

Analysis of Thai Fastener Industry

by Dr. Arthur Hsu



Introduction

In 2021 Thailand imported USD 6.49 billion worth of products from Taiwan, up 25.3% over the same period in 2020, making Taiwan the 5th largest import source for Thailand. In 2021 Thailand exported USD 5.96 billion worth of products to Taiwan, up 24.2%, making Taiwan the 18th largest export market for Thailand. The bilateral trading value between the two countries are around USD 12.45 billion, so Taiwan is the 10th largest trade partner for Thailand.

Thailand seeks to take the leadership among the ASEAN countries, and therefore it is close with China. China has greatly increased its strength in economy and trade in recent years. Ever since the FTA between ASEAN and China took effect, the dependency between Thailand and China has been increasing and China has become the largest trade partner for Thailand. However, the U.S.-China trade war in the last few years has impacted the world's economic and trade landscape, and some Chinese companies made an exit to Southeast Asia to seek a production base that is tariff-free. The global fastener market as we knew it has changed, and many overseas purchase orders are going into Southeast Asia. This article will analyze the essence of this economic and trade change, and propose some corresponding measures.

Fastener Trade of Main ASEAN Countries with the World

Import Analysis

Table 1 shows respective values of fasteners imported by major ASEAN countries from the world. **The top 3 fastener importers are Thailand (around NTD 33.99 billion), Vietnam (NTD 21.56 billion), and Indonesia (NTD 16.31 billion).** Although import doesn't represent demand and one has to take a country's capacity into account, it more or less draws a rough picture of a country's demand for fasteners. Among the main ASEAN countries, excluding Indonesia with a negative growth, Thailand and Vietnam have a positive CAGR.

Table 1. Fastener Import from the World by Main ASEAN Countries from 2017 to 2021

Unit: USD 100 million; %

	2017	2018	2019	2020	2021	CAGR
Thailand	10.51	11.54	11.04	9.40	12.13	3.7%
Vietnam	6.24	6.43	7.22	7.14	7.70	5.4%
Indonesia	6.61	7.93	6.35	4.18	5.82	-3.1%
Malaysia	4.62	4.83	4.55	4.23	5.71	5.5%
Singapore	4.42	4.74	4.55	4.00	4.90	2.6%
Philippines	1.41	1.85	1.93	1.74	2.49	15.2%
Total	33.81	37.32	35.64	30.68	38.75	3.5%

Source: ITC/MIRDC

Export Analysis

Table 2 shows fastener export to the world by main ASEAN countries from 2017 to 2021. **The top 3 fastener-exporting countries in ASEAN are Thailand (around NTD 19.56 billion), Vietnam (14.12 billion), and Malaysia (NTD 12.3 billion).** Thailand as the top ASEAN fastener-exporting country has a CAGR of around 4.2%, lower than the CAGR of Vietnam (the second largest ASEAN fastener-exporting country), supposedly due to Section 301 of the Trade Act that Trump imposed on China in 2018 leading to more than 600 Chinese companies purchasing land in Southeast Asia to build factories and circumvent tariffs from the U.S.-China trade war. Malaysia as the third largest ASEAN fastener-exporting country comes after Vietnam with a 6.2% CAGR. It is worth noting how this development pans out.

Table 2. Fastener Export to the World by Main ASEAN Countries from 2017 to 2021

Unit: USD 100 million; %

	2017	2018	2019	2020	2021	CAGR
Thailand	5.91	6.81	6.16	5.10	6.98	4.2%
Vietnam	3.60	4.07	4.97	4.87	5.04	8.8%
Malaysia	3.45	4.01	3.61	3.16	4.39	6.2%
Singapore	3.42	3.91	3.60	3.35	3.77	2.5%
Philippines	0.51	1.58	1.74	1.15	1.52	31.2%
Indonesia	0.92	0.91	0.82	0.82	1.03	2.7%
Total	17.82	21.29	20.90	18.45	22.73	6.3%

Source: ITC/MIRDC



Status Quo of Thai Fastener Industry

Thailand's Fastener Trade with the World

Table 3 shows Thailand's fastener trade with the world and Taiwan. In 2021, Thailand imported USD 1.23 billion (NTD 33.99 billion) worth of fasteners from the world with a 5-year CAGR of 3.65%, and exported USD 698 million worth of fasteners to the world with a 5-year CAGR of 4.22%. It was a decelerated growth for Thailand in both import and export in the last 5 years. Regarding Taiwan's fastener trade with Thailand, from 2017 to 2021 Taiwan increased export value to Thailand from USD 88 million to USD 106 million (NTD 2.97 billion) with a 5-year CAGR of 4.27%. The growth was stable.

Table 3. Thailand's Fastener Trade with the World and Taiwan

Unit: USD 100 million; %

Product Category	2017	2018	2019	2020	2021	CAGR
Value of Thailand's Fastener Import from the World	10.51	11.54	11.04	9.40	12.13	3.65%
Value of Thailand's Fastener Export to the World	5.91	6.81	6.16	5.10	6.98	4.22%
Value of Thailand's Fastener Import from Taiwan	0.88	0.99	0.90	0.81	1.06	4.72%
Value of Thailand's Fastener Export to Taiwan	0.01	0.02	0.02	0.02	0.02	4.04%

Source: ITC/MIRDC

Thailand's Fastener Trade Partners and Trade Value Proportions

Table 4 shows the top trade partners for Thai fastener industry in 2021. The top 3 import origins for Thailand were Japan (USD 496 million, accounting for 40.9%), China (USD 253 million, 20.8%), and Taiwan (USD 106 million, 8.7%). Japan alone takes up 40% of import; the top 10 import origins take up over 90% of the total import. This is a highly concentrated market. Thailand's top 3 export destinations were the U.S. (USD 177 million, 25.3%), India (USD 56 million, 8.1%) and Japan (USD 56 million, 8.0%). The U.S. as the top export destination accounts for 25%. The top 10 export destinations altogether account for over 70% of the total export. This is also a concentrated market. The U.S. is the top export destination for both Thailand and Taiwan, so there is competition between the latter two countries. Taiwanese companies should keep an eye on this development and opt for product and market differentiation.

Table 4. Top Trade Partners for Thai Fastener Industry in 2021

Unit: USD 100 million; %

Import Source	Import Value	Import Proportion	Export Destination	Export Value	Export Proportion
Japan	4.96	40.9%	The U.S.	1.77	25.3%
China	2.53	20.8%	India	0.56	8.1%
Taiwan	1.06	8.7%	Japan	0.56	8.0%
Malaysia	0.82	6.8%	Indonesia	0.56	8.0%
Germany	0.48	4.0%	Germany	0.38	5.4%
The U.S.	0.48	3.9%	South Africa	0.28	4.1%
Singapore	0.29	2.4%	Argentina	0.27	3.9%
South Korea	0.24	2.0%	UK	0.23	3.3%
UK	0.21	1.7%	Vietnam	0.21	2.9%
Vietnam	0.19	1.6%	Malaysia	0.19	2.8%
Sub-total	11.26	92.8%	Sub-total	5.01	71.8%
Total	12.13	100.0%	Total	6.98	100.0%

Source: ITC/Taiwan Institute of Economic Research/MIRDC



Fastener Types Imported from Thailand

Table 5 shows Thailand's fastener import from the world from 2017 to 2021. In 2021 the value and CAGR of the top 3 fastener products imported by Thailand from the world were: other screws and bolts (USD 492 million, 3.8%), iron and steel nuts (USD 180 million, 2.5%), iron and steel washers (USD 152 million, 4.5%). These products had a CAGR growth of 2% to 5% in the last 5 years, denoting a stable demand for fasteners in Thailand. The top 3 fastener products with the largest CAGR in the last 5 years were iron and steel screw hooks (36.6%), other copper threaded products (29.6%), copper threaded products, screws, bolts and nuts (18.3%). These products didn't record a high import value, but could be in demand or have a growth potential in the future.

Table 5. Thailand's Fastener Import from the World from 2017 to 2021

Unit: USD 100 million; %

Product Category	2017	2018	2019	2020	2021	CAGR
Other screws and bolts	4.24	4.63	4.53	3.69	4.92	3.8%
Iron and steel nuts	1.63	1.79	1.69	1.36	1.80	2.5%
Iron and steel washers	1.28	1.43	1.40	1.24	1.52	4.5%
Other steel non-threaded products	0.84	0.90	0.89	0.79	0.91	2.1%
Iron or steel cotters and cotter pins	0.69	0.77	0.72	0.66	0.83	4.8%
Iron and steel threaded products	0.56	0.59	0.53	0.56	0.66	4.0%
Iron or steel rivets	0.27	0.25	0.24	0.18	0.28	0.7%
Aluminum bolts, nuts, nails, hooks, pins, washers, etc.	0.34	0.32	0.28	0.20	0.24	-8.6%
Iron and steel spring washers and other locking washers	0.18	0.27	0.19	0.14	0.18	-0.5%
Iron and steel self-tapping screws	0.10	0.11	0.10	0.12	0.17	14.2%
Copper threaded products, screws, bolts and nuts	0.06	0.06	0.06	0.06	0.11	18.3%
Iron and steel nails, tacks, corrugated nails, staples, pushpins	0.07	0.11	0.10	0.09	0.11	10.6%
Other copper threaded products	0.03	0.05	0.05	0.05	0.08	29.6%
Copper nuts, nails, hooks, pins, washers and the like	0.04	0.05	0.05	0.04	0.07	14.0%
Iron and steel automotive screws	0.06	0.07	0.05	0.05	0.06	2.4%
Base metal tubular rivets or bifurcated rivets	0.05	0.06	0.06	0.05	0.05	0.2%
Other iron and steel wood screws	0.03	0.03	0.02	0.02	0.05	8.4%
Iron and steel screw hooks and screw rings	0.01	0.02	0.03	0.04	0.04	36.6%
Copper washers (including spring washers)	0.02	0.04	0.04	0.03	0.04	16.0%
Iron or steel nuts	0.01	0.01	0.01	0.01	0.01	13.0%
Copper nails, tacks, pushpins, staples and the like	0.00	0.00	0.00	0.00	0.00	10.4%
Total	10.51	11.54	11.04	9.40	12.13	3.7%

Source: ITC/MIRDC

Thailand's Fastener Export to the World from 2017 to 2021

Table 6 shows Thailand's fastener export to the world from 2017 to 2021. In 2021 the value and CAGR of the top 3 fastener products exported from Thailand to the world were: iron and steel screws and bolts (USD 344 million, 3.9%), iron and steel nails, tacks, corrugated nails, staples, pushpins (USD 88million, 28.4%), iron and steel nuts (USD 66 million, 4.3%). Iron and steel screws and bolts were the top exported products with an export value much higher than the one with iron and steel nails which were the second largest exported products. The top 3 fastener products with the highest CAGR were iron and steel nails, tacks, corrugated nails, staples, pushpins (28.4%), copper threaded products, screws/bolts/nuts (22.1%), other copper bolts, nuts, nails, hooks, pins, washers (18.4%). These products didn't record a high export value, but their high CAGR could mean Thailand has improved product quality and efficiency and a stable client demand. This is worth keeping an eye on.

Table 6. Thailand's Fastener Export to the World from 2017 to 2021

Unit: USD 100 million; %

Product Category	2017	2018	2019	2020	2021	CAGR
Iron and steel screws and bolts	2.96	3.61	3.27	2.50	3.44	3.9%
Iron and steel nails, tacks, corrugated nails, staples, pushpins	0.32	0.52	0.58	0.64	0.88	28.4%
Iron and steel nuts	0.56	0.67	0.58	0.45	0.66	4.3%
Other iron and steel threaded products	0.51	0.41	0.31	0.37	0.52	0.5%
Other iron and steel washers	0.45	0.43	0.38	0.28	0.40	-3.0%
Other iron and steel non-threaded products	0.31	0.29	0.29	0.25	0.30	-0.9%
Iron and steel self-tapping screws	0.29	0.31	0.24	0.19	0.25	-3.8%
Iron and steel pins and cotter pins	0.21	0.23	0.21	0.15	0.19	-1.3%
Iron and steel spring washers and other fastening springs	0.07	0.09	0.10	0.10	0.11	12.7%
Aluminum bolts, nuts, nails, hooks, pins, washers	0.08	0.08	0.07	0.06	0.06	-4.8%
Iron and steel rivets	0.04	0.03	0.04	0.03	0.04	3.8%
Other iron and steel wood screws	0.05	0.04	0.03	0.02	0.02	-16.4%
Other copper threaded products, screws, bolts and nuts	0.01	0.01	0.02	0.01	0.02	22.1%
Other copper bolts, nuts, nails, hooks, pins, washers	0.01	0.01	0.01	0.01	0.02	18.4%
Other copper threaded products	0.01	0.01	0.01	0.01	0.01	15.9%
Iron and steel automotive screws	0.02	0.02	0.01	0.01	0.01	-15.6%
Copper washers (including spring washers)	0.01	0.01	0.01	0.00	0.01	-8.9%
Iron and steel screw hooks and screw rings	0.00	0.00	0.01	0.00	0.01	2.6%
Iron or steel nuts	0.01	0.01	0.01	0.00	0.00	-4.0%
Copper nails, tacks, pushpins, staples and the like	0.01	0.01	0.00	0.00	0.00	-18.9%
Base metal tubular rivets or bifurcated rivets	0.00	0.00	0.00	0.00	0.00	-16.8%
Total	5.91	6.81	6.16	5.10	6.98	4.2%

Source: ITC/MIRDC

Development of Thai Fastener Industry

Foreign Investment in Thai Fastener-Related Industries

Foreign companies invest in the following fastener-related industries in Thailand: local infrastructure, automobile and components, metal processing, electronics, construction. Thailand's primary source of foreign investment and the targeted fastener-related industries are Japan (motors and machinery), China (motors), and the U.S. (automobile-related metal machinery and electronics). The main target countries and related fastener industries for foreign investors in Thailand are Japan (automobile-related metal machinery and electronics), Singapore, and China (motors). Additionally, the major targeted industries for Taiwanese business owners in Thailand are electronics, rubber and steel. Other fastener-related non-metal materials industry, metal products industry and construction industry are mostly small and medium manufacturers.

Development of Fastener-Related Infrastructure in Thailand

Thailand's "2015-2022 traffic infrastructure development plan" includes railway transport expansion, dual railway construction, elevated mass rapid transit and subway extension in Bangkok, phase two Bangkok International Airport expansion, freeway expansion, deepwater port and container port expansion. Plus, on the Eastern Economic Corridor, the Thai government is working on 50 infrastructure plans including airport and airport MRO construction, phase three Map Ta Phut port construction, and transport system upgrade.

Fastener-Related Industry Development in Thailand

In 2021 the Thai government started to promote the “Bio, Circular, Green, BCG” national development tactic and establish “digital economy” and “smart city”. The Eastern Economic Corridor will have a physics center, bio-technology center and aerospace center which will focus on developing 6 industries including agriculture, bio-technology, electric vehicle, smart transport, aerospace, medical equipment, smart system, bioenergy and biofuel.

Final Notes

There remain differences between the manufacturing development of Thailand and Taiwan. Taiwanese fastener industry has long been focusing export on the U.S. and Europe. Looking at the development prospect and industries with a potential, the economy, trade and technical collaboration between Thailand and Taiwan can target on motor vehicles, infrastructure, BCG (Bio-Circular-Green Economy), and medical equipment. The following is my advice to help Taiwanese owners develop business in the Thai market.

Create an Extension for the Domestic Market

Taiwanese owners could consider regarding Thailand as a production base to support OEM and export, utilizing bilateral industry investment, trade, collaboration and exchange to extend Taiwan’s domestic market to Thailand. Thailand has signed an FTA with ASEAN countries, Japan, Australia, New Zealand, South Korea, China, India, Chile, and Peru, which is good for expanding export.



Enhance Taiwanese Owners’ Industrial Deployment in Thailand

Taiwan could establish an investment strategy partnership and an investment platform with Thailand, gather up Taiwanese owners and enhance supply routes, enhance the support system for Taiwanese owners in Thailand, set up Taiwanese contact to reach local sources in Thailand, and enhance connections with Taiwanese industries.

Integrate with Taiwanese owners’ Industry Chain in Thailand

Taiwanese fastener owners both in Taiwan and Thailand could combine their industry chains. They could utilize technical collaboration or joint venture to produce lower-tech and labor-intensive products in Thailand, and then ship back to Taiwan before assembling for export, thereby leveraging advantages in international industry collaboration.

Improve the Brand Image of Taiwanese Fasteners in Thailand

Taiwanese owners could utilize diverse methods and creative marketing on their selected fastener products that represent themselves, thereby improving the brand image of Taiwanese fasteners in Thailand.

Spread Taiwan’s Experience in Smart Fastener Factories

Thailand is in the bottleneck of labor shortage and the need to upgrade and automate equipment. Taiwanese machinery and smart manufacturing companies could market their full line of equipment or set up smart fastener production lines in Thailand as long as this doesn’t undermine competitiveness.

Pre-investment Risk Assessment

Taiwanese owners must assess and monitor the investment risks in Thailand. The industrial land, water and power costs in Thailand are still acceptable, but there is a shortage of high-end talents and a slightly higher logistics cost. Therefore, Taiwanese owners could utilize resources from both Taiwanese and Thai governments to decrease investment risks and increase efficacy.

Seek Help to Remove Non-Tariff Barriers

They could seek help from the government to solve problems in delayed customs clearing, quarantine, and product certificate, and reduce regulations on reciprocating products, personnel and funds between Taiwan and Thailand, as well as market entry into the service industry.

