

TAIWAN

Trend Analysis of Taiwan Fastener Industry in 2023

The Department of Statistics of Taiwan's Ministry of Economic Affairs has indicated that in 2022, Taiwan's export orders have been declining since July, with orders amounting to US\$54.26 billion in July 2022, an annual decrease of 1.9%. In the second half of 2022, Taiwan's export performance was in a recession. Table 1 summarizes the events of 2022 and their impact on Taiwan.

Table 1. 2022 Major Events

Month	Events	Impact
Jan.	<ol style="list-style-type: none"> 1. RCEP came into force. 2. China's National Bureau of Statistics released data for 2021. The GDP growth was 8.1% a year, averaging 5.1% over two years, and slowed to 4% in the latest quarter. 	<ol style="list-style-type: none"> 1. Taiwan isn't an RCEP member, so manufacturers exporting to Southeast Asia cannot enjoy favorable tariffs. 2. China's economic growth is slowing down.
Feb.	<ol style="list-style-type: none"> 1. Russia invaded Ukraine. The largest war in Europe since World War II. 2. US Biden administration announced severe economic sanctions against Russia. 3. The opening ceremony of the 2022 Winter Olympic Games was held at the National Stadium in Beijing, China. 	<ol style="list-style-type: none"> 1. Energy costs rose. Taiwan's electricity prices rose since July 1 and extra-high voltage electricity users faced an increase of 15%.
Mar.	<ol style="list-style-type: none"> 1. Xi Jinping, General Secretary of the Communist Party of China (CPC), presided over a meeting of the Standing Committee of the Political Bureau of the CPC Central Committee, at which he called for a "dynamic clean-up" to curb the spread of the new epidemic as soon as possible. 2. Shanghai (China) implements regional and batch control, which is later expanded to a territory-wide static management. 	<ol style="list-style-type: none"> 1. Shanghai is the largest port in China, which has an impact on the import and export of some Taiwanese manufacturers. 2. Seriously affected the flow of goods in the supply chain worldwide.
Apr.	<ol style="list-style-type: none"> 1. More than 500 million new coronavirus cases and nearly 6.21 million deaths. 	<ol style="list-style-type: none"> 1. The total infected population in the world (including the uncounted value) is estimated to be more than 1 billion people. 2. The overall immunity of the world is strengthened, and the impact of the new coronavirus is reduced.
May.	<ol style="list-style-type: none"> 1. Hong Kong postponed the 6th Chief Executive election, Li Ka-Chiu was elected as the Chief Executive with a record high vote share of over 99%. 	<ol style="list-style-type: none"> 1. China has tightened its control over Hong Kong after the "anti-China campaign".



Table 1. 2022 Major Events

Month	Events	Impact
Jun.	<ol style="list-style-type: none"> 1. Shanghai officially lifted the closure measures in response to the 2019 Coronavirus outbreak. 2. Chairman of the Central Military Commission Xi Jinping signed an order releasing the "Military Non-War Action Plan" with immediate effect. 3. China's third aircraft carrier was launched at Jiangnan Shipyard and was named "Fujian Ship of the Chinese People's Liberation Army". 	<ol style="list-style-type: none"> 1. China's naval force is increased. 2. The eastern part of Taiwan will no longer be a safe area.
Jul.	<ol style="list-style-type: none"> 1. Sri Lanka officially becomes a bankrupt state. 2. The European Parliament approved the inclusion of nuclear energy and natural gas as environmentally sustainable green energy. 3. U.S. inflation rate rose to a new high of 9.1%. 4. The U.S. passed the "Chip and Technology Act" to enhance its ability to compete with China for national power. 	<ol style="list-style-type: none"> 1. China's "One Belt, One Road" capital regulation is facing a test. 2. Inflation caused the U.S. Fed to adopt a rapid interest rate increase policy, and the cost of corporate capital increased significantly. 3. The economic war between China and the U.S. is heating up again.
Aug.	<ol style="list-style-type: none"> 1. Speaker of the U.S. House of Representatives Nancy Pelosi visited Taiwan. 2. The Chinese People's Liberation Army (PLA) held a large-scale military exercise around Taiwan Island. The Chinese PLA held a large military exercise around Taiwan Island, and missiles flew over the island. 3. China's General Administration of Customs banned the import of more than 100 Taiwanese food China's Customs (GAC) banned the import of more than 100 Taiwanese food factories, and announced a moratorium on the export of citrus fruits, white mackerel and horse mackerel to Taiwan. 4. U.S. President Joe Biden signed the "Reducing Inflation Act of 2022". 	<ol style="list-style-type: none"> 1. Cross-strait relations are freezing rapidly, and military tensions are rising. 2. China's unilateral commercial sanctions against Taiwanese companies are expanding. Expanded implementation of commercial sanctions against Taiwan companies. 3. U.S. inflation is expected to slow down.
Sep.	<ol style="list-style-type: none"> 1. India's first domestic aircraft carrier "Vikrant" was commissioned. 2. Russian President Vladimir Putin announced the launch of a partial military mobilization in Russia, mobilizing 300,000 citizens. 3. Russia's Nord Stream gas pipeline project to Germany, Nord Stream 1 and Nord Stream 2, located in the Baltic Sea, exploded on the same day. 4. Queen Elizabeth II died. 	<ol style="list-style-type: none"> 1. World military instability worsened. 2. European energy shortage, once again pushing up prices, weakening the purchasing power of the EU countries. 3. The UK's international influence decreases.
Oct.	<ol style="list-style-type: none"> 1. The First Plenary Session of the 20th CPC Central Committee elected a new member of the Political Bureau of the CPC Central Committee, and Xi Jinping was re-elected as General Secretary of the CPC Central Committee. 	<ol style="list-style-type: none"> 1. A new center of power was established in China and centralization of power became more centralized.
Nov.	<ol style="list-style-type: none"> 1. The world's population passed the 8 billion mark. 2. Residents of Urumqi, Xinjiang, were extremely unhappy with the closure and fire for more than 100 days; the incident provoked a chain reaction among residents and quickly spread to the city. 3. The ruling Democratic Progressive Party set a record low number of votes since it first ran for office in 1989. 	<ol style="list-style-type: none"> 1. The world's demographic dividend will help enhance commercial products demand. 2. The Chinese people are openly dissatisfied with the "Dynamic Zero" policy. 3. The people of Taiwan cast a vote of no confidence in the ruling DPP government.
Dec.	<ol style="list-style-type: none"> 1. In the third year of the "clearing" of the novel coronavirus, the "White Paper Movement" was launched throughout China, and the wave of demonstrations gradually spread, which is considered the largest Chinese assembly demonstration movement since the June 4 Incident in 1989. 	<ol style="list-style-type: none"> 1. The inconvenience caused by the long-term "zeroing out" has led to protests from the people and accelerated the departure or return of the Taiwanese businesses from China to Taiwan.

This article shows Taiwan's fastener export from January to October 2022. The total export value of steel screws, bolts, nuts, automotive screws, spiral hooks, rivets, pins, cotter pins, washers including spring washers and similar products falling within 7318 was US\$5,247,514,000, and the total export weight was 1,380,425 metric tons. For relevant data, please refer to Table 2, which reveals Taiwan's fastener export from January to October 2022, and then compare the export value and weight of fasteners in 2022 with those in 2018, 2019, 2020, and 2021, as shown in Table 3, which reveals Taiwan's fastener export statistics from January to October 2018 to 2022. The data shows that both the export value and the quantity appeared a significant growth. Compared with 2021, the export value increased by 21.52%, and the export volume increased by 3.22%, showing that in 2022 the export performance of Taiwan's fasteners was still



Table 2. Taiwan's Export from January to October 2022 (Product Code 7318)

Date	US\$ (thousands)	Weight (tons)
Jan. 2021	545,462	147,883
Feb. 2021	463,432	125,391
Mar. 2021	580,476	154,970
Apr. 2021	520,836	138,023
May. 2021	533,521	140,025
Jun. 2021	539,327	138,798
Jul. 2021	536,941	137,216
Aug. 2021	537,907	139,999
Sep. 2021	486,712	126,711
Oct. 2021 (preliminary value)	502,900	131,407
Total	5,247,514	1,380,423

Table 3. Taiwan's Fastener Export from January to October 2022

Year	2018	2019	2020	2021	2022
1,000 US\$	3,861,818	3,642,712	3,250,271	4,318,233	5,247,514
Growth Rate	N	-5.67%	-10.77%	+32.86%	+21.52%
Weight(Ton)	1,328,880	1,250,666	1,123,540	1,337,320	1,380,423
Growth Rate	N	-5.89%	-10.16%	+19.03%	+3.22%

Table 4. Taiwan's Fastener Export Weight from January to 2018 to Oct. 2022
Unit: Ton

	2018	2019	2020	2021	2022	2022 vs. 2021
Jan.	134,800	147,455	119,060	126,753	147,883	+16.67%
Feb.	110,952	100,231	100,771	115,907	125,391	+8.18%
Mar.	137,057	138,128	134,432	148,358	154,970	+4.46%
Apr.	123,196	124,535	97,329	130,067	138,023	+6.12%
May.	149,476	131,508	102,609	132,596	140,025	+5.60%
Jun.	132,717	125,840	104,679	133,732	138,798	+3.79%
Jul.	134,043	130,904	117,362	144,330	137,216	-4.93%
Aug.	140,418	122,161	119,152	137,599	139,999	+1.74%
Sep.	129,798	115,208	107,967	127,272	126,711	-0.44%
Oct.	136,424	114,694	120,180	140,706	131,407	-6.61%

very prosperous. However, this data is different from the current market situation. The author also counted the export weight statistics from 2018 to October 2022, as shown in **Table 4**. **It is very clear to see that before June 2022 Taiwan fastener industry was busy in digesting the orders accepted in 2021, so the export volume climbed high. However, since July, the demand in the United States, Europe and other markets declined, and the number of new orders decreased. Compared with 2021, the export weight began to reverse and decline. These data do reflect the current situation of Taiwan fastener market.**

According to **Table 3** showing Taiwan's fastener export, before the start of the US-China trade war in 2018 and 2019, the export of Taiwan fastener industry was declining year by

year regardless of the value or volume due to competition from mainland China. However, since the US President Trump imposed high tariffs on China, US orders were switched to Taiwan. "China-EU Investment Agreement" was also suspended because of China's human rights issues in Xinjiang and China's sanctions against Europeans. At the same time, the EU also imposed an arms embargo and multiple anti-dumping measures against China. Therefore, **lots of fastener orders from the US and Europe were switched to Taiwan in 2021. It even took up to 8 months for Taiwanese fastener manufacturers from taking orders to delivery.** After the war between Russia and Ukraine launched in 2022, the rapid demand increase caused severe inflation in the United States and Europe due to the rapid rise in energy prices. The rising prices restrained the purchasing power of consumers. The demand in the European and American markets has begun to tighten, and foreign orders for Taiwan's fasteners have also begun to decline. After digesting the backlog of orders, the export volume began to decline in July 2022.

IPEST Analysis in 2023

From the above, we can clearly understand that the profits and losses of Taiwan fastener industry are inseparable from the international political, financial, and economic environments. In management science, IPEST is often used as an environmental analysis tool to explore the possible impact of the external environment on business operations from these five aspects. IPEST refers to five key factors: International, Politics, Economy, Socio-cultural, and Technology. International factors include international politics. Of course, the relationship between China and the United States has the greatest impact on Taiwan, and US dollars have the most influential power over the international exchange rates. Political factors include tax policies, labor laws, environmental regulations, trade restrictions, tariffs, and political stability. Economic factors include economic growth, interest rates, exchange rates and inflation rates. Social factors typically focus on health awareness, population growth rates, age structure, work attitudes and safety needs, as well as cultural perspectives. Technological factors focus on R&D activities, automation, technological incentives and the speed of technological development. In this article, the IPEST analysis of Taiwan fastener industry in 2023 is shown in **Table 5**.

Based on **Table 5**. 2023 IPEST analysis table of Taiwan fastener industry, I then sorted out **Table 6**. showing external opportunities and threats of Taiwan fastener industry in 2023.



Table 5. 2023 IPEST Analysis of Taiwan Fastener Industry

Analysis Project		Impact on Taiwan Fastener Industry
International	Positive Influence	<ol style="list-style-type: none"> 1. The trade war between China and the United States continues to heat up, shifting orders from China to Taiwan. 2. The short-term political turmoil of China's "White Paper Movement" is favorable to transfer Chinese orders to Taiwan. 3. As Europe and the United States are de-sinicized, orders made to China were transferred to Taiwan.
	Negative Impact	<ol style="list-style-type: none"> 1. It's hard for Taiwan to join the world's economic partnership agreements. 2. The distance between Taiwan and China is getting farther, and the risk of cross-strait military conflicts is increasing. 3. The war between Russia and Ukraine continues to affect the world's economic recession. 4. Inflation affects international demand and reduces orders.
Politics	Positive Influence	<ol style="list-style-type: none"> 1. Action plan 3.0 for welcoming Taiwanese businessmen to invest in Taiwan. The National Development Fund will set aside NTD 210 billion, and Taiwan Government will pay the transaction fees. 2. The Energy Bureau of the Ministry of Economic Affairs promulgated the "Key Points for Power and Public Equipment Subsidy Operations (2021)" to update auxiliary equipment.
	Negative Impact	<ol style="list-style-type: none"> 1. China's ban on the import of certain products from Taiwan. 2. Taiwan's ruling party DPP lost the election in 2022, resulting in a political instability.
Economy	Positive Influence	<ol style="list-style-type: none"> 1. The depreciation of the New Taiwan Dollar is favorable to export. 2. Compared with Europe and the United States, the price increase in Taiwan is properly controlled.
	Negative Impact	<ol style="list-style-type: none"> 1. Loan interest rates rise, increasing capital costs. 2. Electricity costs rise, increasing manufacturing costs.
Socio-cultural	Positive Influence	<ol style="list-style-type: none"> 1. The impact of Covid-19 on Taiwan has been greatly reduced. 2. The loosening of borders is favorable to the promotion of international trade.
	Negative Impact	<ol style="list-style-type: none"> 1. It is difficult to find employees due to a declining birth rate, and wages are rising year by year. 2. The age of technical staff is relatively high.
Technology	Positive Influence	<ol style="list-style-type: none"> 1. Smart production technology is mature. 2. The technology of electric vehicles is mature, driving the demand for electric vehicle fasteners.
	Negative Impact	<ol style="list-style-type: none"> 1. The machines of some manufacturers are old and have insufficient precision. 2. Insufficient R&D investment in Taiwan fastener industry.

Based on the above-mentioned IPEST, opportunity and threat analysis, I sorted out the trends of Taiwan fastener industry in 2023 into five parts:

1. The Impact of the Development of the Russia-Ukraine War:

If this war cannot end in the near future, it will continue to affect energy prices, inflation, interest rates, negative economic growth, and food shortages. When the main customers in Europe and the United States face the above-mentioned difficulties, the overall demand will decline. It is a negative factor for Taiwan fastener industry.

2. Recession:

As the Central Banks of many countries raised interest rates to curb inflation under the dominance of the U.S., the world's major economies fell into a recession. The decline in purchasing power of consumers is a negative factor for Taiwan fastener industry.

3. Taiwan's Energy Issues:

When Taiwan fastener industry faced a power outage, most companies did not have temporary power generators for immediate use for their production equipment. The more Taiwanese investors return, the more electricity demand will be produced, and the increase in overall electricity consumption will be a negative factor for Taiwan fastener industry.

4. Continuation of US-China Trade War:

President Biden decided to extend the tariff increase on China, and the United States has not stopped the trade sanctions against China for five years. The effect of transferring orders from China is a positive factor for Taiwan fastener industry.



Table 6. Opportunities and Threats of Taiwan Fastener Industry in 2023

Opportunities	Threats
<ol style="list-style-type: none"> 1. The economic war between China and the United States continues to heat up, shifting orders from China to Taiwan. 2. The short-term political turmoil of China's "White Paper Movement" is favorable to transfer orders from China to Taiwan. 3. De-Sinicization of Europe and the United States, causing transfer of orders from China to Taiwan. 4. The depreciation of New Taiwan dollar is favorable to export quotations. 5. Compared with Europe and the US, the price increase in Taiwan is properly controlled. 6. The impact of Covid-19 on Taiwan has been greatly reduced, and the loosening of borders is favorable to the promotion of international trade. 7. Intelligent production technology is mature. 8. The technology of electric vehicles is mature, driving the demand for electric vehicle fasteners. 9. The government promotes the "power and public equipment subsidy operation". 	<ol style="list-style-type: none"> 1. It's hard for Taiwan to join the world's economic partnership agreements. 2. The relationship between Taiwan and China is getting worse, and the risk of cross-strait military conflicts is increasing. 3. The war between Russia and Ukraine continues, and the short-term energy shortage problem cannot be improved. 4. Inflation affects international demand and reduces orders. 5. China's ban on the import of certain products from Taiwan. 6. Taiwan's ruling party DPP lost the election in 2022, resulting in political instability.. 7. Loan interest rates rise, increasing capital costs. 8. Electricity costs rise, increasing manufacturing costs. 9. It is difficult to find employees due to a declining birth rate, wages are rising year by year, and the age of technical workers is relatively high. 10. Some manufacturers' machines are old and have insufficient precision 11. Insufficient R&D investment in Taiwan fastener industry.

5. Geopolitical Tension Across Taiwan Strait:

As geopolitical tension across Taiwan Strait heats up, China may take the opportunity to step up military operations against Taiwan. China's long-term "dynamic zeroing" policy has been protested in the "White Paper Movement" at the end of 2022. It is expected that China will reduce the intensity of epidemic control. It is expected that the impact of this movement will not be too long. However, during this period of time, it will accelerate the departure of Taiwanese businessmen and the transfer of orders from European and American customers, which is a positive factor for Taiwan fastener industry.

From Table 6 showing opportunities and threats of Taiwan fastener industry in 2023, it can be seen that Taiwan fastener industry will face a threat in 2023 greater than the opportunity. Since this article cannot assume the status of a single company, the countermeasures that Taiwan fastener industry can take to face the opportunities and threats in 2023 are summarized as follows:

1. Due to the de-sinification of Europe and the United States and the short-term political instability in China, orders from China will continue to be transferred out. Taiwanese fastener companies should actively send business personnel to visit customers abroad and participate in international exhibitions to quickly increase the number of orders transferred.
2. The Russia-Ukraine war continues, international energy will remain at a high level, and Taiwan's electricity bills will continue to rise in the long run. Enterprises should not only focus on "energy saving and carbon reduction" as a work target, but also bring funds into a "low-carbon economic model." It is also an option to purchase energy-saving equipment and technology, and apply for government subsidies.
3. Invest in R&D and innovation to strive for new fastener markets, such as the electric vehicle fastener market, etc.
4. Invest funds, replace old machines, improve product precision, improve overall quality and strengthen international competitiveness.
5. In response to rapid changes in international exchange rates, pay attention to the risk of capital allocation and account receivables.

Under the rapid interest rate hike in the United States in 2022, the domestic inflation in the United States has been effectively suppressed. In 2023, it is expected that there will be no more rapid interest rate rises, and a policy of slow interest rate rises will be adopted. However, high interest rates cannot be avoided. The era has come. With a large amount of capital withdrawn from circulation, corporate capital allocation and account receivables management will be issues that Taiwan fastener players must pay much attention to in 2023.

The external environment changes rapidly in the 21st century. The changes in 2019-2022 are like riding a roller coaster for Taiwanese companies. During this period, they have experienced epidemics, port closures, container shortages, inflation, rapid exchange rate changes, military tensions across Taiwan Strait and other events, despite the turbulent waves, everyone still gritted their teeth and survived. In the face of 2023, as long as Taiwan fastener industry can carefully analyze the impact of the internal and external environment on their company, integrate the company's internal advantages and disadvantages with external opportunities and threats, and find out countermeasures, I believe that 2023 will be a year full of hope and light. ■



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