

Trend Analyses of Vietnamese Fastener Industry

1. Introduction

Since Vietnam launched a reform and opened its own market in 1986, it has gradually been connecting with the global economy. It promulgated the Foreign Investment Law in 1987, joined the WTO in 2007, and has gradually transitioned from a centrally planned economy to a market-oriented economic system. Although the complex global political and economic landscape has impacted most economies in recent years Vietnam's GDP still grew at a rate of 5.05% in 2023, its manufacturing output grew 3.02%, and its trade surplus reached a record high of US\$ 28 billion. Vietnam effectively leverages structural changes in global trade to support its GDP growth and benefits from the shift in global supply chains. International companies such as Apple and Samsung Electronics are expanding their manufacturing and R&D activities in Vietnam.

The reason why Vietnam is one of the world's important manufacturing and export centers is that as of 2023, Vietnam has signed 15 FTAs with important trading partners, including Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), Regional Comprehensive Economic Partnership (RCEP), EU-Vietnam Free Trade Agreement (EVFTA), and agreements signed by the Association of Southeast Asian Nations (ASEAN) with China, Japan, India, South Korea, etc. Vietnam's political stability and relatively low production costs and land rents increase the country's competitive advantages. **This article begins from Vietnam's fastener import and export to explore whether the export-oriented Taiwan fastener industry has opportunities to use Vietnam's advantages in global economy, trade and geographic location in order to expand the global deployment of Taiwan fastener industry. From there, this article provides analyses and suggestions.**

2. Global Import and Export of the Fastener Industry in Major ASEAN Countries

(a) Import Analysis

Table 1 shows the trend of major ASEAN countries importing fastener products from the world from 2019 to 2022. The top three fastener-importing ASEAN countries were Thailand (approximately NT\$32.94 billion), Vietnam (approximately NT\$21.77 billion), and Malaysia (approximately NT\$18.02 billion). Although the volume produced and sold by Vietnam on its own is a factor that has to be considered in pinpointing domestic demand, the import trend reflects Vietnam's demand for fastener products. Over the years, **Thailand has been the largest importer of fasteners in ASEAN, accounting for about 30% of imports by ASEAN countries. The fastener imports of major ASEAN countries all had positive growth. In the past four years, fastener importing countries with the highest compound growth rate were Malaysia (15.3%), Philippines (11.3%), and Vietnam (8.3%).**

(b) Export Analysis

Table 2 shows the major ASEAN countries exporting fastener products to the world from 2019 to 2022. The top three ASEAN countries exporting fastener products were Vietnam (approximately NT\$20.28 billion), Thailand (approximately NT\$19.86 billion) and Singapore (about NT\$10.99 billion). Vietnam, the largest fastener exporter in ASEAN, had a compound growth rate of about 14.4% in the past four years, accounting for nearly 30%. Thailand and Vietnam have been equally matched in fastener export for many years, but since the compound growth rate of Vietnam's fastener export is much higher than that of Thailand, **it is roughly determined that Vietnam will set out to become the largest fastener exporter in ASEAN. The global fastener export of major ASEAN countries grew except for the Philippines. The top three ASEAN countries with the highest compound growth rate of fastener export in the past four years were Indonesia (14.8%), Vietnam (14.4%), and Thailand (6.9%).**

3. Current Development of Vietnamese Fastener Industry

(a) Vietnam's performance in the global fastener market

Table 3 shows the import and export trade of Vietnamese fastener industry with the world and Taiwan from 2018 to 2022. In 2022, Vietnam's import value of fasteners from the world were US\$731 million (approximately NT\$21.77 billion). The compound growth rate over the past five years was 5.7%, and the value of fasteners exported to the world was US\$681 million (approximately NT\$ 20.28 billion), with the compound growth rate over the past five years at 9.7%. On Taiwan's fastener trade with Vietnam, Taiwan's export to Vietnam increased year by year from US\$53 million to US\$59 million (approximately NT\$1.76 billion) from 2018 to 2022, with a compound growth rate over the past five years at approximately 2.4%. However, the export share dropped from 9.1% to 8.0%, and the compound growth rate of the share dropped 3.2%, indicating that competitors are gradually encroaching on Taiwan's share in Vietnam.



Unit: 100 Million US dollars; %

Table 1. Major ASEAN Countries Importing Fastener Products from the World from 2019 to 2022

Countries	2019	2020	2021	2022	Share in ASEAN	CAGR
Thailand	10.39	8.86	11.42	11.06	29.0%	2.1%
Vietnam	5.76	6.23	7.56	7.31	19.2%	8.3%
Malaysia	3.95	3.81	5.23	6.05	15.9%	15.3%
Indonesia	5.38	3.33	4.80	5.89	15.4%	3.0%
Singapore	4.10	3.60	4.38	4.83	12.7%	5.6%
Philippines	1.44	1.33	1.87	1.99	5.2%	11.3%
Other ASEAN Countries in Total	1.01	1.27	0.97	1.02	2.7%	0.3%
ASEAN in Total	32.03	28.42	36.23	38.14	100.0%	6.0%
Global Total	427.44	383.26	483.28	535.06	--	7.8%

Unit: 100 Million US dollars; %

Table 2. Major ASEAN Countries Exporting Fastener Products to the World from 2019 to 2022

Countries	2019	2020	2021	2022	ASEAN share	CAGR
Vietnam	4.55	4.53	5.38	6.81	29.2%	14.4%
Thailand	5.46	4.36	5.97	6.67	28.6%	6.9%
Singapore	3.17	2.96	3.29	3.69	15.8%	5.2%
Malaysia	2.98	2.70	3.64	3.55	15.2%	6.0%
Philippines	1.65	1.07	1.43	1.40	6.0%	-5.2%
Indonesia	0.77	0.77	0.97	1.17	5.0%	14.8%
Other ASEAN Countries in Total	0.00	0.01	0.03	0.05	0.2%	127.9%
ASEAN in Total	18.58	16.40	20.70	23.34	100.0%	7.9%
Global Total	400.55	368.69	461.73	504.45	--	8.0%

Unit: 100 Million US dollars; %

Table 3. Import and Export Trade of Vietnamese Fastener Industry with the World and Taiwan from 2018 to 2022

Product Category	2018	2019	2020	2021	2022	CAGR
Value of Vietnam's fastener import from the world	5.85	5.76	6.23	7.56	7.31	5.7%
Value of Vietnam's fastener export to the world	4.71	4.55	4.53	5.38	6.81	9.7%
Value of Vietnam's fastener import from Taiwan	0.53	0.49	0.51	0.58	0.59	2.4%
Proportion of Vietnam's fastener import from Taiwan	9.1%	8.4%	8.1%	7.6%	8.0%	-3.2%
Value of Vietnam's fastener export to Taiwan	0.04	0.05	0.04	0.06	0.05	3.0%
Proportion of Vietnam's fastener export to Taiwan	0.9%	1.1%	0.9%	1.0%	0.7%	-6.1%

Data source: Compiled by ITC/MIRDC

(b) Vietnam's fastener trade partners and trade value proportions

Table 4 is the top 10 fastener trading partners with Vietnam in 2022. In terms of import, the top three import sources for Vietnam were China (US\$358 million, accounting for 49.0%), Japan (US\$120 million, accounting for 16.4%), South Korea (US\$88 million, accounting for 12.1%). Taiwan was Vietnam's fourth largest source (US\$59 million, accounting for 8.0%). China alone accounted for nearly 50%. **The top 10 import sources accounted for more than 95%, indicating a highly concentrated market structure.** In terms of export, Vietnam's top 3 fastener export destinations were Germany (US\$135 million, accounting for 19.8%), the United States (US\$119 million, accounting for 17.5%), and Japan (US\$75 million, accounting for 11.0 %). **The top 10 export destinations accounted for nearly 80% of the total, which also indicates a highly concentrated market structure.**

(c) Vietnam's Import of Various Fastener Products

Table 5 shows Vietnam's fastener import from the world by product category from 2019 to 2022. The values and compound growth rates of the top 3 fastener categories imported by Vietnam from the world in 2022 were: other iron or steel screws and bolts (US\$277 million, 37.9%), other iron or steel washers (US\$116 million, 15.8%), and iron or steel nuts (US\$98 million, 13.4%). In the past four years, the proportion of top 5 imported fastener products (all of which being critical items) accounted for nearly 90%. The top 3 fastener products with the highest compound growth rates in the past four years were iron or steel self-tapping screws (27.4%), other iron or steel screws and bolts (15.1 %), iron or steel springs and lock washers (11.8%).

(D) Vietnam's Export of Various Fastener Products

Table 6 shows Vietnam's fastener export to the world by product category from 2019 to 2022. The values and compound growth rates of Vietnam's top 3 fastener products exported to the world in 2022 were other iron or steel screws and bolts (US\$434 million, 63.7%), iron or steel self-tapping screws (US\$0.53 billion, 7.7%), iron or steel wood screws (US\$ 49 million, 7.2%). Other types of iron or steel screws and bolts were the top export items, and their export values far exceeded those of iron or steel self-tapping screws which ranked second in export. The top 3 fastener products with the highest compound growth rate in the past four years were other iron or steel threaded products (38.1%), steel rivets (36.8%), and iron or steel automotive screws (36.5%). Although the export value of some items was not high, the **high compound growth rate could mean that Vietnam's product quality and production efficiency has improved, and that overseas customer demand is steadily increasing. These factors are worth the attention.**

Unit: 100 Million US dollars; %

Table 4. Top 10 Fastener Trading Partners with Vietnam in 2022

Import Sources	Import Value	Import Proportion	Export Destinations	Export Value	Export Proportion
China	3.58	49.0%	China	1.35	19.8%
Japan	1.20	16.4%	Japan	1.19	17.5%
S. Korea	0.88	12.1%	S. Korea	0.75	11.0%
Taiwan	0.59	8.0%	Taiwan	0.70	10.3%
Thailand	0.23	3.1%	Thailand	0.33	4.8%
USA	0.21	2.9%	USA	0.30	4.4%
Germany	0.15	2.0%	Germany	0.23	3.4%
Italy	0.07	1.0%	Italy	0.22	3.2%
Malaysia	0.05	0.7%	Malaysia	0.18	2.6%
Singapore	0.04	0.5%	Singapore	0.15	2.3%
Subtotal of top 10 import sources	7.00	95.8%	Subtotal of top 10 export destinations	5.39	79.2%
Total of other import sources	0.31	4.2%	Total of other export destinations	1.42	20.8%
Total	7.31	100.0%	Total	6.81	100.0%

Unit: 100 Million US dollars; %

Table 5. Vietnam's Fastener Import from the World by Product Category from 2019 to 2022

Product Category	HS Code	2019	2020	2021	2022	Proportion	CAGR
Other iron or steel screws and bolts	731815	1.82	2.12	2.73	2.77	37.9%	15.1%
Other Iron or steel washers	731822	1.19	1.10	1.18	1.16	15.8%	-1.0%
Iron or steel nuts	731816	0.76	0.81	0.94	0.98	13.4%	9.2%
Iron or steel cotters and cotter pins	731824	0.58	0.63	0.77	0.74	10.1%	8.1%
Other types of iron or steel non-threaded products	731829	0.59	0.66	0.98	0.70	9.6%	6.0%
Other iron or steel threaded products	731819	0.49	0.53	0.51	0.53	7.3%	2.7%
Iron or steel rivets	731823	0.14	0.13	0.17	0.15	2.1%	1.5%
Iron or steel self-tapping screws	731814	0.05	0.07	0.09	0.11	1.5%	27.4%
Other iron or steel wood screws	731812	0.06	0.08	0.09	0.08	1.1%	9.3%
Iron or steel spring washers and lock washers	731821	0.05	0.05	0.06	0.06	0.9%	11.8%
Iron or steel automotive screws	731811	0.02	0.02	0.02	0.02	0.3%	7.7%
Iron or steel screw hooks and screw rings	731813	0.01	0.01	0.01	0.01	0.1%	-16.2%
Total		5.76	6.23	7.56	7.31	100.0%	8.3%

Unit: 100 Million US dollars; %

Table 6. Vietnam's Fastener Export to the World by Product Category from 2019 to 2022

Product Category	HS Code	2019	2020	2021	2022	Proportion	CAGR
Other iron or steel screws and bolts	731815	2.84	2.75	3.25	4.34	63.7%	15.2%
Iron or steel self-tapping screws	731814	0.36	0.39	0.39	0.53	7.7%	13.9%
Other iron or steel wood screws	731812	0.36	0.40	0.46	0.49	7.2%	11.0%
Other iron or steel threaded products	731819	0.14	0.15	0.29	0.36	5.3%	38.1%
Iron or steel cotters and cotter pins	731824	0.22	0.23	0.28	0.29	4.2%	9.1%
Other iron or steel washers	731822	0.17	0.17	0.23	0.29	4.2%	18.7%
Iron or steel nuts	731816	0.17	0.16	0.21	0.25	3.6%	12.3%
Other non-threaded iron or steel products	731829	0.27	0.27	0.25	0.24	3.5%	-4.3%
Iron or steel rivets	731823	0.01	0.01	0.01	0.02	0.3%	36.8%
Iron or steel spring washers and other locking washers	731821	0.01	0.01	0.01	0.01	0.2%	7.9%
Iron or steel automotive screws	731811	0.00	0.00	0.00	0.00	0.0%	36.5%
Iron or steel screw hooks and screw rings	731813	0.00	0.00	0.00	0.00	0.0%	-34.8%
Total		4.55	4.53	5.38	6.81	100.0%	14.4%

Data source: Compiled by ITC/MIRDC



4. Current Development of Fastener-Related Industries in Vietnam

(a) Foreign investment in Vietnam and status of fastener-related industries

Foreign investment and fastener-related industries in Vietnam include local infrastructure, motor vehicles and components, metal processing, electronic appliances, construction industry, etc. The main source of foreign investment and fastener-related fields in Vietnam are Japan (motor vehicles and machinery), China (motor vehicles), and the United States (vehicle-related metal machinery and electrical appliances industry); Distinguished by geographic location, metal processing is located in North Vietnam, Central Vietnam is largely represented by Formosa Ha Tinh Steel plant, and steel and motor vehicle components are located in South Vietnam. In addition, the fastener-related industries invested by Taiwanese businessmen in Vietnam include steel, non-ferrous metal materials, metal products, construction, etc., most of which are conventional small and medium-sized manufacturing industries.

(b) Fastener-related infrastructure in Vietnam

The infrastructure projects expected to be built in the "2021-2025 Five-Year Plan" launched by the Vietnamese government in 2021 include building 9 new railways (including high-speed railways), updating 7 railways, and building and expanding dozens of highways. Ho Chi Minh City alone is expected to build approximately 454 kilometers of highways, ring roads, national highways and large bridges, with a total investment of US\$11.5 billion. In terms of industrial parks, 61 of Vietnam's 63 provinces and cities establish industrial parks and economic zones, including 403 industrial parks, 18 coastal economic zones, and 26 port economic zones, of which Dong Nai Province has the largest number of industrial parks and is continuing to increase and improve related facilities. **In the next five years, the Vietnamese government will invest more than US\$139 billion in building stations, airports, ports, highways, railways, power plants and other infrastructure.**

5. Conclusion

There is a gap between Vietnam and Taiwan in economic development. Taiwan's fasteners have long been mainly exported to European and American countries, and Vietnam is not one of the main export destinations for Taiwan's fasteners. However, Vietnam has geographic advantages and possesses the tariff-free advantage under global FTAs. Vietnam has many potential industries for future development. The following are suggestions for the development of Taiwanese fastener manufacturers in the Vietnamese market:

- (a) Get in line with the Vietnamese government's industrial development policy: In addition to the huge demand for Vietnam's future infrastructure construction mentioned above, the "Socioeconomic



Development Strategy from 2021 to 2030" launched by the Vietnamese government will focus on AI, semiconductors and automobile industries. The government will also construct facilities and digital infrastructure involved with digital economy and smart cities (mainly Ho Chi Minh and Da Nang). These are the potential markets that Taiwanese fastener companies can further study in the future.

- (b) Use Vietnam as a test site to connect with the world: The primary production lines of Taiwanese fastener industry are all located in Taiwan. It is unlikely for Taiwanese companies to move their primary fastener production lines to Vietnam. However, Vietnam has the advantages of connection with the international market and tariff-free export; and therefore, Taiwanese fastener companies can think about making Vietnam a test ground for trial production of small quantities of various fastener products for international manufacturers. In addition to connecting with international manufacturers and gaining orders, and supplying local demand nearby, they can bring market intelligence, production experience and know-how back to Taiwanese fastener industry.
- (c) Hop on Vietnam's carbon reduction trend to expand the market: The Vietnamese government's Environmental Protection Law, which took effect in 2022, proposed reducing carbon emissions and developing a carbon trading market to make way for EVs to become Vietnam's transportation vehicles. Vietnam sells 50,000 to 60,000 units of EVs (excluding electric bicycles) annually. Taiwan is more technologically experienced in EV than Vietnam and has more vehicle components and battery manufacturers. Therefore, Taiwan has a competitive edge breaking into the Vietnamese market. Taiwanese fastener manufacturers can think about supplying critical EV components, EV fasteners and fastening tools in Vietnam, collaborating with Vietnamese EV companies to develop the local market.
- (d) Integrate the industrial chain of Taiwanese companies in Vietnam: Taiwanese fastener companies can cooperate with local Taiwanese businessmen to integrate the upstream and downstream industrial chains, and produce low-tech, labor-intensive products in Vietnam through technical collaboration or joint ventures, and ship them back to Taiwan to assemble and re-export, taking advantage of international division of labor. ■

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