



The Impact of Covid-19 on Taiwan Hand Tool Industry

新冠肺炎疫情對台灣手工具產業之影響分析

by Dr. Arthur Hsu, MIRDC

Foreword

Since the outbreak of Covid-19 in the end of 2019 in China, the global confirmed cases as of July 2020 have reached over 16 million, costing lives of more than 0.65 million people. According to IMF, the global economy is estimated to shrink by over 4.9%. In addition, according to the statistics of Asian Development Bank, this pandemic may cost the global economy a loss of 8,800 billion USD. The pandemic has resulted in lockdown orders in over 80 cities in mainland China. China is the world's largest hand tool exporter and lots of major Taiwanese hand tools manufacturers are headquartered in Taiwan. Under the influence of U.S.-China trade war and uncertainties caused by the pandemic, how can Taiwanese hand tools companies respond to the market reshuffling effect on the global market mainly caused by these two factors? This article will expound upon Taiwan hand tool industry, the analysis of how certain products have been impacted by the pandemic, and how can these hand tool companies adjust their operating strategy to face the post-pandemic global market.

Taiwan Hand Tool Industry Influenced by U.S.-China Trade War Before the Outbreak of Covid-19

The hand tool industry is one of the most essential industries for Taiwan to earn foreign exchange. In 2019, the total production value of non-power & power tools reached 125 billion NTD. Its import value was 22.57 billion NTD and the export value was 116.8 billion NTD. Its production value and export value even hit the highest records in its history in 2018. The average CAGR over the past 6 years was around 1.31%. Hand tools explored in this article are: non-power hand tools (HS codes 8201-8215) and power tools (HS codes 8467, 8460, 8465). Among these products, non-power hand tools represented around 75% of the export and power hand tools represented around 25% of the export. **Table 1** shows Taiwan's hand tool import/export and its market share in European and U.S. markets in 2014-2019.

Table 1. Taiwan's Hand Tool Import/Export and Its Market Share in European and U.S. Markets in 2014-2019 Unit: 0.1 bn NTD; %

Statistics	2014	2015	2016	2017	2018	2019	CAGR
Import Value	209.1	203.1	217.3	212.4	235.8	225.7	1.55%
Export Value	1094.2	1103.3	1088.0	1135.9	1158.0	1168.0	1.31%
Export Value to the U.S.	308.2	353.7	361.7	367.3	386.0	432.8	7.03%
% of Its Export to the U.S.	28.2%	32.1%	33.2%	32.3%	33.3%	37.1%	5.64%
Export Value to Europe	296.9	276.5	282.7	295.4	300.1	301.4	0.30%
% of Its Export to Europe	27.1%	25.1%	26.0%	26.0%	25.9%	25.8%	-1.00%
Export Value to China	132.9	130.8	118.4	131.4	131.9	106.5	-4.32%
% of Its Export to China	12.1%	11.9%	10.9%	11.6%	11.4%	9.1%	-5.56%

Source: Import and export data of Taiwan's Customs

In 2019 Taiwan exported 87.86 billion NTD worth of non-power hand tools to the world. 29.86 billion NTD worth of them were exported to the U.S. market (up to 34.0% of its total export) and 24.22 billion NTD worth of them were exported to the EU (27.6% of its total export). The export to the U.S. market was nearly 40% of its export, which appeared a significant growth amid U.S.-China trade war, even higher than the total export to the EU. Such a result reveals how important U.S. market is to Taiwan hand tool industry. Due to U.S.-China trade war, lots of orders were switched to Taiwanese hand tool manufacturers in the first half of 2019. With products "Made in Taiwan" recognized as being of high quality to compete with those "Made in China" well known for supply en masse, Taiwan hand tool industry also reported a growth of 5-6% in the first half of 2019 amid

U.S.-China trade war, though its growth later slowed down in the second half of 2019 due to the focus on processing the orders made in the first half of 2019.

On the other hand, although the total export scale of power tools is not as large as that of non-power tools, it confronted with less impact from the global economy due to the diversity of technology barriers for power tools and pneumatic tools (including not only metallic processing technology, but also Li-ion battery technology, circuit loading system, dustproof system, durability in certain environments). In fact, in the past the export of Taiwan's power tools did face a much smaller impact than that of non-power tools.

The Impact on Taiwan Hand Tool Industry After the Outbreak of Covid-19

As the U.S.-China trade war hasn't come to an end yet and the Covid-19 has also brought many uncertainties to the global hand tool industry since the beginning of 2020, the market deployments of many Taiwanese hand tool companies watching closely the U.S.-China trade war and trying to benefit from the order-switching effect have been greatly interrupted. First, in the beginning of Feb. this year, orders coming from Europe and the U.S. plunged, influencing the normal operation of a majority of hand tool companies. A few of these companies even reported a turnover loss of around 20-40%. In addition, as the hand tool industry will only activate production after orders are made and the general lead time is around 40-50 days,

the issue of delayed shipment could be still observed in May and June, which is forecast to influence the deliveries in the 3rd quarter this year. The market situation in the second half of this year is still unclear and has to be dependent upon how fast the economies in Europe and America will be reopened. In the following paragraphs the impact on Taiwan's top 5 exported hand tools of various categories will be analyzed based on their final shipment destinations (i.e., global, U.S., and European markets).

a. Export to the Global Market- The Same Period Comparison (H1 2020 vs. H1 2019) and Impact Analysis

In the first half of 2020 Taiwan exported 52.08 billion NTD worth of hand tools to the world, down 11.9% from 59.1 billion NTD recorded in the first half of 2019. **Table 2** shows the impact on Taiwan's top 5 hand tools of various categories exported to the world. In the first half of 2020 the non-power hand tools Taiwan exported to the world that showed a more significant decline were: other hand tools (-12.3%), hand-operated wrenches & spanners and sleeves (-16.9%), hand tool sets (-19.1%); in terms of power tools, the products that showed a more significant decline were: other non-reversible hand-held pneumatic tools (-12.6%), other hand-held tool accessories (-13.0%); in terms of fastening hand tools, the products that showed a more significant decline were: interchangeable socket wrenches with or without handles (-18.5%), hand-operated wrenches & spanners (-15.0%), hand-held pneumatic spanners (-30.8%).

Table 2. The Impact on Taiwan's Top 5 Hand Tools of Various Categories Exported to the World in the 1st Half of 2020

Unit: 0.1 bn NTD; %

Top 5 Exported Products of Various Categories	HS Code	H1 2020 Export Value	H1 2019 Export Value	Growth Rate
Type A- non-power tools- subtotal	--	387.2	440.1	-12.0%
1. Other hand tools	8205	132.9	151.5	-12.3%
2. Hand-held wrenches & spanners and sleeves	8204	83.3	100.3	-16.9%
3. Interchangeable tools or hand-operated hand tools for machines	8207	69.8	72.8	-4.1%
4. Hand tool sets	8206	30.2	37.3	-19.1%
5. Pliers, cutting pliers, and similar articles	8203	18.1	20.0	-9.3%
Type B- power tools- subtotal	--	133.6	150.9	-11.5%
1. Other non-reversible hand-held pneumatic tools	8467199000	38.4	43.9	-12.6%
2. Other hand-held tool accessories	8467990000	15.8	18.2	-13.0%
3. Other reversible hand-held pneumatic tools	8467119000	13.5	14.3	-5.4%
4. Pneumatic tool accessories	8467920000	12.6	13.8	-8.3%
5. Spray guns and similar articles	8424200000	10.6	10.7	-0.9%
Hand tool industry (Type A- non-power + Type B- power) total	--	520.8	591.0	-11.9%
Type C: fastening hand tools- total	--	109.4	132.9	-17.7%
1. Interchangeable socket wrenches with or without handles	8204200000	45.0	55.2	-18.5%
2. Hand-operated wrenches and spanners	8204110000 8204120000	38.3	45.1	-15.0%
3. Screwdrivers	8205400000	10.8	11.9	-8.6%
4. Hand-held pneumatic wrenches	84671130001	9.3	13.5	-30.8%
5. Power socket wrenches	8467293000	3.4	4.6	-25.2%

Source: Import and export data of Taiwan's Customs



b. Export to the U.S.- The Same Period Comparison (H1 2020 vs. H1 2019) and Impact Analysis

In the first half of 2020 Taiwan exported 20.16 billion NTD worth of hand tools to the U.S., down 6.2% from 20.16 billion NTD recorded in the first half of 2019. Such a decline was not as low as the 11.9% decline of the entire industry, showing that Taiwan's hand tool export to the U.S. did not appear a significant decline. **Table 3** shows the impact on Taiwan's top 5 hand tools of various categories exported to the U.S. in the first half of 2020. In the first half of 2020 the non-power hand tools Taiwan exported to the U.S. that showed a more significant decline were: hand-operated wrenches & spanners and sleeves (-9.0%), hand tool sets (-18.9%). On the other hand, the products that were not impacted by the pandemic and still showed growth were interchangeable tools or hand-operated hand tools for machines (up 15.6%); in terms of power hand tools, the products that showed a more significant decline were: non-reversible hand-held pneumatic tools (-12.0%), other hand-held tool accessories (-10.0%). On the other hand, the products that were not impacted by the pandemic and still showed growth were reversible hand-held pneumatic tools (up 9.4%); in terms of fastening hand tools, the products that showed a more significant decline were: hand-operated wrenches and spanners (-45.2%), hand-held pneumatic wrenches (-37.2%), power socket wrenches (-31.4%). It is obvious that fastening hand tools were stricken by various levels of impact in U.S. market.

Table 3. The Impact on Taiwan's Top 5 Hand Tools of Various Categories Exported to the U.S. in the 1st Half of 2020

Unit: 0.1 bn NTD; %

Top 5 Exported Products of Various Categories	HS Code	H1 2020 Export Value	H1 2019 Export Value	Growth Rate
Type A- non-power hand tools- subtotal	--	137.1	144.1	-4.9%
1. Other hand tools	8205	51.7	54.1	-4.3%
2. Hand-operated wrenches & spanners and sleeves	8204	33.6	37.0	-9.0%
3. Hand tool sets	8206	13.3	16.4	-18.9%
4. Interchangeable tools or hand-operated hand tools for machines	8207	11.4	9.8	15.6%
5. Pliers, cutting pliers and similar articles	8203	6.5	6.7	-2.6%
Type B- power tools-subtotal	--	64.5	70.8	-8.8%
1. Other non-reversible hand-held pneumatic tools	8467199000	27.3	31.0	-12.0%
2. Other reversible hand-held pneumatic tools	8467119000	7.4	6.8	9.4%
3. Spray guns and similar articles	8424200000	5.7	5.5	4.0%
4. Pneumatic tool accessories	8467920000	4.7	4.6	3.0%
5. Other hand-held tool accessories	8467990000	4.4	4.9	-10.0%
Hand tool industry (Type A- non-power + Type B- power) total	--	201.6	214.9	-6.2%
Type C: fastening hand tools- total	--	45.8	52.0	-11.8%
1. Interchangeable socket wrenches with or without handles	8204200000	20.5	21.5	-4.5%
2. Hand-operated wrenches and spanners	8204110000 8204120000	8.5	15.5	-45.2%
3. Screwdrivers	8205400000	6.1	6.0	2.1%
4. Hand-held pneumatic wrenches	84671130001	2.7	4.3	-37.2%
5. Power socket wrenches	8467293000	2.7	4.0	-31.4%

Source: Import and export data of Taiwan's Customs

c. Export to Europe- The Same Period Comparison (H1 2020 vs. H1 2019) and Impact Analysis

In the first half of 2020 Taiwan exported 12.71 billion NTD worth of hand tools to Europe, down 19.4% from 15.77 billion NTD recorded in the first half of 2019. Such a decline of Taiwan's hand tool export to Europe was much higher than that of Taiwan's fastener export to the U.S. (-6.2%). **Table 4** shows the impact on Taiwan's top 5 hand tools of various categories exported to Europe in the first half of 2020. In the first half of 2020 the non-power hand tools Taiwan exported to Europe that showed a more significant decline were: other hand tools (-20.9%), hand-operated wrenches & spanners and sleeves (-18.9%), hand tool sets (-20.9%), interchangeable tools or hand-operated hand tools for machines (-6.7%), tools for agriculture, gardening and forestry (-17.9%); in terms of power hand tools, the products that showed a more significant decline were: other non-reversible hand-held pneumatic tools (-20.1%), hand-held pneumatic wrenches (-31.2%), other reversible hand-held pneumatic tools (-30.5%), pneumatic tool accessories (-28.0%), other hand-held tool accessories (-16.6%); in terms of fastening hand tools, the products that showed a more significant decline were: hand-operated wrenches and spanners (-17.9%), interchangeable socket wrenches with or without handles (-20.0%), hand-held pneumatic wrenches (-31.2%), screwdrivers (-25.1%), hand-held pneumatic screwdrivers (-31.3%).



Table 4. The Impact on Taiwan's Top 5 Hand Tools of Various Categories Exported to Europe in the 1st Half of 2020

Unit: 0.1 bn NTD; %

Top 5 Exported Products of Various Categories	HS Code	H1 2020 Export Value	H1 2019 Export Value	Growth Rate
Type A- non-power hand tools subtotal	--	102.8	125.8	-18.3%
1. Other hand tools	8205	38.9	49.1	-20.9%
2. Hand-operated wrenches & spanners and sleeves	8204	24.5	30.2	-18.9%
3. Hand tool sets	8206	10.3	13.0	-20.9%
4. Interchangeable tools or hand-operated hand tools for machines	8207	9.9	10.6	-6.7%
5. Hand tools for agriculture, gardening or forestry	8201	7.4	9.0	-17.9%
Type B- power hand tools subtotal	--	24.2	31.8	-23.9%
1. Other non-reversible hand-held power tools	8467199000	5.9	7.4	-20.1%
2. Hand-held pneumatic wrenches	8467113000	3.8	5.5	-31.2%
3. Other reversible hand-held pneumatic tools	8467119000	2.8	4.0	-30.5%
4. Pneumatic tool accessories	8467920000	2.5	3.4	-28.0%
5. Other hand-held tool accessories	8467990000	2.1	2.5	-16.6%
Hand tool industry (Type A- non-power + Type B- power) Total	--	127.1	157.7	-19.4%
Type C: fastening hand tools total	--	31.0	39.3	-21.2%
1. Hand-operated wrenches and spanners	8204110000 8204120000	13.5	16.5	-17.9%
2. Interchangeable socket wrenches with or without handles	8204200000	11.0	13.7	-20.0%
3. Hand-held pneumatic wrenches	8467113000	3.8	5.5	-31.2%
4. Screwdrivers	8205400000	2.0	2.7	-25.1%
5. Hand-held pneumatic screwdrivers	8467112000	0.2	0.4	-31.3%

Source: Import and export data of Taiwan's Customs

Solutions of Taiwanese Government and Companies

Although it is uncertain if the global hand tool market after the influence of U.S.-China trade war and the Covid-19 pandemic can return to the normal level as it was before the outbreak of Covid-19, some countermeasures may still be good references for Taiwanese Government and companies to take into account.

a. For Taiwanese Government

1. Financial Relief: Taiwanese Government has been very active in providing suffering hand tool companies with financial relief. As of this June, the total value of the financial relief provided has been over 0.5 billion NTD, benefiting around 11,000 people. The continuous simplification of the application procedure and the expansion to cover more people in need of the financial relief should mitigate the escalating pressure on hand tool companies.
2. To Reinforce Marketing Approach: Taiwanese Government helps domestic companies promote their brands abroad via approach deployment, talent training, market survey, and strengthening hand tool marketing and promotion.
3. To Help Improve Int'l Marketing: Taiwanese Government can help hand tool companies reinforce their sales to focused international markets or niche industries, organize delegation to participate int'l trade shows or visit local buyers around the world, integrate resources from various official authorities, help Taiwanese hand tool companies penetrate into the supply chain of international leading companies, and give purchasing orientations for foreign large companies to help increase orders of Taiwan hand tool industry.

b. For Taiwanese Hand Tool Companies

1. The U.S.-China trade war and the Covid-19 pandemic have reshuffled the global hand tool supply chain. As a result, in order to gain a firm presence in the markets which have not been saturated yet, it is suggested that Taiwan hand tool industry should adopt the risk management strategy for multi-layered supply chains, figure out feasible plan B and backup solutions in different places, or adopt the strategy of various supply origins to avoid too much reliance upon one single approach and the risk of becoming a second-tier OEM.
2. Hand tool companies can make the most of their time amid the Covid-19 to readjust their plans or operations, such as establishing strategic alliance with companies from different industries to develop IT-enabled hand tools to search for new business opportunities, or adopting the transformation strategy to upgrade their product level and value, or focusing on the development of high-end products and applications to accumulate their strength in the R&D of critical hand tool technology. ■

