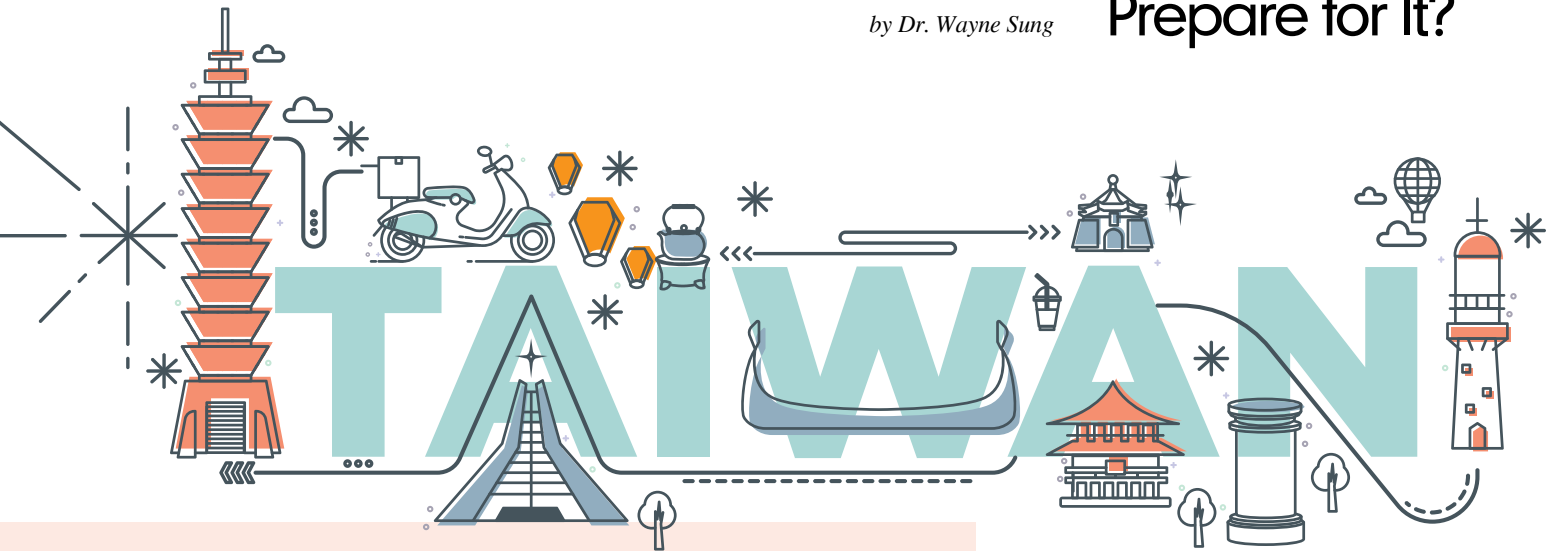


The 3rd Decade Has Come.

How Should **Taiwan Fastener Industry** Prepare for It?

by Dr. Wayne Sung



The 2nd decade of the 21st century has come to its end along with the Covid-19 and U.S.-China Trade War, while Taiwan fastener industry, experiencing a “freeze” in H1 2020 and a recovery in H2 2020, has also reported a result that is not quite satisfying but acceptable. In 2020 Taiwan exported 1,363,250 tons of iron and steel fasteners (HS code 7318), down 7.84% (-116,042 tons) from 2019’s export volume recorded at 1,479,292 tons. In terms of value, Taiwan exported around 3.969 billion USD worth of fasteners, down 8.04% (-0.347 billion USD) from 2019’s export value recorded at around 4.316 billion USD. However, thanks to the in-time travel ban imposed by Taiwanese Government against foreign visitors and excellent island-wide pandemic control, the Covid-19 has not caused any significant damage to Taiwanese fastener manufacturers yet. The most significant impact on Taiwan fastener industry should be “the demand,” as Taiwan’s largest fastener export destination is the U.S., which is one of the Covid-stricken countries and whose positive tested number has climbed to 30 million +. Europe also has a bad story with 5 million + people tested positive in France, 4 million + in the UK, and 3 million + in Germany, all which have reported waning demand due to the pandemic, causing a significant impact over Taiwan’s fastener exports as well. At the same time, the direct challenge of U.S.-China Trade War to the authoritativeness of WTO also implies the diminishing influence of WTO in the 21st century. On the other hand, regional economic agreements gradually demonstrate their influence, such as CPTPP signed in 2018 and RCEP signed in 2020. **With the formation of more regional trade collaboration alliances as well as the temporary exclusion of Taiwan from them, Taiwanese fastener companies will face more difficult challenges.**

This article is divided into three major parts. Part one includes the annual production of Taiwan fastener industry from 2001 to 2010 and its relevance to various changes in the world; part two includes the sales fluctuations of Taiwan fastener industry and its relevance to various changes in the world; part three includes a few strategies and suggestions for Taiwan fastener industry to confront the 3rd decade in the 21st Century.

In 2001, the 9/11 Attacks in the U.S. unveiled the chaotic era of the 21st century and the external factors were also changing fast. According to the article “Production & Sales Overview of Taiwan Fastener Industry” Taiwan’s DGBAS released in 2005 and relevant trade statistics, Taiwan’s fastener export greatly increased by 30.26% in 2004 and went up 5% again in 2005. Except for 2009, the rest of 9 years (from 2001 through 2010) all appeared growth. Table 1 shows the sales volumes, values, and main trade partners of Taiwan fastener industry from 2001 through 2010. Table 2 shows the record events in the world from 2001 to 2010. In 2002 Taiwan officially became a member of WTO under the name of “the Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu,” which benefited the export of Taiwan fastener industry a lot. Then, in 2004 the tsunami hit the Indian Ocean and in 2005 Hurricane Katrina caused severe damages to the U.S., and the demand for post-disaster reconstruction accelerated the growth of Taiwan fastener industry. The inauguration of National Highway No. 3 of Taiwan and Taiwan High Speed Rail (THSR) both helped lead to the significant enhancement of Taiwan’s logistics and commercial shipment networks. Overseas clients could also plan their one-day factory visiting trips from Taipei to Kaohsiung. With all these positive factors, Taiwan fastener industry gradually regained its loss originally caused by factory relocations to China during the 1st decade of the 21st century. In the 1st



decade of the 21st century, the four major influencing factors were: WTO tariff agreements, natural disasters, domestic infrastructure, and Global Financial Crisis. With the combined influence of these 4 factors, Taiwan fastener industry grew 46.58% in 2001 and was “in heaven” of high growth.

To analyze by main export destinations, in 2001 the U.S. represented 47.80% of Taiwan’s fastener export, Germany represented 5.80%, Japan represented 4.90%, and China represented 0.40%. Then, after a decade of change, in 2010 the U.S. represented 36.72% of Taiwan’s export, Germany represented 8.87%, Japan represented 4.64%, and China represented 1.78%. According to the statistics, in the mentioned 10 years (2001-2010) Taiwan fastener industry was actively enhancing its product quality, diversifying market deployment, and developing new markets for high-quality fasteners. The percentage of its export to the U.S. dropped from 47.80% to 36.72%; the percentage of its export to Germany grew from 5.80% to 8.87%. The average price of fasteners per ton grew 61.01% from NTD 50,366 (calculated by the exchange rate on 01/01/2001) to NTD 81,096 (calculated by the exchange rate on 01/01/2010). Meanwhile, Taiwan started to sell a large volume of fasteners to China, whose share in Taiwan’s fastener export rose from 0.40% to 1.78%. The effort which Taiwan fastener industry made over the past decade has proved to be very successful.

Table 1. Sales of Taiwan Fastener Industry in 2001-2010

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average
1,000 USD	1,536,666	1,653,333	1,682,739	2,191,924	2,316,356	2,438,416	2,755,767	2,954,691	1,927,197	3,066,843	2,252,393
Volume (Ton)	1,005,000	1,081,000	1,148,897	1,266,224	1,148,306	1,208,756	1,174,270	1,125,514	816,653	1,206,370	1,118,099
USD / Volume (Ton)	1,529	1,529	1,465	1,731	2,017	2,017	2,347	2,625	2,360	2,542	2,016
Exchange rate on 01/01 per year	32.94	35.04	34.79	33.98	32.06	32.82	32.40	32.44	33.01	31.90	33.14
USD->NTD	50,366	53,592	50,995	58,822	64,671	66,208	76,036	85,161	77,899	81,096	66,481
% of Each Export Destination											
The U.S. (Ton)	480,390	524,285	563,510	654,906	599,638	636,641	531,120	502,932	315,488	442,991	525,190
% of the U.S.	47.80%	48.50%	49.05%	51.72%	52.22%	52.67%	45.23%	44.68%	38.63%	36.72%	46.72%
Germany (Ton)	58,290	50,807	64,272	74,738	67,032	83,793	92,718	88,098	69,073	10,7018	75,584
% of Germany	5.80%	4.70%	5.59%	5.90%	5.84%	6.93%	7.90%	7.83%	8.46%	8.87%	6.78%
Japan (Ton)	49,245	48,645	55,011	59,701	56,501	52,337	56,061	54,359	41,067	55,966	52,889
% of Japan	4.90%	4.50%	4.79%	4.71%	4.92%	4.33%	4.77%	4.83%	5.03%	4.64%	4.74%
China (Ton)	197	535	17,750	26,171	23,359	22,994	21,469	18,901	14,784	21,434	16,759
% of China	0.40%	1.10%	1.54%	2.07%	2.03%	1.90%	1.83%	1.68%	1.81%	1.78%	1.61%

Table 2. Major Record Events in 2001-2010

Year	Record Events
2001	9/11 Attacks in the U.S.
2002	“The Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu” joined the WTO
2003	Iraqi War, SARS
2004	The Indian Ocean Tsunami and completion of Taiwan's National Highway No.3
2005	The U.S.-Iraq War, U.S. Army occupied Iraq, Hurricane Katrina struck the U.S.
2006	RoHs came into effect
2007	Inauguration of Taiwan High Speed Rail
2008	Big Earthquake in Sichuan, Financial Crisis in the U.S.
2009	U.S. Financial Crisis turned into Global Financial Crisis.
2010	ECFA was signed by China and Taiwan, Financial Crisis in Europe



The 2nd decade of the 21st century set out with the 3/11 Earthquake and Tsunami in Japan, the heavy flood in Thailand, Sunflower Movement in Taiwan (the relationship across Taiwan Straits started to cool down since then, the Crimea Crisis, and Refugees swarming into Europe. In 2015, political issues such as the war in Afghanistan began to impact on economies. In mid-2018, U.S.-China Trade War was launched (the influence of WTO started to reduce and CPTPP was signed.) In 2020 RCEP was signed and BREXIT officially took effect. In addition to major disasters over the past decade, political issues, trade war, regional agreements, epidemic, political interference and regional tariffs integration actually caused bigger influence. Table 3 demonstrates the sales of Taiwan fastener industry in 2011-2020. Compared to 2011, the average fastener export volume of Taiwan in the 2nd decade merely rose by 3.9%. In terms of value, compared to 2011 (NTD 85,330; calculated by the exchange rate on 01/01/2011), the average price of fasteners per ton in the 2nd decade was NTD 85,171 (calculated by the exchange rate on 01/01/2020), a drop of 0.19%. In last 10 years the man-caused political issues generated extremely significant impact on Taiwan fastener industry. Although their capacities could still help maintain moderate sales, the prices were not reasonably increased. If the increase in product prices and labor cost were also taken into account, the profit of Taiwanese fastener suppliers was on a decline. That is to say, Taiwan fastener industry was working really hard to run business in 2011-2020.

On the contrary, China achieved a significant improvement in quality and quantity of fasteners over

the past 10 years. Vietnam also began fastener production over the past decade. With the launch of U.S.-China Trade War, some U.S. buyers started to switch their fastener orders to Taiwan and Vietnam.

According to the major destinations of Taiwan fastener exports and calculation by percentage, in 2011 the U.S. represented 34.33% of Taiwan's total fastener export, Germany represented 10.69%, Japan represented 4.61%, and China represented 1.50%. With a decade-long change, in 2020 the U.S. represented 44.68% of Taiwan's total fastener export, Germany represented 8.55%, Japan represented 4.64%, and China represented 1.77%. These statistics show that over the past decade, under the influence of U.S.-China Trade War, the percentage of Taiwan's fastener export to the U.S. grew from the original 34.33% to 44.68% (+10.35%), the percentage of Germany with the demand for high quality dropped from the originally 10.69% to 8.55%, while the exports to Japan and China remained almost unchanged. The biggest factor that helped enlarge the percentage of the U.S. was U.S.-China Trade Dispute. **As for Taiwan, the percentage of its fastener export to the U.S. increased substantially from 37.96% in 2017 to 44.68% in 2020, due to U.S. customers switching some of their orders from China to Taiwan. However, as the prices of orders placed by U.S. customers were often not quite high, the average price of exported fasteners in 2011-2020 continued to remain flat.** On the other hand, the percentage of Germany in Taiwan's total fastener exports dropped by 2.14%. The 10.35% increase in export to the U.S. also means a decline of 10.35% in other markets. **With U.S. high-tariff sanction against China, China was actively developing non-U.S. regional markets and did see a significant result in 2019.** The quality of Chinese fasteners has gradually kept the pace with that of Taiwanese fasteners. Compared to the 1st decade of the 21st century, the leading position of Taiwanese fasteners at the middle price range has been gradually caught up by their Chinese counterparts. Another factor worrying us is that CPTPP and RCEP bot have been signed before 2020, but the relationship between China and Taiwan seems to deteriorate further. Under the current international situation, it is highly difficult for Taiwan to become a member of these two regional economic frameworks (please refer to "CPTPP –The New Focus of Regional Economic Integration in 2021" published in Fastener World Magazine Issue No. 187). In the 2nd decade of the 21st century full of political, economic, and epidemic uncertainties, Taiwanese fastener companies were trying really hard to run their business.

Table 3. Statistics of Sales of Taiwan Fastener Industry in 2011-2020

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average
1,000 USD	3,808,060	3,586,644	3,679,771	4,048,973	3,880,625	3,610,630	4,090,044	4,638,379	4,316,160	3,969,100	3,962,839
Volume (Ton)	1,347,747	1,278,585	1,371,099	1,501,697	1,470,992	1,435,750	1,498,070	1,595,705	1,479,292	1,363,250	1,434,219
USD/Volume (Ton)	2,826	2,805	2,684	2,696	2,638	2,515	2,730	2,907	2,918	2,911	2,763
Exchange Rate on 01/01 Per Year	30.2	30.32	29.09	29.98	32.01	33.24	33.24	29.63	30.79	30.11	30.86
USD->NTD	85,330	85,053	78,072	80,83	84,446	83,592	90,752	86,128	89,837	87,665	85,171
% of Each Export Destination											
The U.S. (Ton)	462,670	476,177	505,638	555,453	546,109	538,010	568,631	629,277	621,962	609,132	551,306
% the U.S.	34.33%	37.24%	36.88%	36.99%	37.13%	37.47%	37.96%	39.44%	42.04%	44.68%	38.42%
Germany (Ton)	14,4043	123,206	128,611	142,884	136,123	143,196	151,298	155,300	132,506	116,623	137,379
% of Germany	10.69%	9.64%	9.38%	9.51%	9.25%	9.97%	10.10%	9.73%	8.96%	8.55%	9.58%
Japan (Ton)	62,100	64,276	74,876	68,729	65,477	62,321	67,152	69,040	72,772	63,284	67,003
% of Japan	4.61%	5.03%	5.46%	4.58%	4.45%	4.34%	4.48%	4.33%	4.92%	4.64%	4.68%
China (Ton)	20,259	18,722	20,943	21,549	19,416	22,013	25,732	24,332	20,277	24,080	21,732
% of China	1.50%	1.46%	1.53%	1.43%	1.32%	1.53%	1.72%	1.52%	1.37%	1.77%	1.52%



Table 4. Major Record Events in 2011-2020

Year	Record Events
2011	The 3/11 Earthquake in Japan, the heavy flood in Thailand, civil war in Syria, civil war in Iraq
2012	Ma Yin-Jeou was elected the 13 th President of Taiwan. Barack Obama was elected the 57 th President of the U.S.
2013	Secretary General of Chinese Communist Party Xi Jinping was elected President of PR China.
2014	Sunflower Movement in Taiwan, Crimea Crisis, Refugees Crisis in Europe, Financial Crisis in Russia
2015	War in Afghanistan. Eurasian Economic Union took effect.
2016	Tsai Ying-Wen was elected the 14 th President of Taiwan. The EU's RoHs 2.0 Directives came into force. The Brexit Bill was passed. Donald Trump was elected the 58 th President of USA.
2017	The then U.S. President Donald Trump announced U.S. withdrawal from Trans-Pacific Strategic Economic Partnership (TPP) and The Paris Agreement
2018	U.S.-China trade war was launched. CPTPP was signed.
2019	China and the U.S. both imposed high tariffs against the products of each other.
2020	The Covid 19 pandemic. RCEP was signed. BREXIT took effect. Joe Biden was elected the 59 th President of the U.S.

In the first 2 decades, Taiwanese fastener companies experienced benefits first and later faced several challenges. Luckily, thanks to the launch of U.S.-China Trade War after 2018, U.S. market could still maintain good capacity demand. **In the 3rd decade of the 21st century, U.S. President Biden officially proposed the USD 2.25 Trillion, 8-Year Infrastructure Plan. This will be very favorable to Taiwanese fastener companies and may temporarily ease the impact of tariffs caused by regional tariffs agreements. However, outside U.S. markets, Taiwanese companies have to face the competition from their fastener counterparts in China and Vietnam and are also subject to certain restrictions from regional tariffs agreements, so they are actually facing more challenges.** In addition to expecting Taiwanese Government to solve these difficulties, sign FTA with the U.S. and the EU, negotiate bilateral trade agreements, and become a member of CPTPP and RCEP, is there also any other strategy for Taiwanese fastener companies to adopt? **Below are some strategies for the reference of Taiwanese fastener companies:**

1. **Large corporations should play a key role in vertically integrating the supply chain**, especially in certain markets preferring well-known brands (e.g., Europe and the U.S.). It is suggested that such a strategy should be used in order to achieve rapid growth, establish fastener brands, tap into middle-price and high-price fastener markets, and quickly expand high-quality fastener business in overseas markets.

2. With various capital investments, **Taiwanese publicly traded or OTC fastener companies can acquire leading fastener brands in Europe, the U.S., and Japan** to quickly obtain benefits for their own brands.

3. **Small-to-medium sized enterprises should also establish their own brands on the global stage** in order to demonstrate their core value and unique corporate image. They should reconsider new supply chains and markets, relocate manufacturing of middle-end and high-end products back to Taiwan, move manufacturing of low-end products to Vietnam, India, and Mexico, and value the future potential development in the Indo-Pacific Region as well.

4. **The niche in product differentiation must be created.** That is to say, the differentiation of materials, design, manufacturing technology, and quality should be created in order to leave other competing fasteners further behind and create the irreplaceable value of Taiwanese fasteners.

In the 3rd decade of the 21st century the change in Taiwan or out of Taiwan is expected to become more fierce than it was before. As a result, it is suggested that Taiwanese fastener companies should re-examine their business running including internal and external risks, reposition their products as per customer's demand to establish their own brands and integrate with marketing activities, and make a differentiation between their products and others', in order to consolidate existing customers, develop more customers and markets, and work together to face the 3rd decade in the 21st century. ■

