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THE IMPACT OF JAPAN'S EPA ON AUTOMOTIVE INDUSTRY IN MALAYSIA, THAILAND AND INDONESIA

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Abstract

In some ASEAN countries governments have been protecting the local automotive industry to various degrees by implementing several measures. The situation has changed after these countries jumped into the free trade agreement (FTA) bandwagon in early 1990s. This paper examines the impact of Japan's economic partnership agreement (EPA) on the automotive industry with a comparison among Malaysia, Thailand and Indonesia. Japan has designed not only a regular FTA with trade in goods but also an agreement that includes intellectual property, trade in services, dispute settlement, cooperation and many more. Japan has forged a very close economic relationship with ASEAN countries since 1960s and has been playing a significant role in the industrial development process of each country. It is well known that many Japanese automotive manufacturers have set up their subsidiaries and factories in Malaysia, Thailand and Indonesia, and have attained among the top shares in automobiles sales and exports. This study aims to investigate the relationship between Japan and ASEAN's top three producers and markets in automobiles and automotive parts: Thailand Malaysia and Indonesia. The paper is organized as follows: (1) review on the background and current development of automotive industry in Malaysia, Thailand and Indonesia; (2) determine the impact of Japan's EPA on the local automotive industry in these three countries from various aspects; (3) explain the prospects and challenges of the automotive industries in Malaysia, Thailand and Indonesia.

Keywords: FTA, EPA, automotive industry, ASEAN

Introduction

Free Trade Agreements (FTAs) have been proliferating worldwide as intra-regional trade increased rapidly since end of the 1980s. Intra-regional trade share in total non-oil trade for East Asia has increased from 34% in 1986/7 to 52% in 2006/7 (Athukolara and Kohbaiphoon, 2009). The trends emerged significantly after the 1997/98 Asian Financial Crisis due to proactive actions by ASEAN, China and

Japan such as financial packages in Chiang Mai Initiatives (CMI), Asian Bond Fund (ABF), regional cooperation in ASEAN+3 and other sub-regional cooperation in ASEAN countries. Regionalism in Europe and North America has made Asian countries well aware of the trend so that they continue to pursue their own economic block (East Asia Community; EAC).

Multilateral trade negotiations organized by the WTO has shown a stagnated situation during the Uruguay Round, which led to the proliferation of FTAs, particularly in East Asia. These multilateral trade negotiations were mostly concerned about trade liberalization by stronger countries while it can be a disadvantage to weaker and poorer countries. On the other hand, FTAs can be considered as a "custom-made agreement" and the liberalization can bring profits to both countries.

Other reasons why FTAs are more popular are because FTAs are WTO-plus; FTAs can shorten the negotiation process thus avoid higher transaction costs and less procedures. FTAs may serve as building blocks to the WTO multilateral trade process judging by its complementary functions and parallel to WTO commitments (Thangavelu and Heng 2005). However, there is a need to address important issues before the countries involved agree to enter into trade agreements. They must recognize varied objectives and detailed study on the effects of FTAs.

Japan changed foreign trade policy in early 2000 from being the staunchest mulitilateralist (Brooke, 2001) to a country that promotes a dual-track policy approach with its FTA partners. Japan as the world's second largest economy has adopted a dual track policy by pursuing bilateral and multilateral trade agreements.

After 1945, Japan stood alongside the U.S as its commitment to multilateralism. Japanese trade policy has been a U.S-centric policy, particularly after signing the San Francisco Peace Treaty with Allied Powers in September 1951. Japan has been supporting global trade institutions and avoided any type of preferential trade arrangements until the end of the 1990s.

Japan is one of the countries with advantages in technology and capital, so any kind of preferential trade agreements such as FTAs was unnecessary because Japan was able to secure a higher share in trade with Asian countries. After the 1985 Plaza Agreement, Southeast Asian countries accomplished a remarkable export-driven economy growth thanks to the active role of the Japanese in foreign direct investment.

The extensive preferential trade agreements signed in East Asia can result in complex and multi-layered rules such as local contents, shipping rules, investment regulations and other obstacles. Japan has been looking into these problems and has come up with "fairer" and wide coverage sectors with a win-win situation for both Japan and its trade partners. If we look into differences between FTAs and Japan's Economic Partnership Agreement (EPA) and the unique characteristics of both, developing countries in East Asia should take full advantage of economic cooperation with Japan. According to the Ministry of Foreign Affairs Japan, an FTA is an agreement that lowers or eliminates tariffs in

the trade of goods and liberalizes regulations on foreign ownership in trade of services. However, the EPA covers widely from trade in goods, trade in services, intellectual property, investment, trade facilitation, technology cooperation and movement on natural persons, and other issues.

Why do East Asian countries pursue FTAs? FTAs promote export-oriented policies to expand markets thus leading to economic growth and attraction of foreign direct investment (FDI). Historically, Southeast Asian countries implemented import substitution policies with a protectionism approach to their domestic industries but it came to an end when these countries followed new industrializing countries (NIEs) by having put into effect various export-oriented policies that successfully outgrew economic growth.

Views about FTAs in ASEAN differ by countries. Although Indonesia has the largest market in ASEAN, with GDP per capita of US$3,600, Indonesia has to find effective measures to attract more foreign investors to the country. Under the Japan-Indonesia Economic Partnership Agreement (JIEPA), Indonesia has agreed to abolish 328 tariff lines imposed on steel products that are used mainly in automotive and auto parts, electronics, energy and construction. Meanwhile, Malaysia has considered FTAs with great care on the subject that FTAs with any developed country will jeopardize the objectives of national policies and sensitive industries. The liberalization should be paralleled with the development of domestic priorities such as SMEs' development and capacity building. In practice, rules of origin also apply for particular products to limit the impact on sensitive products (ADB, 2008). Thailand is the second country in ASEAN after Singapore that see FTAs as an important agent to enhance competitiveness by fully utilizing natural resources, open new markets and keep FDI inflows. After AFTA, Thailand signed FTAs with New Zealand, China, India, Australia, Peru, US and Japan in addition with two groups: BIMSTEC and EFTA.[1]

The manufacturing industry is expected to become developed, particularly automotive industries using Japanese advanced technologies. The share of manufacturing trade in East Asia to the world has increased from 84% (1984/5) to 91% (2006/7). Although the motor vehicle share of intra-regional trade in East Asia decreased from 28% in 1994/5 to 24% in 2006/7, the trade shares within ASEAN countries increased tremendously by 13% higher than the 12 years before by 12% (Athukolara and Kohpaiboon, 2009). Furthermore, the automotive industry is known to be of interest for countries that move towards industrialization. The significance of automotive industries in East Asia can be seen in growth, income, employment, indirect and direct involvement in many other industries.

Automotive industries require countries to be able to achieve economies of scale in production. In addition, high capital and investments are important for the industry to advance in more complex technology. The automotive industry is also known as the key industry of economic growth where supporting industries would be developed too. ASEAN has a Japanese friendly business environment and infrastructure and a market with a combined population of 560 million people. This explains the domination of Japanese auto-manufacturers in ASEAN from the early 1980s. Japanese multinational companies' economic cooperation within ASEAN

such as the BBC Scheme, AICO and AFTA, has proven that Japan's presence in regional production networks is important for future economic integration.

Against this background, it is interesting to compare the automotive industry in Malaysia, Thailand and Indonesia with the Japanese auto-manufacturers presence in an era of the FTA. This paper will do a number of things. First, it will review the background and current developments of automotive industries in Malaysia, Thailand and Indonesia. The reason for looking at Malaysia and Thailand is that they represent the past and present, while Indonesia represents the future in the study of the developmental stages of the automotive industry with Japanese auto-manufacturers having a pivotal role. This paper will also determine the impact of Japan's EPA as an "upgrade" of FTAs on local automotive industry in these three countries and will look at intra-regional trade and technical cooperation. Finally, it concludes with prospects and challenges that must be faced by Malaysia, Thailand and Indonesia in preparing their local automotive industries for globalization.

Background of Automotive Industry in Malaysia, Thailand and Indonesia

ASEAN countries have been attractive locations for investors because of their cheap labor costs, improved investment environment and favorable economic growth. The top investors in ASEAN (2006) are Japan, the United Kingdom, the United States, Netherlands and Germany. Japanese investors hold 26% of share in 2006 compared to 16% in 2004. Thailand has become the biggest recipient of FDI from Japan in 2007 with 33% share followed by Singapore, with 29% of total ASEAN (ASEAN Statistics 2008). With regard to FDI, Japan accounts by far the largest share in Thailand's manufacturing sectors, 39% of 57.2 billion baht (2008). FDI flows from Japan to Malaysia accounts for 12% share (US $1,571 billion) and the second largest investor after Australia in terms of value. Indonesia received US $1,365 billion FDI from Japan with a share of 9% after Singapore, the largest investor in Indonesia.

Japanese multinational companies have been operating in the ASEAN region for 30 years ago. The flow from Japanese investment into ASEAN has helped the industrial sector develop and transform trade pattern. By developing a unique industrial cluster with a wide range of assembly and manufacturing parts, interdependence trade between ASEAN and Japan has been increasing each year.

The 2008 statistics from UN Comtrade indicated that major import items from Japan were electrical and electronic products (26%), machinery equipment (20%), and iron and steel products (10%). Meanwhile, three major sectors that contributed to the increase of export to Japan are mineral products (33%), electrical & electronic products (17%) and machinery equipment (8%). Wood and wood products are also major items that have been exported to Japan from Malaysia (8%) and Indonesia (4%). Japan's big trade expansion affected the manufacturing industries, thus bringing greater profits from FTAs with Malaysia, Thailand and Indonesia.

The high share of raw materials and parts that Japan imports from Malaysia, Thailand and Indonesia proceeds through free-tariff importation, thus showing a large increase in trade value between them (JETRO 2008). This characteristic is found as a result of Japanese multinational companies in Southeast Asian countries importing parts from Japan in order to assembly and manufacture finished products in their own subsidiaries. Later, multinationals export the products to international markets such as U.S and Europe. A similar trend can be seen in other Asian countries but Thailand has a remarkable kind of trade flow.

It is important for ASEAN countries, particularly Thailand and Malaysia automotive industries, to be ready for global liberalization. The first step is signing a trade agreement with Japan, as it is the strongest country in the automobile manufacturing industry. ASEAN countries can expect to open new markets, improve technologies and productivity through comprehensive and speedy diffusion of Japanese innovations in the manufacturing sector.

Free trade agreements have to be initiated at the government-to-government level to ensure the effectiveness of tariff elimination and other advantages in the agreements. The connections between main industry players with government officials are also important in implementing policies after the agreements in effect.

The automotive industry in Malaysia is mainly driven by the government's policies, while Thailand is driven by private sectors such as U.S. and Japanese auto-manufacturers. Active roles by Nippon Keidairen (Japan Business Federation) have pushed the Japanese government to sign free trade agreements with Thailand with the Japan-Thailand Economic Partnership Agreement (JTEPA) in 2007, and Japan's Ministry of Foreign Affairs signing the Japan-Malaysia Economic Partnership Agreement (JMEPA) in 2006. The different levels of beginning stage will further enable the success of each FTA.

Thailand is more enthusiastic in opening their market to overseas investors than Malaysia and Indonesia. Looking at the background of Malaysian, Thai and Indonesian automotive industries, Thailand's market has a bigger potential to become competitive than the other two countries thanks to the fact that Thailand has no domestic car manufacturers. Many foreign auto-manufacturers come to Thailand to establish their regional production base as Thailand's government offers tax incentives and removes ownership constraints in property and subsidiaries. Thailand can offer these foreign auto-manufacturers a level playing field compared to Malaysia and Indonesia who have been protective towards their own domestic automotive industries. As a measure to prevent more damage to their own automotive industry, Malaysia and Indonesia have also implemented a local content regulation policy.

Looking at the background of each country's automotive industry can determine the policy implemented. Thailand, Indonesia and Malaysia have taken different paths in their automotive industries starting from early 1980s. Malaysia started the automotive industry during ex-Prime Minister Mahathir Mohammad's era where he agreed to create a heavy industry policy that led to the establishment of Heavy Industries Corporation of Malaysia (HICOM) in 1984. Thailand decided to be more competitive by promoting its own automotive industry to foreign auto-

manufacturers. Malaysia decided to joint ventures with Mitsubishi to design the country's first national car, the Proton, and second national car, the Perodua. This was initiated with technological collaboration with Daihatsu, Japan. Thailand's national car concept, *Soluna* was initiated by Toyota in 1996 but failed. Indonesia has also established a national car project, *Timor Putra Nasional*, which was a joint venture with Kia Motor Corporation of Korea in 1996. The project failed during Asian Financial Crisis and was abandoned by both companies.

Now, these three countries have different markets for the automotive industry that is clearly understood by studying the market trends. The Indonesian automotive market is predominantly domestic-oriented where commercial vehicles are better suited with the public. Due to poor road conditions and flexible carrying capacity, commercial vehicles and multipurpose vehicles (MPV) are selling better than sedan or compact cars. However, commercial vehicles particularly are also difficult to export, thus limiting the economies scale of production.

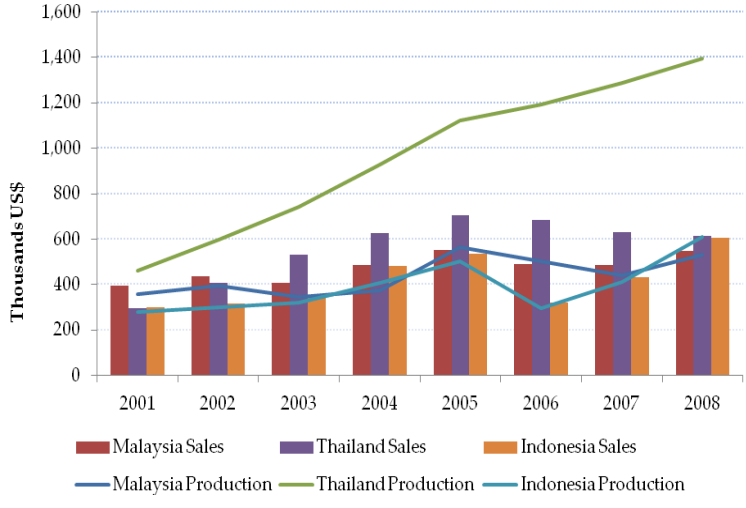
Thailand has already specialized in pick-up trucks and passenger cars. Thailand has decided to introduce the "eco-car" concept in 2007 that started with gradual production in October 2009. Honda, Suzuki and Nissan, with seven other companies, presented investment submissions on the "Eco-Car" project. Thailand has also offered excise duty reduction on E20[2] vehicles and for all eco-cars. After looking at stiff competition from China and India, Thailand has changed its automotive policy from producing small vehicles to eco-cars. Meanwhile, Malaysia has announced a National Automotive Policy (NAP)[3], which will likely pose challenges to Thailand but at the same time could also benefit Thailand's parts manufacturers (Malaysian auto Policy, 2005). Proton has launched its first MPV in the Indonesian market in July 2009. This strategy has benefited to Malaysia as Indonesia has a sizeable middle class market and predominantly an MPV market.

Market liberalization can be competitive among Malaysia, Thailand and Indonesia. Foreign auto-manufacturers such as Japan and Europe are interested in investing in "eco-car" production programs in Malaysia and Thailand. However, Thailand has been offering more incentives and tax relief to global auto-manufacturers than Malaysia. In June 2008, Volkswagen decided to venture its first eco-car production plant in Thailand after long consideration between Thailand and Malaysia (Chalinda, 2008).

Malaysian, Thai and Indonesian automotive market capacity can be interpreted by looking at the production, sales and exports data. Graph 1 shows data on automobiles production and domestic sales in these three countries from 2001 until 2008. Thailand has become the largest automobiles production hub in Southeast Asia and the vehicles produced had reached 1.4 million units in 2008 where commercial vehicles hold the majority share at 71%. Thailand is also the world's second largest producer of pickup trucks after the U.S. One distinguishing characteristic that can differentiate between Malaysia and Indonesia is that Malaysia produced more passenger vehicles than commercial vehicles by 91% and Indonesia produced 4x2 non-sedan including MPVs and SUVs by 69%. Malaysia and Indonesia have similar production capacity from 2001 until 2005 with average

production of 420,000 units per year. In 2008, Indonesia production of vehicles grew at a rate of 46% compared to the previous year of 603,774 units.

Graph 1: Automobiles Production and Domestic Sales in Malaysia, Thailand and Indonesia



Source: OICA, GAIKINDO and Malaysian Automotive Association

Indonesia has the largest population among the three countries, 230 million people with a limited number of high-income households that are able to own a car. Despite of that fact, domestic sales of automobiles in Indonesia have increased rapidly from 318,904 units in 2006 to 603,774 units in 2008 (growth change of 89%). One of the reasons behind the surge of sales is because low interest rate by finance banks with better economic conditions in regional areas. Indonesians were also in a rush to buy cars in order to avoid new progressive taxes that became effective on August 18, 2009 (Pandu, 2009). Thailand's domestic sales declined in 2008 by 3% and Malaysia's sales slightly expanded with 13% change due to new models launched by national cars, Proton and Perodua in early 2008. The Scrappage Scheme offered to all 10-year-old car owners where they can buy new cars from national brands, also contributes to the increase of domestic sales in Malaysia (*WordsAuto.Com*, 2009).

Table 1 shows the exports value of HS8703 (motor vehicles for transport of persons – except buses) and HS8708 (parts and accessories for motor vehicles) in Malaysia, Thailand and Indonesia from 2001 until 2008. Thailand had a similar share between motor vehicles and parts but Malaysia had exported automotive parts and accessories more than motor vehicles to the world by a majority of 75% of total exports in 2008. Indonesia had a majority share in exporting motor vehicle parts and accessories from 2001 to 2007 with an average of US$578 million per year but the exports value for motor vehicles had increased in 2008 by US$ 1,234 million. The increase in exports value from 2006 to 2008 is particularly significant for Thailand

(72% change) and Indonesia (82% change) compared to Malaysia (35% change). In sum, Thailand has emerged as an important production hub for automotive industry but Indonesia has the potential to become one foreign investor taking advantage of various labor intensive supporting industries and a large domestic market. Meanwhile, Malaysia might have to go a long way before it becomes known as a main exporter in the automotive industry in Southeast Asia because of limited competition among local and foreign manufacturers back home.

Table 1: Export Value for Automobiles, Automotive Parts and Accessories (US$ million)

	Type	2001	2002	2003	2004	2005	2006	2007	2008
Malaysia	HS8703	49	88	51	100	104	151	174	197
	HS8708	131	151	212	276	373	424	542	577
	Total	**180**	**239**	**263**	**376**	**477**	**575**	**716**	**774**
Thailand	HS8703	674	528	781	1,129	2,161	2,921	3,854	5,288
	HS8708	490	628	957	1,412	2,120	2,500	3,398	4,095
	Total	**1,164**	**1,156**	**1,738**	**2,541**	**4,281**	**5,421**	**7,252**	**9,383**
Indonesia	HS8703	6	20	30	141	246	366	839	1,234
	HS8708	255	288	380	533	758	909	923	1,088
	Total	**261**	**308**	**410**	**674**	**1,004**	**1,275**	**1,762**	**2,322**

Source: UN Comtrade

The Impact of Japan's Epa on the Automotive Industry in Malaysia, Thailand and Indonesia

ASEAN remains as an important trade partner of Japan since the 1980s. Total two-way trade value between Japan and ASEAN had increased to US$211 billion in 2008. Japan accounts for roughly 12% share of total ASEAN's trade. Together, they created a large market of approximately 700 million people.

The success of certain FTAs depends on whether the partners decide to expand trade in the same industries or not. Japan and ASEAN countries have different comparative advantage products, thus leading to the rise in trade patterns where exchange of manufacturing products for liberalization in agricultural products. This is called "inter-industry trade" from the view of a FTA negotiator (ADB Report, 2008).

Japan's EPA is important for the automotive industry to achieve economies of scale – reducing the cost of production by investing to establish production factories near the target market. Ventures into the next generation of vehicles with the eco-friendly concept and hybrid cars brings cheaper but better quality cars to automobiles market in Asia. The bilateral trade agreements between Japan and ASEAN countries covered tariff eliminations on a wide range of products such as

industrial products, agricultural products, steel products, and many more items that were agreed during negotiation stages.

Many FTAs in Asia have an elaborate tariff elimination schedule with long time frames specific to sensitive sectors in order for local industries to gradually adjust to FTA competitive conditions (Dent, 2006, p. 56). At the early stages of negotiations on sensitive issues in Malaysia, Thailand and Indonesia, they have hampered the progress of EPAs with Japan. Either these sectors or those products were excluded, renegotiated, treated with a quota system or exchange with technical assistance by Japan. Japan has included technical cooperation in EPA as an "exchange card" because they intend to negotiate liberalization on sensitive sectors (agriculture sectors) requested by the other party with it. This way will increase Japan's negotiating power and its influences in concluding FTAs with developing countries.

Table 2: Completed Japan's Economic Partnership Agreements (EPAs) with ASEAN countries

Agreements	Negotiation Start Date	Signing Date	Effective Date
JSEPA (Japan-Singapore Economic Partnership Agreement)	2001.1	2002.1	2002.11
JMEPA (Japan-Malaysia Economic Partnership Agreement)	**2004.1**	**2005.12**	**2006.7**
JTEPA (Japan-Thailand Economic Partnership Agreement)	**2004.2**	**2007.4**	**2007.11**
JIEPA (Japan-Indonesia Economic Partnership Agreement)	**2005.7**	**2007.8**	**2008.7**
JBEPA (Japan-Brunei Economic Partnership Agreement)	2006.6	2007.6	2008.7
JPEPA (Japan-Philippines Economic Partnership Agreement)	2004.1	2006.9	2008.12
AJCEPA (ASEAN-Japan Comprehensive Economic Partnership Agreement)	2005.4	2008.4	2008.12
JVEPA (Japan-Vietnam Economic Partnership Agreement)	2007.1	2008.12	2009.10

Source: Ministry of Foreign Affairs, Japan

Table 2 shows the completed EPAs between Japan and ASEAN countries. JMEPA, JTEPA and JIEPA were enforced from 2006 to 2008, and the early impacts of Japan's EPA can be found from trade and investment within this period. Furthermore, the author found that other than the agriculture sector, automotive industry related sectors are similarly negotiated in the bilateral trade agreements with Japan. In conclusion, automotive sector is important to ASEAN countries and Japan, and should be studied in detail.

Table 3 is the summary of tariff reduction and elimination schedules that were agreed upon in JMEPA, JTEPA and JIEPA. The tariff items can be divided into two categories: automotive parts and automobiles itself.

Table 3: Tariff Elimination Schedule for Malaysia, Thailand and Indonesia for Automotive Sector under Japan's EPA

	Type	JMEPA	JTEPA	JIEPA
Parts	CKD	Immediate	2011 (Sensitive parts by 2013)	2012
	Non CKD	2010	2010	2012
Automobiles (CBU with Engine Capacity)	Exceeding 3000 cc	2010	Reduce from 80 to 60% by 2009. 2010 (renegotiate)	2012
	2000 – 3000 cc	2011	2013 (renegotiate)	Reduce to 0-5% by 2012
	Others	2015		

Source: Ministry of Foreign Affairs, Japan

Here, we can see that all three countries are looking to enhance competitiveness and market expansion in the automotive industry, particularly Malaysia where immediate tariff elimination applies to all CKD automotive parts. These parts are compulsory to assemble automobiles for automotive makers in Malaysia and export them to the world market, particularly Japan, U.S and Europe. Local assemblers that procure parts from Japan are enjoying the benefits from this FTA but at the same time they have to face the challenge of the higher standard of Japanese designs, quality, brand, price, fuel efficiency and they need to sustain their position in the domestic market.

It is argued in the ADB (2008) report that a longer phase-in period means a longer wait until the full benefits of the FTA can be achieved and differences in the phase in will lead to inappropriate increases in some effective protection rate. Like the case of Malaysia that produces two national cars (Proton and Perodua), Malaysia tries to limit the impact of FTAs by gradually reducing the import duty on cars with engine capacity below 2000cc by 2015.

Automobiles with engine capacity of 1500cc and 1800cc hold the largest share in Malaysian market. In 2007, Perodua retained its position as the largest seller in the domestic market (33%) while Proton's share was 24% with 118,134 units and Toyota was third with 17% share (81,993 units). The tariff reduction by 2012 only applies to automobiles that do not compete with Malaysian national car models. Due to the global economic crisis, many customers opted for smaller engine-capacity cars or more fuel-efficient cars.

According to the Japanese Automobile Manufacturers Association (JAMA), the quality of Thailand automotive parts is the best among ASEAN countries. The signing of JTEPA can benefit the Japanese automotive makers in producing more quality and cost-competitive vehicles. Thailand hosts not only Japanese auto-makers but also non-Japanese (U.S and European) auto-makers because of the Thailand-US Treaty of Amity since the Cold War. One of the reasons why Japan

formed an FTA with Thailand is because their position in Thailand is unfair compared to U.S and European companies. This explains the reluctance of Thailand to reduce import tariff for vehicles with engine capacity under 3000cc because of pressures given by non-Japanese automotive manufacturers.

Table 4: Export Share (%) of Complete Vehicles, Auto Parts & Accessories

Year	Malaysia		Indonesia		Thailand	
	Motor Vehicles	Parts & Accessories	Motor Vehicles	Parts & Accessories	Motor Vehicles	Parts & Accessories
2003	19	81	12	88	45	55
2004	27	73	34	66	44	56
2005	22	78	40	60	50	50
2006	26	74	46	54	54	46
2007	24	76	61	39	53	47
2008	25	75	68	32	56	44

Source: Compiled by author, UN Comtrade

As many have known, ASEAN has long depended on high quality and value added automotive parts from Japan. Engines, chassis, gear boxes and drive axles are among the main automotive parts imported from Japan. In 2008, Thailand's share of ASEAN automotive parts imported from Japan was about 54%, followed by Indonesia at about 33% and Malaysia at about 8% of total ASEAN imports value.

Malaysia has been promoting the manufacture of auto-parts and accessories for its own national car industry and many supplier development programs were established in order for them to improve the quality of parts, productivity and move from a lower-tier to a top-tier position. Many Japanese automotive makers worldwide have decided to outsource their auto parts from Japanese auto-parts makers in Japan to Southeast Asian countries for cheap cost in wages and utilities which can be seen from the larger share of export value in parts and accessories from Malaysia, Thailand and Indonesia. The trend is most significant in Malaysia where more than 70% of auto-related exports are from parts and accessories from 2005 until 2007. Most of the parts and accessories are radio-cassettes and speakers.

Meanwhile, Indonesia has reduced its export in automotive components and shifted to exporting more of the complete motor vehicles from 2007 and the share had increased to 68% of the total export in 2008. One of the reasons is because the auto-manufacturers were producing higher volume of vehicles for domestic markets and at the same time were exporting vehicles to Thailand and Malaysia. While Thailand is known as the largest production base for commercial vehicles and good quality auto-parts, the export share between them is almost similar from 2005 until 2008.

From here, we can say that the immediate tariff elimination in JMEPA will have positive impact on Malaysian export of automotive parts. Indonesia has set the tariff reduction of 0-5% by 2012 and it will see an increase of export value in motor vehicles more than parts and accessories. Thailand may expect a slower

impact as the tariff reduction scheduled for automobiles and parts will only be reduced by 2012 as agreed in the JTEPA.

Technical Cooperation in EPA

Economic cooperation in the automotive sectors under JMEPA, JTEPA and JIEPA is aimed to lift the capabilities and enhance competitiveness of local companies. Malaysia-Japan Automotive Industry Cooperation Programmes (MAJAICO) was initiated under JMEPA with 10 sub-programmes in November 2006. Japanese experts in the automotive industry were sent to various Malaysian companies to teach the Japanese Lean Production System. Within five years, 150 companies are expected to benefit from this program. In addition, staffs from Proton, Perodua and SIRIM are sent for training to Japan to acquire skills through on-site jobs, and learn to design press and die for automotive parts and components. The Advanced Technology Centre in Shah Alam, Malaysia has developed new training modules under the supervision of Japanese experts to train the trainers and upgrade the worker's skills for the development of the automotive industry. As a result, under MAJAICO, local automotive manufacturers successfully reduced the defect ratio during painting of aluminum parts from 42% to 8% only in six months of technical assistance. In addition, the inventory system was improved where previously 2,480 pieces per hour from total stock were reduced to 180 pieces per hour with up to 90% improvement rate. In production of parts, one worker was able to produce 21 pieces per hour compared to 31 pieces per hour before the firms took part in MAJAICO programmes (Nichima jidousha, 2008).

Automotive activities in Thailand are more focused on assembling rather than research and development (R&D), product development and marketing. Aiming to become the "Detroit of Asia", Thailand agreed with the Japanese government to formulate two main projects under JTEPA: the Japan-Thailand Steel Industry Cooperation Programme and the Automotive Human Resources Development Institute. Thailand's steel industry is considered a sensitive sector to open up in the negotiation but through JTEPA, Thailand hopes to increase their workers knowledge and know-how in the steel industry by cooperating with Japan to support education for Thai steel engineers and strengthen its technological basis to improve the quality of domestic-produced steel.

JIEPA has more unique characters than JMEPA and JTEPA, where the pact is concentrated on the energy development sector and movement of natural persons. Japan and Indonesia also concluded in the agreement to jointly collaborate in the Initiative for Manufacturing Industry Development Center to enhance competitiveness in the manufacturing industry.

Automotive Industry and Trade With Japan

The ASEAN market has long been dominated by Japanese auto-manufacturers with their highly efficient and cost competitiveness among global players. Japanese (Toyota) lean production innovation is stated to be one of the major reasons why

Ford's mass production failed to occupy the top major shares in ASEAN market (Nag and De, 2008). Toyota has gained top market share in Thailand and Indonesia with 44% and 35% of shares respectively. In Malaysia, Toyota scored the third place after Proton and Perodua with 19% share. However, Proton depended on Mitsubishi technology and Perodua is a joint partnership with Daihatsu, hence Japanese automakers still hold the top position. Other than the Malaysian domestic market, Japanese car brands have grabbed among the top places in Thailand and Indonesian markets with more than 90% in each country. In sum, Japanese auto-manufacturers will find that it is profitable to expand their business in Southeast Asian countries, as the market share will continue to surge along with new model lineups.

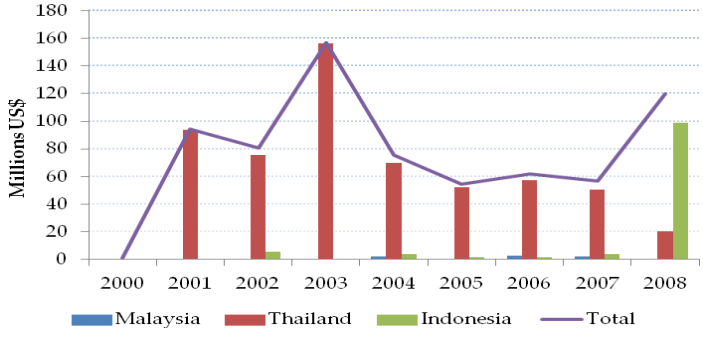
Table 5: Share of Japanese Car Brands in Malaysia, Thailand and Indonesia

Brand Name	Malaysia (2008)	Thailand (2007)	Indonesia (2008)
Toyota	19	44	35
Mitsubishi	1	4	14
Daihatsu	1	n.a	13
Suzuki	1	n.a	12
Isuzu	1	24	4
Nissan	6	3	5
Honda	6	9	9

Source: GAIKINDO, Ernst & Young (2008), Autoworld

When Japan negotiated bilateral trade agreements with Malaysia, Thailand and Indonesia, the main objective was to strengthen economic relationships through trade promotion with countries that have higher tariff rates. Malaysia, Thailand and Indonesia have high MFN tariff for machinery and transport equipment (James and Ramstetter, 2005).

Graph 2: Export of Automobiles (HS8703) to Japan

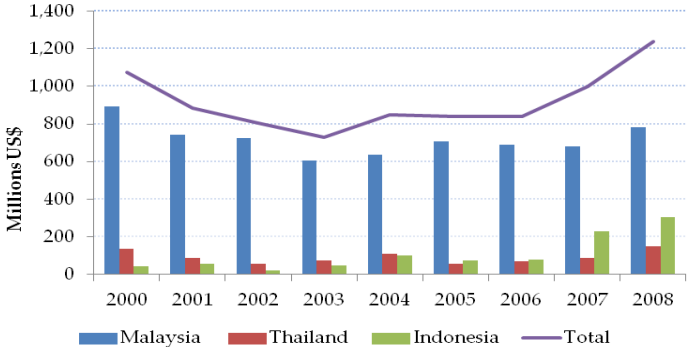


Source: UN Comtrade

Impact from Japan's EPA can be seen from the trend of export and import value under two categories: automobiles and automotive parts. The total number of exports to Japan is unstable year by year but the export value in 2008 has

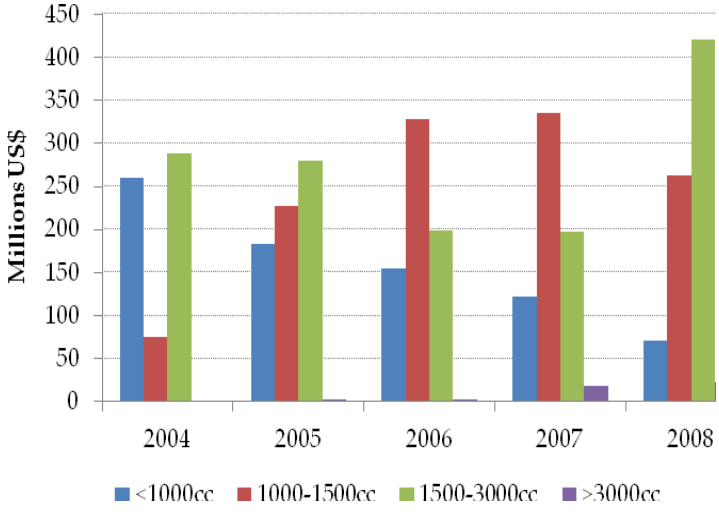
doubled since 2005 with US$ 120 million. From 2000 until 2008, Thailand exported automobiles to Japan with the highest value in 2003 (US$ 152 million) but the amount decreased year after year until 2008 with US$20 million. Indonesia took Thailand's top place to export automobiles to Japan in 2008 nearly five times higher by US$ 99 million. One of the main reasons is because PT Astra Daihatsu Motor Indonesia has agreed to supply 18,000 units of 1500cc Toyota's pickups and minibuses to Japan from 2008 (Daihatsu Indonesia Unit, 2008).

Graph 3: Import of Automobiles (HS8703) from Japan



Source: UN Comtrade

Graph 4: Vehicles Imported from Japan According to Engine Capacity (Malaysia)



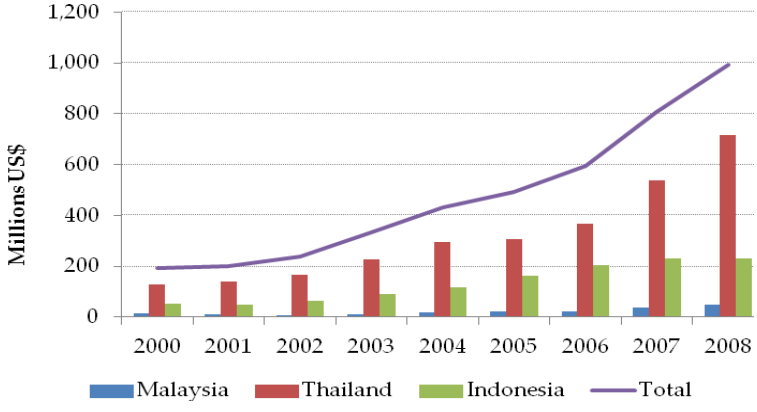
Source: UN Comtrade

In terms of imports from Japan, total import value of three countries in 2008 has increased compared to 2005 by US$ 1,239 million. Malaysia has the

highest import value compared to Thailand and Indonesia. In 2008, the import value had increased 13% than previous year by US$ 781 million, three to six times higher than neighboring countries. Major import categories were vehicles with engine capacity of 1500cc to 3000cc (US$ 421 million) and automobiles with engine capacity of 1000cc to 1500cc (US$ 263 million). Interestingly, Malaysian vehicles with engine capacity exceeding 3000cc had gained a certain import growth in 2008 by nearly eight times higher than import value in 2005 (Graph 4).

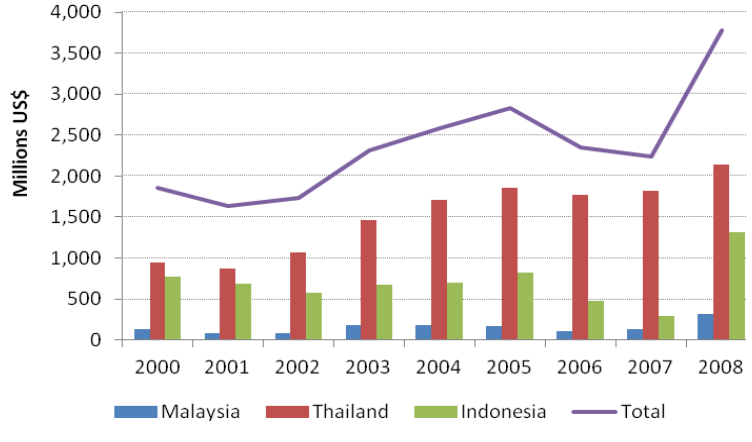
As for exports of automotive parts and accessories for vehicles (HS8708), total exports has increased in value from US$ 194 million (2000) to five times higher with US$ 995 million (2008). Thailand has the largest share with 72%, Indonesia 23% and Malaysia 5% in 2008. Comparing 2006 and 2007, the increase in Thailand's exports has ranged from 33% to 46%. This shows that Thailand and Japan's trade relationship in automotive industry is strong and vibrant.

Graph 5: Export of Automotive Parts and Accessories (HS8708) to Japan



Source: UN Comtrade

Graph 6: Import of Automotive Parts and Accessories (HS8708) from Japan



Source: UN Comtrade

The total imports value is marked with an increase trend from 2001 until 2005 with average growth of 15% per year. In 2008, the value expanded tremendously by 68% compared to previous years with more than US$ 3,000 million. Thailand shows the highest import value for automotive parts and accessories from Japan from 2000 until 2008. The increase of import value in 2008 is also contributed to the fact that Thailand imported many engine parts, lithium batteries, electric motor and other eco-car parts and components from Japan while Indonesia has increased its imports significantly from 2007. Malaysia had the lowest import value for automotive parts and accessories from Japan but it has been increasing slowly since 2007. The sudden increase in Indonesian imports of parts and accessories has the same trend with the increase in export of automobiles to Japan in 2008. The growth in the assembly sector has increased demand for parts and components. However, Indonesia has a low local content in pickup trucks (40%) and passenger cars (10%). The more they depend on import parts, the higher the cost in production and operation will be.

Automotive Trade among Malaysia, Thailand and Indonesia

The stiff competition in automotive markets among Thailand, Malaysia and Indonesia has shown that global auto-manufacturers need to gain benefits from existing FTAs in ASEAN. Previously the Germany auto-manufacturer Volkswagen was expected to join partnership with Proton in 2004 but the talks failed because the Malaysian government disagrees with Volkswagen ideas of transforming the national cars policy (Porter, 2009). In 2011, Volkswagen invested US$ 140 million to set up its first manufacturing plant in Indonesia where the government will lend support by providing tax incentives to Volkswagen. The recent effective Japan-Indonesia Economic Partnership Agreement (JIEPA) has also benefited Volkswagen with the long-term plan to use the Indonesian plant to supply automotive parts and complete vehicles to Japan (Wright, 2009). Unless the Malaysian government changes its automotive policy to invite more foreign auto-manufacturers, other ASEAN countries will grab the chances as globalization grows rapidly.

Between 1999 until 2008, inter-regional trade on automotive related parts (HS87) among Malaysia, Thailand and Indonesia has expanded significantly. Trade between Thailand-Malaysia is stronger than trade between Thailand-Indonesia and Indonesia-Malaysia in 1997 to 2000. But Thailand and Indonesia showed increase trade interdependence from 2006 (US$ 960 million) to 2008 (US$ 2,270 million). In period 2006-2008, total trade in Malaysia, Thailand and Indonesia has grown roughly about two times higher (US$ 7,591 million) than 2003-2005 (US$ 3,721 million). Indonesia depended on imports of automobiles and automotive parts from Thailand and the number has been expanding particularly from 2007 to 2008 with US$ 1,193 million to US$ 2,270 million. Meanwhile, Indonesian exports rate to Malaysia has increased by 93% in 2008 compared to the previous year and also with Thailand by 62%. The deepening trade interdependence between Indonesia and Thailand is growing at a similar rate as trade expands between two countries

with Japan. In 2008, Thailand and Indonesian import share of automotive parts is 80% of the total ASEAN imports value from Japan, compared to the 59% share in 1998. This suggests that in the future, there will be a strong connection between automotive supporting industries in Thailand and Indonesia with Japanese auto-manufacturers.

As a whole, direct and significant impacts of Japan's EPA on exports are limited but indicate an increase in imports from Japan and trade activities within ASEAN countries. Other than Japan's EPA technical cooperation, Japanese auto-manufacturers provide major assisting programs to the automotive industry and their supporting industries such as electrical and electronics industry and steel industry by joining the partnership with local auto-manufacturers (technology transfer) and participating in the regional technical agreements and upgrading skill training for local employees. In 2008, Toyota established a new R&D centre in Thailand for Toyota workers around ASEAN countries to improve their skills in producing a better quality of vehicles.

Prospects and Challenges

ASEAN is becoming more important as a main player in the global automotive industry. With Thailand as the automobile and automotive parts production hub in Southeast Asia, neighboring countries such as Malaysia and Indonesia will benefit from the complementary production networks under Japanese multinational companies' pivotal role. Japanese automotive part makers located globally will have to compete with emerging auto-manufacturers from China and India, particularly in producing high-quality but cost-effective vehicles and parts. Thus, signing free trade agreements with ASEAN countries will ensure Japanese auto-manufacturers an enhancement of their products' competitiveness in the world market. At the same time, they could indirectly contribute to raise the competency of automotive industry workers in ASEAN and provide new opportunities for local supporting companies to supply better quality with cheaper cost automotive parts. Furthermore, through elimination tariffs in auto parts and raw materials to produce auto parts, Japan hopes to facilitate a win-win situation with ASEAN countries by giving support in technical assistance and capacity building in manufacturing industry.

With China's rapid economic growth and large population, it seems inevitable that China may become the largest automobiles market in the world. China's automotive sales have achieved 25% annual growth since China entered the WTO in 2001. Thus, the ASEAN-China Free Trade Agreement (CAFTA) will benefit Malaysia, Thailand and Indonesian local auto-manufacturers by investing in China and take full benefits from the agreement. So far, Chinese auto-manufacturers such as Chery Automobile and Geely Automobile have plans to invest new assembly plants in Indonesia. Geely Automobile decided to change location to Indonesia after they scrapped their plan in Malaysia due to rejection from the government as direct competition to Proton (Geely to make cars, 2006).

Nonetheless, a number of challenges remain. As liberalization of the automotive market in Asia widens, it threatens local car manufacturers. Malaysia protects not just its own national cars, Proton and Perodua but also Proton and Perodua's local suppliers of auto parts as well. In order for these local suppliers to survive in a global liberalization era, they need to come out with innovative, cost competitive and quality parts by collaborating with other foreign manufacturers in R&D development, invest in training of workers and most of all create a new marketing strategy in ASEAN and the global market particularly. Pressure from other auto-manufacturers will also increase competitiveness of local auto-manufacturers once AFTA was fully implemented in 2010.

Indonesia also has many obstacles before its automotive industry can develop to the same level as Malaysia and Thailand. Infrastructure development can contribute to the economic growth and reducing poverty gap in Indonesia. Underdeveloped logistic infrastructure is one of the major challenges faced by the government as improvement in this area will increase the efficiency of the 'Just in Time' system (JIT: delivery at accurate time) of Japan's auto manufacturers.

Japanese investors are concerned about Thailand's political instability that currently has no real impact on the companies' profits. In the long term, the new government has to change or extend the implementation of the old government's policies. The economic growth will be slowing down hence reducing spending by consumers.

Small medium enterprises (SMEs) in ASEAN countries will face bigger challenges when the market gradually liberalizes. Chances to survive in the globalization era are small if the governments in each country do not support nor create a suitable investment environment, incentives for R&D development and intellectual property rights. By creating a technical group among parts makers, they could stand out in producing innovative automotive parts. Other than that, SMEs should also standardize parts for automotive sectors and other sectors such as electrical and electronics, machinery. The more their parts are used in other sectors, they could save costs by producing in big quantity.

Conclusion

It is impossible to see the full impact of Japan's EPA on the automotive industry in Malaysia, Thailand and Indonesia within two or three years after the agreements took effect. Thus, the author feels that this paper could only contribute to some of early fact-findings and in addition, further research should be explored in her doctorate dissertation.

This paper has come to several conclusions. First, the trade performance between Japan and its EPA partners is increasing each year. However, JMEPA has less impact on automotive sectors than JTEPA and JIEPA. It is either the impacts on trade are short-lived or only few Japanese automotive firms fully utilize the EPA between Japan and Malaysia. For Thailand and Indonesia, market and government policies are open to foreign auto-manufacturers. Thus, the impacts are significant,

particularly on imports of parts from Japan and exports of complete vehicles to Japan.

Second, Japanese suppliers for the automotive manufacturers tend to relocate their factories to be near the assembly plants. Hence, intra-regional trades among Malaysia, Thailand and Indonesia in automotive parts and components are expanding with inter-firms relations in R&D development and technical training of workers. It is the government's role to ensure that automotive investors feel welcomed in the country by providing a stable investment environment, attractive incentive tax and transparency. By opening the market to foreign investors, local companies should enhance their competitiveness by joint-venture through FDI and technology transfer.

Finally, if the WTO is considered law, then an EPA is considered as a contract (Kotera, 2007). Local automotive companies are not aware of economic cooperation Japan's EPA, and efforts should be done in order for them to fully take part in the programmes and contribute to the success of FTAs.

Endnotes

[1]BIMSTEC stands for Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation. Members are India, Bangladesh, Myanmar, Sri Lanka, Bhutan and Nepal. EAFTA stands for European Free Trade Association with members countries are Iceland, Switzerland, Norway and Liechtenstein.

[2]A blend of fuel containing 80% gasoline and 20% ethanol.

[3]At the time this paper was written, Malaysian government has reviewed the NAP and just come out with a new and more liberalized policy. The announcement included 1) termination of open Approved Permits (AP) by 2015, 2) prohibition to import used cars from 2015 and used automotive parts and components from June 2011, 3) A scrappage scheme of old vehicles and mandatory inspection for vehicles aged 15 years old or older, 4) Full ownership on manufacturing licenses for passenger vehicles with engine capacity 1,800cc and above, and priced not less than RM150,000, 5) Incentives for local assembly and manufacturers of hybrid and electric vehicles with their components, 6) A new strategic partnership between Proton and a globally-established original equipment manufacturer (OEM) (*The Star Online*, October 29, 2009).

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