

6. Trade liberalization and international production networks: Indonesia's automotive industry

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6.1. Introduction

The move towards product fragmentation in order to reduce costs in recent years has prompted the expansion of international production networks (IPNs). For the automotive industry the move is more prevalent in East Asia, dominated by Japanese automakers such as Toyota, Honda, Nissan and Suzuki. In recent years, the region has also witnessed the proliferation of regional trade agreements (RTAs), particularly in South-East Asia. Although it is widely recognized that the development of IPNs predated the proliferation of FTAs, it is accepted that IPNs could be enhanced and strengthened through RTAs.

Indonesia has taken an active role in the establishment of RTAs and other trade agreements such as APEC, ASEAN+3 and ACFTA (ASEAN-China Free Trade Agreement) as well as the recent Indonesia-Japan Economic Partnership Agreement (IJEPA). This has enabled the Indonesian automotive industry to gain a greater foothold in the development of IPNs in the region. Thus, the objective of this chapter is to examine the role of RTAs in the establishment of IPNs in Indonesia's automotive sector.

It was found that although the proliferation of RTAs has stepped up the "race to the bottom" in tariff rates for Indonesia, the agreements have had a "noodle bowl" effect on trade in East Asia, specifically in the case of overlapping rules of origin (RoO). Classical issues such as legal certainties still plague the Indonesian economy; this is affecting the automotive industry, which needs to attract more local and foreign investment to enable business expansion. Logistics is also a key factor in establishing IPNs in Indonesia. The development of the logistics infrastructure is critical since product fragmentation needs a steady flow of goods from one country to another.

The first part of this chapter addresses the profile of the local automotive sector, followed by an examination of the policy environment for the sector. The growth, establishment, prospects and the relationship between IPNs and FTAs in the Indonesian automotive sector are considered then followed by the conclusion.

6.2. Industry profile

The automotive industry (including auto components) is one of Indonesia's key industrial sectors, with Rp. 13.9 trillion of investment in 2006 and generating employment for about 185,000 persons (table 6.1).

Table 6.1. Profile of Indonesia's automotive industry

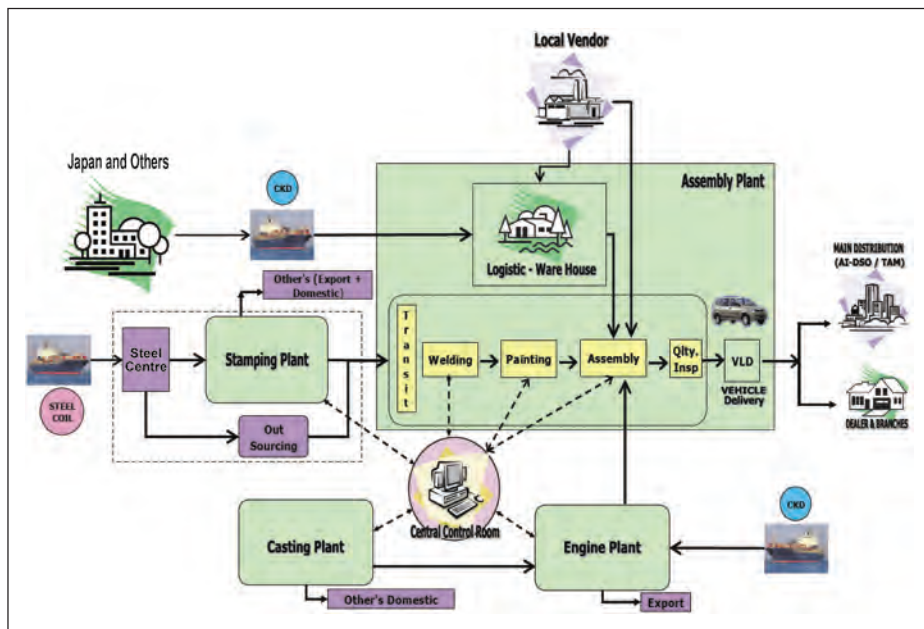
	Classification			
	Cars	Motorcycles	Components	Total
Total industry	37 (20)	77	350	445
Investment (Rp. trillion)	3.4	3.0	7.5	13.9
Annual capacity	855 000	6 575 000	150	
Employment	35 270	30 000	120 000	185 000
Exports (Million United States dollars)	255.0	28.9	1 482.7	1 766.2
Imports (Million United States dollars)	1 327.2	21.1	2 814.1	4 162.4

Source: Gabungan Industry Alat-alat Mobil dan Motor (GIAMM/Indonesian Automotive Parts and Components Industries Association).

Similar to several other countries in the region, Indonesia's domestic automotive manufacturers have been supplying, assembling and distributing foreign automotive brands – mostly Japanese. In the automobile industry, since the 1997-1998 economic crisis, many brand-holding sole agents have switched their role to perform only as sole distributors of Japanese car makers. This was particularly the case with Indonesia's largest homegrown automobile companies, PT. Toyota Astra Motor and PT. Indomobil Suzuki International. Toyota Motor Corp. took control (95 per cent) of its assembling division in 2001. Similarly, Suzuki Motor Corp. took over the manufacturing division of PT. Indomobil Suzuki International. The distribution business of Suzuki cars is now being taken care of by PT. Indomobil Niaga International. In the motorcycle industry, the big players are PT. Astra Honda Motor (resulting from the merger between PT. Federal Motor and PT. Honda Federal effective from 1 January 2001), PT. Indomobil Suzuki International (49 per cent owned by Suzuki Motor Corp.), PT. Yamaha Indonesia Motor Mfg. (100 per cent Japanese-owned, with the majority held by Yamaha Motor and the minority share by Japanese trading companies) and PT. Kawasaki Motor Indonesia (60 per cent owned by Kawasaki). Again, nearly all these companies represent Japanese brands – accounting for more than 99 per cent of Indonesia's total automotive production. About 300 companies currently produce and supply auto components to the above brand-holding sole agents (with extensive product coverage, ranging from shock absorbers and brake systems to wiring harnesses. Some of them are considered to be SMEs).

Indonesia is currently the third-largest car market in South-East Asia after Thailand and Malaysia. Figures from GAIKINDO show that up to September 2008, approximately 454,000 vehicles were sold. When the Government raised fuel prices in May 2008, it was predicted that demand for cars would decline. It did not happen. By October 2008, GAIKINDO had already revised upwards its own projection for 2008 sales twice. Currently, the number stands at 600,000 (projected). As the recent crisis in developed economies unfolded, GAIKINDO predicted 2009 sales would decline by about 40 per cent.

Figure 6.1. Production process in Indonesia's automotive industry



Source: Gabungan Industri Kendaraan Bermotor Indonesia (GAIKINDO/Association of Indonesian Automotive Industries).

In Indonesia, domestic vehicle sales were dominated by passenger vehicles,¹ especially the 4x2 type, followed by pickups/trucks, which were categorized as commercial cars together with buses.

In the case of motorcycles, domestic market sales increased significantly in 2008 (table 6.2). This was partly due to the higher cost of fuel (the Government decision to increase fuel prices in May and October 2008) that made consumers switch to cheaper modes of transportation such as motorcycles. Data from the Indonesian Motorcycle Industry Association (AISI) showed that domestic motorcycle sales grew from less than 1 million units in 2000 to reach more than 4.7 million units in 2007 and 6 million units as of October 2008.

The highest annual growth (60 per cent) was recorded in 2001 when the number rose to more than 1.6 millions units. In 2006, sales were slightly down from 5.086 million units in 2005 to 4.47 million units due to higher fuel costs, but rebounded in 2007 (4.713 million units); this trend continued in 2008. However, the sales target for 2009 was slashed by 30 per cent (to 4 million units) in anticipation of the worsening global economic crisis.

¹ Passenger cars comprise three categories – sedans, MPV 4x2s and SUV 4x4s – each with a different type of engine. Commercial cars also comprise three categories – buses, pickups/trucks and double-cabin 4x2s/4x4s, each with a different weight.

Table 6.2. Domestic sales of motorcycle and auto components, 2000-2008^a

Year	Total motorcycles (Units)	Total auto components (Rp. billion)
2000	979 422	13 798.2
2001	1 650 770	14 384.3
2002	2 317 991	15 738.7
2003	2 823 703	21 747.7
2004	3 900 518	28 707.2
2005	5 086 617	46 210.3
2006	4 470 722	n.a.
2007	4 713 895	n.a.
2008 ^b	6 000 000	n.a.

Source: AISI.

^a Excluding imported motorcycles from China.

^b Estimated figure.

Following the trend (particularly that of motorcycle sales), Indonesia's automotive component market also expanded.

6.2.1. Production data

With foreign principals generally controlling ownership of automotive companies in Indonesia, IPNs have become very important. Indonesia has become the production centre for the Suzuki APV and Toyota Kijang Innova, which are exported to markets in other ASEAN countries.

Passenger and commercial car production increased from 2003 to 2005. In 2006, production declined by about 40 per cent to 296,008 from 500,710 units in 2005. The figure then continued to rise, and in September 2008 (table 6.3) domestic production of automobiles reached 453,057 units, 69 per cent of which comprised 4x2 vehicles.

In the motorcycle industry, almost all domestic demand was met by local products with high (90 per cent) local content. The latest available data from 2005 and 2006 show that when the annual domestic market sales reached 5.1 million units and 4.47 million units, respectively, local production was recorded at 5.126 million units and 4.46 million units, respectively. This highlighted the fact that while most (if not all) automobile manufacturing operations in Indonesia and ASEAN were suffering from the lack of economies-of-scale, the region's motorcycle industries were enjoying reasonable success and efficient manufacturing operations due to their sizable markets.

Table 6.3. Domestic market vehicle production by category and number of units, January-September 2008

Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Sales in 2008	Share (per cent)
Sedan type	472	572	458	137	296	307	187	152	74	2 655	0.59
1500 < cc ≤ 3000 (P)/2500 (D)	165	236	263	382	262	274	261	190	210	2 243	0.50
cc > 3001 (P)/2501 (D)	6	18	12	17	24	11	55	49	23	215	0.05
Subtotal	643	826	733	536	582	592	503	391	307	5 113	1.13
4x2 type	22 286	21 194	18 953	22 630	21 909	24 672	27 333	28 020	24 712	211 709	46.73
1501 < cc ≤ 2500 (P/D)	9 558	9 853	8 808	9 886	8 474	9 213	11 098	8 972	7 761	83 623	18.46
2501 < cc ≤ 3000 (P/D)	2 122	2 459	1 861	2 507	1 888	1 852	1 946	1 265	1 438	17 038	3.76
cc > 3001 (P)/2501 (D)	33 966	33 206	29 622	35 023	32 271	35 737	40 377	38 257	33 911	312 370	68.95
Subtotal 4x4 type											0.00
cc ≤ 1500											0.00
1501 < cc ≤ 3000 (P)/2500 (D)	122	155	86	173	165	142	137	72	1 101	2 153	0.48
cc > 3001 (P)/2501 (D)	256	374	245	581	326	416	328	170	229	2 925	0.65
Subtotal	378	529	331	754	491	558	465	242	1 330	5 078	1.12
Buses	552	192	–	186	144	6	180	126	225	1 611	0.36
GVW 5 – 10-ton (P/D)	114	66	100	116	108	96	90	106	96	892	0.20
GVW 10-ton – 24-ton (P/D)											0.00
GVW > 24 tons (P/D)											0.00
Subtotal	666	258	100	302	252	102	270	232	321	2 503	0.55
Pick-ups/trucks	5 847	5 565	6 426	7 756	8 064	8 817	8 337	7 998	7 701	66 211	14.61
GVW 5-ton – 10-ton (P/D)	3 836	4 845	5 420	5 844	5 675	5 582	6 627	6 437	5 913	50 179	11.08
GVW 10-ton – 24-ton (P/D)	426	312	414	590	376	452	450	400	426	3 846	0.85
GVW > 24 ton (P/D)	601	716	776	746	888	944	1 084	1 052	950	7 757	1.71
Subtotal	10 410	11 438	13 036	14 936	15 003	15 795	16 498	15 887	14 990	127 993	28.25

Table 6.3 (continued)

Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Sales in 2008	Share (per cent)
Double cabin 4x2s/4x4s	-	-	-	-	-	-	-	-	-	-	0.00
Subtotal	-	-	-	-	-	-	-	-	-	-	0.00
Production total	46 063	46 257	43 822	51 551	48 599	52 784	58 113	55 009	50 859		
Cumulative	46 063	92 320	136 142	187 693	236 292	289 076	347 189	402 198	453 057	453 057	100

Source: GAIKINDO.

Note: P = petrol; D = diesel.

6.2.2. Export-import

Export performance was quite robust up to the third quarter of 2008. Compared with 2007, for which only 60,000 units were recorded, automobile exports were estimated to have reached 90,000 units by the end of 2008. Data from the Ministry of Industry showed that up to October 2008, more than 80,000 units had been exported.

Table 6.4 shows the value of exports and imports by the automotive sector up to 2005. Figures for the subsequent years are not yet available.

Table 6.4. Exports and imports, 2000-2005

(Unit: Thousands of United States dollars)

Year	Vehicles		Motorcycles		Auto components	
	Exports	Imports	Exports	Imports	Exports	Imports
2000	22 343	352 699	85 357	62 712	537 942	2 061 565
2001	25 777	422 050	58 597	26 620	552 654	1 863 788
2002	31 570	337 015	57 494	14 034	658 538	1 790 150
2003	47 471	517 516	65 165	13 197	815 911	1 855 952
2004	149 103	949 950	31 928	23 637	1 061 083	2 278 568
2005	255 000	1 327 200	28 900	21 100	1 482 700	2 814 100

Source: Ministry of Industry.

To anticipate the effect of the global economic downturn on automotive exports, the Government planned to help local producers to penetrate non-traditional markets such as Turkey, the Islamic Republic of Iran and Egypt, which had been importing second-hand vehicles from Europe. Nevertheless, a decline in exports of approximately 20 per cent was projected due to expected sluggish demand.

6.3. Policy environment

Indonesia's automotive sector started to expand as early as the 1960s when the Government of Indonesia established it as one of the strategic/priority sectors for development of import-substitution industries. This action was justified because: (a) the automotive sector was the main supplier of transportation needs; and (b) the sector contributed significantly to domestic economic growth and employment, and had high-technology exposure. During 1970-1980, the Government applied a strict policy of banning imports of completely-built-up cars (CBU), meaning cars that are imported as a final good with no need for domestic assembly. In addition, it prohibited foreign automotive investors from direct assembling and distribution. They had to establish joint ventures with domestic partners, with the latter undertaking importing and assembling cars in completely-knocked-down (CKD) form as well as the distribution of their products. The Government also protected the automotive sector by applying high tariffs and non-tariff barriers such as

quotas and local content requirements. It was expected that the automotive industry, represented by several joint ventures, would be Indonesia's manufacturing industry leader, characterized by high-technology transfer and high local content.

At the same time, the Government attempted to encourage the growth of the auto component industry by insisting on local content requirements. In 1978, commercial vehicle manufacturers were required to use glass parts. In the following year, they had to use locally-supplied chassis and, in 1984, domestically-produced engine blocks. The manufacturers who could not meet these requirements would be penalized by having their import tariffs raised to 100 per cent. Ultimately, however, the local content requirements were considered unsuccessful; only small amounts of auto components were manufactured locally, comprising items mostly characterized by low-technology exposure such as car lamps and tyres.

The Government then implemented an incentive programme aimed at encouraging automotive manufacturers to use locally-produced components. Under the scheme, automotive manufacturers who used higher proportions of local components in their products were to be charged lower import tariffs. In this programme, the tariff structure was related more to the use of local components rather than to the type of vehicle manufactured (passenger vs. commercial).

A deregulation package was introduced in 1995 in which the Government offered a zero per cent tariff on imported components for commercial vehicles with at least 40 per cent local content and for passenger vehicles with 60 per cent or more local content. The package also permitted new foreign investment as part of Indonesia's commitment to AFTA and APEC. However, in 1996, the Government launched the controversial national car programme, which was severely criticized by heavyweight WTO members such as Japan, the United States and European Union members.

The huge setback caused by the Asian economic crisis in 1997-1998 forced the Government of Indonesia to revise its automotive (including components) policy. A new automotive policy that was in line with WTO recommendations was launched in 1999. The Government abolished the local content scheme, the lower tariff schedule for imported cars and components, simplified the procedures and qualifications for imports, and encouraged export market expansion for automotive products. Under AFTA, in 2003 import tariffs for many products, including those from the automotive sector, were cut to between zero per cent and 5 per cent. Car manufacturers only pay 5 per cent duty when sending products to ASEAN members, if the products meet a minimum of 40 per cent local content in any of the ASEAN member countries. ASEAN members agreed to remove import duties by 2010 for the five founding members and by 2015 for Brunei Darussalam and Cambodia, Lao People's Democratic Republic, Myanmar, and Viet Nam. The Government of Indonesia had actually already abolished the import duty on spare parts and auto components for re-export (Ministry of Finance Decree No. 79/PMK.010/2006). Due to domestic producers' objections, the Government subsequently issued another regulation (No. 34/PMK.011/2007) that reduced the import duty on basic materials for auto components to zero per cent, effective for one year. In anticipation of the recent global economic downturn, the Government planned to extend the regulation to allow zero per cent import duty on raw and supporting

materials for auto components. The Government argued that the extension was required due to weakening competitiveness of the automotive sector since the rupiah had been in steady decline since October 2008. Auto component imports in 2006 and 2007 were almost the same at US\$ 2.2 billion in both years. In 2008, the number soared with imports soaring during January-May 2008 to US\$ 2.3 billion.

Some problems cited by the industry have lingered for some time, including poor infrastructure, legal uncertainties (particularly local regulation and labour regulation) and the lack of tax incentives. All have been blamed for the low growth of foreign investment in the sector.

6.4. IPNs, RTAs and Indonesia's automotive sector

Before RTAs became prevalent in the region, IPNs had already been established at the company level. In Indonesia it was done through the involvement of Japanese auto makers as mentioned in the previous section. In taking part in IPNs, Indonesia gained an early start, albeit on a small scale, in the region. The Indonesian automotive sector dates back to the early 1920s when Indonesia was still a Dutch colony. During that period, General Motors opened an assembly plant for passenger cars in Jakarta. However, the demand for passenger cars was very limited back then and production only catered for Dutch colonial officers, foreign nationals and the small number of wealthy locals. At the outset of the Second World War, General Motors closed all of its operations in Indonesia and the automotive sector went into a deep slumber until the early 1970s.

To gain a deeper understanding of the relationship between IPN and RTAs at the company level, several in-depth interviews as well as focus group discussions were conducted during the current study. The respondents for the in-depth interview were car manufacturers and industry experts. Meanwhile, the participants in the focus group discussions comprised auto component manufacturers for passenger vehicles and commercial vehicles (including trucks). The interviews and the focus group discussions were based on open-ended questions in order to give the respondents the opportunity to address best-case examples, current issues and challenges in the Indonesian automotive sector. The highlights of the discussions are detailed below.

6.4.1. RTAs and the Indonesian automotive sector

Most of the respondents, from both of the focus group discussion, mentioned that even without the proliferation of FTAs, IPNs had already been established in Indonesia, mostly through the involvement of Japanese automobile manufacturers. The respondents had become aware of FTAs through industry associations such as GAIKINDO and GIAMM. These organizations have special sections devoted to tracking the development of FTAs made by the Government of Indonesia as well as other FTAs in the region. However, the two industry associations had never played an active role in trade negotiations. The Government only invited them to meetings at the Ministry of Trade and the Ministry of Industry, where they were asked to provide inputs to current trade negotiations. Businesses and the Government must realize that business advocacy is very important in FTAs

negotiations. Some of the factors that have made the business sector reluctant to deal with trade negotiations are:

- (a) Problems in identifying business implications of the complex FTAs;
- (b) The uncertainty surrounding “returns” to the business sector on the implementation of FTAs;
- (c) The limited number of credible and well-informed business associations.

In addition, there is some specific information of which government negotiators have no knowledge. The failure to recognize this business-specific information² will lead to implementation problems and, in some cases, even a need for some FTAs to be renegotiated. By working on business advocacy, both the Government and business associations will minimize the risk of undertaking unworkable negotiations. Collective business advocacy sends a stronger message to the Government before the start of trade negotiations.

The recently signed IJEPa does little for the Indonesian automotive sector. Since the deal was signed the sector has not experienced any dramatic effect and most of the breakthroughs in the sector have come from firms’ own initiatives. In the IJEPa negotiations, the automotive sector was considered as one of the driver sectors that stimulate economic growth in both countries. The automotive sector has long attracted foreign investments – especially from the Japanese auto industry, which has been operating in Indonesia since the 1970s. However, since the Asian economic crisis in 1997, investments from Japan have declined for various reasons such as the lack of infrastructure and weak legal certainty. These two factors needed to be worked on by the Government, while in the negotiations with Japan it focused on increasing export capacity by bringing about technology transfers from Japan’s auto industry to its counterparts and the supporting auto component industry in Indonesia. Up to now, the so-called Tier 1 auto component industry (which directly supplies the automotive manufacturing industry) has been able to produce quality products to support Indonesia’s role as a production base for several Japanese automobile manufacturers, including Toyota and Suzuki. In the medium term, it is expected that capacity-building activities included in IJEPa in the form of the Manufacturing Industry Development Centre (MIDEC) will be able to improve product quality in the Tier 2 auto component industry, which consists mainly of small and medium-sized enterprises. Through the establishment of MIDEC, the Government of Indonesia intends to increase the use of local components in automobile manufacturing in Indonesia. So far, the highest local content used in automobile assembly in Indonesia is 76 per cent for the Suzuki APV and 65 per cent for the Avanza, which has the highest sales in Indonesia.³

² For example, the business sector knows best how to penetrate certain export markets and is usually aware of the readiness of each subsector in their industry when market access is to be expanded etc.

³ *Bisnis Indonesia Newspaper*, 24 June 2008.

The negotiations did not attempt to gain wider market access by lowering tariffs since Japan was already applying a very low tariff rate⁴ for all countries. According to the IJEPA documents, once it is implemented, Japan will lower tariffs on about 35 per cent of products categorized as auto components from Indonesia; in return, Indonesia will lower tariffs for some 85 per cent of products in the auto parts components category from Japan. Table 6.5 lists the auto parts and components that are included in IJEPA. Table 6.6 shows the current import duty and luxury tax applied to automotive products in Indonesia.

Table 6.5. Auto components included in IJEPA

HS code	Description
4009	Pipes and hoses of vulcanized rubber other than hard rubber, with or without fittings (for example, joints, elbows and flanges)
4010	Conveyor or transmission belts or belting of vulcanized rubber
4011	New pneumatic rubber tyres
4012	Retreaded or used pneumatic rubber tyres; solid or cushion tyres, tyre treads and tyre flaps of rubber
4013	Inner tubes, rubber
4016	Other articles of vulcanized rubber other than hard rubber
6813	Brake linings and pads
7320	Springs and leaves for springs, iron or steel
8407	Spark-ignition reciprocating or rotary internal combustion piston engines
8409	Compression-ignition internal combustion piston engines (diesel or semi-diesel engines)
8413	Pumps for liquids, whether or not fitted with a measuring device; liquid elevators
8421	Centrifuges, including centrifugal dryers; filtering or purifying machinery and apparatus, for liquids or gases.
8482	Ball and roller bearings
8483	Transmission shafts (including cam shafts and crank shafts) and cranks, bearing housing and plain shaft bearings; gears and gearing; ball or roller screws; gear boxes and other speed changers, including torque converters; flywheels and pulleys, including pulley blocks; clutches and shaft couplings (including universal joints)
8484	Gaskets and similar joints of metal sheeting combined with other materials or of two or more layers of metal; sets of assortments of gaskets and similar joints, dissimilar in composition, put in pouches envelopes or similar packaging; mechanical seals.
8706	Chassis fitted with engines, for the vehicles under headings 87.01 to 87.05.
8708	Parts and accessories of vehicles under headings 8701 to 8705
840991	Parts used for spark ignition in engines

Source: Annex 1 – Schedules in relation to Article 20 in the Agreement between Japan and the Republic of Indonesia for an Economic Partnership.

⁴ Indonesia was applying MFN import duties between 5 per cent and 15 per cent.

Table 6.6. Import duty and luxury tax

(Unit: Per cent)

Category	Remarks	Import duty						Luxury tax
		Completely built up			Completely knocked down			
		2008	2009	2010	2008	2009	2010	2008
Sedan type	cc ≤ 1.5 lt	50	50	40	15	15	10	30
	1.5 lt < cc ≤ 3.0 lt (P)/2.5 (D)	50	50	40	15	15	10	40
	cc 3.0 lt (P)/2.5 (D)	50	50	40	15	15	10	75
4x2 type	cc ≤ 1.5 lt (P/D)	45	45	40	15	15	10	10
	1.5 lt < cc ≤ 2.5 lt (P/D)	45	45	40	15	15	10	20
	2.5 lt < cc ≤ 3.0 lt (P/D)	45	45	40	15	15	10	40
	cc > 3.0 lt (P)/2.5 (P/D)	45	45	40	15	15	10	75
4x4 type	cc ≤ 1.5 lt	45	45	40	15	15	10	30
	1.5 lt < cc ≤ 3.0 lt (P)/2.5 (D)	45	45	40	15	15	10	40
	cc > 3.0 lt (P)/2.5 (D) (P/D)	45	45	40	15	15	10	75
Buses	5 ton < GVW ≤ 24 tons (P/D)	40	40	40	15	15	10	10
	GVW > 24 tons (P/D)	10	10	40	5	5	5	10
Pick-ups/trucks	GVW < 5 tons (P/D)	45	45	40	15	15	10	0
	GVW 5-24 tons (P/D)	40	40	40	15	15	10	0
	GVW > 24 tons (P/D)	10	10	10	5	5	5	0
Double cabin 4x2/4x4	GVW < 5 tons (P/D) All cc sizes	45	45	40	15	15	10	20

Source: GAIKINDO.

Note: P = petrol; D = diesel.

When asked about AFTA, the interviewed companies all agreed that it could further the establishment of IPNs in the region by eliminating import duties. Indonesian automakers could optimally exploit AFTA by focusing on the market. The automotive industry, like any other industry, is driven by market demand, meaning that the market determines which types of car to make. In Thailand's case, pick-up trucks and sedans are the big sellers in that country's market. In Indonesia it is the multi-purpose vehicles or light commercial vehicles such as Toyota's Kijang Innova and Avanza that have high sales. In this regard, AFTA could be beneficial where companies focus on the products that the market needs. Toyota, for example, has made Thailand its hub for the production of sedans, and Indonesia for the Kijang Innova and Avanza. Suzuki has also moved in the same direction with the Suzuki APV in Indonesia. Executives of both Toyota and Suzuki mentioned that selection

depended on the country's potential demand as well as government policies for the automotive industry.⁵

There was quite a significant shift in the Government of Indonesia's strategy for developing the national automotive industry. Unlike during the New Order Government (prior to 1998) – when development of the automotive industry was aimed at creating a national brand without attachment to established brands from automotive giants from Japan, the European Union and the United States – the current strategy looks set to produce international branded cars in Indonesia with high local content. The Government (Ministry of Industry⁶) has, for example, defined the Toyota Kijang as a national car since it has high local content, a huge market in Indonesia and has been exported. It was argued that the automotive industry's development needed huge investment and support from high-technology facilities, strong research and development efforts, and skilled human resources. The Government preferred collaboration between existing automotive giants and domestic partners to develop automobile production.

Along with their domestic partners, Toyota, Daihatsu and Suzuki aimed at developing a “national car” – its construction and marketing would be controlled by each joint venture. While Toyota increased its investment in Indonesia by almost US\$ 90 million, Suzuki Motor Company invested almost Y 11.5 billion in improving its production facilities in order to manufacture the Suzuki APV. On the other hand, Honda Indonesia had a different strategy; it decided to establish two auto component (automatic transmission and engine valve) companies – 100 per cent owned by Honda – and to export the components to Honda manufacturers. The investment totalled almost US\$ 201 million for both plants.

Since the Asian economic crisis in 1997, sales of the Toyota Kijang have shown negligible growth. Nevertheless, a market survey conducted by Toyota and Daihatsu showed that demand for vehicles within the price bracket of Rp. 60 million to Rp. 100 million was still growing strongly. The survey also revealed that Indonesian consumers preferred the commercial-type compact fuel-efficient cars with a good after-sales service network. Following the survey, Toyota and Daihatsu launched the Toyota Avanza and Daihatsu Xenia.

Both Toyota and Daihatsu (as Toyota's subsidiary in Indonesia) have manufacturing facilities in Indonesia. However, they agreed to manufacture the Avanza and Xenia at the Daihatsu facilities with a targeted local content of between 60 per cent and 70 per cent, combining Daihatsu's renowned skills in producing compact cars with and Toyota's high quality standard.

As shown in table 6.6, they are subject to a luxury tax since vehicles except trucks are considered luxury goods by the Government of Indonesia. In terms of exports, the Government currently promotes exports of CKD vehicles; however, one respondent was of the opinion that the Government should concentrate on promoting the export of incomplete knocked down vehicles instead of CKDs. In practice, the export of incomplete knocked

⁵ See ASEAN Affairs at www.aseanaffairs.com.

⁶ Dirjen Industri Logam Mesin Elektronik dan Aneka.

down vehicles is more profitable since their cost is cheaper than CKDs. The transportation cost for one container is lower since it can hold a larger amount of components.

Table 6.7 provides the tariff structure for the Indonesian automotive sector in 2004 and 2007. The tariff structure is included for rubber products that are used in the automotive sector, since rubber is one of Indonesia's leading export commodities. For auto components zero per cent tariff basket, the tariff increased from 23 per cent in 2004 to 31.4 per cent in 2007. There was also a significant increase from 16.7 per cent to 20.8 per cent for products in the zero per cent to 5 per cent tariff basket. These increases may be explained by the significant reduction in tariff lines for the tariff baskets of 5 per cent to 10 per cent, 10 per cent to 20 per cent and above 40 per cent. However, there was a very small increase from zero per cent to 0.3 per cent for auto components subject to the tariff basket of 25 per cent to 40 per cent. Overall, in the span of three years, tariffs for auto components have become lower.

In the case of buses, there was a reduction for the tariff lines in the 20 per cent to 25 per cent and 25 per cent to 40 per cent tariff baskets. Surprisingly, there was a sudden jump for the tariff lines in the 10 per cent to 20 per cent tariff basket, from zero products subject to tariff rates in 2004 to 38.9 per cent of buses in 2007. Most of the tariff lines for passenger vehicles fell into the above 40 per cent basket, with rates of 60.1 per cent in 2004 and 59 per cent in 2005. However, there was a huge reduction in the 20 per cent to 25 per cent basket, from 36.5 per cent of total passenger vehicles in 2004 to zero per cent in 2007.

For motorcycles, the largest change took place in the 10 per cent to 20 per cent and 20 per cent to 25 per cent tariff baskets. In 2004, the 40 per cent for motorcycle products in the 20 per cent to 25 per cent tariff basket was reduced to zero per cent in 2007. On the other hand, there was a significant increase in the 10 per cent to 20 per cent tariff basket, from zero products subject to tariffs of between 10 per cent and 20 per cent in 2004, to 45.2 per cent of tariff lines in 2007. There was no major change in the tariff structure for rubber products used in the automotive and auto component sectors, and the bulk of the tariffs for that sector still fall within the 10 per cent to 20 per cent basket.

While most of the subcategories in the automotive sector have been opening up to international trade, albeit at varying rates, the same cannot be said for trucks. The tariffs for trucks falling within the 25 per cent to 40 per cent tariff basket jumped from 33.3 per cent in 2004 to 41.2 per cent in 2007. A similar trend occurred in the above 40 per cent tariff basket, in which the tariff lines increased from 7.8 per cent to 11.8 per cent in 2007.

Overall, the tariff structure changes moved the automotive sector from a relatively closed sector to a more open one, albeit at a relatively slow pace. The slowest tariff reduction was in the passenger vehicle subsector, where most of the tariffs in 2007 were still in the more than 40 per cent tariff basket. In contrast to the other subsectors, in 2007 the tariffs on trucks in the 25 per cent to 40 per cent and more than 40 per cent tariff baskets increased.

Table 6.7. Comparison of the tariff structure in the Indonesian automotive sector, 2004 and 2007

Tariff basket, 2004	0	0-5	5-10	10-20	20-25	25-40	> 40	NAV	Total
	per cent	per cent	per cent	per cent	per cent	per cent	per cent		
Auto components	23.0	16.7	17.6	39.4	0.0	0.0	0.2	3.1	540.0
Buses	0.0	13.2	13.2	0.0	36.8	36.8	0.0	0.0	106.0
Motorcycles	0.0	0.0	0.0	0.0	40.0	30.0	30.0	0.0	60.0
Passenger cars	0.0	0.0	0.0	0.0	36.5	3.3	60.1	0.0	479.0
Rubber used in auto-sector/components	3.1	0.0	3.1	93.8	0.0	0.0	0.0	0.0	65.0
Trucks	0.0	9.9	8.9	0.0	40.1	33.3	7.8	0.0	192.0
Total tariff lines	126.0	123.0	128.0	274.0	315.0	137.0	322.0	17.0	1 442.0
Total tariff lines (per cent)	8.7	8.5	8.9	19.0	21.8	9.5	22.3	1.2	100.0
Tariff basket, 2007	0	0-5	5-10	10-20	20-25	25-40	> 40	NAV	Total
Auto components	31.4	20.8	13.9	31.1	0.0	0.3	0.0	2.5	395.0
Buses	0.0	16.7	16.7	38.9	0.0	27.8	0.0	0.0	18.0
Motorcycles	0.0	0.0	0.0	45.2	0.0	29.0	25.8	0.0	31.0
Passenger cars	0.0	0.0	0.0	24.0	3.0	14.0	59.0	0.0	100.0
Rubber used in auto-sector/components	3.8	0.0	3.8	92.5	0.0	0.0	0.0	0.0	53.0
Trucks	0.0	8.8	11.8	26.5	0.0	41.2	11.8	0.0	68.0
Total tariff lines	126.0	91.0	68.0	235.0	3.0	57.0	75.0	10.0	665.0
Total tariff lines (per cent)	18.9	13.7	10.2	35.3	0.5	8.6	11.3	1.5	100.0

Source: Compiled from WTO and ASEAN Secretariat data.

Note: NAV = Non-ad valorem tariffs.

Under the 2007 tariff structure in the automotive sector of Indonesia, the relatively low tariffs on parts and components should make it possible for Indonesia to foster IPNs in that sector. The relatively more open regime for the auto components subsector should promote faster growth in the sector's assembly activity. Nevertheless, that is not necessarily the case. One important aspect with regard to RTAs and IPNs is the rules of origin (RoO). This is crucial, since RoO determine the products that are eligible for preferential treatment in an RTA. As argued by Kruger (1999), in RTA negotiations discussions on RoO provide an opportunity for producers to lobby for restrictive rules on goods concerning them. This implies that RoO are a good instrument for trade protection if such rules enable high-cost producers of intermediate goods such as auto components to gain access to the partner's market in preference to the other lower cost resources outside the RTA area. Hence, RoO serve as a hidden protection that creates trade diversion.

In determining origins, there are three approaches: (a) a change in tariff headings/classification; (b) criteria for local value-added content; and (c) specific manufacturing requirements. Furthermore, other rules that are commonly included to determine origin are: (a) cumulation; (b) the *de minimis* rule (tolerance); and (c) duty drawback. Cumulation specifies that input from preferential trading partners can be used in the production of final goods without undermining the origin of the product. The *de minimis* rule asserts that a specific percentage of non-originating products are to be used in the production process without affecting the origin status of the final goods. Duty drawbacks waive applicable duties on the non-originating input materials used in production; however, this is commonly not allowed in many RTAs/FTAs. Manchin and Pelkmans-Balaoing (2007) noted that RTAs in East Asia adopted a combination of the three approaches as well as a variety of cumulation and tolerance rules. Hence, in East Asia, there are numerous RoO that are most likely to overlap one another. Therefore, RoO add to the argument on the "spaghetti bowl" effect of FTAs/RTAs. Given the complex nature of RoO in the FTAs/RTAs in East Asia, they are expected to have an adverse effect on Indonesia, and particularly the automotive sector. One way to curb the "spaghetti bowl" effect of RoO is to implement substantially simpler RoO in FTAs/RTAs in East Asia.

Another related aspect is that of implementation of RoO. As stated by Manchin and Pelkmans-Balaoing (2007), the utilization of preferential treatment from RoO provisions under AFTA has been low. As such, the preference under AFTA is not optimally used. In the case of Indonesia, it may be due to the fact that manufacturers have difficulties in achieving the RoO requirement for local value-added content. As mentioned above in this chapter, Indonesia has a history of difficulties in satisfying local content requirements; only a small proportion of components are manufactured locally, the bulk of which have been low technology components. Clearly, with little or no R&D capabilities, Indonesia will continue to have problems in meeting the local content requirements

Second, local companies find it difficult to export for three reasons. First, shipping costs are high, particularly for small and medium-sized firms. Related to this issue is the fact that when compared to other countries in East Asia, Indonesia is lagging behind in developing a good logistics infrastructure, such as ports. The argument is simple – a reduction of shipping costs and improvement of the quality of logistics and transport

system will improve international market access, and thus lead to increased trade. For MNCs such as Toyota or Honda, the decision to relocate or conduct product fragmentation hinges on the service link cost, i.e., the services needed to link factories across borders. The components of service link costs are transportation cost, telecommunications cost and a variety of coordination costs between factories. Carruthers and others (2003) stated that high logistics cost in developing countries in East Asia was due to poor transport infrastructure, underdeveloped transport and logistics services, and slow as well as costly bureaucratic services procedures for dealing with export and import goods. Although the degree of these three factors differs between countries, they perfectly describe the current status of Indonesia's logistics infrastructure. Carruthers and others (2003) implied that Indonesia was lagging behind its neighbours in terms of accessibility. As a result, service link costs in Indonesia are higher. Although based on 2002 data, the interviews and focus group discussions confirm the results reported by Carruthers and others. The business sector mentioned that poor and yet expensive logistic services were one of the impediments to attracting automotive MNCs.

Hence, the availability of a reliable and cost-effective logistics infrastructure is also critical to attracting MNCs to invest in production facilities or to outsource production to Indonesia. Moreover, different customers have different standards of quality, thus making it difficult to adjust from one form of standard to another.

Third, information on the trade rules of destination markets is minimal.

In the discussions, all of the respondents agreed that RTAs such as AFTA and IJEPa could boost the local automotive sector. However, they all noted that the potential benefits from such agreements could only be realized if there were clear policies and an environment that was conducive to enabling the automotive industry to grow and prosper.

6.5. Links between Indonesian automobile and auto component manufacturers

The Indonesian car and auto components manufacturers are closely related. The relationship is a simple one: if car manufacturers cannot sell their cars, then auto component manufacturers cannot sell their products. However, there are exceptions; components such as tyres, mufflers and batteries do not depend on that type of relationship, since most manufacturers of such products are independent and have a huge aftersales market.

Some components have been locally sourced by the auto manufactures, such as seats, audio parts and batteries. Most of the locally outsourced components require low skills and low technology for production. The car manufacturers produce components that require some technical skill and in-house high technology. However, in the past some important components such as chassis, rear axles and brakes were sourced to local companies. Table 6.8 provides a list of GIAMM members and the components that they produce. Most of the companies concerned are foreign-owned or joint ventures. Foreign companies took an interest in the Indonesian automotive sector, particularly in the auto

components subsector, even before the establishment of FTAs. Indonesia is regarded as being in a good position to benefit from the explosion of IPNs, given its location in a region that has become the global growth centre of auto component production and assembly (Arthukorala, 2006).

Table 6.8. Ownership structure of auto component manufacturers

Item	PMA	PMDN	Total
Total GIAMM members (Joint venture with Japan)	79 (63)	59	138
Special components, two-wheelers	10	4	14
Components, four-wheelers/two-wheelers	20	10	30
Total manufacturers, two-wheelers	30	14	44
Engine components	30	18	48
Engine manufacturing	7	1	8
Special engines, two-wheelers	3	1	4
Filters	2	6	8
Batteries	3	3	6
Gaskets	4	2	6
Alternators/starter motors	5	0	5
Plastic parts	3	5	8
Radiators	2	2	4

Source: GIAMM.

Among the interviewees, company A provides a good example of the decision on whether to produce components locally or to import them. Their product comprises 30 per cent local content and 70 per cent Japanese content. Their decision process on when to use local parts and when to import parts from the parent companies or other affiliates is a complex one that is based on a set of formulae that produce an *n*-value. The calculation of *n*-values relies on several variables, such as the skill of local workers, access to suppliers and the technology at hand. Understandably, they remain secretive with regard to the actual algorithm. The decision mechanism is as follows: if the *n*-value equals one, that means the cost of using components from Indonesia and from Japan is similar. If the *n*-value is greater than or equal to one, it is more cost-efficient to use local components. In special cases where the *n*-value equals seven, the use of local components saves costs of up to 30 per cent.

The Indonesian auto component manufacturers serve two types of markets. First is the OEM market and second is the aftersales market. The OEM market is quality- and cost-oriented; whichever manufacturer can produce the best quality product for the least cost possible is the clear winner. Most of the local auto component manufacturers are already in tune with the standards used in the auto industry (table 6.9).

Table 6.9. Quality compliance

No.	Firms	Per cent
Quality management:		
– ISO/TS 16949	32	23.19
– ISO 9000 – 2	72	52.17
– ISO 14000 – 1	26	18.84
– QS 9000	26	18.84
– No Certificate	34	24.64
Total GIAMM members	138	100.00

Source: GIAMM.

The aftersales market is more price-oriented; in other words, the product that has the cheapest price, regardless of its quality, is the clear winner. Thus the aftersales market is tighter than the OEM market. In this regard, the aftersales market faces serious counterfeit problems and illegal imports. In the Indonesian aftersales market, authorized components account for some 30 per cent while the remaining 70 per cent of components are not authorized or are sold on the black market. This is a huge problem for auto component manufacturers, as the supply of bogus products and illegally imported components from China and Taiwan Province of China is becoming widespread. This problem first occurred during the 1997 Asian economic crisis, when components for the aftersales market became quite expensive due to the deteriorating value of the rupiah and cheap fake auto components began to flood the aftersales market. Although this is obviously an infringement of copyright and patents, no definitive and clear action has been taken on the problem so far by the Government of Indonesia. This is becoming a serious issue as local auto component manufacturers export their products to supply the aftersales markets in 90 countries.

As noted above, the Indonesian automotive industry can only reap benefits from RTAs if there is a clear domestic policy and good infrastructure. With regard to domestic policy, labour regulation has been the main concern of the industry. The new labour law is more one-sided and biased towards labour. This is seen through the high severance pay requirement that is regulated under the labour law. The high level of severance pay has pushed the cost of labour replacement higher, thus reducing the flexibility of the labour market. As such, Indonesia no longer has a comparative advantage of low-cost labour, which, in turn, could hamper the development of IPNs. The survey respondents also highlighted the fact that the Government needed to provide tax holidays or other types of tax incentives in order to attract more investors. Another complaint of the respondents was that the Government never consulted them as part of the policy-making process.

Location-wise, most of the automobile and auto component manufacturers are located in the Jakarta-Bogor-Depok-Tangerang-Bekasi (JABODETABEK) area, which means they are located close to one another. Logically, there should not be a logistics problem in the area, but the worsening traffic congestion has made it difficult for companies

to ship their products along the supply chain. One respondent noted that previously one truck could make two delivery runs in one day. Now, with the traffic becoming seriously congested, one truck can only make one delivery run per day. Clearly, the available road network is unable to keep up with the growth of vehicle numbers in the JABODETABEK area. This poses a serious problem in IPN establishment, for which a good logistics infrastructure is necessary.

6.6. The way forward

The successful expansion of Indonesia's automotive industry depends on three important factors:

- (a) Large investment;
- (b) Product development;
- (c) Economies-of-scale;
- (d) Simplification and harmonization of RoO;
- (e) Development of the logistics infrastructure.

The automotive industry is capital-intensive and requires high start-up investment. As noted above in this chapter, unclear and uncoordinated policies and legal uncertainties are the main deterrents to attracting foreign investments. Thus, the Government of Indonesia needs to take steps to alleviate the problem since resolving the problem mainly lies within its purview.

Indonesian companies also lack product development (R&D) capabilities. The main reason most auto component manufacturers in Indonesia fail to meet OEM demands is because they lack this ability. Most of the local auto component producers are Tier 2 and Tier 3 firms that do not have the ability to design their own products. Product design and development capabilities are essential to enabling local companies to achieve Tier 1 status.

Since the automotive industry is a high-cost industry, economies-of-scale is a critical aspect. The industry needs a large volume of orders for it to be profitable, i.e., exports need to expand. Domestically, Indonesia itself is a big market, but it does not necessarily translate into high demand. In the case of the automotive industry, road networks are critical in increasing the demand for passenger vehicles. Since road networks are relatively well-developed on the island of Java, most of the demand for vehicles comes from that area. However, if road network development becomes widespread in other areas such as Sumatra, Kalimantan and the least-developed eastern part of Indonesia, then demand for passenger vehicles may increase and larger volumes can be ordered. Apart from Java, the dismal development of road networks in other parts of Indonesia is also contributing to the fact that the motorcycle industry is doing relatively better than passenger vehicle sales, since it is easier to move around in such areas using motorcycles.

Another important aspect is the direction of development in the Indonesian automotive sector. Instead of focusing only on the assembly segment of the industry, the Government should focus on policies for developing the auto component industry. As one

industry expert noted, the Japanese automotive industry consisted of a pyramid structure with assembly plants at the top, and supported by Tiers 1, 2 and 3 auto component firms. In Indonesia's case it is an inverted pyramid. Thus, the focus on developing the automotive industry should be directed at auto components, instead of the assembling industry. Further development in the auto components industry is needed for Indonesia to be able to take a more active role in IPNs, as product fragmentation is the current norm. Through the development of parts and components, technology spillover can occur.

A simplification of the RoO procedure in RTAs across East Asia would allow exporters to exploit the benefits of such agreements. For example, the changes in RoO provisions under AFTA, ASEAN-China and ASEAN-Republic of Korea FTAs allow manufacturers to choose between a change in tariff heading or value-added content as the method for determining origin. Another important development towards simpler RoO is the 40 per cent local value-added content set by AFTA, which has been followed by the ASEAN-China and ASEAN-Republic of Korea FTAs. RoO in all RTAs across East Asia that overlap one another should be harmonized to minimize the "spaghetti bowl" effect. A survey carried out by the Japan External Trade Organization in 2006 concluded that more than 60 per cent of firms operating in East Asia felt that RoO across RTAs in the region should be harmonized. Clearly, improvements in RoO would be beneficial to the Indonesian automotive sector.

As a step forward to the implementation of RoO, the Indonesian Minister of Trade recently announced a new law, the Minister of Trade Decree No. 31/2009 on the Issuance Fee for Obtaining Certificates of Origin (CoO). The new law complements the previously released Minister of Trade Decree No. 43/2007 on the Issuance of Certificates of Origin and replaces the outdated Minister of Trade and Cooperative Decree No. 155/1980 on Fees for the Issuance of Certificates of Origin. The new law has established a new entity, under the Ministry of Trade for the issuance of CoO as well as the collection of issuance fees. The new entity is called the Institution for the Issuance of Certificates of Origin (IICoO/Instansi Penerbit Surat Keterangan Asal); it will process CoO applications as well as collect a low fee of Rp. 5,000 (approximately US\$ 0.50) after the certificate is issued. Given the low fee, bureaucracy efficiency also needs to be improved to ensure that the new regulation does not create more problems and delays for exporters. It is hoped that the new law will make it easier for Indonesian automakers to exploit preferential treatment from RoO provisions.

As mentioned above, developing a sound logistics infrastructure is critical to the reduction of service link costs. Thus, Indonesia needs to improve its transport infrastructure, develop better transportation and logistics services, and improve bureaucratic efficiency in handling exported and imported goods. It should also be noted that the term "logistics" refers not only to ports, but also the whole network for delivering goods from manufacturers to markets. Thus, it also includes the land network that connects factories to ports. Since most Indonesian automotive factories are located in the JABODETABEK area, the improvement of road networks from the industrial area to Tanjung Priok Port, in the northern part of Jakarta, is crucial. This is especially important in view of the growing traffic congestion on the toll roads, which has begun to hamper the efficiency of the factories.

6.7. Conclusion

Indonesia is currently the third-largest car market in South-East Asia behind Thailand and Malaysia. Indonesian production figures reveal an increasing trend, although it is expected that production will decline in the wake of decreasing demand due to the present global economic crisis. The proliferation of FTAs is expected to improve Indonesia's position in IPNs. However, certain conditions have to be met first. Investment is one key issue and existing legal uncertainties, as well as policy coordination problems, will have to be addressed to enable more foreign investment to be attracted.

Indonesia is a big market compared to Thailand and Malaysia. However, due to the uneven development of the country's road networks, most of the demand for passenger vehicles comes from Java. The focus of the Indonesian automotive sector should shift from assembling to auto component production in order to exploit the trend towards product fragmentation and the proliferation of IPNs. Indonesia's latest tariff structure provides the opportunity to move in that direction. Nevertheless, the numerous FTAs being signed across the region are undermining the growth of IPNs because of overlapping RoO, which are creating a "spaghetti bowl" effect. To overcome the problem, RoO need to be simplified and harmonized across FTAs in the region. To keep pace with other countries in the region, Indonesia should also develop more effective and efficient transportation and logistics services.