

Analyzing Market Development of Indonesia's Machinery Industry under U.S. Tariff Policies

印尼機械產業在美國關稅政策之市場發展剖析

Introduction

After President Trump took office, the U.S. promoted new tariff policies that had a significant impact on the global economic and trade structure. Against this backdrop, Indonesia became the first ASEAN country to complete an agreement with the U.S., securing a relatively favorable tariff rate of 19%. This phenomenon not only reflects the U.S.'s emphasis on the developmental potential of Indonesia's industrial environment but also highlights Indonesia's unique potential position among ASEAN countries. Although the trade volume of machinery products between the U.S. and Indonesia is currently not high, Indonesia possesses abundant metal mineral resources, a large domestic market, and low labor costs, giving it a significant price competitiveness in machinery equipment and components. In recent years, the Indonesian government has actively promoted local processing of metal raw materials such as nickel, bauxite, and copper through its mineral policies. This has successfully made Indonesia the world's largest stainless steel exporter, with foreign investment in Indonesia's metal industry accounting for 23.4%. Therefore, Indonesia still has the opportunity to attract metal processing industries as well as procurement or assembly processes for related machinery parts to the local area. Indonesia provides abundant raw materials, policy support, and huge market linkage opportunities for the metal products industry, driving notable development advantages in related machinery products.

Analysis of the U.S. Import Market for Machinery Products

Major Countries from Which the U.S. Imports Machinery Products

Table 1 shows the major countries from which the U.S. imported machinery products from 2020 to 2024. U.S. imports of machinery products increased from 311 million USD in 2020 to 441 million USD in 2024, with a CAGR of 9.1%, indicating stable growth in demand. The top 15 import sources accounted for a 94.5% market share, demonstrating high concentration. Germany ranked first with 107 million USD, accounting for 24.3%, with a CAGR of 18.5%; Italy ranked second with 68 million USD, accounting for 15.3%, with a CAGR of 14.7%, making both countries the main sources of machinery imports. China held about 7.0% market share with a CAGR of 24.5%, showing rapid expansion of its influence. Taiwan ranked 12th, with a smaller scale but a potential growth rate of 23.6%. **Currently,**

Table 1. Major Countries from Which the U.S. Imported Machinery Products from 2020 to 2024 Unit: USD 100 million; %

Ranking	Import Sources	2020	2021	2022	2023	2024	2024 Share	CAGR
1	Germany	0.54	0.72	0.42	1.32	1.07	24.3%	18.5%
2	Italy	0.39	0.45	0.57	0.55	0.68	15.3%	14.7%
3	Japan	0.45	0.34	0.36	0.49	0.34	7.7%	-6.7%
4	South Korea	0.25	0.24	0.30	0.42	0.31	7.0%	5.2%
5	China	0.13	0.20	0.17	0.24	0.31	7.0%	24.5%
6	Croatia	0.00	0.17	0.16	0.36	0.30	6.8%	N/A
7	Spain	0.03	0.01	0.16	0.22	0.23	5.2%	62.8%
8	Netherlands	0.25	0.04	0.09	0.28	0.23	5.2%	-2.1%
9	Switzerland	0.15	0.20	0.33	0.36	0.23	5.1%	11.6%
10	Canada	0.07	0.10	0.10	0.36	0.18	4.1%	28.0%
11	Austria	0.12	0.07	0.15	0.15	0.12	2.6%	-0.3%
12	Taiwan	0.03	0.05	0.09	0.10	0.07	1.6%	23.6%
13	Mexico	0.02	0.01	0.02	0.03	0.04	1.0%	18.1%
14	Australia	0.01	0.02	0.03	0.02	0.04	0.8%	48.2%
15	UK	0.03	0.07	0.05	0.07	0.03	0.8%	3.4%
Top 15 Sources - Subtotal		2.46	2.69	3.01	4.98	4.16	94.5%	14.0%
Other Sources- Subtotal		0.65	0.47	0.55	0.36	0.24	5.5%	-21.8%
US Imports from the World - Total		3.11	3.17	3.56	5.33	4.41	100.0%	9.1%





Germany and Italy still dominate the U.S. import market, but U.S. imports are becoming more diversified, with rapidly increasing market shares from the two sides of the Taiwan Strait and emerging countries.

Analysis of Categories of U.S. Imported Machinery from the World

Table 2 shows categories of U.S. imported machinery from the world from 2020 to 2024. The main machinery category was "Machinery for Working Metal" (Tariff Code: 847981), which increased from 155 million USD in 2020 to 258 million USD in 2024, holding a 58.5% market share and a CAGR of 13.6%, becoming the main import driver. This reflects strong demand in the U.S. infrastructure, automotive, and electronics industries for metalworking and wire-winding machinery. The second category was "Injection Molding or Shaping Machinery" (Tariff Code: 847759), which increased from 156 million USD to 183 million USD by 2024, with a 41.5% market share but only a 4.0% CAGR. **The U.S. import focus is shifting from molding machinery to metalworking machinery, indicating deeper reliance on precision metalworking equipment due to reshoring and industrial chain strengthening.**

Table 2. Categories of U.S. Imported Machinery from the World from 2020 to 2024

Unit: USD 100 million; %

Tariff Code	Product	2020	2021	2022	2023	2024	2024 Share	CAGR
847981	Machinery for Working Metal	1.55	1.81	2.12	3.01	2.58	58.5%	13.6%
847759	Injection Molding or Shaping Machinery	1.56	1.35	1.44	2.32	1.83	41.5%	4.0%
US Imports from the World - Total		3.11	3.17	3.56	5.33	4.41	100.0%	9.1%

Recent Trends in Indonesia's Machinery Imports from the World

Table 3 shows the major countries from which Indonesia imported machinery products from 2020 to 2024. Indonesia's machinery imports increased rapidly from 54.93 million USD in 2020 to 155 million USD in 2024, with a CAGR of 29.5%. The top 10 importing countries accounted for a highly concentrated market share of 98.5%. China jumped from 16.977 million USD to 120 million USD, capturing a 77.7% market share and a CAGR of 63.1%, effectively forming a monopoly. Italy, although small with 8.119 million USD, showed a high CAGR of 78.0%, demonstrating the advantage of European high-end equipment entering the Indonesian market. Indonesia's imports from the U.S. rose from 1.759 million USD to 7.376 million USD, with a market share of 4.8% but a rapid CAGR of 43.1%, showing quickly growing influence. In contrast, Japan, Taiwan, Germany, and Singapore all experienced declines in their market shares. Overall, **China's dominant position in Indonesia's machinery product market is expanding rapidly, compressing the share held by other countries. Non-China suppliers will need to rely on technological differentiation and high-end markets to maintain competitiveness in the future.**

Table 3. Major Countries from Which Indonesia Imported Machinery Products from 2020 to 2024

Unit: 10 thousand USD; %

Ranking	Import Sources	2020	2021	2022	2023	2024	2024 Share	CAGR
1	China	1697.7	1883.8	2929.5	3342.0	12006.2	77.7%	63.1%
2	Italy	80.9	174.6	102.9	517.8	811.9	5.3%	78.0%
3	Japan	1048.7	652.8	515.3	281.0	743.7	4.8%	-8.2%
4	United States	175.9	69.5	18.3	185.7	737.6	4.8%	43.1%
5	Taiwan	348.6	964.0	624.0	246.7	242.1	1.6%	-8.7%
6	Singapore	397.0	170.6	34.3	37.0	208.0	1.3%	-14.9%
7	Germany	362.1	243.9	180.1	97.1	170.7	1.1%	-17.1%
8	France	6.8	0.0	36.5	0.8	162.9	1.1%	121.2%
9	Saudi Arabia	0.0	0.0	0.0	0.0	71.1	0.5%	N/A
10	Bosnia	0.0	0.0	0.0	0.0	67.4	0.4%	N/A
Top 15 Sources - Subtotal		4117.7	4159.2	4440.9	4708.1	15221.6	98.5%	38.7%
Other Sources- Subtotal		1375.8	2599.5	2057.3	807.6	233.3	1.5%	-35.8%
Indonesia's Imports from the World - Total		5493.5	6758.7	6498.2	5515.7	15454.9	100.0%	29.5%



Table 4 shows the categories of machinery products imported by Indonesia globally from 2020 to 2024. The main imported machinery product category was "Machinery for Working Metal" (Tariff Code: 847981), which surged from 37.324 million USD to 137 million USD, accounting for 88.4% of imports with a CAGR of 38.3%. This category is the main growth driver for machinery products, reflecting **strong demand in the Indonesian market for metalworking and wire-winding machinery**. In contrast, "Injection Molding or Shaping Machinery" (Tariff Code: 847759) only increased from 17.611 million USD to 17.909 million USD, making up 11.6% of imports but with a mere 0.4% CAGR, indicating a stagnant market. This shows that **Indonesia's infrastructure and manufacturing sectors still maintain a demand primarily for metalworking machinery imports**.

Table 4. Categories of Machinery Products Imported by Indonesia Globally from 2020 to 2024

Unit: 10 thousand USD; %

Tariff Code	Product	2020	2021	2022	2023	2024	2024 Share	CAGR
847981	Machinery for Working Metal	3732.4	3892.0	4270.0	3955.4	13,664.0	88.4%	38.3%
847759	Injection Molding or Shaping Machinery	1761.1	2866.7	2228.2	1560.3	1790.9	11.6%	0.4%
Indonesia's Imports from the World - Total		5493.5	6758.7	6498.2	5515.7	15454.9	100.0%	29.5%

Recent Trends in Indonesia's Machinery Exports to the World

Table 5 shows the major export destinations for Indonesia's machinery products from 2020 to 2024. Indonesia's machinery exports increased from 282,000 USD in 2020 to 3.742 million USD in 2024, with a CAGR of 90.9%. Although the total export amount remains modest, the growth momentum is strong. Vietnam is Indonesia's largest export destinations, reaching 3.36 million USD in 2024 and accounting for 89.8% of exports, with a CAGR of 95.3%, demonstrating a highly dominant position. Malaysia, India, and Thailand have also emerged as important export destinations for Indonesia in recent years. **Despite the rapid export growth, Indonesia's machinery exports are overly reliant on the Vietnamese market, presenting a clear structural risk. Moving forward, Indonesia needs to expand into diversified markets such as other ASEAN countries and regions like Europe and the U.S. to enhance resilience.**

Table 5. Major Export Destinations for Indonesia's Machinery Products from 2020 to 2024

Unit: 10 thousand USD; %

Ranking	Export Destinations	2020	2021	2022	2023	2024	2024 Share	CAGR
1	Vietnam	23.1	38.6	71.7	150.5	336.0	89.8%	95.3%
2	Malaysia	0.0	100.5	5.7	0.0	11.2	3.0%	N/A
3	India	0.0	12.9	6.0	18.0	8.9	2.4%	N/A
4	Thailand	0.0	0.0	0.0	0.4	7.0	1.9%	N/A
5	Japan	3.3	0.7	0.0	23.1	4.4	1.2%	7.5%
6	Singapore	0.9	241.4	50.2	46.8	3.4	0.9%	39.4%
7	Hungary	0.0	0.0	0.0	0.0	1.4	0.4%	N/A
8	China	0.0	2.9	0.0	2.0	1.2	0.3%	N/A
9	East Timor	0.0	0.0	0.0	0.0	0.5	0.1%	N/A
10	Switzerland	0.0	0.0	0.0	0.0	0.1	0.0%	N/A
Top 15 Destinations - Subtotal		27.30	397.00	133.60	240.80	374.10	100.0%	92.4%
Other Destinations - Subtotal		0.90	14.10	1629.40	85.90	0.10	0.0%	-42.3%
Indonesia's Exports to the World - Total		28.20	411.10	1763.00	326.70	374.20	100.0%	90.9%

Table 6 shows the categories of Indonesia's machinery exports to the world from 2020 to 2024. Indonesia's main exported machinery product category is "Machinery for Working Metal" (Tariff Code: 847981), which surged from 76,000 USD to 3.363 million USD, capturing an 89.9% market share with a CAGR of 157.9%, becoming the main export driver. In contrast, "Injection Molding or Shaping Machinery" (Tariff Code: 847759) only increased from 206,000 USD to 379,000 USD, with a 10.1% market share and a limited CAGR of 16.5%. Overall, **while Indonesia's machinery exports are rapidly expanding, the scale remains small and overly concentrated on a single product category, representing structural risk. Going forward, measures such as product diversification, export market diversification, and technology upgrades are necessary to improve industry resilience and strengthen competitiveness.**

Table 6. Categories of Indonesia's Machinery Exports to the World from 2020 to 2024

Unit: 10 thousand USD; %

Tariff Code	Product	2020	2021	2022	2023	2024	2024 Share	CAGR
847981	Machinery for Working Metal	7.6	28.6	73.7	165.1	336.3	89.9%	157.9%
847759	Injection Molding or Shaping Machinery	20.6	382.5	1689.3	161.6	37.9	10.1%	16.5%
Indonesia's Exports to the World - Total		28.2	411.1	1763.0	326.7	374.2	100.0%	90.9%



Analyzing the Current Market Development of U.S. Machinery Industry

(1) Scale of U.S. Manufacturing

In 2024, the U.S. GDP was approximately 29.2 trillion USD. The manufacturing sector primarily exports civil aircraft and engine parts and imports motor vehicles, data processing machines, etc. The U.S. machinery industry covers civil aircraft, non-electronic machinery, machine tools, precision machinery, medical equipment, biotechnology, agricultural/mining/transport machinery, as well as electric vehicle battery assembly and semiconductor processing equipment.

(2) Key Machinery-Related Sectors by State

The development of machinery industries in various U.S. states is closely linked to high-tech trends such as electric vehicles, semiconductors, aerospace, and advanced manufacturing. Key states include:

- New York (industrial machine tools production center, semiconductor development)
- Pennsylvania (focus on advanced manufacturing and 3D metal printing)
- Arizona (semiconductor manufacturing core, driving related processing machinery and battery equipment)
- Kentucky (hub for automotive and electric vehicle battery manufacturing)
- North Carolina (significant investments in industrial machinery and electric vehicle battery assembly)
- Tennessee (major transportation equipment, attracting forging equipment manufacturers)
- Ohio (leading U.S. engine production, advanced machinery manufacturing)
- Texas (increased electric vehicle productivity, large automotive parts industry)

(3) Investment Incentives and Talent Training

Most U.S. states provide manufacturing machinery sales tax exemptions (e.g., Georgia), R&D and investment tax credits, and employment subsidies. The government also actively promotes workforce training to meet industry talent needs.

(4) Taiwanese Investment Overview in the U.S.

In 2024, Taiwanese companies' cumulative investment in the U.S. "machinery equipment manufacturing" sector reached 376 million USD, including metal cutting bandsaws, forging equipment, aircraft component technology, charging station/battery assembly, and semiconductor processing equipment. This serves as a reference for companies considering setting up factories in Indonesia for cross-national collaborations.

(5) Potential Areas

The U.S. machinery industry benefits from a large economy, high-tech development, industrial clusters by state, and active government policies. Rapid growth and investment potential come from electric vehicles, aerospace, semiconductors, and advanced manufacturing technologies.

Analysis of Indonesia's Potential as an Alternative Export Base to the U.S. Machinery Market

(1) Tariff Comparison Between Indonesia and Competitors

Machinery products (Tariff Codes: 847981 and 847759) are not included in the U.S. steel and aluminum Section 232 tariff list or its derivatives, so rates apply equally to all countries. For example, the U.S. tariff rate on machinery goods is 15% for Japan and South Korea; ASEAN countries have 19% for Malaysia and Thailand, 20% for Vietnam. Currently, Indonesia's market share in U.S. machinery imports is very low (no related imports from Indonesia in 2024). Therefore, Indonesian competitiveness in the U.S. depends on fundamentals such as mineral resources, location, cost, capacity, technology, regulations, as well as the capacities of investors planning local production.

(2) "China-Taiwan Plus One" Strategy and Supply Chain Diversification

After the U.S.-China trade war, international investment strategies tend to spread risk by establishing a "China-Taiwan Plus One" approach, finding suitable production bases beyond Taiwan. **Indonesia is considered a promising Southeast Asian option, leading many Taiwanese firms to shift production lines from increasingly saturated countries like Vietnam to Indonesia.** This supply chain restructuring trend offers Indonesia a strategic opportunity to develop as an export-oriented manufacturing base for machinery products.

(3) Large Domestic Market and Ample Labor

In 2024, Indonesia had about 279 million people, making it the fourth largest country globally and the largest in ASEAN. It possesses a vast domestic market and demographic dividend foundations. This provides local sales opportunities and a stable base for export production. The workforce is abundant and young, with 40 million workers aged 20 to 39.

(4) Government Efforts to Improve Investment Environment and Diverse Incentives

Indonesia has actively improved its investment environment in recent years, launching comprehensive employment creation laws and loosening restrictions on foreign investment. The number of industries with foreign ownership limits was drastically reduced from 350 to 41 conditional industries, reducing many investment barriers and increasing incentives.

(5) Investment Incentives for Machinery Equipment and Key Components Manufacturing in Indonesia

1. Tax Holiday: Machinery and key components manufacturing industries are classified as "pioneer industries" and along with upstream basic metal industries enjoy tax holidays. Depending on investment amount, companies can receive up to 20 years of full corporate income tax exemption, followed by 2 additional years of 50% tax reduction.

2. Tax Deductions: Qualified investments can deduct 30% of taxable income within 6 years, i.e., 5% of total investment yearly.

3. Two-Year Import Duty Exemption: New or expanded companies can apply for exemption from import duties on production machinery and raw materials for two years.

4. Super Tax Deduction Scheme: Certain metal processing industries (e.g., nails, screws, metal fasteners) can receive additional corporate income tax deductions for expenditures on R&D and talent training. 

