

Leading multinationals from Taiwan increase their foreign assets despite the global crisis

Report dated November 3, 2011

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Taipei and New York, November 3, 2011:

The College of Management at Fu Jen Catholic University in Taipei, and the Vale Columbia Center on Sustainable International Investment (VCC) at Columbia University in New York, are releasing the first annual report on leading Taiwanese multinationals today, indicating that the top Taiwanese multinationals are maintaining their growth momentum in their investment abroad despite the global crisis and a drop in the overall flows of Taiwanese foreign direct investment (FDI). The research for this report was conducted in 2011 and covers the period 2007 to 2009.¹

Highlights

The global financial crisis had a severe negative impact on Taiwan's outward investment in 2009. According to UNCTAD, the FDI outflows of Taiwan dropped dramatically from USD 10.29 billion in 2008 to USD 5.87 billion in 2009². However, 15 of the top 20 Taiwanese multinationals still increased their overseas assets in 2009 (table 3 below).

The top 20 Taiwanese multinationals ranked in table 1 below by their foreign assets had around USD 76 billion in overseas assets, USD 221 billion in foreign sales and employed nearly 1.1 million persons abroad in 2009 (see annex table 1 for details other than assets). The total foreign assets of the 20 multinationals were equivalent to more than 40% of Taiwan's outward FDI stock of around USD 180 billion in 2009. Collectively, the top 20 had 1,164 foreign affiliates in 42 economies. The most prominent industry on the list is electrical and electronic equipment manufacturing.

¹ The research for this report was carried out by Anthony Kuo and Ming-Sung Kao, in association with the College of Management, Fu Jen Catholic University. The authors would like to thank Professor Yi-Chieh Chang of the Department of Business Administration at St. John's University, Taipei Campus, for his kind sharing of his data with us. A report on 2010 is expected later this year or next year.

² UNCTAD, Annex tables to *World Investment Report 2010*, <http://www.unctad.org/Templates/Page.asp?intItemID=5545&lang=1>.

Table 1. Taiwan: The top 20 non-financial outward investors, 2009^a (USD million)

Rank	Name of company	Industry	Status (% of state ownership) ^b	Foreign assets ^c
1	Hon Hai Precision Ind. Co., Ltd.	Electrical and electronic equipment	Listed (1.62%)	10,699
2	Pou Chen Corporation	Consumer goods ^d	Listed (3.75%)	6,694
3	Asustek Computer Inc.	Electrical and electronic equipment	Listed (1.11%)	6,416
4	Quanta Computer Inc.	Electrical and electronic equipment	Listed (1.87%)	5,524
5	Acer Inc.	Electrical and electronic equipment	Listed (6.56%)	4,897
6	AU Optronics Corp.	Electrical and electronic equipment	Listed (2.11%)	4,874
7	Wistron Corp.	Electrical and electronic equipment	Listed (8.82%)	4,667
8	Taiwan Semiconductor Mfg. Co., Ltd.	Electrical and electronic equipment	Listed (6.73%)	3,661
9	Compal Electronics, Inc.	Electrical and electronic equipment	Listed (2.16%)	3,458
10	Nan Ya Plastics Corp.	Plastics	Listed (0.04%)	3,435
11	Delta Electronics, Inc.	Electrical and electronic equipment	Listed (3.03%)	3,212
12	United Microelectronics Corp.	Electrical and electronic equipment	Listed (0.65%)	2,591
13	Formosa Chemicals & Fiber Corp.	Plastics	Listed (0.03%)	2,587
14	Inventec Corporation	Electrical and electronic equipment	Listed (0%)	2,399
15	Cheng Shin Rubber Ind. Co., Ltd.	Rubber and plastics products	Listed (2.16%)	2,337
16	Formosa Plastics Corp.	Plastics	Listed (0.17%)	2,183
17	Yang Ming Marine Transport Corp.	Shipping and related services	Listed (36.3%)	1,847
18	Synnex Technology International Corp.	Electronic products distribution	Listed (1.6%)	1,708
19	Far Eastern New Century Corporation	Textiles	Listed (2.93%)	1,632
20	Qisda Corp.	Electrical and electronic equipment	Listed (0.25%)	1,323
Total				76,144

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

^a Financial firms are excluded by the methodology of the international project of which this report is a part. All data are based on the firms' annual reports. For additional data on each firm, see annex I, table 1 and the tables that follow.

^b The percentage of state ownership shown in parentheses is based on 2009 data.

^c Foreign assets were calculated from the consolidated annual reports of individual firms. Calculations use the exchange rate provided by the IMF for December 31, 2009: of USD 1 = TWD 31.98.

^d Mainly footwear and sportswear.

Profile of the top 20

Major drivers

The search for new production sites with lower production costs (mainly labor and land costs) or higher economies of scale was the most important driver for Taiwanese investment abroad. Accessing markets with high potential and expanding distribution channels were also crucial determinants for certain firms. Responding to client requirements and following the migration

of suppliers and customers were also indicated as the drivers of some ventures abroad³.

Even distribution in size, high concentration in industry

Unlike some emerging countries' lopsided top 20 lists, in which the top 3 can account for 80% of the assets, the Taiwanese top 20 list shows a fairly even distribution. In 2009, the top-ranking Hon Hai Precision held 14% of total foreign assets controlled by the top 20 in Table 1. The next two positions in the ranking accounted for about 9% and 8% respectively, and the last firm on the list accounted for about 2%.

On the other hand, the list shows high concentration in industry. Of the top 20, 13 are in the electrical and electronic equipment industry. These companies together hold 73% of the total foreign assets of the top 20 (see annex figures 1a and 1b). The high concentration can be attributed to the superior competitiveness, both domestic and global, of the electrical and electronic equipment industry. Domestically, while the industry accounts for only 10% of Taiwan's GDP, it accounts for 40% of Taiwan's economic growth.⁴ Internationally, Taiwan ranks third in the number of ICT companies on the Top 250 list among the 44 economies investigated by the OECD in its *Information Technology Outlook 2010*.⁵ For more on industry distribution see the **Principal industries** section below.

Ranking changes over the past three years

As table 1a shows, rankings by foreign assets were fairly stable over the three-year period 2007-2009. Hon Hai Precision (the world's largest contract electronics manufacturer, which produces computers, consumer electronics, communications, and other products for companies such as Apple, HP, Dell and Nokia) retains its top ranking for three consecutive years. Firms in the next three ranks in 2009 – Pou Chen (the manufacturer of footwear for companies such as Nike, Adidas, Reebok, and New Balance), Asustek Computer (a manufacturer of computers and cell phone products), and Quanta Computer (a manufacturer of computers and cell phone products) – occupied one of these three ranks in 2007 and 2008 as well. Other firms that changed little in their rankings include Acer, Taiwan Semiconductor Mfg. Co., Delta Electronics, Formosa Chemicals & Fiber, Inventec, Cheng Shin Rubber, Formosa Plastics, Yang Ming Marine Transport, and Synnex Technology International.

Two firms showed more significant positive changes. Wistron increased its foreign assets from USD 1.80 billion in 2007 to USD 2.69 billion in 2008 and USD 4.67 billion in 2009, rising in the process from the 14th to the 7th place. Compal Electronics also increased its foreign assets, from USD 2.06 billion in 2007 to USD 2.32 billion in 2008 and USD 3.46 billion in 2009, moving from the 13th (14th in 2008) to the 9th place. The two major semiconductor manufacturers, Taiwan Semiconductor Mfg. Co. (TSMC) and United Microelectronics Corp. (UMC), on the other hand, showed a decline in foreign assets, TSMC from USD 4.44 billion in 2007 to USD 3.81 billion in 2008 and USD 3.66 billion in 2009, and UMC from USD 3.02 billion in 2007 to USD 2.60 billion in 2008 and USD 2.59 billion in 2009, moving from the 5th to the 8th and from the 9th to the 12th place respectively.

³ Information on the motives of the top 20 was secured mainly from their annual reports. Reports of the Investment Commission in the Ministry of Economic Affairs were an additional source.

⁴ See EE Times Taiwan, http://www.eettaiwan.com/ART_8800631755_876045_NT_cd806ec3.HTM.

⁵ See http://www.oecd.org/document/20/0,3746,en_2649_33757_41892820_1_1_1_1,00.html.

Table 1a. Taiwan: Changes in ranks by foreign assets of the 2009 top 20, 2007–2009

Firm	2007	2008	2009	Firm	2007	2008	2009
Hon Hai Precision	1	1	1	Delta Electronics	11	9	11
Pou Chen	4	3	2	United Microelectronics Corp.	9	12	12
Asustek Computer	2	2	3	Formosa Chemicals & Fiber	12	13	13
Quanta Computer	3	4	4	Inventec	15	17	14
Acer	6	5	5	Cheng Shin Rubber	16	16	15
AU Optronics	7	10	6	Formosa Plastics	18	15	16
Wistron	14	11	7	Yang Ming Marine Transport	17	19	17
Taiwan Semiconductor Mfg. Co.	5	6	8	Synnex Technology International	19	21	18
Compal Electronics	13	14	9	Far Eastern New Century	NA	18	19
Nan Ya Plastics	8	7	10	Qisda	NA	20	20

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

Principal industries (see annex figures 1a and 1b)

Electrical & electronic equipment, including semiconductors

As noted above, the manufacturing of electrical and electronic equipment is the most important sector in Taiwan's outward FDI. Among the top 20 multinationals, 13 are from the electrical and electronic equipment industry. These companies together hold 73% of the total foreign assets in table 1 (see annex figures 1a and 1b). Seven of these 13 companies (Asustek Computer, Quanta Computer, Acer, Wistron, Compal Electronics, Inventec, and Qisda.) produce computer and related peripheral products. Two of the 13 specialize in semiconductor foundry (Taiwan Semiconductor Manufacturing Co., and United Microelectronics Corp.). The rest of the electrical and electronic equipment manufacturers focus on the production of optoelectronic products (AU Optronics), the production of electronic parts and components (Delta Electronics), and the distribution of electronic products (Synnex Technology International). Hon Hai Precision is the world's largest contract electronics manufacturer. It manufactures computers, consumer electronics, communications, and other products, including connectors, cable assemblies, enclosures, flat-panel displays, game consoles, motherboards, servers, and televisions. The company also provides design engineering and mechanical tooling services. Its clients include Apple, Cisco, Dell, HP, Nokia, and Sony. The recent financial crisis hit Taiwanese firms badly. However, many of the top 20 multinationals still expanded abroad and increased their foreign assets and sales.

Plastics and chemicals

Among the industrial activities of the top 20, the second largest contributor in 2009 was the plastics and chemicals industry. Three companies—Nan Ya Plastics, Formosa Chemicals & Fiber, and Formosa Plastics—operate in this industry. All three belong to the same business group: the Formosa Plastics Group. In addition to these three companies, the Formosa Plastics Group

comprises a dozen other companies, engaging in such businesses as oil refining, petrochemicals, plastic raw materials, secondary processing of plastics, fibers and textiles, electronic materials, machinery, and transport. Total foreign assets owned by the three companies on the top 20 list jointly reach over USD 8 billion, second only to the top-ranking Hon Hai Precision.

Others

Other companies on the top 20 list specialize in such industries as textiles (Far Eastern New Century), rubber (Cheng Shin Rubber), shipping and related services such as logistics and terminal operations (Yang Ming Marine Transport), and footwear manufacture (Pou Chen).

Geographic distribution of foreign affiliates

The foreign affiliates of the top 20 are to be found primarily in East Asia & the Pacific. Nearly half (46%) are located in this region, followed by a quarter (26%) in Latin America and the Caribbean and 10% in North America. The percentages of foreign affiliates in the Middle East and North Africa and in Sub-Saharan Africa are very low (only 0.3% and 0.9% respectively). The only firm with a perceptible presence in either of these regions is the Yang Ming Marine Transport (7% in Sub-Saharan Africa). South Asia is another region with very little Taiwanese investment. Acer has the highest percentage of foreign affiliates in Europe (4% in the Eastern Europe & Central Asia and 34% in Western and Central Europe). Taiwan Semiconductor Manufacturing has the highest percentage of foreign affiliates in North America (29%), followed by 24% of Inventec and 22% of Quanta Computer. Pou Chen has the highest percentage of foreign affiliates in Latin America & the Caribbean (51%), followed by 41% of Compal Electronics and 39% of Hon Hai Precision. (see annex table 2 and annex figure 2).

The geographic distribution of foreign affiliates also varies from industry to industry. The plastics and chemicals industry operates the majority of its foreign affiliates in the East Asia and the Pacific region (89%). The electrical and electronic equipment manufacturing industry relies heavily on East Asia & the Pacific and on Latin America & the Caribbean for their foreign operations, with 44% and 28% of foreign affiliates, respectively, located in these regions. Annex figure 3 shows the details for the industry breakdown of the geographic distribution of foreign affiliates. Since, however, some of the industries contain only one firm (e.g. textile, shipping, rubber, and consumer goods), we separated electrical and electronic equipment manufacturers from companies in other industries to investigate the differences. Annex figure 3a reveals that companies from industries *other than* electrical and electronic equipment appear to rely more heavily on neighboring countries (the East Asia & the Pacific region) for their foreign operations, with 60% of foreign affiliates set up in this region, while in the electrical and electronic equipment industry the percentage is significantly lower (44%). A further division of the electrical and electronic equipment industry into three different segments (semiconductors, computer and peripheral equipment, and other electrical and electronic equipment) shows that the semiconductor companies' foreign affiliates are more evenly distributed, with the highest percentage in Latin America & the Caribbean. Other details can be found in Annex figure 3a.

The geography of Taiwanese investment abroad can partly be explained by cultural affinities and market size - hence the large presence in China⁶. Other factors involved are the availability

⁶ Hong Kong and Macau excluded.

of low-cost skilled labour for manufacturing industries (all but one of the top 20 are manufacturers), which again points to China, and the advantages of certain tax regimes (which may explain some of the Latin American investment). The fact that none of the top 20 firms is in the natural resources business may explain the indifference of Taiwanese multinationals to resource-rich locations such as the Middle East and Sub-Saharan Africa.

Transnationality Index (TNI)

The transnationality index (TNI) for each of the top 20 can be found in annex table 1. While the TNI for Taiwanese multinationals varies, it is generally higher than that for multinationals from other emerging markets. 9 firms out of the top 20 have a TNI higher than 70%. The highest rank was recorded for Pou Chen (84%), followed by Delta Electronics (82%), and Cheng Shin Rubber (79%). On average, sales were the most highly transnationalized component. For half of the top 20, foreign sales account for *over 90%* of their total sales, probably a record among emerging markets. This is no doubt a function of the size of the domestic market (total population 23 million).

Note that a low TNI does not necessarily signify low global influence. For example, the TNI of Taiwan Semiconductor Mfg. Co. is 28%, the lowest among the tops 20, but this company is the world's largest dedicated independent semiconductor foundry. It counts among its customers many of the world's leading semiconductor companies, ranging from fabless semiconductor and systems companies such as Advanced Micro Devices (AMD), Altera, Broadcom, Marvell Semiconductor, MediaTek, nVidia, and Qualcomm, to integrated device manufacturers such as LSI, STMicroelectronics, Texas Instruments, and Intel.

Ownership and status

All the top 20 Taiwanese multinationals are listed on the Taipei stock exchange. 13 of the 20 are also listed on foreign stock exchanges. Among them, 7 are listed on the Luxembourg stock exchange, 3 on the New York Stock Exchange, and another 3 on the London Stock Exchange. (See annex table 3 for details).

Yang Ming Marine Transport is the only state-controlled enterprise among the top 20, with 36.3% of its stock held by the state. The shares of the other 19 firms on the top 20 list are publicly held, with only insignificant state stakes. The state ownership in these cases comes mainly from public pension funds and state-owned investment funds, such as the Public Service Pension Fund, the Labor Insurance Fund, the Labor Pension Fund, and the Postal Savings System Fund. These "big four" funds held around USD 47 billion in total assets, with not quite a third of it in domestic stocks.

Most companies on this list belong to business groups (also known as conglomerates) – see Box 1 on 'Common governance among the top 20' below.

Box 1: Common governance among the top 20

Business groups are common in Taiwan. A business group is a network of loosely coupled firms, usually comprising many legal entities with some form of common governance. The control that goes with common governance may not be exercised by a clearly identifiable single entity. Taiwan's traditional business groups

emerged in the 1980s and have expanded rapidly since then. Most of them evolved from family-owned firms in such protected markets as insurance, steel, food-processing, automobiles, real estate, petrochemicals, cement, and home appliances. These predecessors of the business groups had established stable ties with government and began to diversify into different industries. Prominent examples include the Lin Yuan Group, the Formosa Plastic Group and the Far Eastern Group, among others. These business groups are similar to the Japanese *keiretsu*—comprised of firms in diversified lines of business, with the banking arm providing the capital for the whole group. Most of them are still controlled by the founding family and play an important role in the domestic economy of Taiwan.

The other type of business groups usually originated from entrepreneurial ventures, typically in technological industries. As the venture grew and became established, founding entrepreneurs began to integrate vertically or horizontally, thus creating business groups. Unlike the first type discussed above, the second type has engaged in more limited diversification, mainly into related industries. There is usually no banking or financial arm in this type of group. The controlling individuals are typically founding partners but second-generation family members are not necessarily involved in the succession process. This sort of business group is more likely to focus on global value chains than on the domestic economy. Renowned examples of this type of business group include the Hon Hai Group, the Pou Chen Group, the Asus Group, the Quanta Group, the Acer Group, et al.

All of the top 20 are related to business groups. Three firms (Nan Ya Plastic, Formosa Chemicals & Fiber, and Formosa Plastics Corp.) belong to one group: Formosa Plastic. Two others (AU Optronics and Qisda Corp) belong to the BenQ Group. The remaining fifteen of the top 20 firms are the flagship companies of their specific business groups (group names in italics below, followed by company names).

Hon Hai Group: Hon Hai Precision Ind. Co., Ltd.

Pou Chen Group: Pou Chen Corporation.

Asus Group: Asustek Computer Inc.

Quanta Group: Quanta Computer Inc.

Acer Group: Acer Inc.

Wistron Group: Wistron Corp.

TSMC Group: Taiwan Semiconductor Mfg Co., Ltd.

Kinpo Group: Compal Electronics Inc.

Delta Group: Delta Electronics, Inc.

UMC Group: United Microelectronics Corp.

Inventec Group: Inventec Corporation.

Cheng Shin Group: Cheng Shin Rubber Ind. Co., Ltd.

Yang Ming Group: Yang Ming Marine Transport Corp.

Mitac-Synnex Group: Synnex Technology International Corp.

Far Eastern Group: Far Eastern New Century Corporation

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2010.

Head office locations

The headquarters of all companies are located in Taiwan, with 10 of them located in Taipei, the capital city and the economic and cultural center of Taiwan, and four located in Hsinchu, where the Hsinchu Science and Technology Industrial Park is home to 400 high-tech firms. In addition to these 14, two of the top 20 are headquartered in Taoyuan (a large city neighboring Taipei, with the largest Taiwanese international airport located at the north tip of the city), one in Taichung (the main city in central Taiwan), two in Changhua (a city south of Taichung), and one in Kaohsiung (the second largest city in Taiwan). See annex figure 4 for details.

Top mergers and acquisitions

Taiwan's top 10 outward M&A transactions from 2007 to 2009 were mostly carried out in the computer, electronic component, and semiconductor industries, except for one deal in the food and drinks industry. The most significant M&A transaction by value carried out by a Taiwanese multinational in the past three years was the investment made by Acer to acquire Gateway, a PC and peripheral products manufacturer from the US. On October 16, 2007, Acer completed its acquisition of Gateway for approximately USD 761.5 million. The second largest M&A transaction was conducted by Lite-On Technology Corp (a major manufacturer of electronic components, power supplies, and LEDs - not among the top 20) to acquire Perlos Corp. (a manufacturer of electronic components from Finland). The third largest M&A transaction was undertaken by Prime View International (an affiliated company of the YFY Group which is not among the top 20) which bought E Ink, a US-based supplier of electronic paper displays (EPD) to the eBook industry for USD 400 million. Another firm from the top 20 to figure in the top M&As of 2007-2009 was AU Optronics, which acquired 15% of the shares of M Setek, a Japanese firm producing monocrystal silicon wafers (for use in photovoltaic energy systems) for USD 125 million, aiming to strengthen its presence in the solar energy industry. The top-ranking firm on our list, Hon Hai Precision, has also undertaken an M&A deal through its affiliate Foxteq Holdings to acquire the printed circuit boards manufacturing facilities of Sanmina-SCI, a major electronics manufacturing services provider based in San Jose, CA, US. For more details of other M&A transactions, please see annex table 4.

Top greenfield investments

In sharp contrast to the M&A story, the top outward greenfield transactions over 2007-2009 (annex table 5) were mostly carried out by firms from the top 20, with much larger amounts. The largest of them was an investment by the Formosa Plastics Group in Vietnam, with a value of nearly USD 2 billion. Cheng Shin Rubber Industry made a USD 1 billion investment in China in 2009. Hon Hai Precision Industry also made five investments worth USD 1 billion each in China (3 investments), Vietnam (1 investment), and India (1 investment). Companies not on the top 20 list, such as the E-United Group (a business group with its core businesses in the steel industry and real estate development), China Steel Corporation, and InnoLux Display also invested heavily during this period of time, all in Vietnam—the E-United Group made two major investments in Vietnam (USD 1.6 billion in steel and USD 1 billion in real estate), China Steel Corporation put USD 1.5 billion in Vietnam (in steel), and Innolux Display undertook a USD 1.06 billion investment in Vietnam (annex table 5).

Changes in assets, sales and employment over 2008-2009

Table 2 below offers a snapshot of changes in the assets, sales and employment of the top 20 over 2008-2009. Both assets and sales rose in 2009. The growth in assets was stronger than the growth in sales—their foreign assets and total assets both rose significantly, by 14% and 18% respectively. The share of foreign assets remained the same at 40%. However, sales did not pick up as much as assets, with foreign sales and total sales growing by only 9% and 5% respectively. The share of foreign sales increased by 3%, from 82% in 2008 to 85% in 2009. Foreign and total employment both increased from 2008 to 2009, by 12% and 11% respectively.

Table 2. Taiwan: Snapshot of the top 20 multinationals, 2008-2009^a (USD million and numbers of employees)

Category	2008	2009	percentage change, 2008-2009
Assets			
Foreign	81,206	92,783	14%
Total	200,945	234,101	17%
Share of foreign in total (%)	40%	40%	
Sales			
Foreign	227,229	248,168	9%
Total	278,540	291,469	5%
Share of foreign in total (%)	82%	85%	
Employment			
Foreign ^b	1,170,735	1,309,673	12%
Total	1,664,360	1,844,184	11%
Share of foreign in total (%)	70%	71%	

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

^a Listed firms in Taiwan were not required by law to reveal their foreign assets prior to 2008, so 2007 data on foreign assets was not available for all firms.

^b Foreign employment figures were mostly unavailable directly from individual firms' annual reports, with the exception of Taiwan Semiconductor Manufacturing Co.. Approximations based on percentages of foreign employment reported by UNCTAD (*World Investment Report 2009*, www.unctad.org/wir and www.unctad.org/fdistatistics) or data from the Investment Commission, Ministry of Economic Affairs (http://www.moeaic.gov.tw/system_external/ctrl?PRO=DownloadFile&t=4&id=310) have been used instead.

The big picture

Taiwan's outward investment began in the 1950s, in very limited amounts. From 1952 to 1986, the accumulated amount of outward FDI from Taiwan was only USD 272 million. Since 1987, Taiwan outward FDI has increased dramatically, thanks to the relaxation of foreign exchange regulation by the Taiwanese government (e.g. the implementation of a floating exchange rate and freer currency exchange). As labor costs started to surge in the late 1980s, Taiwanese firms gradually transferred their manufacturing facilities to foreign countries, increasing FDI outflows by more than a factor of 10 within three years, from USD 60 million in 1986 to USD 6.9 billion in 1989.

In 1990, the stock market in Taiwan crashed and the real estate market collapsed. Outward FDI from Taiwan thus started to slow down. The global oil price surged the following year, driving

down FDI outflows further. In 1992, the government partially removed the restrictions on direct investment in China. With the adoption of a more open economic policy in China after Deng Xiaoping's tour of southern Guangdong and Shanghai in early 1992, and the depreciation of the renminbi (RMB), Taiwanese firms increased their investment in China dramatically. Outward FDI continued to grow fast every year until 2000, except for the drop in 1998 due to the Asian financial crisis in 1997. Overall, in the 1990s, Taiwan's outward FDI followed a consistent pattern of targeting Asian and American locations, with Europe and other regions relatively neglected. In 1987, Asia and the Americas received 99% of all FDI outflows from Taiwan, while in 2000 their share was 95%.

The beginning of the 2000s saw a drop in FDI outflows from Taiwan. The global recession in early 2000s dragged down outward FDI for two years. In 2002, Taiwanese government further relaxed restrictions on outward FDI in China, leading Taiwan's FDI in China to increase rapidly. The FDI outflow of Taiwan maintained its pace of growth till 2007, reaching USD 11 billion in that year. Then came the global financial crisis of 2008.

The crisis had a severe negative impact on Taiwan's GDP growth, as well as on outward FDI in 2009. According to UNCTAD, Taiwan's outward FDI dropped by almost half, from USD 10.29 billion in 2008 to USD 5.87 billion in 2009. However, the top 20 did not appear to be much affected. Their collective foreign assets grew by 14% in 2009, as noted earlier. As table 3 below indicates, 15 of the top 20 increased their overseas assets in 2009. AU Optronics led the 15, with an increase of USD 2.17 billion, an 80.3% increase, followed by the Wistron with USD 1.974 billion (a 73.3% increase) and Compal Electronics with USD 1.139 billion (a 49.1% increase)(table 3 below).

Table 3. Taiwan: Changes in foreign assets of the top 20 multinationals, 2008-2009 (USD million)

Rank	Name of company	Foreign assets (2008)	Foreign assets (2009)	Change (2008-2009)	Change as percentage (2008-2009)
1	Hon Hai Precision	9,476	10,699	1,222	12.9%
2	Pou Chen	5,796	6,694	898	15.5%
3	Asustek Computer	6,690	6,416	-274	-4.1%
4	Quanta Computer	4,592	5,524	932	20.3%
5	Acer	4,027	4,897	870	21.6%
6	AU Optronics	2,703	4,874	2,172	80.3%
7	Wistron	2,694	4,667	1,974	73.3%
8	Taiwan Semiconductor Mfg. Co.	3,813	3,661	-152	-4.0%
9	Compal Electronics.	2,319	3,458	1,139	49.1%
10	Nan Ya Plastics	3,282	3,435	153	4.7%
11	Delta Electronics	2,798	3,212	414	14.8%
12	United Microelectronics Corp.	2,602	2,591	-11	-0.4%
13	Formosa Chemicals & Fiber	2,462	2,587	125	5.1%
14	Inventec	1,868	2,399	531	28.4%
15	Cheng Shin Rubber	2,103	2,337	234	11.1%
16	Formosa Plastics	2,122	2,183	62	2.9%
17	Yang Ming Marine Transport	1,771	1,847	76	4.3%

18	Synnex Technology International	1,381	1,708	326	23.6%
19	Far Eastern New Century	1,807	1,632	-175	-9.7%
20	Qisda	1,526	1,323	-202	-13.3%

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

Taiwan's outward FDI has increasingly been characterized by a dual-track approach since the mid-1990s: on the one hand, there is investment in relatively low-quality labor-intensive activities offshore, particularly in China (discussed below), and on the other increasing amounts of higher-quality investment in the major industrialized markets of Japan, the United States and Europe. A clear pattern of increasing industrial and geographic concentration can also be observed. Government policy in the 1960s, designed to promote industrial development and exports, successfully boosted the whole of the manufacturing sector, making manufacturing the driver of economic growth of Taiwan ever since. In the late 1980s, the emergence of a sizeable high-technology electronics and computer sector further changed the structure of the manufacturing sector in Taiwan. Taiwanese manufacturers of electrical and electronic equipment have gradually earned a major place in the world in this industry. In its *Information Technology Outlook 2010*,⁷ the OECD identifies the Top 250 ICT (information and communication technology) firms, among which 18 companies are Taiwan-based. Among the 44 economies investigated in the survey, Taiwan ranks third in the number of ICT companies on the Top 250 list.

Manufacturers of electrical and electronic equipment have also become increasingly important to Taiwan's outward FDI. From 1952 to 2000, this industry accounted for 21% of Taiwan's FDI outflows, after the financial services industry, which accounted for 25%. Data from the Investment Commission in the Ministry of Economic Affairs shows that, in 2009 alone, investment from these companies accounted for 32% of outward FDI from Taiwan. For the past 30 years, the IT industry has been leading Taiwanese OFDI, and in 2009 accounted for 41% of the outward stock of Taiwan, with machinery⁸ manufacturing a distant second at 5%.

As the globalization of the ICT industry accelerated in the mid-1990s, Taiwanese manufacturers gradually shifted their production activities overseas, aiming at cost advantages. In 1995, over 70% of the ICT hardware products offered by Taiwanese manufacturers were produced in Taiwan. Within ten years, these firms had mostly moved their factories abroad. By 2004, less than 10% of the products were made in Taiwan. Among the overseas production "hot spots", China has undoubtedly attracted the largest amount of investment. Given the available data, it is difficult to distinguish clearly the host-country pattern of Taiwan's outward FDI in Asia before 1991. (Taiwanese FDI in China has officially been permitted only since 1991.) However, a study⁹ estimates that China might have attracted over USD 2 billion in investment from Taiwan in the 1980s, about 40% more than Taiwan's outward FDI to all *other* economies in the 1980s (USD 1.46 billion), thus making it the most popular target location of Taiwan's outward FDI for the past three decades.

⁷ See http://www.oecd.org/document/20/0,3746,en_2649_33757_41892820_1_1_1_1,00.html.

⁸ Machinery here refers to the equipment used in the production process.

⁹ "Analysis of Taiwan's FDI", research conducted by the Metal Industries Research & Development Centre, Taipei, Taiwan in 2010 (in Chinese).

The attractiveness of China can be explained by two factors. As the global competitiveness of many labor-intensive industries in Taiwan has declined, they have been forced to move offshore to locations with lower labor costs. And China's 'Open Door' Policy since 1978 has been targeted at attracting inflows of FDI based upon its abundant supplies of low-cost labor. Another important factor is the cultural links or kinship relations which have been maintained in spite of economic and political separation between Taiwan and China. The use of family networks has been important in both the choice of China as a destination for FDI and the precise location within China of any such investment. In the 1990s, China attracted 42% of total outward FDI from Taiwan. From 2000 to 2009, the proportion increased further to 63%. In 2009, Taiwan's FDI flows into China were about two and a half times its FDI flows into all other economies.

However, the shift in China's role from the world's factory to the world's market may change Taiwanese strategies, as well as the geographic and industry distribution of Taiwan's outward FDI. As wages rise continuously in China, many Taiwanese firms are encountering unprecedented challenges. China's labor-cost advantage may soon come to an end and Taiwanese manufacturers are likely to move their investments to economies with even lower wages. On the other hand, the huge potential of the domestic market in China may also attract firms from some industries to invest in China to seize market opportunities.

One noteworthy feature of Taiwanese FDI is that its outward FDI flows and stocks have exceeded inward FDI flows and stocks for a long time, certainly for the past two decades (see annex figures 5 and 6). This pattern is uncommon among emerging markets, where inward FDI flows and stocks are generally higher than outward FDI flows and stocks. Several factors have probably contributed to this unique pattern. First, unlike many other emerging markets, Taiwan lacks natural resources, which usually attract significant inflows of FDI. Second, capital inflows to Taiwan have gradually changed in their structure—inward FPI (foreign portfolio investment) has been outstripping inward FDI since 1993. It is likely that FPI has gradually been substituting for FDI in Taiwan. Compared with other countries in the world, Taiwan's pattern of IFDI/OFDI shows a strong similarity to that of Japan, whose OFDI flows and stocks have consistently exceeded IFDI flows and stocks for years. The implication is not clear yet, but it would be interesting to see if future studies can shed more light on this phenomenon.

On the policy side, the government's FDI policies have changed with economic development, which has progressed through the stages of labor-intensive import substitution in the 1950s, export expansion in the 1960s, intermediate-goods import substitution in the 1970s, and the technological upgrading and deepening since the 1980s. Different policies have been used to promote economic development in different periods. In general, FDI policy has evolved from government-guided protection for emerging industries in the earlier periods to liberalized policies in recent years that rely on the market mechanism and the international division of labor. For example, the earlier tax relief incentives for investment abroad were abolished in September 2010. Today, there is no financial support to facilitate outward investment. On the other hand, some restrictions are still imposed on outward FDI. For example, prior approval by the Investment Commission in the Ministry of Economic Affairs (MOEA) is required for investments larger than NTD 1.5 billion (around USD 50 million). Legal restrictions of various kinds are also imposed on investment in China for certain industries, such as agriculture, chemicals, telecommunications, transport, public utilities, semiconductors, etc. In general, Taiwanese investment policy emphasizes attracting inward FDI more than promoting outward FDI. In this, Taiwan is much more like a typical emerging market.

The Department of Investment Service in the Ministry of Economic Affairs is in charge of facilitating Taiwanese investment abroad and attracting investment from other countries, focusing on providing information and services to Taiwanese firms intending to invest abroad and to foreign firms interested in investing in Taiwan.

For further information please contact:

College of Management Fu Jen Catholic University

Anthony Kuo
Assistant Professor
MBA Program in International Management
profakuo@gmail.com or 076667@mail.fju.edu.tw
+886-2-2905-2968

Ming-Sung Kao
Assistant Professor
Department of Finance & International Business
gaums0327@gmail.com
+886-2-2905-2977

Vale Columbia Center on Sustainable International Investment

Karl P. Sauvart
Executive Director
Karl.Sauvant@law.columbia.edu
+1-212-854-0689

Vishwas P. Govitrikar
Global Coordinator
Emerging Market Global Players Project
vpgovitrikar@gmail.com
+1-514-507-3948

Emerging Markets Global Players Project

This report on Taiwanese multinationals was prepared in the framework of the Emerging Market Global Players (EMGP) project, a collaborative effort led by the Vale Columbia Center. It brings together researchers on FDI from leading institutions in emerging markets to generate annual reports on the top outward investors in each participating economy. Reports on 14 economies have been published so far (several on some of them): Argentina, Brazil, Chile, China, Hungary, India, Israel, Korea, Mexico, Poland, Russia, Slovenia, Taiwan and Turkey. For further information, visit: <http://www.vcc.columbia.edu/content/emerging-market-global-players-project-0>.

College of Management, Fu Jen Catholic University

The College of Management at Fu Jen Catholic University is one of the most prestigious business schools in Taiwan. As one of the first two AACSB accredited schools in Taiwan and China, the College emphasizes learning-by-doing, and dedicates itself to conducting academic research, teaching with diversified pedagogical methods, and serving humanity. It pursues excellence in academic research as well as in business practice, and has been contributing significantly to Taiwan's higher education in management. For further information, visit: <http://www.management.fju.edu.tw/>.

Vale Columbia Center on Sustainable International Investment (VCC)

The VCC is a joint center of the Columbia Law School and the Earth Institute at Columbia University. It serves as a leading forum for discussion by scholars, policy makers, development advocates and other stakeholders of issues related to FDI in the global economy, paying special attention to the impact of this investment on sustainable development. The VCC currently focuses on three key themes: creating a framework for extractive industries and sustainable development; analyzing trends in investment law and policy around the world, especially as they contribute to sustainable development; and analyzing the rise of emerging market multinationals. For further information, visit: <http://www.vcc.columbia.edu>.

Annex table 1. Taiwan: The top 20 multinationals: Key variables, 2009 (USD million and number of employees)^a

Rank by foreign assets	Firm	Assets		Sales		Employment		TNI (%)	Number of foreign affiliates	Number of host economies
		Foreign	Total	Foreign	Total	Foreign	Total			
1	Hon Hai Precision	10,699	32,036	60,955	61,416	513,240	611,000	72%	314	27
2	Pou Chen	6,694	7,703	6,375	6,471	219,551	332,653	84%	39	6
3	Asustek Computer	6,416	11,599	18,377	19,126	69,128	113,324	71%	142	36
4	Quanta Computer	5,524	11,831	24,456	26,326	21,357	64,719	58%	50	12
5	Acer	4,897	9,123	17,406	17,993	5,564	6,624	78%	139	42
6	AU Optronics	4,874	19,518	10,988	11,264	38,277	51,378	66%	26	13
7	Wistron	4,667	5,637	13,939	17,137	21,974	39,239	73%	43	13
8	Taiwan Semiconductor Mfg. Co.	3,661	18,643	5,103	9,271	2,484	26,390	28%	24	11
9	Compal Electronics	3,458	10,511	21,027	21,169	33,655	58,025	63%	56	15
10	Nan Ya Plastics	3,435	13,276	4,016	7,653	18,454	30,297	46%	38	5
11	Delta Electronics	3,212	4,198	3,624	3,935	44,544	58,000	82%	37	11
12	United Microelectronics Corp.	2,591	7,951	1,771	2,865	5,742	13,051	46%	18	11
13	Formosa Chemicals & Fiber	2,587	14,019	4,016	9,291	10,941	17,936	41%	18	6
14	Inventec	2,399	4,549	11,119	13,951	28,164	29,646	76%	21	10
15	Cheng Shin Rubber	2,337	2,829	2,484	2,649	14,221	23,348	79%	23	10
16	Formosa Plastics	2,183	10,381	2,521	5,645	3,362	5,519	42%	10	7
17	Yang Ming Marine Transport	1,847	3,568	2,787	2,787	729	4,197	56%	46	20
18	Synnex Technology International	1,708	2,306	5,678	6,919	3,987	5,192	78%	24	10
19	Far Eastern New Century	1,632	8,383	2,521	5,186	15,125	20,834	47%	32	8
20	Qisda	1,323	3,485	2,021	4,707	20,552	41,942	43%	64	26
Total (average for percentages)		76,144	201,545	221,184	255,761	1,091,050	1,553,314	61%	1,164	

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

^a All calculations use the exchange rate provided by the IMF for December 31, 2009: USD 1 = TWD 31.98. ^b As indicated earlier, foreign employment figures were mostly unavailable from individual firms' annual reports. Approximations based on the percentage of foreign employment reported by UNCTAD in its *World Investment Report 2009* or data from the Investment Commission in the Ministry of Economic Affairs have been used instead. ^c The TNI for all firms other than Taiwan Semiconductor was calculated on the basis of the approximate employment ratio mentioned in the preceding footnote.

Annex table 1a. Taiwan: The top 20 multinationals: foreign/total ratios, 2009

Rank by foreign assets	Firm	Industry	Foreign asset/total asset	Foreign sales/total sales	Foreign employment /total employment	TNI (%)
1	Hon Hai Precision	Electrical and electronic equipment	33%	99%	84%	72%
2	Pou Chen	Consumer goods	87%	99%	66%	84%
3	Asustek Computer	Electrical and electronic equipment	55%	96%	61%	71%
4	Quanta Computer	Electrical and electronic equipment	47%	93%	33%	58%
5	Acer	Electrical and electronic equipment	54%	97%	84%	78%
6	AU Optronics	Electrical and electronic equipment	25%	98%	75%	66%
7	Wistron	Electrical and electronic equipment	83%	81%	56%	73%
8	Taiwan Semiconductor Mfg. Co.	Electrical and electronic equipment	20%	55%	9%	28%
9	Compal Electronics	Electrical and electronic equipment	33%	99%	58%	63%
10	Nan Ya Plastics	Plastics	26%	52%	61%	46%
11	Delta Electronics	Electrical and electronic equipment	77%	92%	77%	82%
12	United Microelectronics Corp.	Electrical and electronic equipment	33%	62%	44%	46%
13	Formosa Chemicals & Fiber	Plastics	18%	43%	61%	41%
14	Inventec	Electrical and electronic equipment	53%	80%	95%	76%
15	Cheng Shin Rubber	Rubber and plastics products	83%	94%	61%	79%
16	Formosa Plastics	Plastics	21%	45%	61%	42%
17	Yang Ming Marine Transport	Shipping and transportation	52%	100%	17%	56%
18	Synnex Technology International	Electrical and electronic equipment	74%	82%	77%	78%
19	Far Eastern New Century	Textiles	19%	49%	73%	47%
20	Qisda	Electrical and electronic equipment	38%	43%	49%	43%

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

Annex table 2. Taiwan: The top 20 multinationals: Regionality Index^a (%) 2009

Rank by foreign assets	Firm	Middle East & North Africa	Sub-Saharan Africa	East Asia & the Pacific	South Asia	Developed Asia-Pacific (Japan, Australia & New Zealand)	Eastern Europe & Central Asia	Other Europe	Latin America & the Caribbean	North America	Number of affiliates
1	Hon Hai Precision Ind. Co., Ltd.	0.0%	0.0%	43.9%	1.3%	1.3%	3.5%	2.2%	38.5%	9.2%	314
2	Pou Chen Corporation	0.0%	0.0%	46.2%	0.0%	0.0%	0.0%	0.0%	51.3%	2.6%	39
3	Asustek Computer Inc.	1.4%	2.1%	43.0%	0.7%	2.1%	3.5%	8.5%	31.7%	7.0%	142
4	Quanta Computer Inc.	0.0%	2.0%	48.0%	0.0%	2.0%	0.0%	4.0%	22.0%	22.0%	50
5	Acer Inc.	0.0%	1.4%	23.7%	0.0%	5.8%	3.6%	33.8%	16.5%	15.1%	139
6	AU Optronics Corp.	0.0%	0.0%	57.7%	0.0%	15.4%	7.7%	7.7%	3.8%	7.7%	26
7	Wistron Corp.	0.0%	0.0%	53.5%	2.3%	4.7%	2.3%	9.3%	18.6%	9.3%	43
8	Taiwan Semiconductor Mfg. Co., Ltd.	0.0%	0.0%	12.5%	0.0%	12.5%	0.0%	8.3%	37.5%	29.2%	24
9	Compal Electronics, Inc.	0.0%	0.0%	46.4%	0.0%	0.0%	1.8%	5.4%	41.1%	5.4%	56
10	Nan Ya Plastics Corp.	0.0%	0.0%	92.1%	0.0%	0.0%	0.0%	0.0%	0.0%	7.9%	38
11	Delta Electronics, Inc.	0.0%	0.0%	67.6%	0.0%	5.4%	0.0%	2.7%	18.9%	5.4%	37
12	United Microelectronics Corp.	0.0%	0.0%	50.0%	0.0%	11.1%	0.0%	5.6%	22.2%	11.1%	18
13	Formosa Chemicals & Fiber Corp.	0.0%	0.0%	88.9%	0.0%	0.0%	0.0%	0.0%	5.6%	5.6%	18
14	Inventec Corporation	0.0%	0.0%	52.4%	0.0%	4.8%	4.8%	0.0%	14.3%	23.8%	21
15	Cheng Shin Rubber Ind. Co., Ltd.	0.0%	0.0%	60.9%	0.0%	0.0%	0.0%	8.7%	17.4%	13.0%	23
16	Formosa Plastics Corp.	0.0%	0.0%	80.0%	0.0%	0.0%	0.0%	0.0%	10.0%	10.0%	10
17	Yang Ming Marine Transport Corp.	0.0%	6.5%	30.4%	2.2%	4.3%	2.2%	26.1%	6.5%	21.7%	46
18	Synnex Technology International Corp.	0.0%	4.2%	58.3%	4.2%	8.3%	0.0%	0.0%	20.8%	4.2%	24
19	Far Eastern New Century Corporation	0.0%	0.0%	59.4%	0.0%	0.0%	0.0%	6.3%	34.4%	0.0%	32
20	Qisda Corp.	1.6%	0.0%	54.7%	1.6%	4.7%	3.1%	17.2%	9.4%	7.8%	64

^a The Regionality Index is calculated by dividing the number of a firm's foreign affiliates in a particular region of the world by its total number of foreign affiliates and multiplying the result by 100.

Annex table 2a. Taiwan: The top 20 multinationals: Number of affiliates by region, 2009

Rank by foreign assets	Firm	Middle East & North Africa	Sub-Saharan Africa	East Asia & the Pacific	South Asia	Developed Asia-Pacific (Japan, Australia & New Zealand)	Eastern Europe & Central Asia	Other Europe	Latin America & the Caribbean	North America	Total
1	Hon Hai Precision Ind. Co., Ltd.	0	0	138	4	4	11	7	121	29	314
2	Pou Chen Corporation	0	0	18	0	0	0	0	20	1	39
3	Asustek Computer Inc.	2	3	61	1	3	5	12	45	10	142
4	Quanta Computer Inc.	0	1	24	0	1	0	2	11	11	50
5	Acer Inc.	0	2	33	0	8	5	47	23	21	139
6	AU Optronics Corp.	0	0	15	0	4	2	2	1	2	26
7	Wistron Corp.	0	0	23	1	2	1	4	8	4	43
8	Taiwan Semiconductor Mfg. Co., Ltd.	0	0	3	0	3	0	2	9	7	24
9	Compal Electronics, Inc.	0	0	26	0	0	1	3	23	3	56
10	Nan Ya Plastics Corp.	0	0	35	0	0	0	0	0	3	38
11	Delta Electronics, Inc.	0	0	25	0	2	0	1	7	2	37
12	United Microelectronics Corp.	0	0	9	0	2	0	1	4	2	18
13	Formosa Chemicals & Fiber Corp.	0	0	16	0	0	0	0	1	1	18
14	Inventec Corporation	0	0	11	0	1	1	0	3	5	21
15	Cheng Shin Rubber Ind. Co., Ltd.	0	0	14	0	0	0	2	4	3	23
16	Formosa Plastics Corp.	0	0	8	0	0	0	0	1	1	10
17	Yang Ming Marine Transport Corp.	0	3	14	1	2	1	12	3	10	46
18	Synnex Technology International Corp.	0	1	14	1	2	0	0	5	1	24
19	Far Eastern New Century Corporation	0	0	19	0	0	0	2	11	0	32
20	Qisda Corp.	1	0	35	1	3	2	11	6	5	64
Total		3	10	541	9	37	29	108	306	121	1,164

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

Annex table 3. Taiwan: The top 20 multinationals: Stock exchange listings, 2009

Firm	Domestic	Foreign
Hon Hai Precision Ind. Co., Ltd.	Taiwan Stock Exchange	London
Pou Chen Corporation	Taiwan Stock Exchange	<i>None</i>
Asustek Computer Inc.	Taiwan Stock Exchange	London
Quanta Computer Inc.	Taiwan Stock Exchange	Luxembourg
Acer Inc.	Taiwan Stock Exchange	London
AU Optronics Corp.	Taiwan Stock Exchange	New York (NYSE)
Wistron Corp.	Taiwan Stock Exchange	Luxembourg
Taiwan Semiconductor Mfg. Co., Ltd.	Taiwan Stock Exchange	New York (NYSE)
Compal Electronics, Inc.	Taiwan Stock Exchange	Luxembourg
Nan Ya Plastics Corp.	Taiwan Stock Exchange	<i>None</i>
Delta Electronics, Inc.	Taiwan Stock Exchange	Luxembourg
United Microelectronics Corp.	Taiwan Stock Exchange	New York (NYSE)
Formosa Chemicals & Fiber Corp.	Taiwan Stock Exchange	<i>None</i>
Inventec Corporation	Taiwan Stock Exchange	<i>None</i>
Cheng Shin Rubber Ind. Co., Ltd.	Taiwan Stock Exchange	<i>None</i>
Formosa Plastics Corp.	Taiwan Stock Exchange	<i>None</i>
Yang Ming Marine Transport Corp.	Taiwan Stock Exchange	<i>None</i>
Synnex Technology International Corp.	Taiwan Stock Exchange	Luxembourg
Far Eastern New Century Corporation	Taiwan Stock Exchange	Luxembourg
Qisda Corp.	Taiwan Stock Exchange	Luxembourg

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

Annex table 4. Taiwan: Top 10 outward M&A transactions, 2007–2009 (USD million)^a

Date	Acquirer's name	Target name	Target industry	Target economy	% of shares acquired	Value of transaction
10/16/2007	Acer Inc	Gateway Inc	Computer and Peripheral Equipment	United States	100.0	761.5
10/24/2007	Lite-On Technology Corp	Perlos Corp	Electronic components	Finland	100.0	573.0
12/22/2009	Prime View Intl Co Ltd	E Ink Corp	Electronic components	United States	100.0	400.3
01/11/2008	MediaTek Inc	Analog Devices Inc-Cellular	Semiconductors and related devices	United States	100.0	350.0
05/31/2009	Ting Hsin(Cayman Islands)Hldg	Tingyi-Asahi-Itochu Beverages	Bottled soft drinks & carbonated waters	China	9.9	280.0
12/22/2009	Function Well Ltd	Champ Tech Optical Foshan Corp	Optical instruments and lenses	China	100.0	230.6
01/23/2008	Investor Group	Adema Technologies Inc	Semiconductors and related devices	United States	100.0	155.4
09/01/2009	AU Optronics Corp	M Setek Co Ltd	Semiconductors and related devices	Japan	15.1	125.0
04/30/2007	Silicon Motion Technology Corp	Future Communications IC Inc	Semiconductors and related devices	South Korea	100.0	102.0
07/07/2008	Foxteq Holdings Inc	Sanmina-SCI Corp-Certain Asset	Printed circuit boards	United States	100.0	90.0
Total						3,067.8

Source: Adapted from Thomson ONE Banker, Thomson Reuters.

Annex table 5. Taiwan: Top 11^a outward greenfield transactions, announced, 2007-2009 (USD million) ^b

Date	Company	Destination	Industry	Value
Jun-08	Formosa Plastics Group (FPG)	Vietnam	Coal, Oil and Natural Gas	1,907.3 ^c
Oct-07	E-United Group	Vietnam	Metals	1,650.0
Nov-07	China Steel Corporation (CSC)	Vietnam	Metals	1,500.0
Jul-07	InnoLux Display	Vietnam	Electronic Components	1,063.0
Nov-09	Cheng Shin Rubber Industry	China	Rubber	1,000.0
Oct-09	Hon Hai Precision Industry	China	Electronic Components	1,000.0
Sep-09	Hon Hai Precision Industry	China	Electronic Components	1,000.0
Aug-07	Hon Hai Precision Industry	China	Electronic Components	1,000.0
Jul-07	Hon Hai Precision Industry	Vietnam	Real Estate	1,000.0
Jun-07	Hon Hai Precision Industry	India	Electronic Components	1,000.0
Oct-07	E-United Group	Vietnam	Real Estate	1,000.0
Total				13,120.3

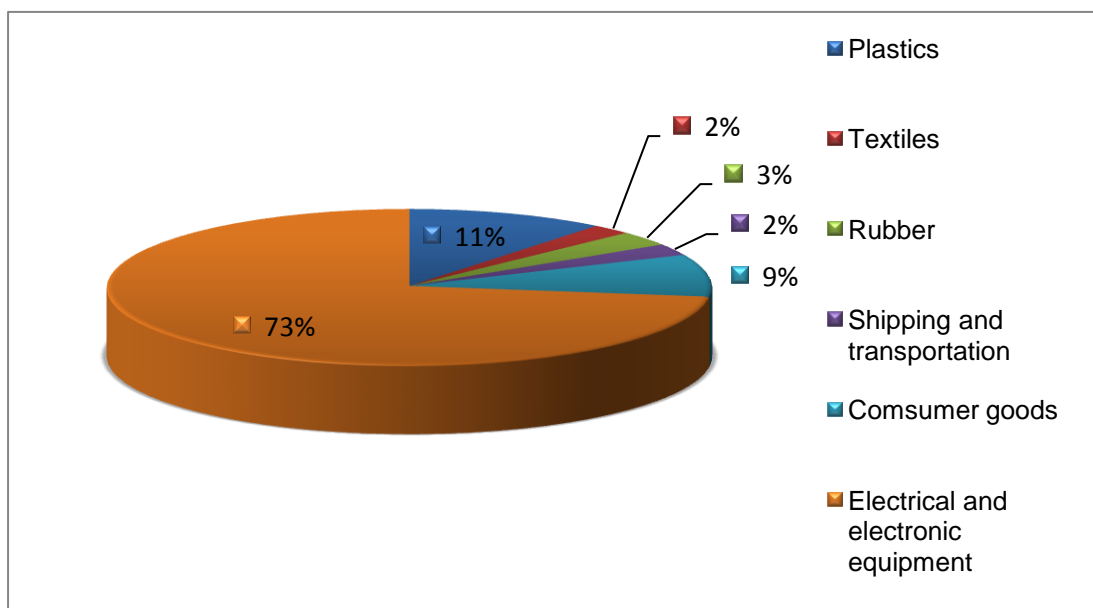
Source: Adapted from fdiIntelligence, a service from the Financial Times Ltd.

^a This table normally includes 10 transactions. In this case, as seven transactions worth USD 1,000 million each were tied for 5th place, 11 transactions have been included.

^b Note that these transactions may not have been completed exactly as listed.

^c This is an estimated amount.

Annex figure 1. Taiwan: Breakdown of the foreign assets of the top 20 multinationals, by main industry, 2009

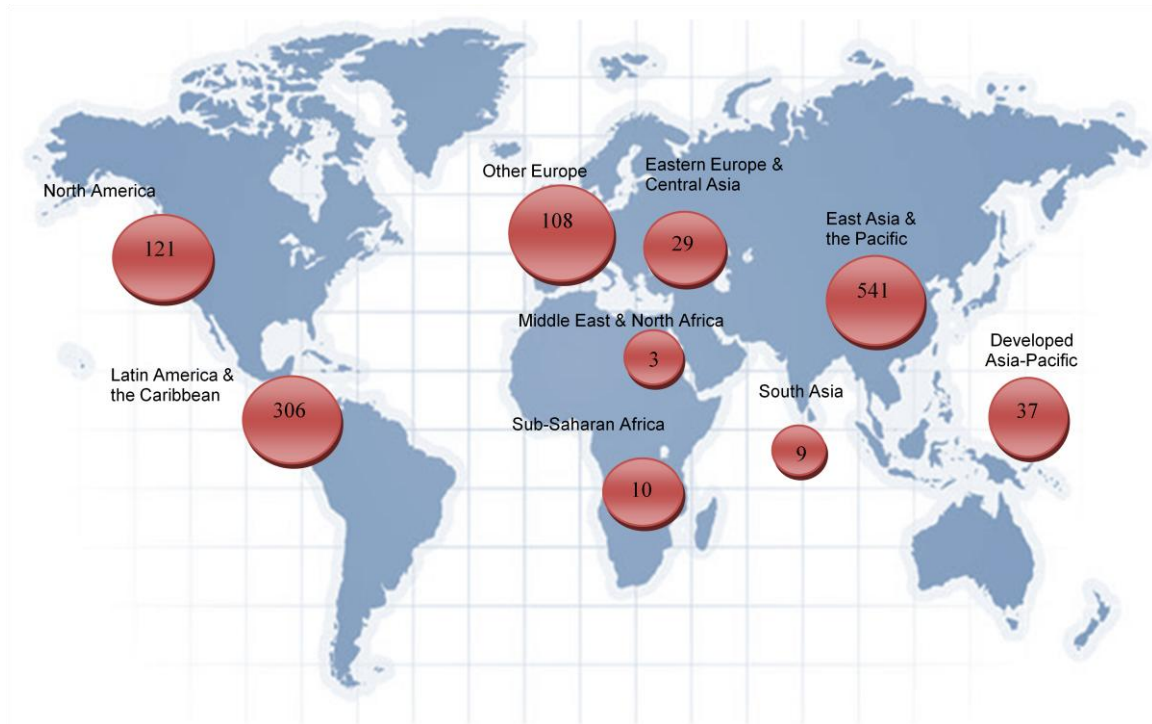


Details

Industry	Foreign assets (USD mn)	Number of Companies	Companies
Plastics	8,205	3	Nan Ya Plastics, Formosa Chemicals & Fiber, Formosa Plastics
Textiles	1,632	1	Far Eastern New Century
Rubber	2,337	1	Cheng Shin Rubber
Shipping and transportation	1,847	1	Yang Ming Marine Transport
Others	6,694	1	Pou Chen
Electrical and electronic equipment	55,430	13	
Semiconductor	6,252	2	Taiwan Semiconductor Mfg, United Microelectronics
Computer and peripheral equipment	28,685	7	Asustek Computer, Quanta Computer, Acer, Wistron, Compal Electronics, Inventec, Qisda
Optoelectronic	4,874	1	AU Optronics
Electronic parts & components	3,212	1	Delta Electronics
Electronic products distribution	1,708	1	Synnex Technology International
Other electronic	10,699	1	Hon Hai Precision

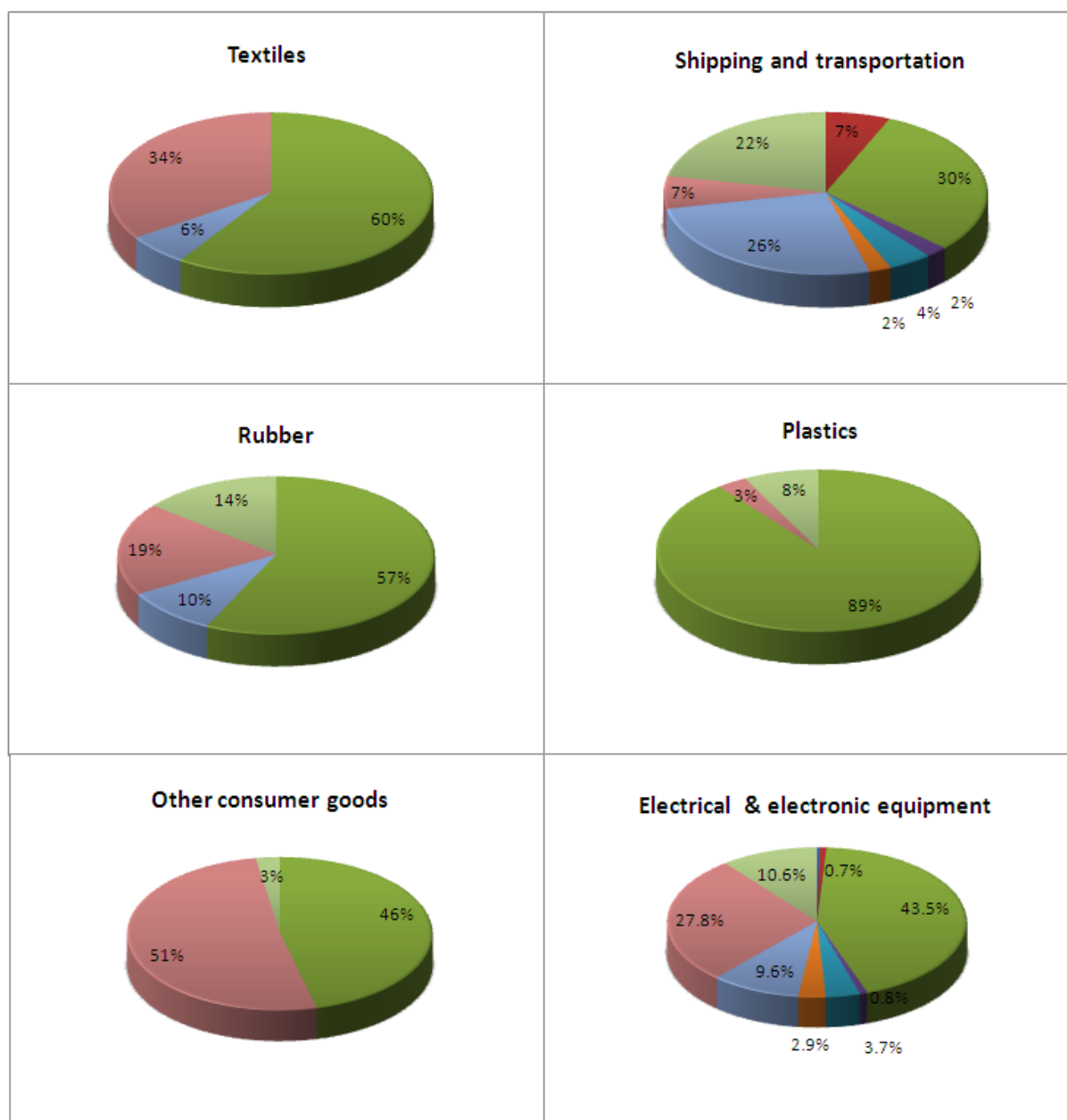
Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

Annex figure 2. Taiwan: Foreign affiliates of the top 20 multinationals, by region, 2009
(number of affiliates)



Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2010, drawing on individual companies' websites.

Annex figure 3. Taiwan: Geographic distribution of the foreign affiliates^a of the top 19 multinationals, by main industry, 2009 (percentages)

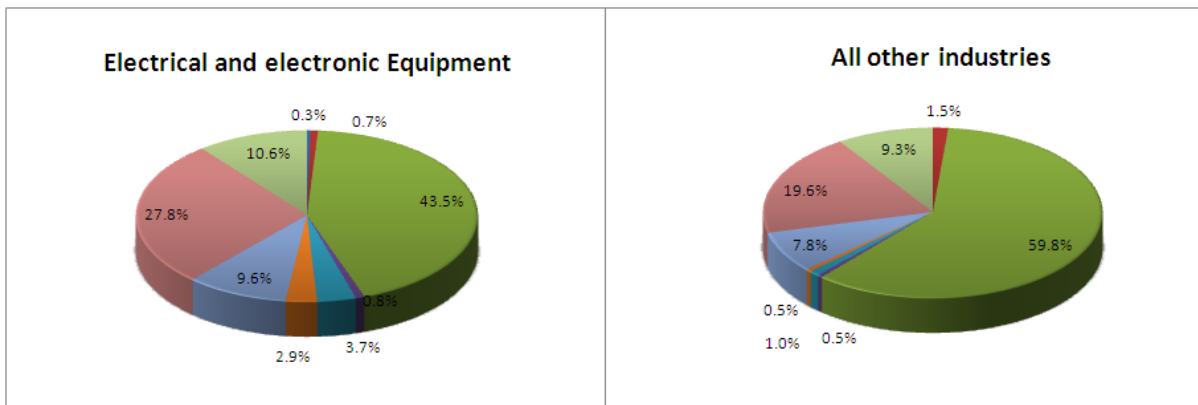


- 1. Middle East & North Africa
- 2. Sub-Saharan Africa
- 3. East Asia & the Pacific
- 4. South Asia
- 5. Developed Asia-Pacific
- 6. Eastern Europe & Central Asia
- 7. Other Europe
- 8. Latin America & the Caribbean
- 9. North America

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

^a This figure normally provides the geographic breakdown of *assets*, which was not available. The geographic breakdown of *affiliates* is given instead.

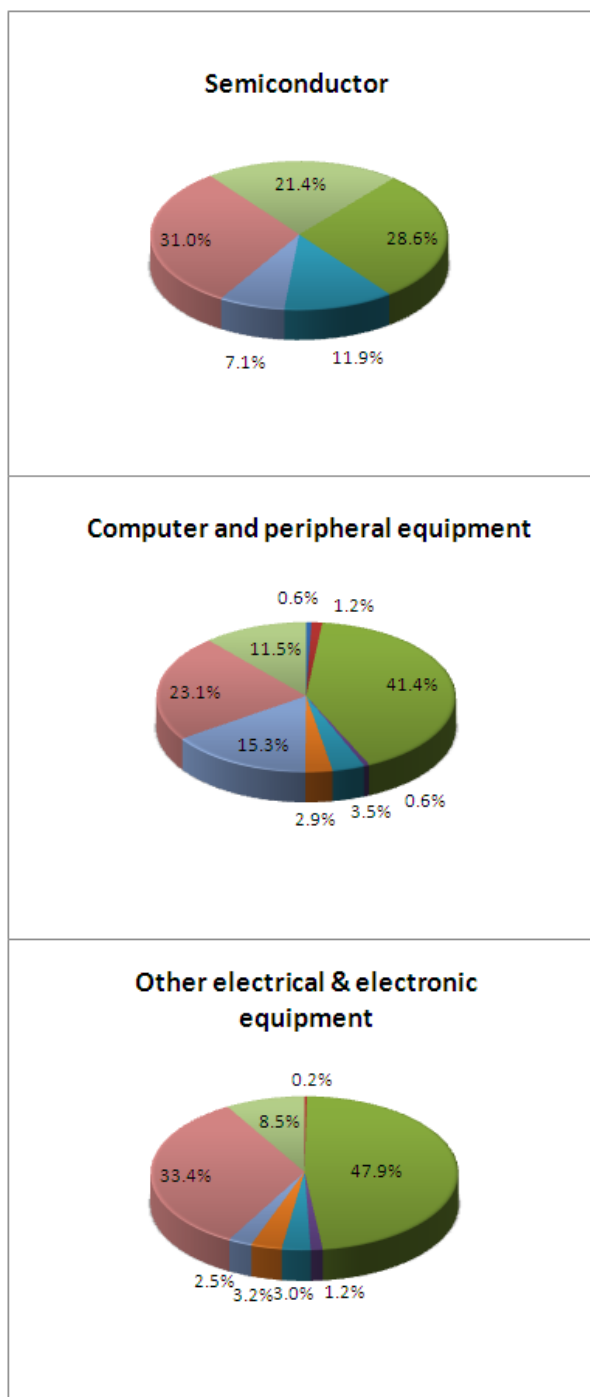
Annex figure 3a. Taiwan: Geographic distribution of foreign affiliates, comparison between the electrical and electronics equipment industry and other industries, 2009 (percentages)



- 1. Middle East & North Africa
- 2. Sub-Saharan Africa
- 3. East Asia & the Pacific
- 4. South Asia
- 5. Developed Asia-Pacific
- 6. Eastern Europe & Central Asia
- 7. Other Europe
- 8. Latin America & the Caribbean
- 9. North America

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

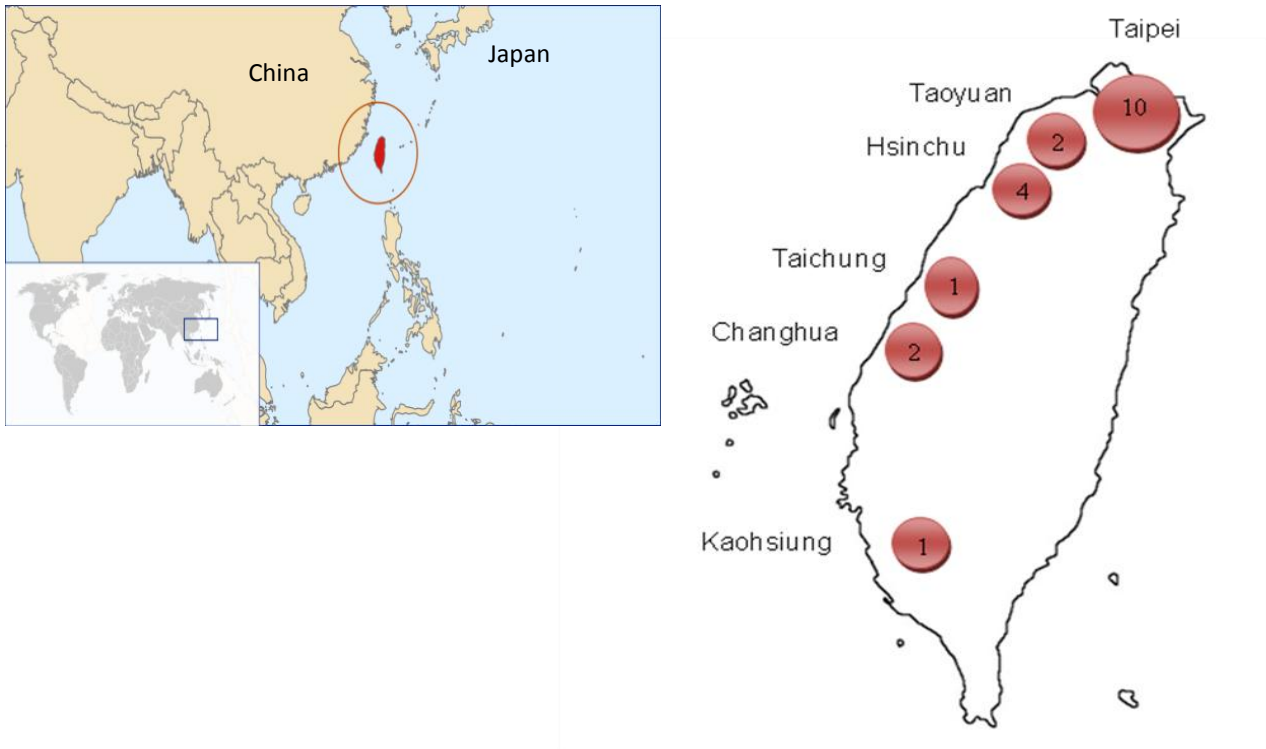
Annex figure 3b. Taiwan: Geographic distribution of the foreign affiliates, breakdown of the electrical and electronics equipment industry, 2009 (percentages)



- 1. Middle East & North Africa
- 2. Sub-Saharan Africa
- 3. East Asia & the Pacific
- 4. South Asia
- 5. Developed Asia-Pacific
- 6. Eastern Europe & Central Asia
- 7. Other Europe
- 8. Latin America & the Caribbean
- 9. North America

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on Market Observation Post System (MOPS) maintained by Taiwan Stock Exchange (<http://emops.twse.com.tw/>), the Taiwan Economic Journal (TEJ) database, and individual firms' reports.

Annex figure 4. Taiwan: Head office locations of the top 20 multinationals, 2009



★ Taipei

- 1. Hon Hai Precision Ind. Co., Ltd.
- 3. Asustek Computer Inc.
- 5. Acer Inc.
- 9. Compal Electronics, Inc.
- 10. Nan Ya Plastics Corp.
- 11. Delta Electronics, Inc.
- 14. Inventec Corporation
- 17. Yang Ming Marine Transport Corp.
- 18. Synnex Technology International Corp.
- 19. Far Eastern New Century Corporation

★ Taoyuan

- 4. Quanta Computer Inc.
- 20. Qisda Corp.

★ Hinchu

- 6. AU Optronics Corp.
- 7. Wistron Corp.
- 8. Taiwan Semiconductor Mfg. Co., Ltd.
- 12. United Microelectronics Corp.

★ Taichung

- 2. Pou Chen Corporation

★ Changhua

- 13. Formosa Chemicals & Fiber Corp.
- 15. Cheng Shin Rubber Ind. Co., Ltd.

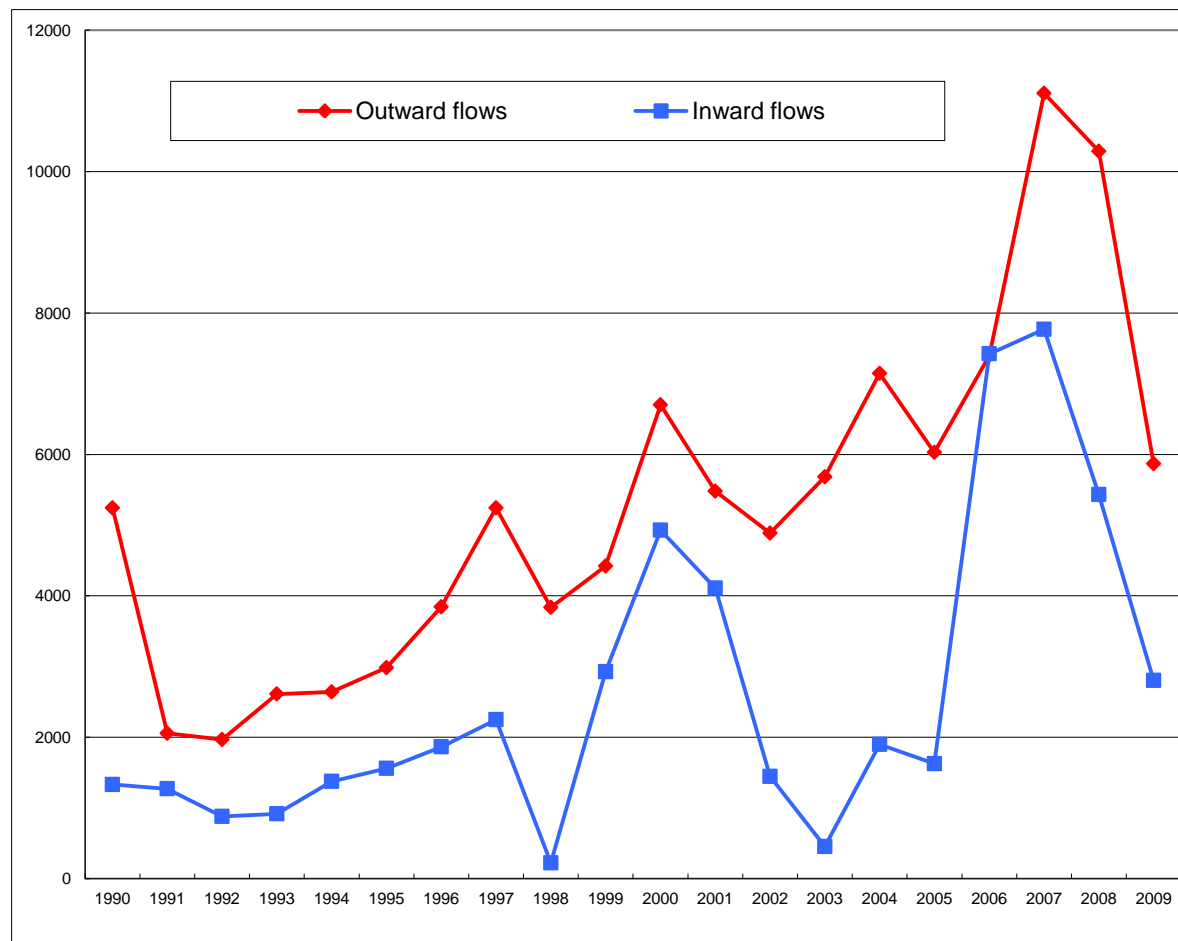
★ Kaohsiung

- 16. Formosa Plastics Corp.

Source: Fu Jen-VCC research on leading Taiwanese multinationals, 2009, drawing on company annual reports.

Annex figure 5. Taiwan: Inward & outward FDI flows, 1990-2009 (USD million)

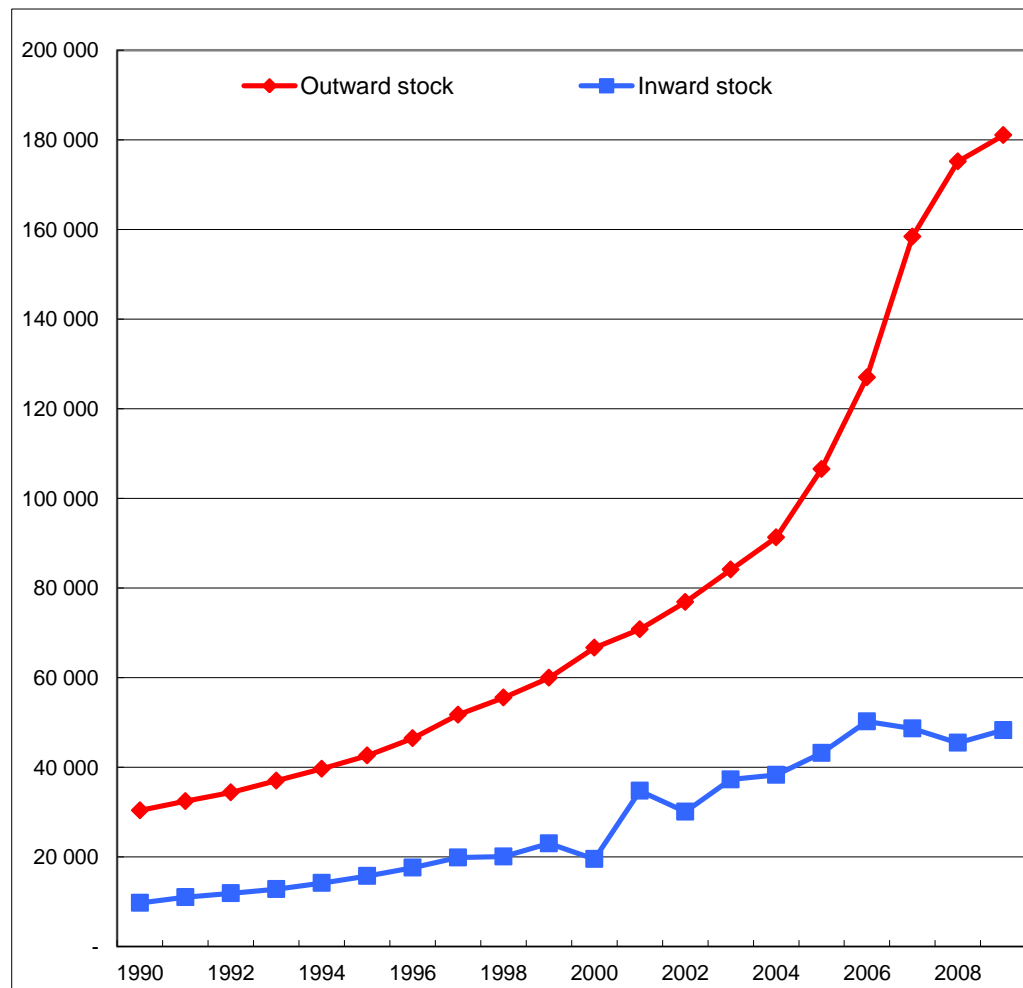
Year	Outward flows	Inward flows
1990	5 243	1 330
1991	2 055	1 271
1992	1 967	879
1993	2 611	917
1994	2 640	1 375
1995	2 983	1 559
1996	3 843	1 864
1997	5 243	2 248
1998	3 836	222
1999	4 420	2 926
2000	6 701	4 928
2001	5 480	4 109
2002	4 886	1 445
2003	5 682	453
2004	7 145	1 898
2005	6 028	1 625
2006	7 399	7 424
2007	11 107	7 769
2008	10 287	5 432
2009	5 868	2 803



Source: Adapted from UNCTAD, Annex tables to *World Investment Report 2010*, <http://www.unctad.org/Templates/Page.asp?intItemID=5545&lang=1>.

Annex figure 6. Taiwan: Inward and outward FDI stock, 1990-2009 (USD million)

Year	Outward stock	Inward stock
1990	30 356	9 735
1991	32 411	11 006
1992	34 378	11 885
1993	36 989	12 802
1994	39 629	14 177
1995	42 612	15 736
1996	46 455	17 600
1997	51 698	19 848
1998	55 534	20 070
1999	59 954	22 996
2000	66 655	19 521
2001	70 758	34 746
2002	76 850	30 069
2003	84 096	37 262
2004	91 265	38 283
2005	106 511	43 175
2006	126 963	50 211
2007	158 361	48 640
2008	175 140	45 458
2009	181 008	48 261



Source: Adapted from UNCTAD, Annex tables to *World Investment Report 2010*, <http://www.unctad.org/Templates/Page.asp?intItemID=5545&lang=1>.