Taiwan's Fastener Strategy Amid Poland's Logistics & Global Supply Chain Restructuring

Taiwan has long held a pivotal position in the global market, particularly in steel fasteners such as screws and nuts, where its export volume consistently ranks among the world's leading suppliers. In recent years, however, the international landscape has undergone significant shifts due to the Russia–Ukraine war, followed by the restructuring of European supply chains. Poland's role as a logistics hub has become increasingly prominent during the conflict and is expected to grow further in the post-war period. Taiwan's fastener exports have experienced a notable decline, dropping from USD 6,140,351 thousand in 2022 to USD 4,200,762 thousand in 2025—a sharp decrease of 31.59% (see **Table 1**). When this trend is examined alongside trade data between Taiwan and Poland in steel fasteners, as well as Poland's import structure (see **Table 2**), it reveals strategic blind spots within Taiwan's fastener industry. Taiwanese industry players must confront this reality and recalibrate their strategies to better align with the opportunities emerging from Poland's logistics role and the broader restructuring of global supply chains.

Table 1. Comparison of Taiwan's Global and Poland Export Values for Steel Fasteners (HS 7318), 2021–2025

(Unit: USD Thousand)

Item	2021 Exports	2022 Exports	2023 Exports	2024 Exports	2025 Exports
Global	**5,319,169**	**6,140,351**	**4,599,738**	**4,373,848**	**4,200,762**
Poland	**81,783**	**90,732**	**66,044**	**76,701**	**78,836**

According to **Table 1**, Taiwan's global exports of steel fasteners (HS 7318) showed considerable fluctuations between 2021 and 2025. The export value rose from USD 5.319 billion in 2021 to a recent peak of USD 6.140 billion in 2022, before dropping sharply to USD 4.599 billion in 2023. This downward trend continued, reaching USD 4.200 billion in 2025. These fluctuations reflect the combined effects of post-pandemic demand recovery and geopolitical disruptions on global markets. In contrast, Taiwan's exports to Poland, while representing only a small share of its total exports, have remained relatively stable, increasing from USD 81.78 million in 2021 to USD 90.73 million in 2022, declining to USD 66.04 million in 2023 amid market volatility, then rebounding to USD 76.70 million in 2024 and further to USD 78.84 million in 2025. Overall, exports to Poland have consistently ranged between USD 70 million and USD 90 million. This suggests that while the Polish market offers resilience, **Taiwan's fastener industry has not sufficiently prioritized its development, resulting in limited growth. Compared with major suppliers such as Germany, China, and the U.S., Taiwan's market share in Poland remains relatively low, indicating an underdeveloped presence in the Eastern European market. If Taiwanese fastener manufacturers can more actively leverage Poland's strategic position as a logistics hub—particularly in conjunction with anticipated reconstruction demand in Ukraine—they may significantly increase their market share in Poland and expand their influence across Europe.** In other words, Poland currently represents an underdeveloped yet high-potential market for Taiwan's fastener industry. With stronger strategic focus, it could become a new driver of export growth for Taiwan in the future.

Poland, located in Central Europe, has a population of approximately 37.5 million. Its capital is Warsaw, the official language is Polish, and its currency is the Polish złoty (PLN), with an exchange rate of roughly PLN 3.6551 to USD 1. Positioned at the crossroads of Europe's geopolitical and economic landscape, Poland has become a frontline state in terms of security and logistics following the outbreak of the Russia–Ukraine war on February 24, 2022. According to data from the International Trade Centre (ITC), Poland's imports of steel fasteners (HS 7318) grew from USD 1,246,710 thousand in 2021 to USD 1,455,110 thousand in 2025, representing an increase of 16.72%. In contrast, Taiwan's fastener exports to Poland declined from USD 97,177 thousand in 2021 to USD 91,954 thousand in 2025, a negative growth rate of 5.37% (see **Table 2**). **Taiwan's relative performance reflects a decline of 22.09%, as compared to Poland's import increase of 16.72%, indicating that Taiwan's steel metal industry has not effectively capitalized on Poland's evolving role in the supply chain following the Russia–Ukraine war.**

Table 2. Top 10 Sources of Poland's Steel Fastener (HS 7318) Imports in 2021–2025

(Unit: USD Thousand)

Item	Country	2021 Imports	2022 Imports	2023 Imports	2024 Imports	2025 Imports
	World	**1,246,710**	**1,312,399**	**1,323,606**	**1,379,256**	**1,455,110**
1	Germany	361,362	374,725	400,385	417,816	435,124
2	China	210,130	185,607	130,904	163,301	175,708
3	Italy	98,582	107,399	136,932	131,245	110,110
4	USA	43,790	57,040	69,151	78,205	102,934
5	Taiwan	97,177	113,560	79,469	86,982	91,954
6	France	36,190	32,338	39,655	50,777	54,971
7	Czech Republic	33,975	44,809	48,192	46,072	45,948
8	Vietnam	25,795	36,917	34,987	31,345	40,323
9	Unspecified Region	11,659	19,474	26,198	28,901	37,542
10	Spain	24,021	21,402	28,713	33,728	34,727

According to **Table 2**, Poland's imports of steel fasteners (HS 7318) showed steady growth from 2021 to 2025, increasing from USD 1.247 billion to USD 1.455 billion. This trend indicates that demand for fasteners in Poland has experienced tangible growth, partly driven by the Russia–Ukraine war. Among the import sources, Germany consistently ranked 1st, with imports reaching USD 435 million in 2025 and accounting for roughly 30% of the total, underscoring its central role in Europe's manufacturing and supply chains. Although China's import value declined after 2022, it remained the 2nd-largest supplier in 2025 at USD 176 million. Italy, the U.S., and Taiwan ranked 3rd to 5th, respectively. Notably, U.S. exports exceeded USD 100 million in 2025, reflecting a gradual expansion in market share. Taiwan, by contrast, recorded USD 91.95 million, representing a negative growth rate of 5.37%, suggesting that its competitiveness in the Polish fastener market needs to be strengthened. Other sources, including France, the Czech Republic, Vietnam, and Spain, each recorded import values between USD 30 million and USD 50 million. While these countries are secondary sources, they highlight the diversification of Poland's import structure. It is also worth noting that imports categorized as "unspecified regions" reached USD 37.54 million in 2025, indicating that some sources were not clearly identified, possibly due to re-exports or special trade arrangements. Overall, Poland's steel fastener import structure is dominated by Germany, followed by China and Italy, with the U.S. steadily increasing its presence. With stable demand growth, Poland represents not only a key export destination in Europe but also a strategic market worthy of deeper cultivation and expansion for Taiwan's fastener industry.

Since Russia's invasion of Ukraine in 2022, Poland has become one of the frontline supportive countries in Europe. Its geographic position has exposed it directly to the spillover effects of the war, while also placing it at the center of refugee assistance, military logistics, and energy supply restructuring. As the conflict gradually moves toward a later stage, **Poland's post-war role is becoming increasingly clear: it is poised to serve as a gateway for Ukraine's reconstruction and as a central logistics hub for Eastern Europe.** Following the outbreak of war, more than 4 million Ukrainian refugees entered Poland, placing significant pressure on housing, healthcare, education, and social welfare systems. Although both the Polish government and civil society have demonstrated a high degree of resilience and inclusiveness, long-term refugee integration will require substantial fiscal resources and institutional adjustments. Meanwhile, Poland has become the primary transit corridor for NATO and U.S. military aid to Ukraine. Weapons, ammunition, and equipment are transported through Poland's borders into Ukraine, placing unprecedented strain on its railways, road networks, and border crossings. This has accelerated infrastructure upgrades and enhanced Poland's dual-use logistics capabilities for both civilian and military purposes. Baltic ports such as Gdynia and winoujcie, along with eastern rail corridors, have emerged as strategic nodes. These routes not only handle military shipments but also facilitate the transport of grain, energy supplies, and humanitarian aid. As a result, Poland's position within Europe's logistics network has been significantly elevated.

Figure 1 illustrates Poland's connectivity with Germany, the Baltic states, Ukraine, and neighboring Central European countries, highlighting its geopolitical advantage in post-war supply chain restructuring and Ukraine's reconstruction.

Following the end of the Russia–Ukraine war, Ukraine is expected to require massive volumes of materials for the reconstruction of its infrastructure, energy facilities, and urban systems. Demand for construction materials, machinery, and energy equipment is expected to grow exponentially. In this context, Poland, by virtue of its geographic location and established transportation infrastructure, will naturally serve as a primary distribution hub. Large volumes of goods will be transported into Ukraine via Poland's ports and rail networks, forming a stable and efficient supply chain. Polish companies are also expected to benefit significantly in areas such as engineering contracting, warehousing and logistics, and supply chain management, further strengthening the country's strategic position in Eastern Europe. As Black Sea shipping remains constrained, the center of gravity of European supply chains is gradually shifting northward, positioning Poland as a key logistics hub between Eastern and Western Europe. Looking ahead, **Poland is likely to emerge as the "logistics gateway" to Eastern Europe—linking Germany and the Baltic states while serving as a frontline support base for Ukraine's reconstruction.** For Taiwan's fastener industry, this presents a critical opportunity: by leveraging Poland's role as a transshipment hub, companies can more efficiently access the Ukrainian market and identify new growth drivers amid the restructuring of European supply chains.

Strategic Directions for Taiwan's Fastener Industry: Focusing on Poland's role as a transshipment hub and the reconstruction needs of Ukraine. In the post-war period, Ukraine's reconstruction of infrastructure, energy facilities and cities will drive **substantial demand for steel fasteners, which are essential components in construction materials, machinery, and engineering projects.** Given Poland's geographic and infrastructural advantages, it will function as the primary gateway for materials, machines and energy equipment entering Ukraine via ports and rail systems. Taiwanese fastener manufacturers should seize this opportunity and consider the following strategic directions:

★ **Strengthen European market presence:** Treat Poland as a strategic base by establishing warehousing and distribution centers to leverage its logistics hub status. This can shorten supply chains and improve delivery efficiency. Meanwhile, use Poland as an entry point into Ukraine to participate directly in reconstruction projects and meet the growing demand for fasteners in infrastructure and industrial equipment.

★ **Advance low-carbon transformation and sustainability:** The EU's CBAM will pose new challenges for exporters. Taiwanese manufacturers should adopt green production processes, invest in energy-efficient equipment, and utilize renewable energy to reduce carbon emissions. Establishing transparent carbon footprint systems will help meet EU requirements, enhance export competitiveness, and secure long-term positioning in the European market.

★ **Upgrade product value and differentiation:** Focus on innovation and upgrade of construction fasteners. With rising fastener demand driven by Ukraine's reconstruction and broader European infrastructure renewal, particularly in bridges, steel structures, energy facilities, and urban development, manufacturers should shift from standard products toward high-strength, corrosion-resistant, and seismic-resistant fasteners to increase added value.

★ **Promote strategic partnerships and supply chain integration:** Taiwanese fastener companies can pursue joint ventures or technological collaborations with European firms to enhance trust and market influence. Building partnerships with Polish logistics providers will help ensure supply chain stability and reinforce Poland's role as a key transshipment hub.

★ **Diversify markets:** While focusing on Poland and Ukraine, Taiwanese manufacturers should also expand into Southeast Asia and the Middle East to mitigate geopolitical risks. Through brand internationalization and an emphasis on quality and sustainability, companies can move beyond price-based competition and elevate the global image of Taiwan's fastener industry.

The Russia–Ukraine war has fundamentally reshaped the structure of European supply chains, with Poland set to become a central hub for logistics and reconstruction in the post-war era. For Taiwan's fastener industry, this represents a critical opportunity for strategic repositioning. Looking ahead, several strategic directions should be prioritized. First, Poland should be established as a forward operating base, with warehousing and distribution centers developed to capitalize on its geographic advantages. This would enable Taiwanese firms to access Ukraine's reconstruction market more effectively and meet the substantial demand for fasteners in infrastructure, construction materials, and machinery. Second, advancing low-carbon transformation is essential. Manufacturers must adopt green production processes, integrate renewable energy, and establish transparent carbon footprint systems to comply with the EU's CBAM and maintain export competitiveness. Third, investment in the development and upgrade of high-value construction fasteners is crucial. As reconstruction projects expand across Europe—particularly in Ukraine—demand for high-strength, corrosion-resistant, and seismic-resistant fasteners will increase rapidly. These products must not only withstand the structural stresses of large-scale steel frameworks and bridges, but also comply with Europe's stringent standards for safety and sustainable construction. Fourth, companies should actively pursue international partnerships and logistics alliances, including joint ventures and technological collaborations with European firms, as well as stable supply chain networks with Polish logistics providers. This will ensure agility and responsiveness amid post-war reconstruction and ongoing supply chain restructuring. Finally, market diversification remains a key. While deepening engagement in Europe, Taiwanese companies should also expand into Southeast Asia and the Middle East to mitigate geopolitical risks. Additionally, advancing brand internationalization—emphasizing quality and sustainability—will help shift competition away from price alone.

Figure 1. Poland's Strategic Position in Europe

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Through these strategies, Taiwan's fastener industry can not only reinforce its position as a leading global exporter, but also gain strategic initiative amid the restructuring of European supply chains, transforming from "an OEM supplier" to "a high-end solution provider". This is not merely about maintaining existing advantages; it is an opportunity to redefine its international role. As Poland emerges as the logistics gateway for Ukraine's reconstruction, Taiwanese fastener manufacturers that successfully position themselves with strengths in low-carbon production, smart manufacturing, and high-value products will secure an irreplaceable role in the next phase of global supply chain evolution—unlocking new growth momentum while establishing a stronger and more clearly defined global brand and strategic identity. ■