

2022 is a new start with anticipation to regain peace after the COVID impact on the human race that has raged on for two years since 2019. The new variant Omicron found at the end of 2021 in South Africa caught the world's attention. Experts indicate the reason for the emergence of the new variant in Africa could be the disparity in global vaccination rates. Western developed nations have relatively abundant supply of vaccines and higher vaccination rates, and most of them have begun a third shot. Developing nations have low vaccination rates, and the rapid transmission of COVID virus in Africa is very likely to result in a new variant. The same goes for the Delta variant, and so does Omicron. The Central Epidemic Command Center of Taiwan announced on December 11, 2021 the first imported Omicron case. The case came from Eswatini.

According to Dr. Coetzee who discovered Omicron, the cases are mild with just fatigue, headache and sore throat. ACIP convener Dr. Ping-Ing Lee pointed out the first COVID virus from Wuhan caused fever, cough, etc., mostly centered on the lower respiratory system, while the Delta variant moves up to the upper respiratory system causing a runny nose and a headache. The change from the lower to the upper system signifies a sign of COVID symptoms going mild. Despite the UK reported deaths caused by COVID in December 2021, it is generally recognized by experts of various fields that new COVID variants will continue to become like the flu. The world's anticipation to coexist with the virus may become a reality in 2022.

Retrospectively, the vaccination rate began to increase in 2021 in Western developed nations. Many consumers who had had opted for Internet purchase because of the virus could finally walk out to shopping malls. As the economy reopened, everyone could head out and the long-suppressed consumers' demand largely drove the U.S. economy to grow at a whopping speed. In a World Economy Outlook report titled "Recovery During a Pandemic" released by IMF in October 2021, the global economy continues to recover. The world's economy growth was 5.9% in 2021. IMP has even better outlook for the U.S. economic recovery and expects the U.S. economy to grow 7%, up quite a lot from what was expected.

In 2021, the U.S. also faced a disrupted supply chain involved with price surge, overburdened harbors, and shortages of ships, trains and trucks. Furthermore, shipping rates increased substantially in 2021 as a result of many enterprises booking containers. Baltic Dry Index as the indicator for evaluating shipping costs has surged over 700% since mid-May 2020. Loading cargoes to ships will take some time to wait because the manufacturing countries are short of empty containers. By the time the cargoes reach the U.S., the ports are overwhelmed and a large number of container ships congest at the ports in Long Beach and Los Angeles. Supply chain disruption has paralyzed many companies and they cannot cope with the massive amount of orders. Taiwanese fastener industry has been also heavily impacted. Products could not be loaded on ships, and therefore companies have to increase warehouses to store the products. Orders continued to pour in and the lead time extended to over 6 months. Concerns about the rising material costs forced the companies to pre-order materials and put pressure on working capital.

Out of the world's containers going to the U.S., up to 40% go through Los Angeles and Long Beach ports in California. The two ports don't have enough unloading capacity, leading to a disrupted supply chain. The U.S. president Biden announced on October 2021 that Los Angeles and Long Beach ports will change their working hours from 5 days to 7 days a week, working non-stop 24 hours a day. The ports are expected to be back to normal in the first quarter of 2022.



Table 1. Taiwan's Fastener (HS Code 7318) Exports to the Top 12 Countries and the World from 2017 to the First 11 Months in 2021

Year Items		2021		2020			2019			
Ranking	Region	1,000 USD	Ton	Unit Price (USD/KG)	1,000 USD	Ton	Unit Price (USD/KG)	1,000 USD	Ton	Unit Price (USD/KG)
	World	4,871,103	1,487,752	3.27	3,583,774	1,235,201	2.90	3,940,227	1,350,723	2.92
1	U.S.	2,081,246	652,400	3.19	1,530,321	553,310	2.77	1,607,446	569,826	2.82
2	Germany	409,140	127,242	3.22	304,441	105,760	2.88	352,941	119,385	2.96
3	The Netherlands	263,661	84,406	3.12	172,309	59,254	2.91	205,329	72,526	2.83
4	Japan	223,500	60,727	3.68	195,356	59,219	3.30	224,014	67,596	3.31
5	UK	191,404	56,029	3.42	122,983	37,673	3.26	155,392	50,604	3.07
6	China	172,962	30,148	5.74	115,474	21,553	5.36	100,882	17,667	5.71
7	Canada	161,319	52,475	3.07	116,520	41,166	2.83	135,126	47,981	2.82
8	Sweden	110,166	29,661	3.71	76,964	22,510	3.42	83,120	25,663	3.24
9	Mexico	106,547	30,811	3.46	69,866	21,276	3.28	88,960	28,450	3.13
10	Australia	79,957	20,544	3.89	64,546	18,050	3.58	63,584	17,778	3.58
11	Thailand	76,272	22,040	3.46	59,037	19,054	3.10	65,006	20,278	3.21
12	France	75,916	24,291	3.13	61,065	20,831	2.93	72,313	24,777	2.92

In 2021, Taiwanese fastener industry was recovering from the pandemic, and both the export volume and value were back to the prepandemic level. Due to the U.S./China trade war, the volume and value surpassed the level in 2017 and 2018. **Table 1** is the export data of Taiwan's fastener products (HS Code 7318) to the top 12 countries and the world from 2017 to the first 11 months in 2021. The products include stainless steel screws, bolts, nuts, automotive screws, helix screws, rivets, cotters, cotter pins, and washers.

Compared with 2020, the export volume of Taiwan's fasteners grew 20.45% in 2021, and the export value grew a fascinating 35.92% (the value of New Taiwanese Dollar, or TWD, grew about 7% in 2021). However, as we go further and factor in cost hikes and the appreciation of TWD, the pretty figures don't quite reflect the reality. Comparing 2021 to 2018, the total export volume grew 2.42% and the value grew 15%. However, the exchange rate in November 2018 was USD 1 for TWD 32.12, and in November 2021 it was USD 1 for TWD 28.07. The Taiwanese Dollar grew 12.6%. According to the Domestic Wire Rod Price Record in 2018 by Money-Link, wire rods were sold for NTD 26.38 thousand per ton in November 2018, and 36.17 thousand per ton in September 2021, up 37.11%. Judging from this data, despite a boost in the capacity of Taiwanese fastener companies in 2021, profits declined because of increased wire rod costs and currency appreciation, and there was also a cost increase in freight and inventory. The face value acquired doesn't quite translate to much profit gains and the Taiwanese fastener business owners should think about it.

One of the main reasons is that the unit price of Taiwan's fasteners didn't go up. The average export price in 2021 was USD 3.27/kg, in 2020 it was USD 2.90/kg, in 2019 it was USD 2.92/kg, in 2018 it was USD 2.91/kg, and in 2017 it was USD 2.72/kg. The average export price in 2021 was 12.38% higher than the one in 2018, but considering the appreciation of TWD by 12.6% and the 37.11% increase in wire rod cost, the profit actually dropped 11.13%. This explains that even with the U.S./China trade war that brought orders to Taiwan instead of China, the unit price was not adjusted, and the orders for low-price fasteners that were brought to Taiwan result in profit gains that doesn't amount to what appears in those pretty numbers.

The internal and external factors that could affect Taiwan fastener industry in 2022 are listed below:

lacktriangle Risks and Opportunities with Orders from the U.S. and Europe lacktriangle

The U.S. remains to be Taiwan's largest fastener export destination. The infrastructure demand in the U.S. drove the country to place a large number of orders to Taiwan in 2021. As in **Table 2**, the U.S. took up 42.73% of Taiwan's total fastener export value in the first 11 months of 2021. However, the U.S. is short of workforce and its constructions are behind schedule. Some companies have requested to postpone shipment because they have overstocked. Taiwanese fastener business owners must keep an eye on it in case they have overstocked and created financial pressure. For 2022, more Americans are expected to return to their jobs because the Pandemic Unemployment Assistance has expired in September 2021. The Assistance was expected to increase 1 million employees in Q4 2021. An estimate of 3 million people who hesitated to return to their jobs could be able to return by mid-2022. **Therefore, fastener inventory issues could be improved in Q2 2022**.

Europe is another important region for Taiwan's fastener exports. Prior to 2021, the top export destinations for Taiwan's fasteners included Germany (taking up 8.40%), the Netherlands (5.41%), UK (3.93%), Sweden (2.26%), France (1.56%), altogether taking up 21.56% of Taiwan's total fastener export value, making Europe the second largest destination for Taiwan's fastener export. Compliance to the European high quality requirements reflects the fact that Taiwan's fasteners are above international standards in terms of quality, technique, service and materials. Although Taiwan's fastener industry benefits from EU's five-year anti-dumping taxes on Chinese fasteners effective from 2012, which in turn brought orders to Taiwan, the export price for Taiwan's fastener going to Europe didn't go up in the past few years. The average unit price for the Netherlands (USD 3.12/kg) and France (USD 3.13/kg) were lower than the one for the U.S. (USD 3.19/kg). It is worth noting that last year there were again European companies requesting an anti-dumping investigation on Chinese fasteners. The EU launched an anti-dumping investigation on China in September 2021. If an anti-dumping tax is imposed on China again, the orders could be switched from China to Taiwan and Taiwanese fastener companies should grasp the chance and adjust product prices as appropriate.

Table 2 Proportions	of Countries in the	Export Value of Taiwan'	's Fastanars in the First	11 Months of 2021
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Ranking	Region	1,000 USD	Proportion	Unit Price (USD/KG)	
	World	4,871,103	100%	3.27	
1	U.S.A	2,081,246	42.73%	3.19	
2	Germany	409,140	8.40%	3.22	
3	The Netherlands	263,661	5.41%	3.12	
4	Japan	223,500	4.59%	3.68	
5	UK	191,404	3.93%	3.42	
6	China	172,962	3.55%	5.74	
7	Canada	161,319	3.31%	3.07	
8	Sweden	110,166	2.26%	3.71	
9	Mexico	106,547	2.19%	3.46	
10	Australia	79,957	1.64%	3.89	
11	Thailand	76,272	1.57%	3.46	
12	France	75,916	1.56%	3.13	

► Shipping Barriers to Decrease & Shipping Rates to Near a Reasonable Range ▲

Port congestion which was never seen before 2021 and the hike of logistics rates have forced American companies to increase their product prices to which they divert the increased shipment cost, and this in turn increases inflation. U.S. President Biden has taken measures to alleviate harbor congestion, including persuading harbor business owners into working 24-7 to help shipping out the heaping cargoes. According to Economy Daily News' (Taiwan press) report on December 3, 2021, Morgan Stanley, the business expansion in the freight transport industry could slow down in the second half of 2022, by which time the volume of cargoes in transport will drop from its peak and create pressure on the overall profit growth of the freight transport industry.

The U.S. harbors are inordinately busy in the yearend shopping season and right before the lunar New Year, but after the high freight transport season, port congestion could ease. The congestion in U.S. freight by sea, railroads and trucks is expected to ease before mid-2022 and the freight volume should normalize in mid-2022. By then, supply chain congestion should ease as well and global freight congestion can be expected to get back to normal after Q2 2022.

► Chinese Economic Contraction and Declining Demand **▲**

Chinese economist Mr. Li Daokui pointed out at the 14th Golden Phoenix Forum that the coming years will be the hardest time for China since the Chinese economic reform. China enforced a series of regulatory policies in 2021 while the U.S./China trade war continued. At the end of 2021, it was rumored that government employees in multiple Chinese provinces said they received a notice of wage cut by around 20% to 30%. The cut initially applies to government employees in Jiangsu, Zhejiang, Guangdong, Fujian, Shanghai and some other Chinese provinces.

Taiwanese scholar Mr. Jinhe Hsieh pointed that the Chinese economy has grown rapidly in the last 30 years and that China has become the biggest powerhouse for the world's economic growth. "China has become the world's factory. The industrial products manufactured by low-wage labors alleviates the pressure on global inflation, but now this powerhouse that drives the world's economic growth is waning and brings an unprecedented change to the world of future." China could be the biggest variable of the world in 2022. The political wrestle between the U.S. and China continues to permeate worldwide and countries have to choose sides. Among them, Europe has the most evident

swerve. Additionally, China makes more and more investments in national defense and maintaining national stability. The economic decoupling caused by the competition between the U.S. and China adds to the pressure on global inflation and puts an end to globalization. It is harder to find cheaper production bases. There had been a qualitative and quantitative change in the global economy over the past 30 years and this makes for an opportunity for Taiwanese fastener industry to develop international markets.

In terms of fastener export, China takes an important share in Taiwan's fastener export. Taiwan exported 30,148 tons or USD 172.96 million worth of fasteners to China, taking up 3.55% of the total export value and becoming the 6th largest fastener export destination for Taiwan. The average price for fasteners exported to China was USD 5.74 which was the highest of the world. It explains that Taiwan's high quality and high value added fasteners can compensate for the deficiency in China, but if the demand in China contracts, Taiwan's high-price fastener export to China will create a huge negative impact.

► Workforce Shortage Worsens in Taiwan **▲**

Since the U.S./China trade war, many Taiwanese business owners have returned to Taiwan to build plants. Taiwan Semiconductor Manufacturing Co. is expanding facilities across Taiwan, and because of much increased export, many technology companies dish out high-wage jobs to recruit talents. Japan and South Korea did the same to attract foreign workers. After allowing foreign workers into the borders in 2019, Japan allowed foreign workers to have the same amount of work and pay, share corporate profits and live permanently as do the native Japanese. Japan used to rely on the Chinese with skills who were allowed into Japan as apprentices, but now Southeast Asian workers have replaced them as the mainstay.

Taiwan is expected to face severe labor shortage in 2022. Foreign workers are an important workforce for Taiwanese fastener companies. As domestic and international industries scramble for foreign workers, the once developing and now developed Taiwan faces workforce shortage and has to reconsider its workforce policy to treat foreign workers as partners who are an integral part of industrial development and home care. Workforce Development Agency director Meng-liang Tsai from the

Ministry of Labor pointed out in November 2021 that "The shortage of labor is a fact in Taiwan and must be replenished with foreign labors." He said to continue to allow them into Taiwan in the future for Taiwan's economic stability and that it is a predetermined policy to retain good foreign workers. This policy will be in force in the first half of 2022. To be qualified and become an immigrant, foreign labors will have the motivation to pursue work performance and improve work skills, which will benefit industries and the society. Particularly, after acquiring the right to permanent residence, they can move their families to Taiwan and never have to miss them from long distances, and employers will have stable workforce, which benefits employers, foreign workers and the society.

Cheap foreign workers will be nowhere to see in 2022. Due to the COVID in 2021 and the Indonesian government's "zero expense" policy, Taiwanese employers will have to cover foreign workers' expenses for plane tickets, health checkup, and the commission paid to their agents. The cost for employing them and their wages will only increase. Facing increased cost. Taiwanese fastener companies must reconsider foreign worker management and it is urgent to adopt automated machines.

■ Taiwan Economic Prospect for 2022

Chuang-Chang Chang, head of Taiwan Institute of Economic Research, said on December 10, 2021 that Taiwan's economy during the pandemic was strong and resilient. Driven by domestic investment and export, the country's economic growth rate exceeded 6%, a record high since 2011. He reminded that Taiwan was facing challenges amid a positive prospect for economic growth.

The world's economic recovery boosts demand for various items, and supply chain congestion, port congestion as well as the shortage of water, electricity, medical staff, COVID inspection and vaccines boost global merchandise prices. Chung-Hua Institution for Economic Research pointed out that the projected CPI went up every month in 2021. Taiwan was mostly under imported inflation. The projected annual growth rate of CPI for 2021 was 1.9%. The Taiwanese people's heart are sinking with enterprises lifting product prices to cover their costs. The Institution also forecast the NTD exchange rate for USD. In 2021 it was TWD 28.03 for USD 1, and TWD 28.04 in 2022. The appreciating TWD will help decrease imported inflation.

In 2022, Taiwanese fastener companies will face internal and external threats and opportunities. The long-anticipated coexistence with the COVID could come true. Economic growth momentum should be able to sustain with the demand from the U.S. and Europe. Freight congestion is expected to ease in the second quarter and freight will near the normal range. China's economic contraction will negatively impact Taiwan's high price fastener export to China. Taiwanese fastener industry must look into labor shortage which is intensifying, and must redeploy foreign worker management and adopt automated machines.

2022 is a great timing for Taiwanese fastener companies to connect to the global market. The COVID has hardly halted Taiwan's fastener production. The government's COVID prevention helps strengthen Taiwan's image as a national brand. Taiwan is having a closer tie with the U.S. in trading. The U.S. support helps Taiwan establish friendly relationship with more countries. The Eastern and Central Europe as well as the countries of the New Southbound Policy present new opportunities for Taiwan. In 2021, Taiwan filed its application for CPTPP membership hoping to make advancement in 2022 and open up new opportunities for Taiwan's fastener trade with the world.

