

With the globalization of markets and the deregulation of trade, Taiwan, the world's third largest fastener exporter, has gained a foothold in the market with its high-end technology, excellent quality and competitive prices. Statistics in recent years show that the annual production value of fasteners in Taiwan exceeds USD 4 billion, about 9% of the total fastener export value around the world reaching USD 28.8 billion in 2012. If calculated according to the forecast of The Freedonia Group, which states that the current global fastener demand is USD 68 billion, Taiwan will then share 6% of it. Fastener companies from different countries are now geared up for the USD 40 billion demand gap. So, what about Taiwan? The writer here attended this forum and summarized the key points as follows.

Situation 1. Competitors Ahead and Behind

When trade barriers among countries are removed via free trade agreements, how can Taiwan fastener industry retain its price competitiveness to face the competitors who have obtained the preferential tariff treatment, or display its competitiveness through other channels? This, however, is not the only challenge faced by Taiwan fastener industry. Speaking on the topic "The Global Competition Faced by Taiwan Fastener Industry," Yang referred to some major points regarding the development trend of the fastener industry, which are issues Taiwan or even the global fastener industry should be aware of.

1. **Specific Division Among Europe, North America, and Asia-** The Asia Pacific region has displayed a continuous rise in both technical levels and production volumes. With the large capital investment and accumulation of production experiences, Chinese manufacturers are closing the gap with the advanced countries. However, the production and R&D of specialty



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data courtesy of Matt Yang, MIRDC

- fasteners are still concentrated in North America and Europe where the imports are mainly standard fasteners.
2. **Use of Plastic Fasteners Is Growing Faster Than That of Metal Ones-** compound materials and high-strength plastic fasteners have begun to replace the aluminum and iron fasteners in aircrafts.
3. The automotive industry has the greatest demand for fasteners. However, **the popularity of compact vehicles and the trend of modulization will decrease the use of fasteners.**
4. **The research of agglutination will decrease the use of fasteners** and slow down the development of fastener industry.
5. **The increase of material costs and competition from developing countries are factors affecting the profitability of the fastener industry.**

With Japan being the largest fastener import origin of Taiwan and China being the largest fastener export origin of the world, Taiwan is in a very unfavorable position. Taiwan still relies on Japan for high-end fasteners. Yang said that Taiwan imports about NTD 2.4 billion fasteners from Japan every year, taking up 52% of its total fastener import value; for standard items, Taiwan is no match to the Chinese low-price products in huge

supplies, when China first surpassed Taiwan for the export volume in 2003 and for the export value in 2005. China has become the world's largest fastener export origin since 2008.

Situation 2. Insufficient Product and Market Diversification

The economic theory "Don't put all your eggs in one basket." illustrates the importance of risk diversification. However, fasteners made in Taiwan are highly homogenous. Yang's study shows that the ranking of fastener diversification in Taiwan went down from the 17th place in 2001 to the 35th place in 2009. It had been below the 30th place until 2007 and began to climb back after 2008 (see **Table1**).

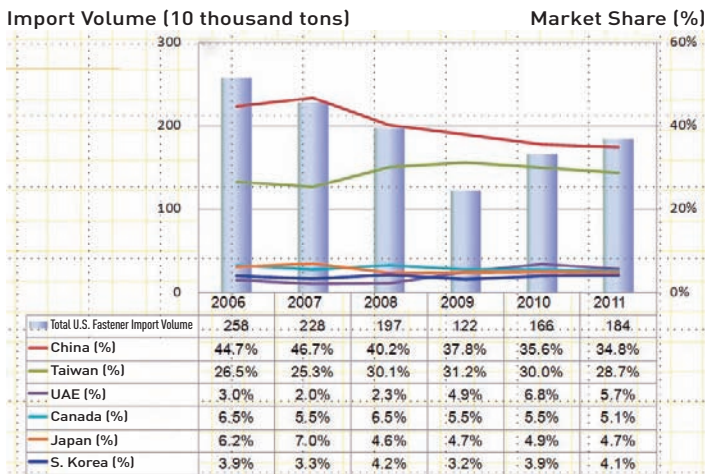
Therefore, we can reasonably attribute the rebound of the ranking in 2008 to the fluctuation of strong economies due to the financial crisis, which forced the companies to turn to the emerging markets for risk diversification and new business opportunities. Even so, statistics show that the U.S. remained Taiwan's largest fastener export destination by the end of 2012 with the export value and export volume exceeding USD 1.2 billion and 470,000 tons respectively. Of course, there is no doubt that a huge demand for fasteners exists in the U.S., however, a heavy reliance on the U.S. market will be very risky in the long run.

Table 1. Indices of Current Export Performance of Taiwan

Year	Number of Export Destinations	General Index	Net Export Value (1 million USD)	Rank of Net Export Value	Export Value Per Capita (USD)	Rank of Export Value Per Capita	Global Market Share (%)	Rank of Global Market Share	Product Diversification (6-digit code)	Rank of Product Diversification	Market Diversification	Rank of Market Diversification
2001	49	3	1,250	1	58.7	2	13.8	3	3.6	17	3.8	31
2002	49	3	1,316	1	61.3	2	13.5	3	3.4	21	3.7	31
2003	49	3	1,540	1	71.8	1	13.5	2	3.2	19	4.2	32
2004	49	4	1,982	1	93.5	1	13.9	2	3.0	28	3.8	33
2005	49	3	2,142	1	98.4	1	13.1	2	2.9	28	3.7	31
2006	49	5	2,271	1	103.4	1	12.0	2	2.9	27	3.8	36
2007	49	4	2,563	1	115.7	2	11.3	3	2.8	31	4.9	30
2008	49	4	2,741	1	123.3	1	10.7	3	2.7	33	5.0	29
2009	49	4	1,739	1	79.2	2	9.9	5	2.7	35	5.9	25
2010	49	3	2,811	1	126.5	1	11.7	2	2.7	30	6.5	24

- Products are mostly with codes 73181590 (56%, other screws) and 73181600 (21%, nuts).
- The U.S. represents 34% of Taiwan’s fastener export.

Figure 1. Overview of U.S. Fastener Import Market



- Slow increment of U.S. fastener import in 2010 and 2011.
- Market shares of China and Taiwan dropped; market share of UAE grew fast.

Figure 1 shows that the financial crisis in 2008 had no instant impact on the percentage of Taiwan’s fasteners into the U.S. and there was even a growth. In fact, the total U.S. fastener import during the years showed a downward trend and began to climb up slowly in 2011. However, Taiwan failed to employ the upward trend to increase its percentage in the market. What’s worse, UAE caught up with the pace to surpass Canada, Japan, and S. Korea to become the third largest fastener exporter to the U.S. market, showing the undeniable aggressiveness of emerging countries. The market diversification effect triggered by the 2008 economic turmoil is definitely good news for Taiwanese fastener companies. For example, global car manufacturers have turned to the emerging countries to set up plants and the transfer of fastener demand caused by the investment is actually what Taiwanese companies should be aware of.

Figure 2. Percentages of Global Fasteners

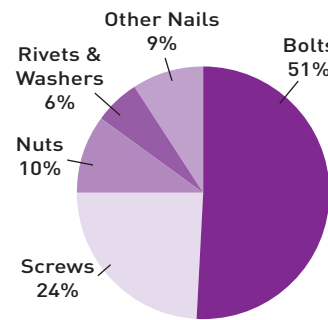


Figure 3. Percentages of Global Fastener Applications

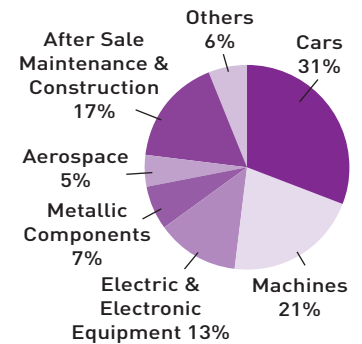


Figure 2 shows that bolts take up the highest percentage of the global fasteners, followed by screws (24%), nuts (10%), other nails (9%), rivets & washers (6%). When it comes to fastener applications (Figure 3), cars have the biggest chunk (31%), followed by machines (21%) and after-sale maintenance & construction (17%). The landscape of Taiwan fastener industry follows a similar pattern with cars, machines and construction being the 3 major applications. The high homogeneity of fasteners in Taiwan reflects the expertise in certain industrial sectors. However, if the industry fails to transform or upgrade in time, the industry as a whole may be affected when the demand changes.

Situation 3. Competitive Prices Become Targets of Antidumping Cases

Speaking on the topic “The future development and impact if the EU terminates antidumping measures against Chinese fasteners”, Emily Chiu, Director of Trade Development Committee of Chinese National Federation of Industries (CNFI), pointed out that China, Korea, India and Taiwan, which have been frequently accused of dumping, all have the feature of competitive prices.

Being the leading role in setting industrial standards is controlling rules of the game.

The antidumping system is a product of trade deregulation for removing the unfair trade activities in overseas markets, with the judgment criteria of “a company selling products to other countries at prices lower than the ordinary prices (production costs + reasonable profits) in its own countries”. In this case, other countries can file an anti-dumping lawsuit. The anti-dumping measures can help stabilize the market trading, but can be also very destructive for its all-inclusive collateral punishment on the countries accused and convicted.

One of the widely known cases in the fastener industry was in 2008 when China was convicted by the European Commission for dumping steel fasteners. After the verdict, Chinese fastener market share in the EU plummeted from 68% to 3% in 2012 and its lost market share was then divided by other countries. Taiwan is the biggest beneficiary in this case, as its steel fastener exports to the EU rose from 21% in 2008 to 57% in 2012.

Despite the current situations and concerns for Taiwan fastener industry, it is undeniable that Taiwan shows a significant position in the area of fasteners. The industrial rankings for 49 countries released over the past few years show that Taiwan always remained in the top five places, an indication that Taiwanese industries outperformed others in Europe and North America. A Chinese saying goes “One must know himself and the enemy very well in order to win every battle.” It is, therefore, advisable to review and adopt the following strategies as we envision the future of Taiwan fastener industry:

Strategy 1. Being a Leading Role in Setting Industrial Standards

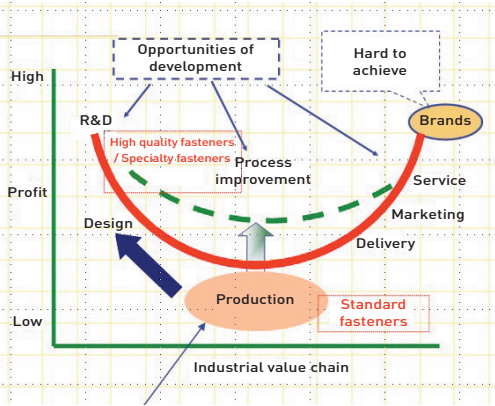
Yang assessed the value of Taiwan fastener industry with the “smile curve” consisting of “production, R&D and brands.” Taiwan fastener industry has the advantages of complete clustering, stable supplies from China

Steel Corporation, good customer relationship, and the capability to develop high-end or specialty fasteners. However, the establishment of brands remains a difficult issue. To fully increase the competitiveness of Taiwan fasteners, there is no other way but following the three guidelines of “change in production process, exploration of high value added areas, efforts in distribution and marketing for brand establishment.”

In recent years, Taiwanese companies have been following the three guidelines and have been quite successful. For example, there are more and

Figure 4. New Industrial Value Chain

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Advantages- complete industrial clustering, stable supplies from CSC, good customer relationship

more shifts from the business model of “separation of production and marketing” to the “integration of production and marketing”. The updated “smile curve” has added “the formulation of industrial standards” compared to the original version (Figure 4).

Being the leading role in setting industrial standards is controlling rules of the game. Examples including European EN, German DIN, and Japanese JIS have been all upgraded from the merely industrial improvement to the level of national policies. China is also working on the formulation of its own industrial standards, of which Taiwan cannot be ignorant of.

Strategy 2. The Turning Point for Product Transformation & Upgrade

Yang pointed in his speech the interaction of Taiwan with the strong competitors, Japan and China, particularly at the technical level. Taiwan has the ability to develop aerospace and automotive fasteners, or even dental implants. However, the demand for specialty fasteners still relies on imports from Japan, creating an odd result that most Taiwanese companies adhere to the production of existing products or produce high value added fasteners for global marketing when the sales channels are not working effectively domestically, whereas they rely on imports to meet the domestic demand for specialty fasteners.

Taiwan fastener industry is at the critical point of transformation and upgrade. With so many competitors around, the only way to survive is to upgrade and differentiate products

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to avoid being drowned in the general market. With a USD 3 billion global demand for aerospace fasteners each year, companies interested may try to enter the supply chain as well.

Strategy 3. Following Market Trends

Chinese auto industry produced 19.27 million vehicles in 2012, equaling the total production of the U.S. and Japan and topping the annual production. This indicates a huge fastener business opportunity. According to the statistics of Mexican Auto Parts Association, the Mexican auto parts production in 2012 totaled USD 75 million, and ranked No. 5 in the world.

What do these historical data reveal? “Relocation of production bases = Shift of market demands.” It is generally understood that a mature market is stable in demand but is hard for development of new customers. However, the bankruptcy of Detroit, one of the car manufacturing bases of the U.S., is a blockbuster in 2013. So, **a mature market means a stable demand? NOT REALLY!**

To take emerging countries as an example, China is a major country for fastener export and import with the average import unit price of USD 11 per kilogram; while the average unit price of Taiwanese fasteners exported to China reached USD 7.1 per kilogram (the average unit price of total export is USD 2.7 per kilogram). Fasteners from Taiwan are at the medium-to-high price level in the fastener import of China. It is advisable for Taiwanese companies to adopt Strategy 2 to increase the production of specialty fasteners for the ability to negotiate for better prices. This will also help increase its market share in the fastener import of China or even other countries. ■

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