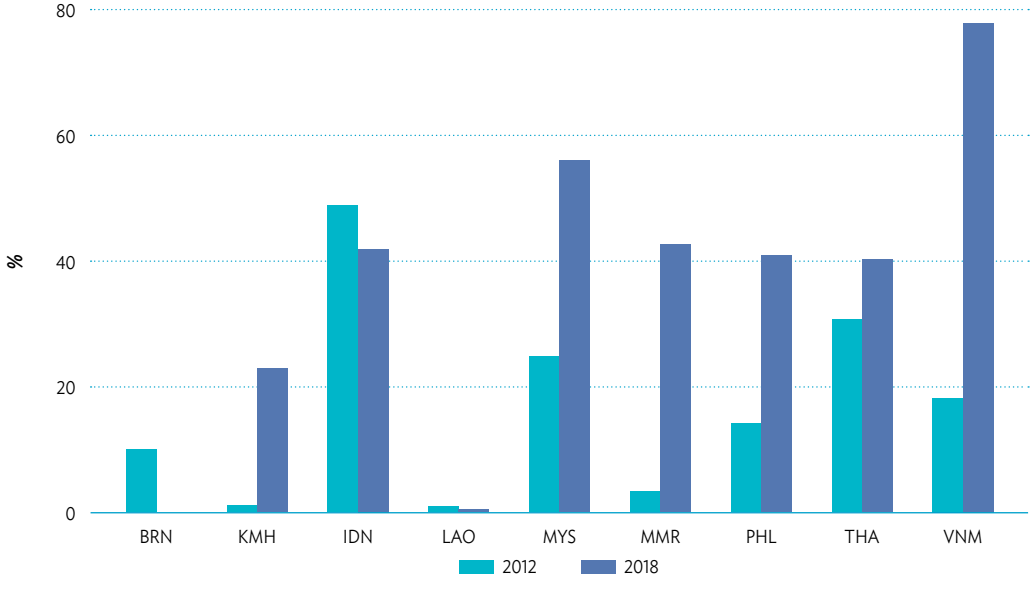
Source: Authors' calculation from tariff information.

Figure 7-8. Number of non-zero ATIGA tariff lines in electronics by year

Source: Authors' calculation from tariff information.

In electronics, FTA utilisation remains around or below 40% for the majority of AMS. Viet Nam reported the highest utilisation rates, reaching almost 80%, which is consistent with its high MOP in this sector. Malaysia's utilisation rate is above 50%, also consistent with its high MOP. Cambodia, Malaysia, Myanmar, the Philippines, Thailand, and Viet Nam have registered significant increases in utilisation rates over time. We observe a slight decline in Indonesia's utilisation rates. There is also some variation in utilisation rates by source of the imports. Electronics coming from Cambodia and Indonesia had the highest utilisation rates at close to 60% in 2018, while imports from Thailand had a utilisation rate of 43%. Indonesia and Thailand in particular have a higher share of exports under Form D (12% and 51%, respectively) compared with their share of all exports (4% and 22%, respectively). In other words, Thai Form D exports of electronics account for over half of all electronics trade under Form D in ASEAN. On the other hand, while Singapore's electronics export account for as much as 35% of total exports by AMS to other AMS, it accounts for less than 2% of Form D exports. This is likely because the two countries specialise in exporting different types of electronics components to other AMS. Thirty-two percent of Singapore's exports to other AMS comprises of HS Sub-heading 8542, where Form D utilisation is zero percent, while for Thailand this product only comprises 16% of its exports. Other major exports of Indonesia in this PIS sector enjoy high FTA utilisation rates. This is because the HS Sub-heading 8542 comprises products that have zero MFN tariff.

Figure 7-9. FTA Utilisation in electronics sector



Note: Percentage is calculated with total intra-regional imports excluding tariff lines where MOP less than or equal to zero.

Source: Authors' calculation from tariff information.

F. Automotive

Over 95% of the 728 tariff lines in this sector came from HS chapters 84, 85, and 87, while a few products from HS chapters 40 and 73 are also included. The tariff rates and MOP of this sector is presented in **TABLE 7-7**. Automotive is the sector with some of the highest MOP due to ATIGA tariff elimination and very high MFN tariffs. It is also the sector with the highest number of tariff lines with high MFN tariffs and zero ATIGA tariffs. In automotive, while the ATIGA tariffs have already been eliminated in all countries, except for Viet Nam, the MFN tariffs remain very high – at above 15% in most countries. MFN tariffs of automotive products increased from 2010 to 2018 for all countries except Brunei Darussalam and the MOPs are above or close to 10% for all AMS except Brunei, which has eliminated all of its MFN tariffs, so the MOP is zero. Automotive products do not only include vehicles but also its components such as tyres, tubes (chap 40), chains, and springs (Chap 73). However, car windshields (7007.11 – glass suitable for vehicles) are not included in the automotive sector. In the automotive sector, the very high MFN tariffs are mostly on the complete built-up (CBU) vehicles under headings 8702–8705. This high MOP could provide a continuing advantage for ASEAN as an attractive investment destination for automotive manufacturers to build factories in ASEAN countries.

Table 7-7. Tariffs and margin of preference in PIS automotive

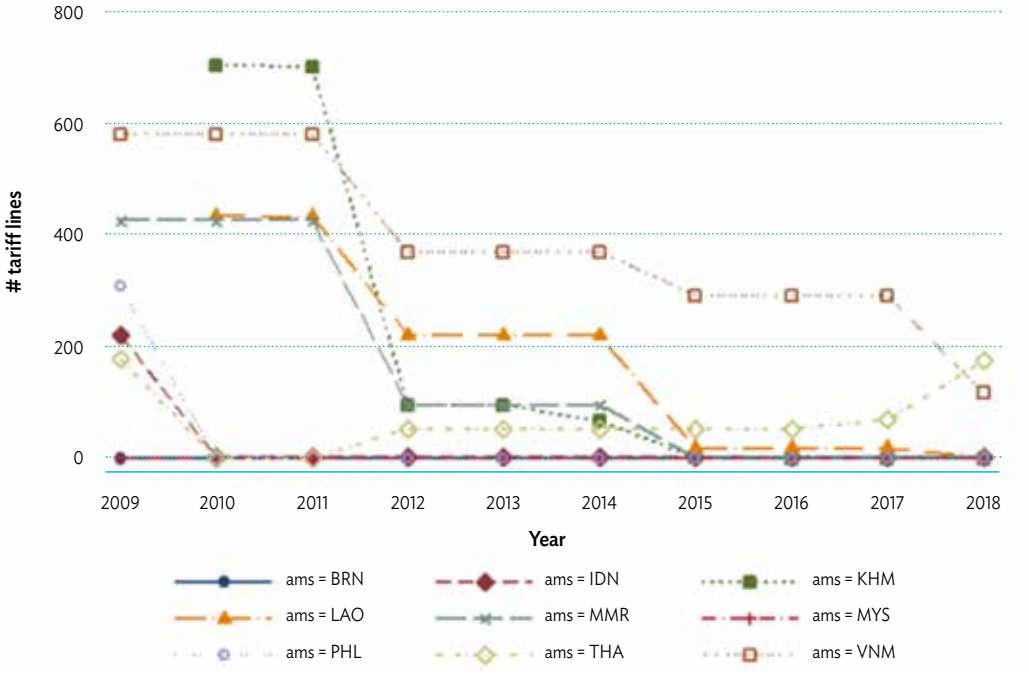
	2010			2018		
	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA
Brunei D.	8.95	0.00	18.78	0.00	0.00	n.a.
Indonesia	15.66	0.00	19.00	23.70	0.00	25.20
Malaysia	15.68	0.00	20.09	18.51	0.00	22.40
Philippines	12.28	0.00	12.28	18.67	0.00	19.12
Singapore		0.00			0.00	
Thailand	28.61	0.00	29.11	35.60	0.00	37.31
Cambodia	17.54	4.81	13.60	20.29	0.00	22.73
Lao PDR	17.41	5.68	12.03	24.78	0.00	24.79
Myanmar	7.51	1.83	9.78	11.70	0.00	11.71
Viet Nam	28.22	12.13	20.37	31.83	0.00	34.60

Note: Average MOP is calculated by taking a difference between MFN and ATIGA rates for tariff lines where MFN is greater than ATIGA and taking an average across these product lines, whereas all tariff lines are used to calculate average MFN and average ATIGA. Hence, average MOP does not equal (average MFN – average ATIGA).

Source: Authors' calculation from tariff information.

As shown in **FIGURE 7-10**, liberalisation of the automotive sector occurred in 2012 in Cambodia and Myanmar. Lao PDR and Viet Nam reduced ATIGA tariffs to zero in 2012 in some of their product lines, but over 200 over of them remained without zero rates at that time. In 2015, Lao PDR reduced its tariff rates on more products, while Viet Nam's reductions came mostly in 2018. In 2017, 437 tariff lines had non-zero ATIGA tariffs in Viet Nam, 110 tariffs were at 15% ATIGA tariffs, and another 77 were set at 30%. ATIGA rates were unspecified in the remaining tariff lines of this sector. By 2018, an equivalent of 615 tariff lines had ATIGA zero tariffs (after tranposition of 2018 rates from AHTN 2017 to AHTN 2012 for consistency) while the rest were classifed under CKD or GEL.[12]

Figure 7-10. Number of non-zero ATIGA tariff lines in automotive by year

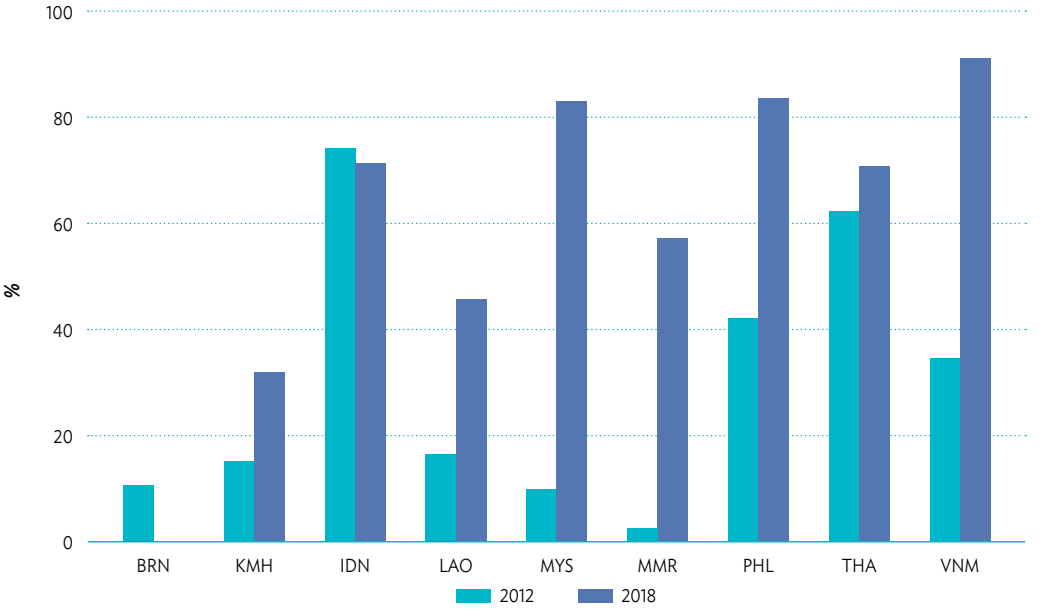


Source: Authors' calculation from tariff information.

As a result of the high MOP, FTA utilisation rates are quite high in this sector for all AMS except Brunei. Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam, have utilisation rates above 60%, which has meant a sharp incrase in Malaysia and Viet Nam since 2012. Myanmar's utilisation rate is also approaching 60%, after being almost non-existent in 2012. Cambodia and Lao PDR are also showing increased FTA utilisation rates in this sector.

[12] In the AHTN 2017 classification, 949 out of 1,194 of Viet Nam's automotive tariff lines had zero ATIGA tariff.

Figure 7-11. FTA Utilisation in automotive



Note: Percentage is calculated with total intra-regional imports excluding tariff lines where MOP less than or equal to zero.

Source: Authors' calculation from tariff information.

G. Textiles and apparel

The tariff lines of the PIS textiles & apparel sector mostly come from HS Chapters 50–63, with significant numbers coming from Chapters 52, 61, and 62. This sector is one of the key growth areas for ASEAN, espcially for Cambodia, Lao PDR, Myanmar, and Viet Nam. The exports of these countries grew very rapidly between 2012 and 2018. Especially for Cambodia, export growth to ASEAN has increased much faster than export growth everywhere. As summarised in **TABLE 7-8**, MOPs have stayed high in the textiles and apparels sector and most of them had increased by 2018 compared with 2010. In the textiles and apparel sector, MFN tariffs for Indonesia, Thailand, and Viet Nam have increased between 2010 and 2018, and now are well above 10% or close to 15%. For Indonesia, the increase of average MFN tariffs was due not only to the actual tariff increase but also a result of a transposition process where some of the tariff lines with high tariff in 2018 (in AHTN 8 digit) could not be measured in 2010 because they were a combination of different tariffs at 10-digit level. For Thailand, the increased tariffs were on carpets (HS 5702) and for Viet Nam the increased tariffs were merely due to the result of the transposition exercise to the updated AHTN version. Malaysia's MFN tariffs have declined significantly due to the MFN tariff elimination on products under Chapters 61–63. MFN tariffs of more than 53% of total tariff lines in this sector for Malaysia had already been at 0% in 2018, so average MFN tariffs are relatively low, yet the average MOP

is relatively high. On the contrary, Brunei's MFN remains low and close to zero. There is not much change in MOP for the remaining AMS. **FIGURE 7-12** depicts the trend in liberalisation of ATIGA tariffs in this sector, which had been mostly done by 2012. Viet Nam further liberalised in 2015 by pushing the number of tariff lines with non-zero tariffs below 100.

Table 7-8. Tariffs and margin of preference in PIS textiles and apparel

	2010			2018		
	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA
Brunei D.	0.65	0.00	5.93	0.45	0.00	6.48
Indonesia	10.57	0.00	10.65	15.33	0.00	15.43
Malaysia	11.77	0.00	15.38	6.21	0.00	13.39
Philippines	10.75	0.00	10.78	10.89	0.00	10.95
Singapore		0.00			0.00	
Thailand	12.11	0.00	18.12	15.10	0.00	15.53
Cambodia	13.87	4.99	11.70	8.29	0.00	9.86
Lao PDR	9.30	0.29	9.01	9.30	0.00	9.30
Myanmar	10.91	0.85	10.82	11.27	0.00	11.30
Viet Nam	12.32	4.05	9.87	12.64	0.00	13.72

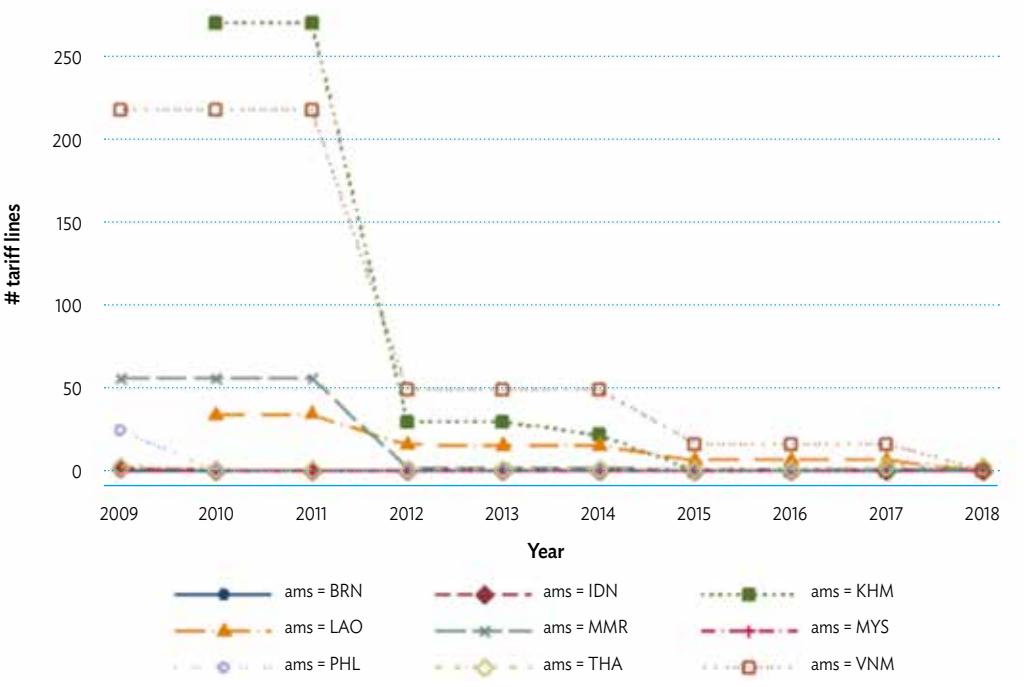
Note: Average MOP is calculated by taking the difference between MFN and ATIGA rates for tariff lines where MFN is greater than ATIGA and taking an average across these product lines, whereas all tariff lines are used to calculate average MFN and average ATIGA. Hence, average MOP does not equal (average MFN – average ATIGA).

Source: Authors' calculation from tariff information.

The FTA utilisation rates in textile and apparel sector, shown in **FIGURE 7-13**, remains low with only three AMS – Malaysia, Philippines, and Thailand – reporting rates over 40% in 2018. This could be related to the fact that inputs for this sector mostly originate in non-ASEAN countries, especially China, and trade within ASEAN could be utilising one of the ASEAN Plus One FTAs. It is important to note that ROO on textiles and apparel is one of contentious sectors in FTA negotiations, not only in ATIGA but also in the ASEAN Plus 1 FTAs, when product-specific rules were adopted as alternative origin criteria for the regional value content. An enhancement of the ATIGA ROO on textiles and apparel could benefit ASEAN in facilitating trade and expanding the production networks in the region.

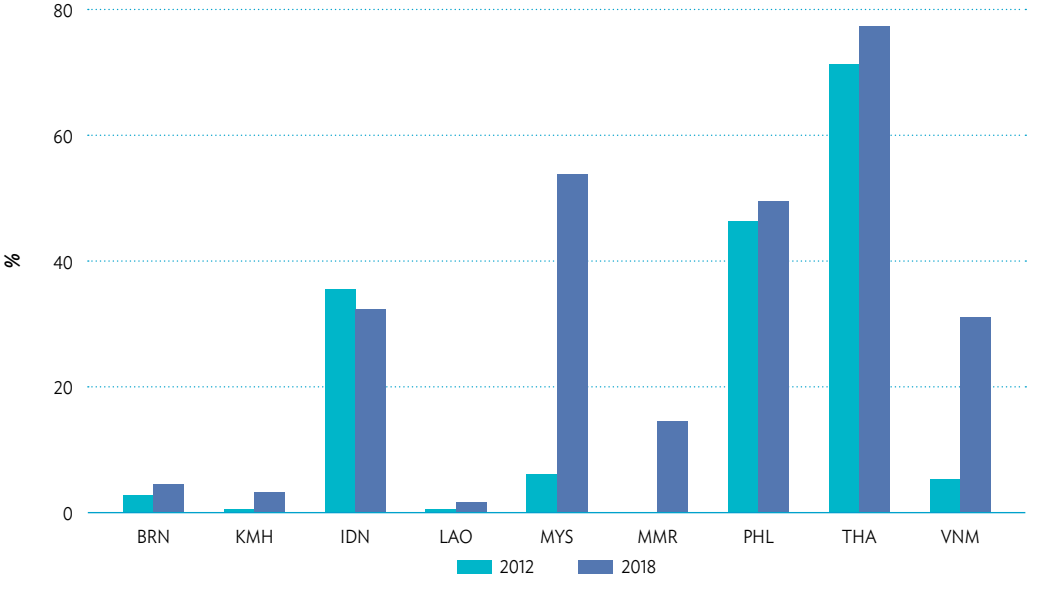
As a case in point, FTA utilisation in Malaysia's imports varies by source country, with imports from Indonesia, Lao PDR, and Thailand having high rates of FTA utilisation, whereas those from Cambodia, Myanmar, and Viet Nam had very low FTA utilisation in 2018. This is likely due to the fact that the latter three countries used imported inputs from China in this sector and made use of the ASEAN–China FTA rather than ATIGA.

Figure 7-12. Number of non-zero ATIGA tariff lines in textiles and apparel by year



Source: Authors' calculation from tariff information.

Figure 7-13. FTA Utilisation in textile and apparel sector



Note: Percentage is calculated with total intra-regional imports excluding tariff lines where MOP less than or equal to zero.

Source: Authors' calculation from tariff information.

H. Fisheries

Most of the fisheries PIS sector comes from HS Chapters 3 and 16. The tariff structure of AMS in this sector is given in **TABLE 7-9**. Cambodia and Lao PDR still have some products for which ATIGA tariffs have not been eliminated. Those products are freshwater fish fry for Lao PDR and not for breeding fish fry for Cambodia. These products are under the Sensitive List (Schedule D) where the end rates are at 5%. Most of the products were set to zero ATIGA tariffs by 2012, as shown in FIGURE 7-14. MFN tariffs of products in this sector are above 10% in Thailand, Cambodia, Lao PDR, and Viet Nam; above 6% in Indonesia; below 10% in the Philippines and Myanmar; and below 1% in Malaysia and 0% in Brunei Darussalam. Regarding MOP, Thailand, Cambodia, Lao PDR, and Viet Nam have their MOP above 12%, while that of Indonesia, Malaysia, Philippines and Myanmar is between 6% and 10%.

Table 7-9. Tariffs and margin of preference in PIS fisheries

	2010			2018		
	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA
Brunei D.	0.00	0.00	n.a.	0.00	0.00	n.a.
Indonesia	5.39	0.00	5.73	6.06	0.00	6.26
Malaysia	2.26	0.00	9.48	0.79	0.00	8.87
Philippines	8.78	0.00	8.78	9.40	0.00	9.44
Singapore		0.00			0.00	
Thailand	8.88	0.00	10.48	10.34	0.00	15.71
Cambodia	19.25	5.07	14.82	14.62	0.02	14.98
Lao PDR	14.00	0.48	13.58	12.65	0.01	12.64
Myanmar	7.77	1.40	7.74	8.02	0.00	9.27
Viet Nam	16.26	4.86	17.30	15.17	0.00	17.53

Note: Average MOP is calculated by taking a difference between MFN and ATIGA rates for tariff lines where MFN is greater than ATIGA and taking an average across these product lines, whereas all tariff lines are used to calculate average MFN and average ATIGA. Hence, average MOP does not equal (average MFN – average ATIGA).

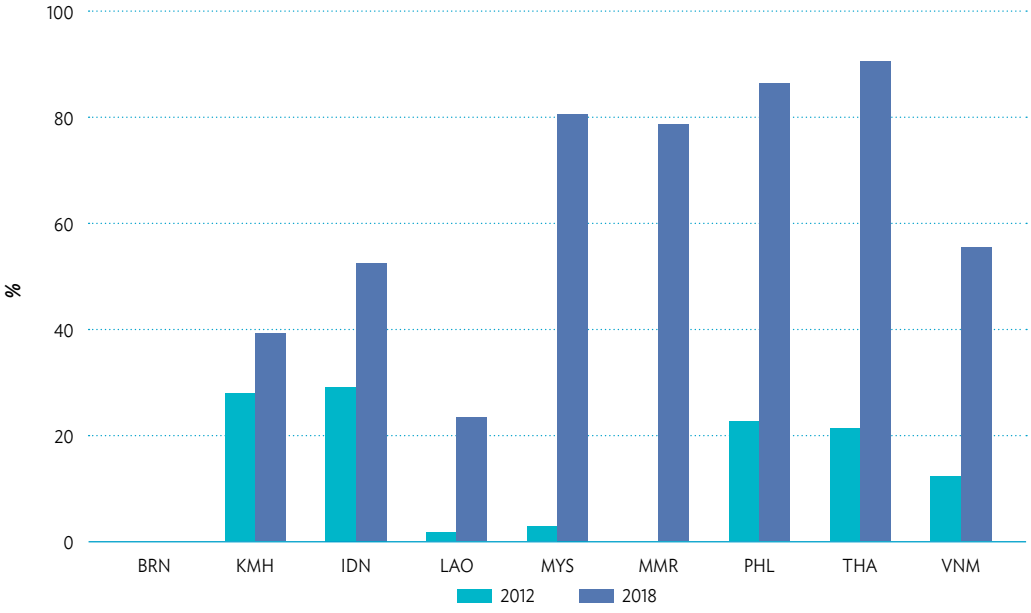
Source: Authors' calculation from tariff information.

Figure 7-14. Number of tariff lines in fisheries with non-zero ATIGA tariffs by year

Source: Authors' calculation from tariff information.

FTA utilisation fisheries is shown in **FIGURE 7-15**. It is found to be high in many AMS, with four AMS at or above 50%. Consistent with the high MOP offered by Thailand, it also has the highest utilisation rate. Even though the Philippines' MOP is half that of Thailand, its utilisation rate is almost the same. Malaysia's and Myanmar's utilisation have increased markedly to be amongst the top AMS with the highest utilisation rates. Both AMS offered a little less than 10% MOP, which has not changed much since the early 2000s. Viet Nam's utilisation rate is low given it has the highest MOP in this sector.

Figure 7-15. FTA Utilisation in fisheries



Note: Percentage is calculated with total intra-regional imports excluding tariff lines where MOP less than or equal to zero.

Source: Authors' calculation from tariff information.

I. Healthcare

The products under healthcare PIS come from a slightly more diverse set of HS chapters, most of them from Chapters 29, 30, and 33, but some also from Chapters 90, 12, and 34. The tariff structure of this sector is shown in **TABLE 7-10**. In the healthcare sector, MFN tariffs are relatively low. The highest MFN tariffs in 2018 are in Lao PDR, which is slightly above 8%. For Malaysia, even though the average MFN tariffs are very low – below 1% – the MOP in 2018 is very high and the highest amongst AMS. This is because the MFN tariffs of most of healthcare products in Malaysia have already been eliminated. In Malaysia, MFN tariffs of 396 tariff lines out of total 417 tariff lines in the healthcare sector have already been eliminated. In this sector, increased MOPs are seen in Indonesia, Malaysia, the Philippines, Thailand, Cambodia, and Lao PDR. Thailand has the sharpest increase in the MOP, from 6.75% to 12.02%. This was because the measurable number of tariff lines decreased from 263 in 2010 to 158 in 2018 and most of the reduced tariff lines are those that have low MOP. This sector has relatively few products, and most of the ATIGA tariffs had been eliminated by 2012, as shown in **FIGURE 7-16**.

Table 7-10. Tariffs and margin of preference in PIS health care

	2010			2018		
	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA
Brunei D.	1.60	0.00	12.33	0.13	0.00	5.00
Indonesia	4.31	0.00	5.99	5.43	0.00	6.73
Malaysia	0.86	0.00	15.56	0.60	0.00	16.33
Philippines	3.00	0.00	3.02	3.02	0.00	3.16
Singapore		0.00			0.00	
Thailand	5.35	0.00	6.75	4.84	0.00	12.02
Cambodia	7.31	3.00	6.02	6.62	0.00	10.07
Lao PDR	7.52	1.29	6.56	8.03	0.00	7.98
Myanmar	2.63	0.92	2.75	2.63	0.00	2.71
Viet Nam	4.27	1.04	12.34	3.45	0.00	10.27

Note: Average MOP is calculated by taking a difference between MFN and ATIGA rates for tariff lines where MFN is greater than ATIGA and taking an average across these product lines, whereas all tariff lines are used to calculate average MFN and average ATIGA. Hence, average MOP does not equal (average MFN – average ATIGA).

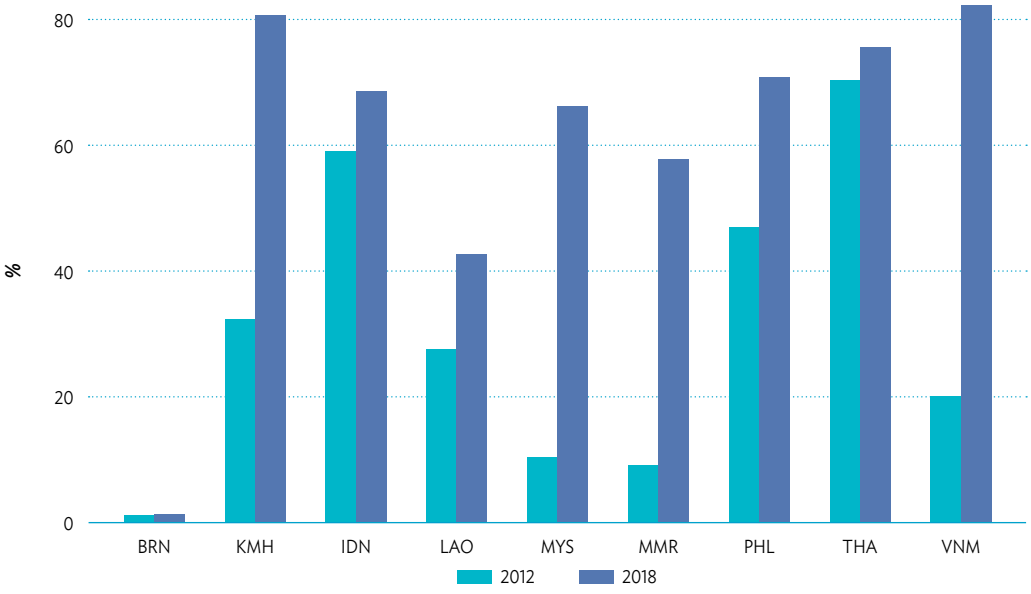
Source: Authors' calculation from tariff information.

Figure 7-16. Number of tariff lines in health sector with non-zero ATIGA tariffs by year

Source: Authors' calculation from tariff information.

FTA utilisation rates for this sector are shown in **FIGURE 7-17**. They are quite high in health-care related sectors, although it is not amongst the highest MOP sectors. All AMS except Brunei reported utilisation rates above 40%, with six AMS having utilisation rates above 60%. For Cambodia, this is the sector with one of the highest FTA utilisation rates, although it ranks fourth in the MOP offered for products in this sector (still substantially high at 10%). Malaysia (with the highest MOP) and Viet Nam have seen a three-fold increase in utilisation rate since 2012.

Figure 7-17. FTA Utilisation in healthcare related sector



Note: Percentage is calculated with total intra-regional imports excluding tariff lines where MOP less than or equal to zero.

Source: Authors' calculation from tariff information.

J. Rubber-based products

Rubber-based products also come from various HS Chapters, mainly from Chapters 40, 64, and 85. Their tariff structure is shown in **TABLE 7-11**. For rubber-based products, the MFN tariff for Brunei has gone down significantly as its MOP has fallen sharply. The strong decrease in the average MFN tariff for Brunei was due to the tariff elimination of rubber-based products, such as tyres and inner tubes (HS 4011–4013) and insulated wire/cable (HS 8544). The average MFN tariff in Malaysia is 15.64%, which is the highest amongst AMS. The highest MOP is 20.54% which is also in Malaysia. The average MFN tariffs of five AMS, i.e. Indonesia, Malaysia, Thailand, Cambodia and Viet Nam, are above 11% and the rest are below 9%. The MOP of these AMS are also 12% and the rest are below 9%. The average of Cambodia's MFN tariffs has fallen but the MOP has increased. The

decrease in the MFN tariff was due to the reduced or eliminated tariffs of some rubber-based products such as bedding (9404), puzzles, and skipping rope (HS 9503). The MOP increase in Cambodia was due to the ATIGA tariff elimination of all products in the rubber-based sector from 5% in 2010. ATIGA tariff reductions in this sector are depicted in **FIGURE 7-18**. Many of the products were liberalised in 2012, and the rest in 2015. Viet Nam still has some products in this sector with non-zero ATIGA tariff.

Table 7-11. Tariffs and margin of preference in PIS rubber-based products

	2010			2018		
	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA
Brunei D.	8.46	0.00	15.13	0.93	0.00	5.32
Indonesia	10.92	0.00	11.42	11.16	0.00	12.15
Malaysia	17.63	0.00	21.55	15.64	0.00	20.54
Philippines	7.19	0.00	7.39	7.35	0.00	7.73
Singapore		0.00			0.00	
Thailand	11.82	0.00	12.00	11.86	0.00	12.41
Cambodia	15.01	4.75	10.78	12.64	0.00	13.38
Lao PDR	9.14	0.73	8.50	8.56	0.00	8.56
Myanmar	4.22	1.98	4.22	4.28	0.00	4.31
Viet Nam	14.86	2.02	14.04	12.90	0.00	13.74

Note: Average MOP is calculated by taking a difference between MFN and ATIGA rates for tariff lines where MFN is greater than ATIGA and taking an average across these product lines, whereas all tariff lines are used to calculate average MFN and average ATIGA. Hence, average MOP does not equal (average MFN – average ATIGA).

Source: Authors' calculation from tariff information.

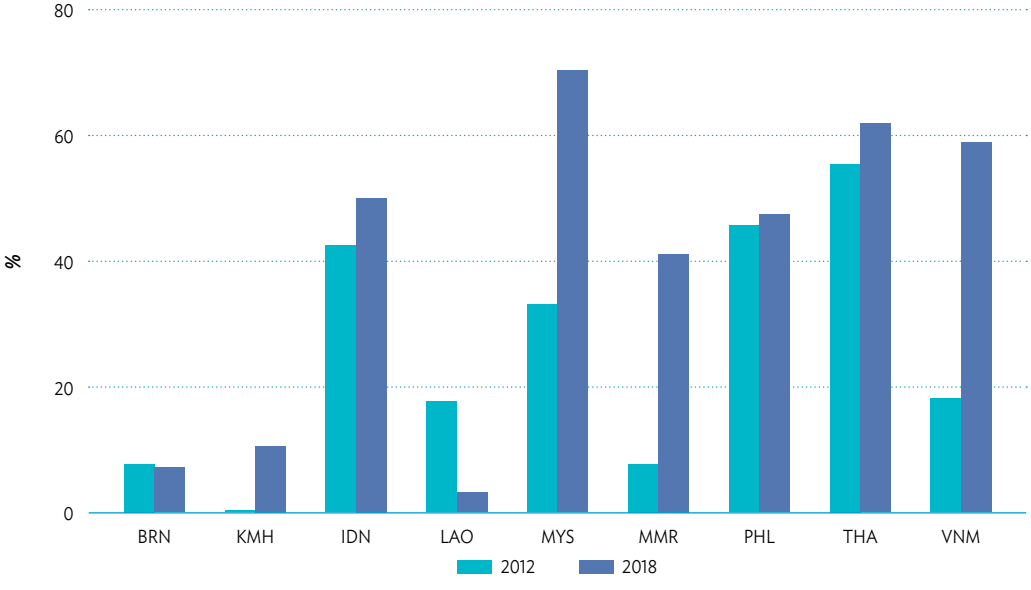
FTA utilisation rates are shown in **FIGURE 7-19**. It was above 40% in six of the nine AMS, with Viet Nam showing the biggest increase since 2012. Malaysia, which has the highest MOP in this sector, also reports the highest FTA utilisation rate, which has doubled since 2012. Brunei, Cambodia, and Lao PDR, despite their high MOPs, have not seen much change in FTA utilisation rates.

Malaysia's Form D imports in 2018 mostly come from three countries – Indonesia, Thailand, and Viet Nam, which together comprise over 95% of total Form D imports. The overwhelming share is from Thailand at 62%. This marks a drastic shift from 2013, when Singapore was the most important Form D exporter to Malaysia (accounting for 57%). At the time, Thailand's share was only 24% while Viet Nam's was less than 1%. There has been a shift in FTA utilisation rates of individual source countries as well. Viet Nam's share in total imports of Malaysia increased from 8% in 2012 to 22% in 2018 and its utilisation rate increased from 1% to 30%. During the same period, the utilisation rate of imports from Thailand increased from 19% to 80% and that of Indonesia increased from 21% to 58%.

Figure 7-18. Number of tariff lines in rubber-based sector non-zero ATIGA tariffs by year

Source: Authors' calculation from tariff information.

Figure 7-19. FTA Utilisation in rubber-based sectors



Note: Percentage is calculated with total intra-regional imports excluding tariff lines where MOP less than or equal to zero.

Source: Authors' calculation from tariff information

K. Wood-based products

The products classified under PIS wood-based sector come overwhelmingly from HS Chapter 44. The tariff structure of AMS is summarised in **TABLE 7-11**. For wood-based products, the average MFN tariffs for all countries have slightly changed except for Brunei, where it fell significantly from 13.33% in 2010 to 3.64% in 2018. The significant decrease in Brunei's average MFN tariffs was due to a MFN tariff reduction from 20% in 2010 to 5% in 2018 for wood products such as wood sawn or chipped, particle board, etc. The slight change in the average MFN tariffs of other countries was a result of the AHTN transposition exercise. In 2018 Lao PDR had the highest average of MFN tariffs, at 40%, as well as the highest MOP. One tariff line of wood product in Malaysia also had a MFN tariff of 40%. It should also be noted that Malaysia's MFN tariffs in half the tariff lines of this sector were already at 0% in 2018, so that the average MOP is relatively high, but the average MFN is relatively low. MOP of five AMS are above 10% and the rest below 9%. As shown in **FIGURE 7-20**, Cambodia had liberalised its ATIGA tariffs by 2012, while Lao PDR's liberalisation occurred in 2015.

Table 7-12. Tariffs and margin of preference in PIS wood-based products

	2010			2018		
	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA	Average MFN Tariffs	Average ATIGA Tariffs	Average MOP where MFN>ATIGA
Brunei D.	13.33	0.00	18.42	3.64	0.00	5.00
Indonesia	4.76	0.00	8.84	4.58	0.00	8.64
Malaysia	10.00	0.00	20.00	9.23	0.00	19.42
Philippines	8.39	0.00	8.39	8.05	0.00	8.05
Singapore		0.00			0.00	
Thailand	8.79	0.00	9.05	6.43	0.00	8.54
Cambodia	10.58	5.00	5.58	10.49	0.00	10.49
Lao PDR	26.14	1.63	24.51	25.30	0.00	25.30
Myanmar	12.57	1.77	12.33	12.99	0.00	12.99
Viet Nam	7.94	1.81	11.00	7.74	0.00	13.67

Note: Average MOP is calculated by taking a difference between MFN and ATIGA rates for tariff lines where MFN is greater than ATIGA and taking an average across these product lines, whereas all tariff lines are used to calculate average MFN and average ATIGA. Hence, average MOP does not equal (average MFN – average ATIGA).

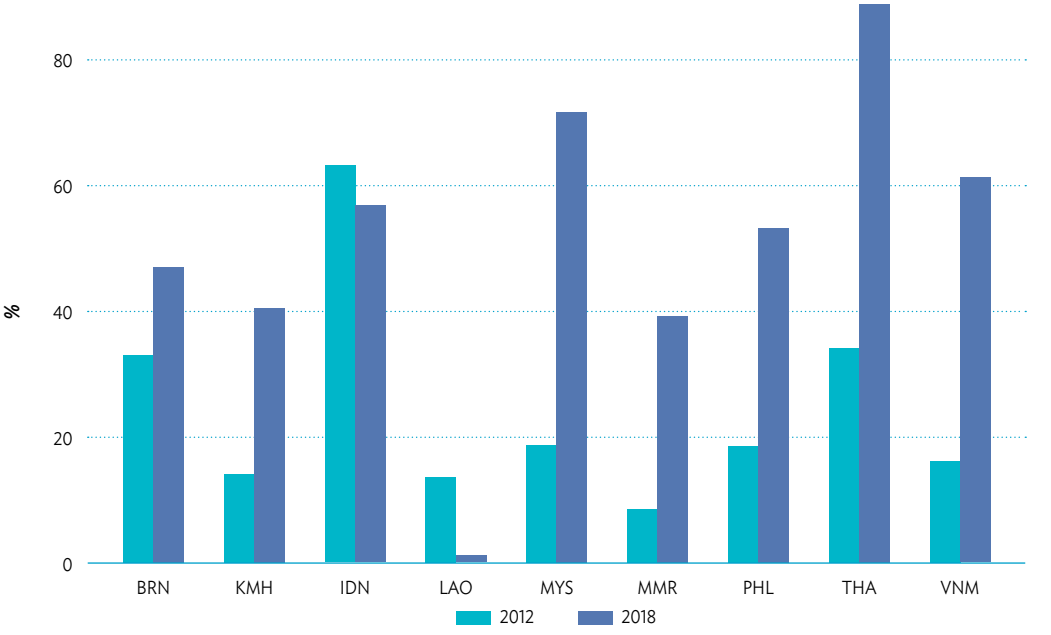
Source: Authors' calculation from tariff information.

Figure 7-20. Number of tariff lines in wood-based sector with non-zero ATIGA tariffs by year

Source: Authors' calculation from tariff information.

FTA utilisation rates in wood-based products, shown in **FIGURE 7-21**, are also at or above 40% for the majority of the AMS, with all AMS except Lao PDR showing an increase since 2012. The highest utilisation rate is found in Thailand, with over 80% of the imports from ASEAN coming under ATIGA preference, conditional on having a positive margin of preference. Malaysia's utilisation rate is also very high. Lao PDR's low utilisation again is puzzling given the high MOP. The majority of its imports of this sector come from Viet Nam which had an 83% share in 2018 while Thailand had the remaining 17%. However, there was virtually no Form D trade from Viet Nam, while imports from Thailand had utilisation rates of over 6%. This is despite the fact that the main import under wood at 4-digit subheading is 4401, which has an MOP of 10%. So, it is unclear why the utilisation rate is low. There may be other bilateral agreements governing trade between the two countries in this sector or it may be a result of high cost of compliance.

Figure 7-21. FTA Utilisation for wood-based products



Note: Percentage is calculated with total intra-regional imports excluding tariff lines where MOP less than or equal to zero.

Source: Authors' calculation from tariff information

L. Conclusion

The analysis is this section has shown the various levels of MFN tariff protection afforded to various sectors. In highly protected sectors, ATIGA has increased the MOP, thus providing opportunities for expansion of intra-ASEAN trade. And we do find some cases of growing intra-ASEAN trade, for example the case of agriculture imports by the Philippines from Thailand. However, the largest PIS sector in terms of import volume – electronics – also happens to be the one with some of the lowest MFN tariffs in the region. This is to be expected as electronics is highly integrated with the global value chain and a large part of this product group falls under the International Technology Agreement (ITA) which accords duty free MFN treatment.

There are some cases where utilisation seems low in the context of high MOP afforded by some AMS. This could because of the presence of other costs of compliance in these sectors which may be preventing firms from availing themselves of ATIGA preference. Another possibility is that other bilateral FTAs or Plus One FTAs are being used to trade due to use of inputs from non-AMS countries or that these goods are imported into Economic Zones which are allowed duty free importation. If the reason for low utilisation is high cost of compliance, these cases need to be examined more carefully to implement

reforms in the implementation of ATIGA. If sourcing of input is the main reason and use of alternative FTA is a further reason, there is little cause for concern. However, sourcing decisions could be related to lack of supply within ASEAN or other inefficiencies that may need to be mitigated. A more thorough analysis looking at trade between particular products within this sector amongst two or more trade partners to investigate the presence of any barriers that can be mitigated may be needed.

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