

Competition in ASEAN- the Rise of the Automobile Fastener Industry in Thailand

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Thailand, with Its Fast Development in Automobile Manufacturing, has been Regarded as the Detroit of Asia

Thailand is a new export-oriented economy. Manufacturing sector has been the most important sector of Thailand and comprises 43% of its GDP (its service sector comprising 44% of its GDP and its agriculture comprising 13% of its GDP). The economy of Thailand was originally expected to reach 4% growth in its total GDP in 2013, though it did grow 4.1% compared to the corresponding period last year. After the seasonal adjustment its GDP in 2013 exhibited a decline of 1.7% in Q1 and a decline of 0.3% in Q2, a recession in the consecutive quarters. Technically, the economy of Thailand was then in recession, and it exhibited a growth of 7.7% in GDP in 2012; however, in 2013, it exhibited a small growth of 1.8% in GDP. With its instability in political and economic conditions, such trend of economic decline may continue to 2014.

In 2012, the government of Thailand raised the daily minimum wage to 300 bahts (about US\$10) in seven major provincial jurisdiction cities, resulting in a big jump of 40% in wage in Thailand in 2012. In 2013, the government of Thailand extended the daily minimum wage to the rest of the country and tried to minimize the fluctuation in the prices of daily goods, successfully lowering its inflation from 3.0% in 2012 to 1.9% in 2013 and hence enhancing the purchasing power of general public and boosting its consumer confidence. These measures made great contributions to the overall economic condition of Thailand. In addition, in 2013, thanks to the boom in its manufacturing sector and tourism industry, unemployment in Thailand was merely 0.7%, compared to 8.4% for the world, 7.3% for the U.S., 7.4% for Philippines, 6.6% for Indonesia, 3.1% for Malaysia, 1.9% for Singapore, 1.3% for Vietnam, 3.2% for Korea, and 4.1% for China, Taiwan, and Japan.

As illustrated in **Table 1**, the top five categories exported from 10 countries of the ASEAN in 2013 were "electrical/electronic equipment", "petrification", "machinery", "nuclear reactors", "vehicles" and "plastics". In the automobile industry, Thailand ranked the top among the 10 countries of the ASEAN and this category comprised 11% of its GDP (followed by "financial service sector" (9%), "electronic components industry" (8%) and "tourism industry" (6%)). Thailand's

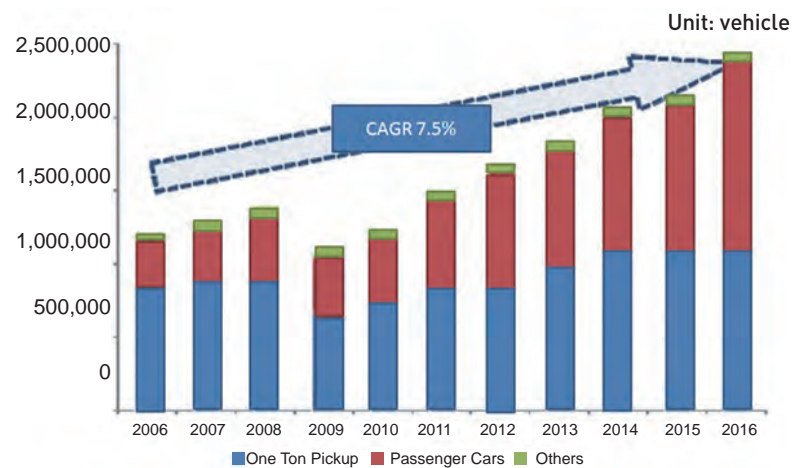
Table. 1 Top 5 Categories Exported from 10 Countries of ASEAN from 2010 to 2013 in Terms of Exported Value

Unit: million USD

Product	Export value in 2010	Export value in 2011	Export value in 2012	Export value in 2013
Electrical, electronic equipment	235	247	260	284
Mineral fuels, oils, distillation products, etc	165	231	229	220
Machinery, nuclear reactors, boilers, etc	132	132	139	142
Vehicles other than railway, tramway	30	31	40	40
Plastics and articles thereof	31	38	39	39

Data source: International Trade Centre, compiled by MII of MIRDC (July 2014)

Fig. 1 Growth of Automobile Production in Thailand from 2006 to 2016



Data source: Frost & Sullivan, compiled by MII of MIRDC (July 2014)

automobile industry comprises 709 companies: 287 of them are foreign-owned companies; 68 of them are partially domestically owned companies; 354 of them are thoroughly domestically owned medium-size and small-size companies. These 709 companies provide more than 0.3 million jobs. In terms of the production of one-ton pickup truck, Thailand ranks the top in the Asian Pacific region. In terms of automotive assemblers, Thailand ranks 5th in the Asian Pacific region and top in the countries of the ASEAN. In 2013, Thailand produced 2.46 million automobiles and ranked top in the countries of the ASEAN. It is expected that 3 million automobiles will be manufactured in Thailand in 2016 (at the CAGR of 7.5%), as shown in **Fig. 1**. In addition, only next to Shanghai and Taipei, Bangkok is the city closest to the geographical center of Asia. Such geographical position of Thailand would work in favor of the distribution of auto parts in automobile manufacturing.








The big five Japanese automakers have dominated foreign-owned automakers in Thailand. Toyota's plants are located in Samrong, Gateway and Banpho. Isuzu's plants are in Samutprakarn and Gateway. Mitsubishi's plant is situated in Laemchabang. Honda's plant is in Ayutthaya. Nissan and Siam Motors jointly established Siam Motors & Nissan Co., Ltd., with Nissan owning 75% of it. Siam

Motors & Nissan Co.'s plant is located in Bagna Trad. As illustrated in **Table 2**, the amount of automobiles produced by these five Japanese automakers is expected to comprise more than 70% of all automobiles produced in Thailand in 2016. Each big foreign automaker has either expanded its production capacity or has erected additional production line. **Table 2** also bears additional amount that each big foreign automaker invested into its plant from 2009 to 2012. For example, in July 2011, Ford invested US\$ 0.45 billion to erect a plant able to produce 150,000 automobiles per year in Rayong, making Ford the top among these foreign automakers in terms of investment in Thailand. In the past five years, Ford has invested US\$ 0.69 billion in Thailand.

Cluster Formation of Automobile Production Chain in Thailand

Typically, the weight of fasteners comprises 4.5% of the weight of an automobile. On average, an automobile has 2,500 fasteners. Therefore, many types of fasteners are needed for automobiles. Fasteners are fitted to the following parts: (1) Engine and transmission (including engine, electrical parts, steering wheel and transmission) (2) Chassis (fluid carrying elements, brake system and pump) (3) Body (locks and suspension system) (4) Other parts (air bag and safety seats) (please see **Fig. 2**). In addition, please see **Fig. 3** for the types of fasteners commonly used for automobiles. An automobile is usually designed

Table 2 Multinational Automakers in Thailand and Their Investment and Projected Output in 2016

Multinational automaker	Brand name	Amount of investment (unit: million baht) from 2009 to 2012	Projected output in 2016 (unit: 1,000 vehicles)
Toyota Motors		6,600	730
Isuzu Motors		NA	266
MMIC		7,700	208
Honda		6,700	273
GM Motors		NA	250
Auto Alliance		20,800	275
Siam Motor & Nissan	 Siam Nissan Automobile	5,500	212
Other			120
Total			2,333

Data source: Frost & Sullivan, compiled by MII of MIRDC (July 2014)

in such way: When one or more parts are deformed or damaged, the corresponding fasteners should be deformed or just break. Therefore, fasteners fitted to automobiles should not be too strong or sturdy in terms of tensile strength. Fasteners serve to connect various key parts with the body. Though their cost only comprises 2 to 3% of the cost of the entire automobile, their importance is no less than that of the engine and steering wheel because they are closely correlated with safety. In addition, because the production of automobiles is highly automated, fasteners with poor quality would render the assembly line stop operating. Therefore, fasteners must have a very high yield rate, preferably close to 100%. Hence, fasteners used for automobiles may be regarded as products of high value as compared to regular types of fasteners.

Most of the local fastener manufacturers in Thailand are medium-size and small-size manufacturers, such as Atlantic Yuki Thailand, Dura Fasteners and Thaisin Metal Industries. These local fastener manufacturers are facing severe competition posed by fastener manufacturers of China, Japan and Taiwan. However, only a small portion of

fasteners produced by foreign-invested fastener manufacturers are used for automobiles. Japan ranks top in terms of the number of foreign-owned fastener manufacturers, such as Aoyama Seisakusho, Fuserashi, Meira, NHK Spring, NIFCO, Nitto Seiko and Piolax. Also, either Böllhoff of Germany or Stanley Black & Decker of the U.S. has a fastener-manufacturing plant in Thailand. In addition, Tycoons of Taiwan also has a fastener-manufacturing plant in Thailand. Other multinationals only have business establishment to sell or distribute their products.

In Thailand, automobile fastener manufacturers are usually situated near automobile plants to form a cluster of production chain, as illustrated in **Fig. 4**. The largest cluster is in the central region of Thailand: There are about 230 automobile parts and fastener plants in the Bangkok industrial area and there are 158 automobile parts and fastener plants in the Samut Prakam industrial area thanks to the presence of a harbor near Bangkok, Chonburi and Rayong.

In 2013, US\$ 3.18 billion worth of fasteners (about 7.2% of the global market) were imported into the countries of ASEAN; US\$ 1.7 billion worth of fasteners (about 4.3% of the global market share) were exported to the world. Thailand ranked top in terms of either the import or export value among the 10 countries of ASEAN. In 2013, US\$ 1.15 billion worth of fasteners (about 2.6% of the global market share) were imported into Thailand (about 40% of the ASEAN's import value); US\$ 0.5 billion worth of fasteners (about 1.3% of the global market share) were exported from Thailand (about 30% of the ASEAN's import value). This trade deficit of the fastener industry of Thailand, in which wage level and government subsidies are quite reasonable (as compared to its competing countries), is probably attributed to the greater domestic demand for fasteners in Thailand than the supply. Please see **Table 3**.

The automobile industry has exhibited fast development in Thailand. In 2013, 1.33 million automobiles were sold in Thailand and this made a great contribution to the increase in the demand for automobile fasteners. In addition, the growth in the manufacturing sector has increased OEM's

demand for fasteners. In Thailand, in terms of the fastener market, demand surpassed supply. In 2013, the major countries in terms of fasteners imported into Thailand included Japan, China, Malaysia and Taiwan. Fasteners imported into Thailand from Taiwan comprised 6.9% of the fastener import market of Thailand. Please see **Table 4**. In the aspect of fastener export market of Thailand in 2013, the five major export destiny countries were the U.S., Indonesia, Japan, Germany and Malaysia.

The fastener market in Thailand has been growing steadily thanks to the fast growth of the automobile industry in Thailand, the strong growth in fixed investment and the demand for durable goods, the strong demand in the domestic market and the increase in sales to its export destiny countries. However, such steady growth may be stifled and weakened by the severe competition posed by cheaper fasteners with inferior quality in Thailand and the global market. It is estimated that in the future, fastener demand in Thailand will exhibit an annual growth of 8.7% and will reach US\$ 1.23 billion in 2016. **Table 5** bears the fastener import data of Thailand from 2009 to 2013. **Table 6** contains the fastener export data of Thailand from 2009 to 2013. As illustrated in **Table 5**, the CAGR of import amount from 2009 to 2013 exceeded 20%; in 2013, the average import price was US\$ 6.9/Kg. As illustrated in **Table 6**, the CAGR of export amount from 2009 to 2013 also exceeded 20%; the average export price has been maintained at the ball park of US\$ 3.2/Kg from 2011 to 2013.

With the Political Unrest in Thailand and Its Competing Countries, Its Leading Position in Automobile Manufacturing in ASEAN May be Undermined

After the large-scale anti-government rallies took place in November 2013, the rallies forced the former prime minister Yingluck Shinawatra to dismiss the House of Commons on Dec. 9, 2013. After the election of new members to the House of Commons was decreed as invalid, the Thai government has so far remained in a guarded state and its fiscal capacity is limited. At the end of 2012, the manufacturing sector of Thailand suffered great loss by the flood; the former government intended to pass a flood aid budget of US\$ 11.7 billion in 2014. However, the approval of the budget will have to wait until the official inauguration of the new government. The political and civil uncertainty will continue to adversely affect the domestic demand.

The political unrest has adversely affected new

Table 5 Fastener Import of Thailand from 2009 to 2013
Units: value (in 10 thousand USD), amount (in metric tons), average price (in US\$/Kg)

Item	2009	2010	2011	2012	2013	CAGR%
Import Value	68,561	94,582	104,084	126,549	115,503	13.93%
Import Amount	75,383	120,976	143,612	178,641	166,480	21.91%
Average Price	9.1	7.8	7.2	7.1	6.9	-6.68%

Data source: Customs import and export data bank of the TIER, compiled by MII of MIRDC (July 2014)

Table 6 Fastener Export of Thailand from 2009 to 2013
Units: value (in 10 thousand USD), amount (in metric tons), average price (in US\$/Kg)

Item	2009	2010	2011	2012	2013	CAGR%
Export Value	25,493	39,062	52,314	48,016	50165	18.4%
Export Amount	74,264	109,366	161,091	152,507	155890	20.4%
Average Price	3.4	3.6	3.2	3.1	3.2	-1.5%

Data source: Customs import and export data bank of the TIER, compiled by MII of MIRDC (July 2014)

Fig. 2 Different Parts Fasteners are Fitted to

Data source: PennEngineering Automotive Fasteners, compiled by MII of MIRDC (July 2014)

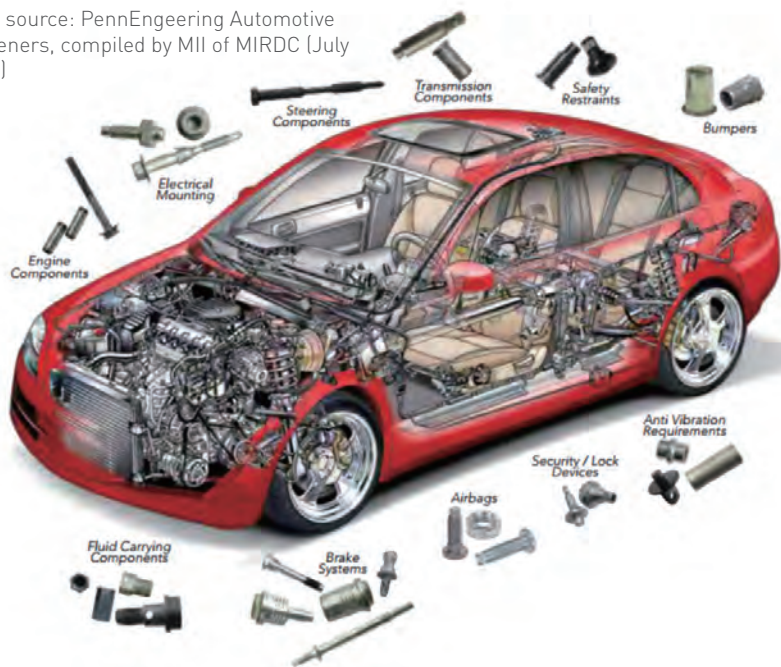
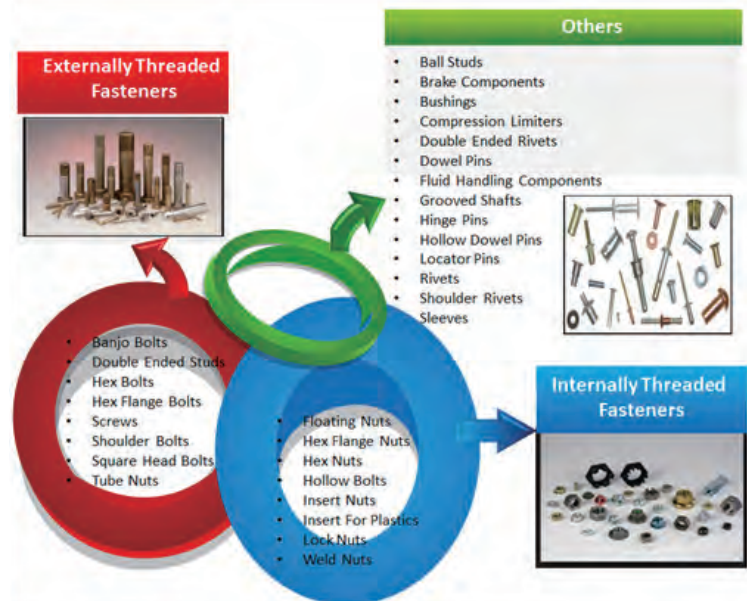


Fig. 3 Types of Fasteners Commonly Used for Automobiles



Data source: PennEngineering Automotive Fasteners, compiled by MII of MIRDC (July 2014)

Fig. 4 Clusters of Production Chain in Thailand



Data source: Frost & Sullivan, compiled by MII of MIRDC (July 2014)

vehicle purchase and foreign investment. For example, Toyota is considering stopping its investment plan, which is about US\$ 0.6 billion and if there is no sign indicative of a change of the political crisis, it may even slash its capital expenditure. In addition, the government has stopped its first-time car buyer's preferential measure. In mid-2013, the continuous growth pattern in the automobile market of Thailand stopped. In the first quarter of 2014, new car sales figure (only 140,000 units of vehicles) exhibited a big slide of 45% as compared to the same period of 2013. It is estimated that the annual sales figure in 2014 will drop to 1.17 million vehicles, a slide of 11.7% as compared to 1.33 million vehicles in 2013. Its leading position will probably be replaced by Indonesia, whose new car sales figure in 2014 will exhibit a growth of 6.5% to reach 1.31 million vehicles, thereby overtaking Thailand.

In contrast to the political unrest and the stopping of first-time car buyer's preferential measure in Thailand, the Indonesian government has implemented a preferential measure for LCGC (low-cost green cars). The measure has increased the sales figure of assembled automobiles by 11% to reach 0.33 million vehicles in the first quarter of 2014. Which country will remain the top country in terms of car sales is not yet clear to be seen.

In fact, the fastener market in Thailand is also propped up by the electronics industry and construction industry. In addition, Thailand has an eco-cars policy to promote the export of green cars. Till now, none of multinational automakers in Thailand has indicated it will withdraw its operations

Table. 3 Import and Export Values of Fasteners of 10 Countries in ASEAN

Unit: 1,000 USD

	Country	Fasteners	Global Market Share	Country	Export Value Fasteners	Global Market Share
1	Thailand	1,155,034	2.62%	Thailand	501,648	1.27%
2	Indonesia	762,009	1.73%	Malaysia	402,253	1.02%
3	Singapore	433,306	0.98%	Singapore	342,166	0.87%
4	Malaysia	421,492	0.96%	Vietnam	341,610	0.87%
5	Vietnam	262,513	0.59%	Indonesia	83,342	0.21%
6	Myanmar	52,791	0.12%	Philippines	34,460	0.09%
7	Philippines	52,125	0.12%	Cambodia	917	0.00232%
8	Cambodia	20,186	0.05%	Lao People's Democratic Republic	770	0.00195%
9	Brunei Darussalam	16,599	0.04%	Brunei Darussalam	520	0.00132%
10	Lao People's Democratic Republic	11,619	0.03%	Myanmar	9	0.00002%
Total	ASEAN Aggregation	3,187,674	7.22%	ASEAN Aggregation	1,707,695	4.33%

Data source: International Trade Centre, compiled by MII of MIRDC (July 2014)

Table. 4 Top 10 Countries in Terms of Fastener Import and Export Markets of Thailand in 2013
Units: value (in 10 thousand USD), amount (in metric tons), average price (in US\$/Kg)

Ranking	The major 10 countries in terms of the fastener import and export markets of Thailand in 2013					
	Country	Import Value	Global Market Share	Country	Export Value	Global Market Share
1	Japan	623	54.0%	U.S.	75	14.9%
2	China	122	10.6%	Japan	51	10.2%
3	Malaysia	114	9.9%	Indonesia	39	7.8%
4	Taiwan	79	6.9%	Germany	28	5.6%
5	Singapore	41	3.5%	Malaysia	21	4.2%
6	U.S.	38	3.3%	South Africa	21	4.1%
7	Germany	38	3.3%	Italy	20	4.0%
8	Korea	17	1.5%	India	20	4.0%
9	UK	12	1.1%	Vietnam	18	3.7%
10	Italy	10	0.9%	Brazil	16	3.2%
Subtotal (top 10 countries)		1,094	94.9%	Subtotal (top 10 countries)	310	61.7%
Total		1,155	100%	Total	502	100%

Data source: International Trade Centre, compiled by MII of MIRDC (July 2014)

from Thailand; they just keep a close eye on the political condition. In the recent unrest, only in the beginning, airports and harbors were affected; later on, all activities took place away from any harbor or airport. The government of Thailand knows that other near-by countries, such as Indonesia and Vietnam would love to take over its business and overtake its leading position. Therefore, fastener manufacturers in Thailand should not worry about the situation too much. The relevant government agency of Thailand has lowered its growth from 2.5% to 1.5% for 2014. To cope with the long-term economic sluggishness, the Central Bank of Thailand continues to implement its monetary easing policy and on June 18 of this year, it announced the benchmark interest rate would remain at 2%. According to international credit institutions, in spite of the political unrest in Thailand, its economic condition still remains at a certain level. Though Thailand has announced martial law in May of this year, either Standard & Poor's or Fitch gave A- to its economic and credit condition; Moody's gave Baa1 to its economic and credit condition. These ratings mean Thailand's economic and credit condition is still in pretty good shape. ■

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