Investment Opportunities in Taiwan's Connector Industry

Taiwan is an ideal location for setting up regional operation centers for both foreign and domestic businesses for its excellent geographic location, well-developed industrial clusters, outstanding R&D ability, and well-established infrastructures.Take the connector business for example, Taiwanese manufactures, such as Foxlink, ACON,LOTES, Aces, Singatron, p-two, CviLux and CHANT SINCERE, created a combined operating revenue of more than NT$2 billion in 2013. Also, each of the first-line connector manufacturers, such as ALL TOP TECHNOLOGY, PLASTRON PRECISION and others, created revenue of more than NT$1 billion in the same year. As the economic and trade relations between Taiwan and the mainland are normalizing, the opportunities in the emerging application market as a result of the mainland's Twelfth 5-Year Plan and gradual formation of the IT industrial clusters in its west, a thriving future for Taiwan's connected industry is expected

I. Seven Attractions to Foreign Investors of Taiwan's Connector Industry

1. A significant clustering effect constituted by more than 300 manufacturers across Taiwan.
2. The major importing country of the mainland.
3. More than 10% share of the global connector output, with Foxconn as one of the world's Top 10, and Foxlink, SUYIN, LOTES, Aces and SINGATRON in the world's Top 30 to Top 60.
4. The center of the headquarters of global electronic system and product assembly and OEM plants.
5. The hometown of world-leading manufacturers notebook PCs, mobile phone and other high-tech products.
6. The internationally renowned Hsinchu Science Park.
7. The most complete top-down connector chain in the world.

II. Structure and Status of Taiwan's Connector Industry

As most connector manufacturers in Taiwan are small and medium enterprises (SMEs), the quantity is huge. The 2012 statistics showed that there were about 300~400 connector manufacturers in Taiwan contributing an output value of NT$150.3 billion in 2013, which accounts for 17.18% of total output value of Taiwan's electronic components industry.

Table 1 Output Value of Taiwan's Electronic Components Industry

Unit:NT$ million

	2010	2011	2012	2013(e)	2013 成長(%)	比重%
Optoelectronic	90,424	82,625	86,310	97,692	13.20	11.16%
Passive	117,209	111,169	101,760	108,298	6.40	12.37%
PCB	390,790	401,100	399,560	407,160	1.90	46.52%
Connection	148,892	148,088	147,886	150,361	1.70	17.18%
Energy	82,308	92,430	113,083	111,760	-1.20	12.77%
Total	**829,623**	**836,412**	**848,599**	**875,271**	**3.10**	**100.00%**

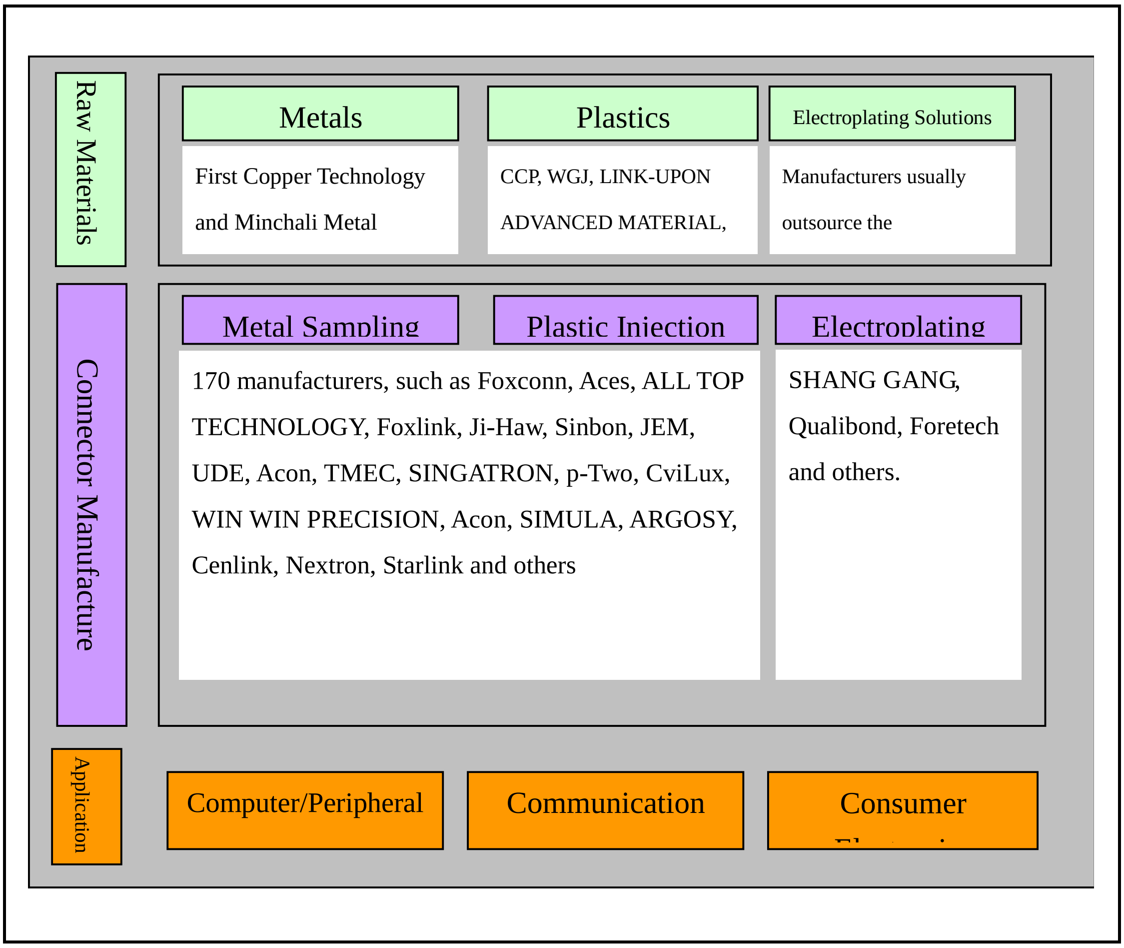
資料來源：工研院 IEK(2014.02)

In industrial structure and industrial value change (Figure 1), suppliers of raw materials, such as metals, plastics and electroplating solutions, are upstream. At present, domestic suppliers are capable of supplying common electroplating solutions, such as yellow metal, PBT and tin/lead electroplating solutions; while high-level electroplating solutions, such as phosphor bronze, LCP and tinned copper electroplating solutions, are mainly imports. As connector manufacturers maintain good relations with their raw material supplier, the supply sources are secured.

Mid-stream connector manufacturers generally refer to metal stamping, plastic injection, electroplating and assembly service providers. Considering the technology and cost factors, nearly all connector manufacturers outsource their electroplating work. As a result, there are about 170 manufacturers specified in the connector production or with a larger scale.

Regarding downstream applications, computer/peripheral, communication, and consumer electronics are the main focus of Taiwan's connector market.

Regarding product ranges, these include PCB connectors, rectangular I/O connectors, circular I/O connectors, CPU sockets, RF coaxial connectors, fiber optic connectors, high-voltage connectors, and others. At present, PCB connectors and rectangular I/O connectors are the main product ranges of Taiwan’s connector manufacturers.



Source: IEK, ITRI, (2011). Electronic Component Industry Yearbook 2011.

Figure 1 Structure of Taiwan’s Connector Industry

III. The mainland has been the major exporting country of Taiwan’s connectors

In 2012, Taiwan’s connector export value was NT$13.57 billion (Table 2). As the mainland has become the assembly center of Taiwan’s computer, communication and consumer electronics products, the mainland has become the largest importing country of Taiwan’s connectors, including notebook PC board to board, wire to board, FPC, FFC and memory connectors, as a result of the investment with trade effect. When leading notebook PC manufacturers continue to expand their locations in Chongqing and Chengdu in Sichuan, it is foreseeable that the connector import share of the mainland will further increase. In industrialized countries, the USA, Japan and Germany are the top three importing countries of Taiwan’s connectors. In terms of product ranges, the USA mainly imports Taiwan’s communication connectors, Japan the digital home appliance connectors, and Germany the autotronics connectors.

Table2 Shares of Major Importing Countries of Taiwan’s Connectors in 2012

Ranking	2012		
	Country	Export Value (NT$: million)	Ratio (%)
1	China (included HK and Macau)	5,062	37.30
2	USA	2,538	18.70
3	Japan	719	5.30
4	Germany	624	4.60
5	UK	461	3.40
6	Malaysia	339	2.50
7	Others	3,827	28.20
	Total	**13,570**	**100.00**

Source：2013 Electronic Components Industry Yearbook

IV. Introduction of Major Taiwanese Connector Manufacturers

Table 3 shows the medium and large or quality connector manufacturers in Taiwan. Generally speaking, Foxlink, LOTES, ACON, Aces were ranked at the world’s Top 80 in 2009. Also, 2013 revenue ranking is also a top five companies.

Table3 Medium and Large or Quality Connector Manufacturers in Taiwan

	2013			2012		2011	
	Revenues (NT$100 million)	NPR (%)	Revenue Growth(%)	Revenues (NT$100 million)	NPR (%)	Revenues (NT$100 million)	NPR (%)
Foxlink	1,062.00	1.93	1,029.00	1.9	816.00	2.65	1,062.00
Acon	90.00	-1.54	89.04	-2.14	95.95	0.71	90.00
LOTES	80.62	8.87	85.67	11.1	77.38	12	80.62
JPC	44.74	3.79	39.53	1.72	47.73	-1.34	44.74

Aces	39.88	4.82	44.41	5.43	46.38	14.7	39.88
SINGATRON	37.56	0.02	46.13	4.33	42.13	5.51	37.56
p-Two	34.26	-11.50	38.14	3.51	43.38	3.22	34.26
CviLux	25.21	10.90	23.36	13.8	22.44	14.2	25.21
CHANT SINCERE	23.29	6.03	24.19	4.68	23.03	2.02	23.29
Plastron	18.80	18.20	21.14	10.2	18.77	5.19	18.80
ALL TOP TECHNOLOGY	16.10	0.27	18.06	7.06	20.31	7.54	16.10
SIMULA	8.60	-11.10	12.30	2.2	11.64	1.99	8.60

Source: Market Observation Post System (2014.06)

V. Strength and Opportunity Analysis of Taiwan's Connector Industry

There are five points of strength for Taiwan's connector industry: (1) The same language and same ethnic origin with mainland China; people are unfamiliar with one another, but we came from the same place; (2) the short distance allows quick response to customer service; (3) the price is lower than European and US products; performance is superior to mainland and Korean products, with a higher PPR; (4) Taiwan is the OEM service suppliers of 90% of the PC notebooks in the world, thus giving rise to many leading manufacturers of home appliance and notebook PC connectors; and (5) Higher corporate management efficiency, higher level of production automation, and better quality employees.

There are four main opportunities for Taiwan's connector industry: (1) Better political and economic relations between Taiwan and the mainland in the post-ECFA period; (2) the rapid rise of computer, communication and consumer electronics brands, including Lenovo, ZTE, Huawei, Hisense, and TCL, in the mainland will bring various opportunities for Taiwan's connector industry; (3) the government encouragement of the telecommunication, green energy, automobile and healthcare industries in the mainland will bring the next connector demand in the emerging markets outside of the computer, communication and consumer electronics markets; and (4) entry to Sichuan to fuse with the local emerging supply chain will create more and more potential market opportunities in the west.