

Investment Opportunities in the Woodworking Machinery/Plastic and Rubber Machinery Industry in Taiwan

The wood furniture industry was undergoing rapid development from 1960 ~ 1980 in Taiwan, and this adversely drove explosive growth in the woodworking machinery industry. The woodworking machinery industry in Taiwan features a complete industrial chain, control over superior electronic technologies and fast response time to customer inquiries and abilities to provide customized services, excellent service and product qualities and competitive prices. The industrial strengths are favorably referred to by customers in the international markets and industrial clusters of the industry are now complete. The impressive improvements in product quality and quantity are approved by the customers. From traditional woodworking machinery, integration with the most advanced CNC machines and to thorough planning of the entire plant, the level of industrial maturity can be observed from every facet of the business – product design, manufacturing and even assembling. Currently, there are a total of 300 suppliers in the woodworking machinery industry ranging from woodworking machines to peripherals and blade sets. Most of them are mid-small firms. 85% of them are located in central Taiwan (Fengyuan, Shengang, Howli and Tanzih etc..), while the remaining 15% are scattered in the northern and southern Taiwan. Taiwan is now the fourth largest woodworking machinery exporting country and is right below Germany, Italy and China.

The plastic and rubber machines can be categorized into two types: material processing and product manufacturing and machines produced in Taiwan are the bulk of the product manufacturing type and major products of this type include injection molding machines, extrusion machines, blow-molding machines and vacuum molding machines. The plastic and rubber machinery manufacturers in Taiwan are mostly mid-small factories and the total number of manufacturers in the woodworking machinery industry is about 200.

I. Reasons to invest in the Woodworking Machinery/Plastic and Rubber Machinery Industry in Taiwan

1. Woodworking machinery, plastic and rubber machinery, machine tools, and textile machinery are four major sectors in the machinery industry in Taiwan
2. The fourth largest exporting country for woodworking machinery in the world
3. Size of export is ranked slightly below Germany, Italy and China
4. Industrial clusters are completely developed for the woodworking machinery industry in Taiwan
5. There are a total of 300 suppliers in the woodworking machinery industry ranging from suppliers of woodworking machines, peripherals and to blade sets.
6. 85% of the suppliers are located in central Taiwan (Fengyuan, Shengang, Howli and Tanzih etc.), while the remaining 15% are scattered in the northern and southern Taiwan.
7. The woodworking machinery industry in Taiwan has accumulated years of experience and can flexibly customize products based on customer inquiries and satisfactorily meet customer needs.
8. Woodworking machines produced in Taiwan are great deals offering excellent values – they are all high quality and low price products
9. Taiwan is the fifth largest plastic and rubber machinery exporting countries in the world
10. In 2013, total exports reached USD\$1,265.18 million.

II. The industrial production and advantages of the woodworking machinery industry in Taiwan

Each year, the total export of the woodworking machinery industry exceeds USD\$ 700 million and is always in top 10 among other countries in the world. The performance of the industry is very brilliant. Although manufacturers are all small to medium enterprises (SME), the product qualities and prices are very competitive and these are the strongest advantage. This, when combined with IT

strengths and post-sales services, is the ultimate core competency distinguishing the industry from others in the world. The product scope covered in the woodworking machinery industry ranges from sliding tables, wood planers, molding machines, drilling machines, woodworking lathes, jointing machines, polishing machines, drying machines, dust collecting machines, coating machines, other bamboo and rattan processing machines, related components, wood materials and so on. The major products of the industry include plastic injection molding machines, extrusion molding machines and blow-molding machines.

According to recent export statistics, the 2011 and 2013 exports of the plastic and rubber machinery industry are barely below that of the machine tools industry and each year, the export of the industry is about 6% of the machinery industry, and the exports of the plastic and rubber machinery industry and woodworking machinery industry combined are higher than 8% of the industrial export of the entire machinery industry in Taiwan. This further revealed the importance and strengths of these two industries. (Table 1)

Table 1 Export of the Entire Machinery Industry in Taiwan

Unit: USD\$1 thousand

	2013		2012		2011	
	Export Value		Export Value		Export Value	
Machine tool	3,548,309	17.40%	4,236,448	20.4%	4,000,508	19.0%
Plastic and rubber machine	1,265,179	6.20%	1,349,271	6.5%	1,339,237	6.3%
Bearings, gears, ball screw	1,253,122	6.10%	1,222,990	5.9%	1,333,257	6.3%
Special purpose machine	1,211,081	5.90%	1,219,810	5.9%	1,308,640	6.2%
Fluid machine	1,180,360	5.80%	1,177,263	5.7%	1,166,507	5.5%
Valve head	1,147,194	5.60%	1,151,653	5.6%	1,131,183	5.4%
Papermaking machinery and	932,531	4.60%	901,247	4.3%	921,924	4.4%

	2013		2012		2011	
	Export Value		Export Value		Export Value	
printing machine						
Components of machine tool	804,172	3.90%	875,228	4.2%	1,004,241	4.8%
Textile machine (excluding sewing machine)	603,443	3.00%	573,748	2.8%	615,185	2.9%
Conveying Machine	549,346	2.70%	529,298	2.6%	N/A	N/A
Molding machine	528,861	2.60%	518,264	2.5%	520,332	2.5%
Food packaging machine	507,552	2.50%	501,316	2.4%	471,094	2.2%
Woodworking machine	504,156	2.50%	485,060	2.3%	540,358	2.6%
Leather shoe making machine (excluding sewing machine)	498,448	2.40%	474,632	2.3%	521,470	2.5%
Other	5,872,413	28.80%	5,531,923	26.7%	6,236,677	29.5%
Total	20,406,167	100.00%	20,748,151	100.00%	21,110,613	100.00%

Source: TAMI

As indicated from the export statistics of machines manufactured in Taiwan (Table 2), the export of the entire machinery industry is three times higher than domestic sales, and the export is about 75% of the industrial total. This highlights the export importance of these two industries and the important role these two industries play in reference to total exports. There are many different types of woodworking machines, and they need to be as highly automated as possible for efficient operations. The competitive advantage of the woodworking machinery industry in Taiwan is its short lead time – from the moment an order is placed to the time of product delivery, it typically takes from 1 ~ 1.5 months at its shortest to three months at its longest, while the Japan or Germany counterparts take at least six months or more to deliver products ordered. In the past, 2 million woodworking machines were exported each year. However, as the production operations of low cost DIY woodworking machines are shifted to China, the export quantity of the

industry in Taiwan dropped to 1 million per year, but the industrial production is increased each year. China, USA and Hong Kong are important exporting countries for the woodworking machinery in Taiwan as their total exports makes up 50% of the total export of the industry; the total exports from the top ten exporting countries make up 78.41% of the exports and the major world markets for the industry include China, North America, Southeast Asia, EU members and Northeast Asia. (Table3)

Table 2 Export of the Entire Machinery Industry in Taiwan

Unit: USD\$

Year	Product	Exports	Domestic sales	Imports	Industrial production	% Export	% Domestic sales
2008	Metal-cutting machine tools	2,964,484,363	790,404,001	1,427,768,451	3,754,888,364	78.95%	21.05%
	Metal forming machine tools	756,575,328	240,624,261	107,971,304	997,199,589	75.87%	24.13%
	Subtotal	3,721,059,691	1,031,028,261	1,535,739,755	4,752,087,952	78.30%	21.70%
2009	Metal-cutting machine tools	1,324,126,419	332,481,136	272,548,020	1,656,607,555	79.93%	20.07%
	Metal forming machine tools	419,161,573	128,189,658	68,261,022	547,351,231	76.58%	23.42%
	Subtotal	1,743,287,992	460,670,795	340,809,042	2,203,958,787	79.15%	20.85%
2010	Metal-cutting machine tools	2,331,286,672	749,166,119	572,370,134	3,080,452,791	75.68%	24.32%
	Metal forming machine tools	630,333,091	202,119,486	131,251,988	832,452,577	75.72%	24.28%
	Subtotal	2,961,619,763	951,285,604	703,622,122	3,912,905,367	75.69%	24.31%
2011	Metal-cutting machine tools	3,287,867,435	1,004,387,702	714,987,892	4,292,255,137	76.60%	23.40%
	Metal forming	712,643,516	236,535,381	113,932,544	949,178,897	75.08%	24.92%

Year	Product	Exports	Domestic sales	Imports	Industrial production	% Export	% Domestic sales
	machine tools						
	Subtotal	4,000,510,951	1,240,923,083	828,920,436	5,241,434,034	76.32%	23.68%
2012	Metal-cutting machine tools	3,555,739,354	866,822,032	544,870,478	4,422,561,386	80.40%	19.6%
	Metal forming machine tools	680,713,706	237,185,035	102,796,859	917,898,741	74.16%	25.84%
	Subtotal	4,236,453,060	1,104,007,066	647,667,337	5,340,460,126	79.33%	20.67%

Source: TMBA

Table 3 2010~2012 Export of the Woodworking Machinery in Taiwan

Unit: USD\$ 1 million

Rank	Country	2010	2011	2012	% Share			%Change
					2010	2011	2012	12/11
01	United States	130.019	124.583	147.872	23.34	23.45	31.56	18.69
02	China	155.277	148.131	91.097	27.88	27.89	19.45	-38.50
03	Vietnam	32.374	26.534	24.269	5.81	5.00	5.18	-8.54
04	Canada	34.079	26.886	20.724	6.12	5.06	4.42	-22.92
05	Malaysia	15.245	12.796	16.246	2.74	2.41	3.47	26.96
06	Indonesia	10.092	16.171	15.748	1.81	3.04	3.36	-2.62
07	Korea, South	4.247	4.832	15.239	0.76	0.91	3.25	215.37
08	Thailand	14.187	17.456	12.727	2.55	3.29	2.72	-27.09
09	Germany	22.503	22.292	12.322	4.04	4.20	2.63	-44.72
10	Russia	4.907	11.438	11.118	0.88	2.15	2.37	-2.79

Source: TWMA

III. The industrial production and advantages of the plastic and rubber machinery industry in Taiwan

The export of rubber and plastic machines grew abundantly in 2012, and the major products exported include plastic injection molding machines, extrusion molding machines, blow-molding machines and so on. Total exports reached

USD\$1,349.27 million, or 0.74% growth from the same period in 2011. In 2012, China and Hong Kong were the major exporting countries for this sector, and following these two countries are Thailand and Indonesia, but the export to China and Hong Kong is 3.5 times higher than that for Thailand, highlighting their export importance/importance of overseas sales to the plastic and rubber machinery sector in Taiwan (Table 4).

Table 4 Export Status of the Plastic and Rubber Machinery Sector in Taiwan

Unit:USD\$1 thousand

Rank	Country	2012		2011	12/11
		Export Value	Ratio%	Export Value	Change %
1	China + HK	454,003	33.6%	420,691	7.9%
2	Thailand	126,383	9.4%	92,438	36.7%
3	Indonesia	104,922	7.8%	102,384	2.5%
4	Vietnam	78,053	5.8%	94,537	-17.4%
5	India	70,563	5.2%	95,038	-25.8%
6	Japan	43,667	3.2%	34,506	26.5%
7	Malaysia	39,193	2.9%	45,142	-13.2%
8	United States	35,923	2.7%	31,158	15.3%
9	Turkey	26,950	2.0%	31,401	-14.2%
10	Brazil	22,988	1.7%	33,928	-32.2%

Source: TAMI

The plastic and rubber machines can be categorized into two types: material processing and product manufacturing. The machines produced in Taiwan are mostly the product manufacturing type and major products of this type include injection molding machines, extrusion machines, blow-molding machines and vacuum molding machines. The plastic and rubber machinery manufacturers in Taiwan are most small factories and the total number of manufacturers in the

woodworking machinery industry is about 98% of the 200 manufacturers are SMEs. 90% of them are located in Tainan, Taichung and Hsinchu etc., and they are the dominating industry in these regions. Within the entire machinery industry, the 12 manufacturers that fall directly under the category of plastic and rubber machinery sector are: Victor Taichung, Chen Hsong Group, Chuan Lih Fa Machinery Works, Hwa Chin Machinery, Fong Kee International Machinery, FCS Group, Jonwai, Clinical Excellence, Yei Metal, Jung Chang Machinery, Lien Yu Machinery and Taiwan Union Plastic Group and the professional ones among these 12 are: Chen Hsong Group, FCS Group, Chuan Lih Fa Machinery Works, Hwa Chin Machinery, Fong Kee International Machinery, Queen's Machinery Group, Yatai Metal, and Taiwan Union Plastic Group. The remaining ones only partially touch on this business. As for the plastic and rubber machinery sector, it is the most representative sector right below the machine tool sector within the entire machinery industry.

The top quality woodworking machinery and plastic and rubber machinery manufacturers are listed in Table 5. Since all plastic and rubber machinery manufacturers are SMEs, Table 5 lists only important ones. Among all companies listed, Rexon Industrial, Basso Industry, Chang Type Industrial, C Sun Mfg., Juting Machinery and Motomax Electric are woodworking machinery manufacturers, and except woodworking machines; they also produce different kind of machines, including machine tools or production machines. For woodworking machinery manufacturers, Rexon Industrial and Basso Industry have higher revenue; C Sun Mfg is excelled on dryers and dryer systems. As for plastic and rubber manufacturers, besides Victor Taichung, Chen Hsong Machinery Taiwan and Andersen whose revenue is higher than others, Chuan Lih

Fa, FCS Group, Hwa Chin Machinery and Fong Kee International Machinery are closely following these with higher revenue, and their main product is injection molding machine.

The industrial clusters of the woodworking machinery industry have been completely developed. Currently, there are a total of 300 suppliers in the woodworking machinery industry ranging from suppliers of woodworking machines, peripherals and to blade sets. Taiwan is the fourth largest exporting countries of woodworking machinery products and manufacturers are closely located. Their response time to customer inquiries is very short, product prices are lower than international brands from Germany and Japan and CP values of the woodworking machines are better than these offered by manufacturers in China. Moreover, the mid-to low end woodworking machines/plastic and rubber machines offer a better quality than competing products from China and the operational performance from Taiwan manufacturers is better than their counterparts in China. In short, the manufacturers in Taiwan can produce customized models based on customer inquiries with a short development lead time and response time. The export of rubber and plastic machines has been largely growing, and the major products exported include plastic injection molding machines, extrusion molding machines and blow-molding machines. These advantages, along with the fact that the cross-strait relationship has improved in recent years, make the woodworking machinery/plastic and rubber machinery industry in Taiwan an ideal target for investment.

**Table 5 Top Quality Woodworking Machinery and Plastic and Rubber
Machinery Manufacturers in Taiwan**

Unit: NT\$ million

	2013		2012		2011		2010	
	Revenue	Net Profit (%)	Revenue	Net Profit (%)	Revenue	Net Profit (%)	Revenue	Net Profit (%)
Rexon	3,287	6.26	3,215	1.96	2,422	-4.88	3,336	2.47
Basso	2,705	19.41	2,528	2.28	2,775	13.64	2,735	0.25
CHANG TYPE Industrial	1,838	-1.24	1,305	-6.20	1,069	-0.37	1,296	3.03
C Sun	3,438	7.89	2,490	10.60	3,167	12.48	2,904	14.59
FCS Group	2,684	1.82	1,654	2.24	1,877	6.95	1,783	9.26
CHIU TING MACHINRE Y	1,954	4.63	1,376	-1.17	1,042	-2.99	1,042	-5.41
Linco Technology	527	0.73	272	-4.97	321	3.07	462	7.96

Source: Market Observation Post System