

Political Economy of Cross-Strait Investments: The Taiwanese High-tech Industry as an Example

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The data analyzed in this paper revealed that Taiwanese high-tech companies that invested in China have grown larger. Industrial clusters have been established in the Greater Shanghai area and to a lesser extent, along the Shenzhen-Dongguan-Guangzhou corridor. These clusters were established along the principles of vertical differentiation. Will the post-ECFA China-Taiwan relations create the “Chiwan” phenomenon or will it present Taiwan with a “prisoner’s dilemma”? The paper proposes that in taking advantage of China’s huge domestic market, Taiwanese high-tech enterprises should maintain their comparative advantage in the world ICT market. In terms of production functions, aside from capital, innovation-driven human resource is perhaps equally, if not more, important in maintaining enterprise profitability and sustainability.

Keywords: ECFA, High-tech industrial cluster, “Chiwan” phenomenon, Prisoner’s dilemma, Peace dividend, Cross-Strait relations

JEL Classification: F21, F59

I. Introduction

All indicators have revealed that Taiwan’s fairly strict regulations pertaining to cross-strait investments have been considerably relaxed since President Ma Ying-Jeou stepped into power on 20 May 2008. For instance, the upper limit for investments intended for China has been lifted from 40% of a firm’s total assets to 60%¹; three links in terms of direct

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flights across major cities² of the Strait have been launched since July 2008, and Taiwan opened its doors not only to mainland Chinese tourists³ but also to capital.⁴ Taiwanese banking and insurance companies are eager to invest in China, especially after the MOU and Economic Cooperation Framework Agreement (ECFA)⁵ were signed in August 2010.

All these measures would not be possible without endorsement from China. In responding to Taiwan's friendly overtures, Mainland China has enacted a number of policies on its relations with Taiwan. Through the six negotiations⁶ conducted thus far, China has accepted direct flights for travel across the Strait and agreed to gradually allow Chinese citizens from all provinces to visit Taiwan (free visits have also been discussed). Additionally, China has formulated laws and regulations for its industrial investments in Taiwan;⁷ under the "Home appliances shipped to the countryside"⁸ and "Automobiles shipped to the countryside"⁹ pol-

¹ Given that more than 70% of Taiwan's overseas investments were infused in China, Taiwanese investors, at the most, were allowed to invest only 40% of their total assets in China to avoid overdependence during Presidents Lee Teng-hui and Chen Shiu-ben's terms; however, the upper limit was lifted to 60% after Ma took over the presidency in May 2008. This act may cut unnecessary capital flow from Taiwan into areas such as the Cayman Islands and relieve Taiwanese businessmen of pressure. Most important, the act itself is a friendly gesture to the other side of the Strait.

² Direct flights were launched on 4 July 2008.

³ Since the opening policy for Mainland tourists was adopted, more than 1,800,000 Chinese tourists have visited Taiwan by the end of 2010. The open door policy in terms of how large and how long the duration of the tours will be have been undergoing several evaluations and revisions.

⁴ Thus far, more than 247 products have been set aside for Mainland investors. With the ECFA signed in August 2010, trade barriers across the Strait have literally become non-existent.

⁵ The agreement was first called the Close Economic Cooperation Agreement (CECA). However, because the general public noted its similarity to the China-Hong Kong CEPA, the name was later changed to ECFA. The main concern of the ruling party is the higher custom duties in comparison with other countries within the ASEAN region. The duties are thought to be possibly harmful to certain Taiwanese export industries. The key argument of the opposition party is the risk on Taiwanese sovereignty once the agreement with China is signed.

⁶ The six negotiations run by the Strait Exchange Foundation (Taiwan side) and the Association for Relations Across the Taiwan Strait (Mainland side) took place in Taipei, Beijing, Nanjing, Taichung, Chongqing, and Taipei on 2008/6/11, 2008/11/3, 2009/4/25, 2009/12/24, 2010/6/28, and 2010/12/20, respectively.

⁷ Refer to "Notes on Mainland Enterprises Investing and/or Setting Up Companies in Taiwan," which was announced in early 2009.

icies, China also delegated many “purchasing” teams to buy electronic-related products from Taiwan beginning January 2009. Chimei and AOU are two Taiwanese electronic companies that benefited considerably from these policies because of the huge demand for flat panel displays. Meanwhile, some key Taiwanese banks, as well as insurance companies, have established branches in China. Cathay Life Insurance (Beijing), Chang Hwa Bank (Suzhou), and Fubon Bank (Xiamen) are a few examples. Some Mainland stocks believed to have been packaged as exchange-traded funds (ETF) are scheduled for issuance in the Taiwan stock market, following the strategy of Hong Kong. The ECFA was eventually signed after a couple of negotiations with China, although the Mainland seems to favor first testing such an agreement over a newly orchestrated region — on the West Side of the Straits Economic Area in Fujian Province — rather than over the entire China as Taiwan expected.

Aside from the aforementioned policies directly targeted at improving relations with Taiwan, several strategies and measures adopted by the Chinese authorities since the 2008 world financial crisis also carry significant implications for Taiwan. First, reacting to the shrinking foreign market demands that badly hit China’s export-oriented economy,¹⁰ the Chinese government initiated a new round of policymaking for “inward/ domestic market-driven” development by setting aside as much as RMB 4 trillion (USD 585 billion). Particular attention has been paid to basic rural infrastructure, including the transportation system, hygiene system, education, housing, environment, and industrial structural transformation. Chinese Premier Wen Chia-bao’s speech delivered at Davos, Switzerland in late January 2009 highlighted these issues. He stated that, “... this

⁸ This policy is meant to achieve at least two goals: 1) the home appliance manufacturing companies/industries, such as TV, refrigerator, washing machine manufacturers will benefit; and 2) regional disparity may be eased somewhat because of the policy’s focus on rural areas. However, although detailed rules and regulations pertaining to the implementation of such a policy have been publicly announced, some controversies can still be witnessed either because some local governments simply lack the financial capability to carry out the policy, businesses have a weak sense of social responsibility, or village residents distrust the program entirely.

⁹ Aside from decreasing regional disparity, this policy also carries multi-level goals. Reducing unemployment associated with the auto industry, transforming and upgrading the auto industry structure (*e.g.*, developing green concept cars) are only a few examples.

¹⁰ More than 70% of China’s GDP is reported to consist of foreign capital, foreign trade, and foreign enterprise-driven investments, indicating exceedingly over-dependence on exports.

round, Chinese reform intends to integrate domestic demands, readjust the industrial structure, innovate science and technology, strengthen social protection, increase investment, and stimulate consumption, as well as solve existing difficulties while promoting long-term future development.”

A point worth emphasizing here is that not long after the RMB 4 trillion project was initiated, 10 industrial reconstruction projects that are to be implemented from 2009 to 2011 have also been launched. These projects are the steel, automobile, shipment, petrochemical, textile, light industry, non-ferrous metal, equipment manufacturing, IT, and logistics programs. These industries were chosen mainly because they account for 1/3 of China's GDP, 80% of the increase in total industrial production, 40% of the country's tax collections, and 30% of total employment in the past 30 years. Specifically, one of the aims of these industrial reconstruction projects is to integrate enterprises and promote the upgrade of their technologies. An example is the steel industry. The Chinese government has already requested Baosteel Group Corp. to merge with Baotou Iron and Steel Group Co. as well as Ningbo Iron and Steel Co. The automobile industry is another important sector that the Chinese government wants to reorganize. Thus far, the automobile industry is reported to produce approximately RMB 3 trillion value. The successful implantation of the “Automobiles shipped to the countryside”¹¹ policy will add another 10% to this value. According to an estimate released by the Chinese government, if an additional 1,500,000 vehicles can be sold on account of the adopted policy, the revenues generated will create a ripple effect throughout the metal, raw material, and other related industries. The ripple effect may boost the GDP by 0.5%. China currently has at least 19 different auto manufacturing companies; the government hopes to reduce this to 10 through mergers or reorganizations. Out of these, at least 2 to 3 are expected to have the capacity to manufacture

¹¹ According to the announced rules and regulations, from 1 March to the end of 2009, the Chinese government will subsidize 10% of the sale price for people who buy cars under RMB\$50,000; those who purchase cars above RMB\$50,000, will be afforded a fixed subsidy of RMB\$5,000. From 1 February 2009 to the end of January 2013, those buying motorcycles under RMB\$5,000 will receive a subsidy of 13% of the selling price, and for those who buy motorcycles above RMB \$5,000 will be provided a fixed subsidy of RMB\$650. Moreover, the Chinese central government will shoulder 80% of the financial burden while the provincial government will take care of the remaining 20%. However, for Xinjiang, Inner Mongolia, Ningxia, Tibet, Guangxi, and 51 heavily damaged earthquake disaster areas in Sichuan, the Chinese central government's subsidy is 100%.

2,000,000 cars, while another 4 to 5 are projected to manufacture more than 1,000,000 cars. In other words, large companies such as the China Faw Group Corporation, Dongfeng Motor Corporation, SAIC Motor Corporation Ltd., and China Auto Co. Ltd. are encouraged to opt for country-wide mergers and/or reorganizations. Beijing Automobile Work Co. Ltd., Guangzhou Automobile Industry Group Co. Ltd., Chery Automobile Co. Ltd., and China National Heavy Duty Truck Group Co. Ltd. are expected to pursue regional mergers and reorganizations. This policy direction certainly reflects global practice. For instance, Chrysler's coalition with Fiat, and the future developments of GM, Volkswagen, BMW, and Mercedes-Benz convinced the Chinese authorities that auto industry development in China necessitates modification to allow for the enhancement of global competitiveness.

Assessing the effectiveness of these megaprojects is too early at this point. However, given that China has contributed 22% to the world economic growth in 2008, this contribution was anticipated to increase to 50% in 2009. The first designated two-year project, for which the total budget is equivalent to 16% of China's 2007 GDP, will undoubtedly bring about positive transformations in China; the benefits of these changes will, in the processes, extend to surrounding countries including Taiwan. Against this background, I review Taiwan's investments in China with particular focus on high-tech industries. Observations as to the changing trends of such cross-border investments are then discussed with three sets of empirical data. Preliminary speculations on both challenges and opportunities in light of the newly developed cross-strait relations are also articulated.

II. Taiwanese Investments in China with Particular Focus on High-tech Industries

Three sets of empirical data pertaining to Taiwan's investments in China are analyzed: 1) Taiwanese high-tech industries that have invested in China, and are listed among the top 100 enterprises from 2004 to 2008; 2) Taiwanese high-tech industries, especially listed companies that have invested in China from 1991 to 2008; and 3) Taiwanese high-tech companies listed among the top 1,000, particularly those ranked at the top 100 in the Greater China region (China, Hong Kong, and Taiwan).

A. Taiwanese High-tech Industries Investing in China; Listed among the Top 100 Enterprises from 2004 to 2008

By the end of 2008, high-tech industries constituted nearly 60% of enterprises that invested in China. These companies were also listed among the top 100. The growth trend remained reasonably steady over the past years from 38% at the end of 2004 to 45%, 54%, 50%, and 59% in 2005, 2006, 2007, and 2008, respectively. We can definitively conclude that compared with the investments from Taiwanese hightech industrial sector, those of traditional manufacturing sectors are not as flourishing, reflecting a decline from 42% to 41%, 33%, 40%, and 28% within the same period. Investments from the service sector, however small, have been picking up (Table 1).

Location-wide, although the Yangtze River Delta and Pearl River Delta by far remained the two most attractive regions, the Bohai Gulf region and other parts of China have nevertheless become attractive to Taiwanese high-tech companies. Specifically, the Yangtze River Delta in the past five years has received majority of the investments from the Taiwanese high-tech industry, whereas the Pearl River Delta had been losing quite a number of investments (Table 1). Given the economic transformation along the coastal areas of China in general and the Pearl River Delta in particular, the Pearl River Delta was expected to lose even more FDI (of OEM) not only from Taiwan, but also from Hong Kong and South Korea. Within the Yangtze River Delta, Kunshan, Suzhou, and Shanghai were the three favorite locations of Taiwanese investors. In the Pearl River Delta, most Taiwanese high-tech companies were concentrated in Guangzhou, Shenzhen, and Dongguan. In the Bohai Gulf region, most Taiwanese high-tech companies were situated in either Beijing or Tientsin. Xiamen is worth mentioning here because it has recently received more Taiwanese investors possibly because of the newly established "West side of the Straits Economic Area." Interestingly, 85% of the Taiwanese high-tech industrial investors' home bases were in Northern Taiwan, especially in the Taipei Municipality, New Taipei City, and Keelung City.

As to the types of industries that Taiwanese investors are involved in, within the Yangtze River Delta, electronics, computers, and opto-electronics are the three major sectors invested in. Aside from finished products, materials and related components are also produced. Keyboards, wireless LAN cards, Bluetooth products, WiMAX products, Skype phones, monocrystalline silicon, cell phones, LCD modules, copper foils, insert moldings, network products, ADSL, GSM, and GPRS products, PCB as-

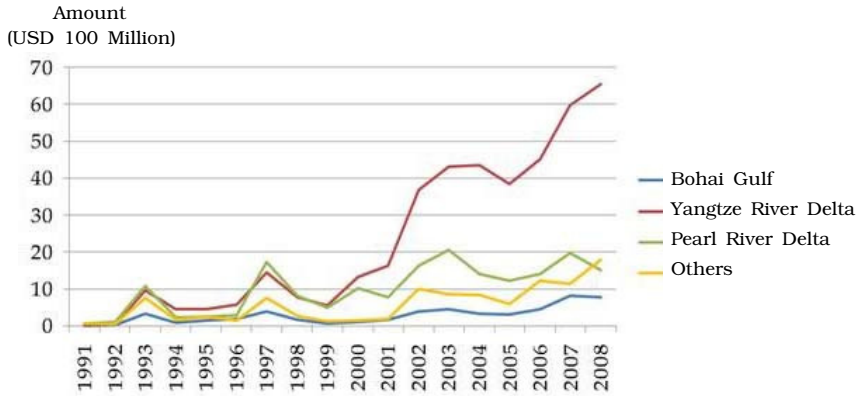
TABLE 1
HOME BASES AND DESTINATIONS OF TAIWANESE INVESTORS IN CHINA; LISTED AMONG THE TOP 100 ENTERPRISES
(2005-2009—BY SECTOR/INDUSTRY)

Location	Industry Year	Service Sector					Traditional Manufacturing Sector					High-Tech Industry				
		2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009	2004- 2005	2005- 2006	2006- 2007	2007- 2008	2008- 2009
H O	Northern Taiwan %	1 1.2%	0 0.0%	5 5.4%	4 4.3%	5 5.4%	30 37.0%	32 37.2%	23 25.0%	28 29.8%	24 26.1%	34 42.0%	39 45.3%	45 48.9%	41 43.6%	50 54.3%
M E	Central Taiwan %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	3 3.7%	3 3.5%	2 2.2%	3 3.2%	2 2.2%	2 2.5%	3 3.5%	4 4.3%	3 3.2%	5 5.4%
B A	Southern Taiwan %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	8 9.9%	5 5.8%	7 7.6%	8 8.5%	2 2.2%	2 2.5%	3 3.5%	5 5.4%	6 6.4%	4 4.3%
S E	Eastern Taiwan %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.2%	1 1.2%	1 1.1%	1 1.1%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
D E S	Yangtze River Delta %	0 0.0%	0 0.0%	3 3.3%	2 2.1%	3 3.3%	26 32.1%	21 24.4%	17 18.5%	21 22.3%	13 14.1%	22 27.2%	27 31.4%	33 35.9%	31 33.0%	45 48.9%
T I	Pearl River Delta %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	7 8.6%	11 12.8%	7 7.6%	8 8.5%	5 5.4%	11 13.6%	15 17.4%	14 15.2%	9 9.6%	6 6.5%
N A T	Bohai Gulf Region %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 1.2%	6 7.0%	5 5.4%	3 3.2%	3 3.3%	3 3.7%	2 2.3%	5 5.4%	7 7.4%	4 4.3%
I O N	Other Parts of China %	1 1.2%	0 0.0%	2 2.2%	2 2.1%	2 2.2%	8 9.9%	3 3.5%	4 4.3%	8 8.5%	7 7.6%	2 2.5%	1 1.2%	2 2.2%	3 3.2%	4 4.3%
	Total %	1 1.2%	0 0.0%	5 5.4%	4 4.3%	5 5.4%	42 51.9%	41 47.7%	33 35.9%	40 42.6%	28 30.4%	38 46.9%	45 52.3%	54 58.7%	50 53.2%	59 64.1%

Note: This table excludes primary sectors/industries as well as companies whose data are not easy to collect; therefore, the total number is less than 100 per year. Data in this table were compiled and analyzed.

semblies, laptops, MP4 players, PDAs, motherboards, LCD/CRT monitors, projectors, batteries (ODM), wireless communication products, and LCM are only some of the products manufactured. The Pearl River Delta products are somewhat different: photoresist materials, UPS, PSU transformers, and power supplies are only some of the products in which investments have been infused. Investments in areas such as Fujian seem focused on LCD hinges and monitors. In Kunshan, where most Taiwanese investors are concentrated, products such as glass fabrics, micro vibrator motors, heat pipes, die castings, FIN, color filters, and laser films can also be found. Within both the Yangtze River Delta and Pearl River Delta, especially surrounding Shanghai, Kunshan, Suzhou and Shenzhen, Dongguan, and Guangzhou, a type of electronic-related agglomeration/cluster has been developed. The difference is that technologies adopted by Taiwanese industries surrounding the Shanghai area are slightly more advanced than those adopted by companies located in the Pearl River Delta.

In summary, the Chinese industries in which Taiwanese companies infused investments in the 1990s were composed of traditional manufacturing sectors, and most of them were run on an individual basis. In recent years, aside from investing on a larger scale, major high-tech enterprises seem to have formulated some kind of differentiation in both industrial and spatial perspectives across different cities/regions in China. For example, Walsin Lihwa Conglomerate produces power cables in Shanghai, copper cables in Nanjing, and bare copper bars and wires in Dongguan. Hong Hai Conglomerate (Foxconn) manufactures cell phones and laptop Magnesium alloy components in Taiyuan; cell phones and LCDs in Beijing; motherboards, video cards, barebones/frames, and cases in Yentai; connectors and laptop shells in Kunshan; and communication and consumer electronics components in Shenzhen. Being one of the leading Taiwanese high-tech investors in the Mainland, especially in the Shenzhen area, Foxconn has decided to relocate its factories in Zhengzhou (in Henan), Wuhan (in Hubei), and Chongqing (in Sichuan), among others. Product differentiation among regions has been implemented depending on the comparative advantage of each area and the incentives provided by different local governments. Compal Electronics Technology Co. Ltd. conglomerates in Kunshan alone produces laptops, PDA cell phones, wireless net cards, MP4 players, DMC LCD TVs, projectors, plasma TVs, and LCD/CRT monitors. Moreover, prior to 2005, most Taiwanese high-tech industrial products manufactured in China were OEM in nature and mainly for export to foreign markets. They



Note: Data used in this figure were compiled and analyzed; obtained from the Investment Commission, Ministry of Economic Affairs, *Statistics on Overseas Chinese & Foreign Investment, Outward Investment, Mainland Investment, the Republic of China* (April, 2009).

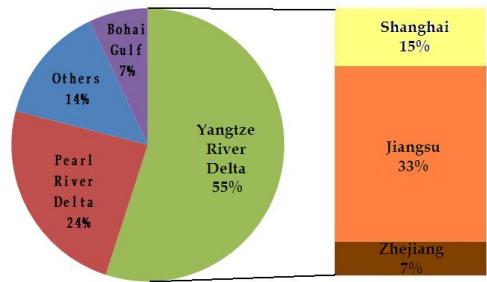
FIGURE 1
TAIWAN'S INVESTMENTS IN MAINLAND CHINA BY REGION (1991-2008)

gradually switched to the Chinese domestic market, especially after the mid-2008 world financial crisis as many of them are aware of the fact that their future developments perhaps may lie more heavily on the rising Chinese domestic market.

B. Taiwan's Investments in China from 1991 to April 2008

From 1991 to April 2008, the Taiwanese government has allowed 37,181 companies to invest in China. The total amount of investments was USD 755.60 billion. Investments in the Yangtze River Delta clearly exceeded those that were infused in other areas in China, including the Pearl River Delta (Figure 1). The Yangtze River Delta received 55% of Taiwan's investments compared with 24% in the Pearl River Delta, 7% in the Bohai Gulf region, and 14% in the rest of China. Within the Yangtze River Delta, 33% was invested in Chiangu, 15% in Shanghai, and another 7% in Zhejiang (Figure 2). Jiangsu and Guangdong Provinces, and Shanghai were the top three regions that received the highest amount of Taiwanese investments.

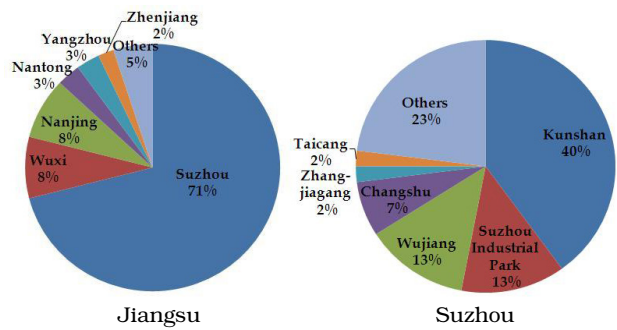
Electronic component manufacturing ranked at the top (16.4%) in terms of total amount invested in China, followed by computers, electronic appliances, and opto-electrical products (15.7%), as well as electrical power



Note: Data used in this figure were compiled and analyzed; obtained from the Investment Commission, Ministry of Economic Affairs, *Statistics on Overseas Chinese & Foreign Investment, Outward Investment, Mainland Investment, the Republic of China* (April, 2009).

FIGURE 2

TOTAL AMOUNT INVESTED IN CHINA FROM TAIWAN BY REGION (1991-2008)



Note: Data used in this figure were compiled and analyzed; obtained from Investment Commission Ministry of Economic Affairs, *Statistics on Overseas Chinese & Foreign Investment, Outward Investment, Mainland Investment, the Republic of China* (April, 2009).

FIGURE 3

INVESTMENT BY TAIWANESE LISTED COMPANIES IN JIANGSU AND SUZHOU (1991-2008)

equipment manufacturing (9.4%). These three categories made up 41.5% of total Taiwanese capital in China.

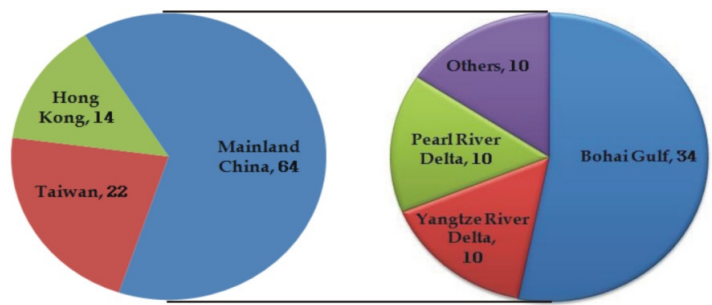
Figure 3 indicates the specific areas of the Yangtze River Delta where Taiwanese listed companies were established.

C. Top 100 Companies Listed among the Top 1,000 Companies within the Greater China Region (China, Hong Kong, and Taiwan)

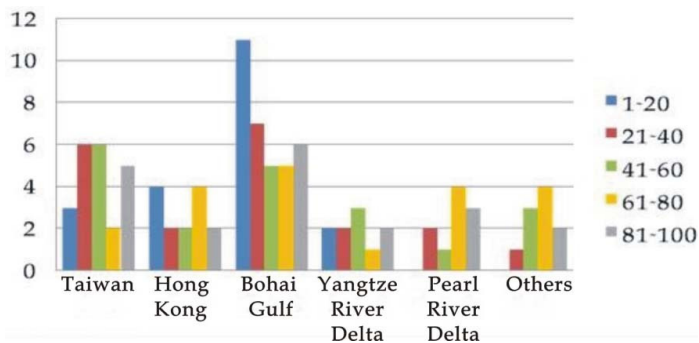
Taking the Greater China region into consideration, China by far still holds the largest number (64) of foreign companies investing in the country, in terms of top 100 enterprises. Taiwan hosts 22 companies, while Hong Kong hosts 14. Furthermore, Taiwan's manufacturing sector is undoubtedly strong relative to the other two regions. The largest number of China's top 100 large enterprises are concentrated in the Bohai Gulf region (34). This region also hosts most of the manufacturing enterprises ranked at the top 100 list (1 to 20). Bohai Gulf region's finance sector also exhibits strong performance (21 to 40). Many of the enterprises located in the surrounding Bohai Gulf region belong to state-owned, large-scale heavy industries. To a lesser extent, a similar pattern is observed in the Yangtze River Delta and Pearl River Delta. Among the 22 Taiwanese enterprises listed as the top 100 enterprises in the region, almost all are privately owned and more than 90% are ICT-related companies (Figure 4).

If the top 1,000 enterprises are taken into account, China (575) remains ahead of Taiwan (253) and Hong Kong (172). In terms of number of enterprises counted, the Yangtze River Delta (153) is quite close to the Bohai Gulf region (159). These indicate once again that Taiwan's manufacturing sector is stronger compared with those of China and Hong Kong (Figure 5).

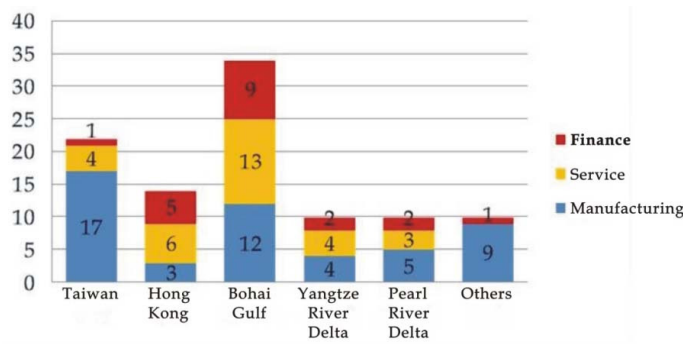
If we look into the Taiwanese enterprises listed in the top 1,000 in terms of investment sites in China, we find that the 10 most attractive cities sequentially are Kunshan (136), Shanghai (126), Dongguan (93), Shenzhen (89), Suzhou (71), Guangzhou (40), Xiamen (35), Ningbo (27), Chungshan (26), and Tientsin (22). As previously noted, more than 90% of these are ICT-related enterprises, depicting that the Yangtze River Delta (360) attracts the majority of top Taiwanese ICT companies, followed by the Pearl River Delta (248), Bohai Gulf (22), and Fujian (35).



Location of the Top 100 enterprises in the Greater China Region



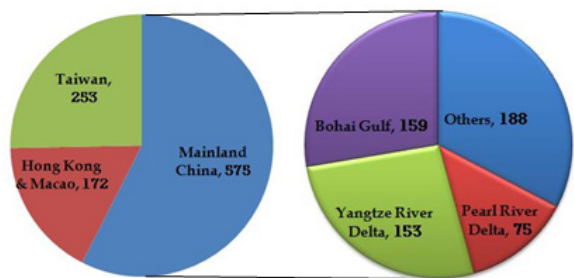
Rankings of the Top 100 Companies within Each Region



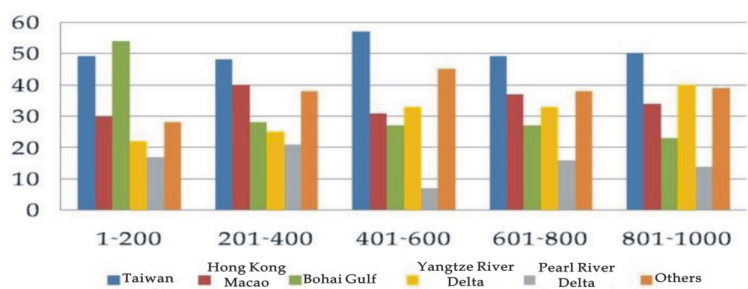
Distribution of Industries within Each Region

Note: Data used in this figure were compiled and analyzed; obtained from Chiang (2009) and *Commonwealth Magazine*, No. 442, pp. 176-223.

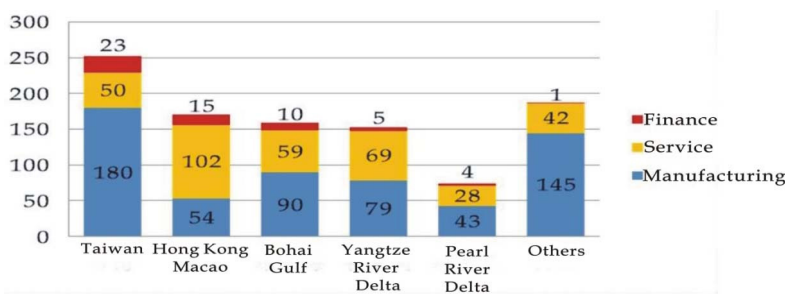
FIGURE 4
TOP 100 ENTERPRISES LISTED IN THE TOP 1,000 ENTERPRISES IN THE GREATER CHINA REGION-CHINA, HONG KONG, MACAO, AND TAIWAN



Locations of the Top 1,000 Companies within the Greater China Region



Rankings of the Top 1,000 Companies within Each Region



Distribution of Industries within Each Region

Note: Data used in this figure were compiled and analyzed; obtained from Chiang (2009) and *Commonwealth Magazine*, No. 442, pp. 176-223.

FIGURE 5
TOP 1,000 COMPANIES WITHIN THE GREATER CHINA REGION-
CHINA, HONG KONG, MACAO, AND TAIWAN

III. Prospects Brought by the Recently Established Cross-Strait Relations for Taiwanese High-tech Industry Investments

A. From Unidirectional Investment to Two-Way Interaction

As mentioned previously, more than 70% of Taiwan's overseas investments were infused in China and by the end of August 2010, more than 38,351 companies have been allowed to invest in the Mainland. The total amount of investments has reached as high as USD 91,729 million. However, because of policy restrictions, China's investment in Taiwan prior to signing the ECFA is almost zero. New regulations pertaining to Mainland investments in Taiwan were enacted by the Taiwan Ministry of Economic Affairs immediately after August 2010. Manufacturing, service, and public construction are the three main sectors that were focused on during the first stage of the opening policy. Investments in services, such as conferences, exhibitions, film making, *etc.* were permitted during the January 2011 second-stage negotiations, whereas the rules and regulations regarding finance and telecommunications investments have yet to be worked out in succeeding stages. To date, 247 investment opportunities have been made available to Mainland investors.

In response to Taiwan's opening policy, the Chinese State Council and the Ministry of Commerce issued the "Notice on Mainland Enterprises Investing and/or Establishing Companies in Taiwan" on 17 May 2009. The Taiwan office director, Mr. Wang I, later announced that to encourage Mainland businesses to invest in Taiwan, Chinese authorities will organize investment survey teams responsible for assessing the prospects of the electricity, telecommunications, biology, medicine, oceanic transportation, public construction, logistics, textiles, mechanics, automobile, and other key manufacturing companies in Taiwan since these are areas where Chinese authorities felt that Taiwan industries strength lie and China is interested in collaborating with Taiwan during the 2011-2015 twelve five-year period. Taiwan is not necessary to constantly adopt a passive role and simply wait for Mainland "friendly responses." On 16 May 2009, when the 1st Cross-Strait Forum took place in Xiamen, then Taoyuan County mayor Dr. Chu Li-ren (now newly elected new Taipei City mayor) welcomed potential investors for the Taoyuan International Air Hub¹² in front of more than 10,000 participants. My recent re-

¹²The Taoyuan International Air Hub is one of the 12 major projects pro-

search showed that for the past two years (2009-2010), 92 Mainland investments have been approved by Taiwan, of which 37 are concentrated in Taipei City. In terms of industry, 77 of these belong to the wholesale and retail sectors. Professional (R & D), science and technology, and ICT-related sectors consist of 36 companies.

B. Taiwan's High-tech Industries Capture New Opportunities by Taking Advantage of China's Policies, such as the "Home Appliances Shipped to the Countryside" and "Automobiles Shipped to the Countryside" Policies

Taiwanese high-tech enterprises normally act faster than does the government in seizing investment opportunities in China. Before the ECFA was formally signed in August 2010, several leading companies such as AOU, Teco Electric & Machinery Co. Ltd., Epistar Corporation, and Groundjay Digi Tech, as well as solar energy companies including Sunplus Core Technology, TPK Optical Solutions and multi-media company Hikids Inc., have invested in the Xiamen Torch Hi-tech Industrial Development Zone. This development zone is located in the West Side of the Straits Economic Area, which the Chinese central authority wants to use as the experiment site for the ECFA. One-third of Xiamen's optoelectronics industries originate from Taiwan and they have contributed RMB 400 billion in 2008. The total production value was estimated to reach RMB 1,000 billion by 2010. Moreover, given that China and Taiwan attached importance to the "green industry," many Taiwanese high-tech companies such as Taiwan Semiconductor Manufacturing Company Limited—TSMC, UMC, Foxconn Technology Group, Tatung, and AOU have gradually shifted focus to either LED solar energy products or lithium batteries through the establishment of subsidiary companies, mergers, and/or investments. Another example is TSMC, one of the world leading semi-conductor companies, which has now begun to invest in solar energy because of recent developments in the semi-conductor business. Even Taiwan Plastic Company is currently considering investing in energy-saving cars in China.

moted by President Ma since November 2007 during his campaign. Included in this are three projects, which the Taoyuan International Air Hub is an integral part, along with two other projects—a logistics center in the Central region and the Kaohsiung Freeport are treated as the core. A total budget of NT\$12 billion was set aside for the 12 projects, of which a little more than half is open to Mainland investors.

In light of the Chinese “Home appliances shipped to countryside” policy, a delegation composed of 46 major Mainland home appliance companies, such as HASEE, Changhong, Haier, Legend, Heisense, Midea, etc., has visited Taiwan in June 2009 and purchased TVs, computers, LCD boards, memory systems, and 3G-related parts worth billions of US dollars. In particular, 26 to 42 inch display panels have been among the key products that interest Mainland buyers. Several Taiwanese core manufacturing companies in this sector, such as Chunghwa Picture Tubes, Ltd., Chimei, and AOU, not only benefited from rapidly rising demands, but also became targets of collaboration with Mainland firms. Moreover, three primary Mainland Telecommunication companies — China Mobile, China Telecom, and China Unicom — have also purchased millions of US dollars worth of 3G mobile phones, notebooks, and cable ADSL-related products. After the “Home appliances shipped to the countryside” policy was enacted, the State Council of China also decided to provide a 10% subsidy to families living in Beijing, Shanghai, Tientsin, Chiangsu, Zhejiang, Shandong, Fuzhou, and Changsha that wish to exchange their old TVs, refrigerators, washing machines, air conditioning units, and computers for new ones. More sales revenues are expected to be generated. Chinese statistics revealed that from February to May 2009, a monthly 36% increase in sales was recorded owing to the implementation of the “Home appliances shipped to the countryside” policy. Another source indicated that the purchasing power for home appliances has expanded sevenfold since the policy’s implementation. Thus far, the policy is believed to have also helped increase employment and sales of related raw materials.¹³

C. Numerous Chinese Buyers of Taiwanese High-tech Products

“Sourcing, Taiwan 2009” held from 30 March to 2 April 2009 was attended by 548 foreign companies from 63 countries. Out of these, 77 were Chinese enterprises, 46 were Japanese companies, and 35 were US firms. A total of NTD 1,200 billion in business was acquired within four days. Major Taiwan suppliers included Formosa Chemicals & Fiber Corporation, Nan Ya Plastic Corporation, Asustek Computer Inc., President, China Motor Corporation, Green Technology, TYC Brother Industrial Co. Ltd., Delsolar Co. Ltd., China General Plastic Co., and Sampo Cor-

¹³ Data was released by the Ministry of Finance, China. For details, please consult <http://news.chinatimes.com/CMoney/News/News-Page-content/0,4993,11050701+122009060600284,00.html>.

TABLE 2
 CONSENSUS REACHED BY CROSS-STRAIT ICT INDUSTRIES
 IN SETTING UP TECHNICAL STANDARDS

Items to be Standardized \ Consensus Reached	1 st Meeting	2 nd Meeting	3 rd Meeting	4 th Meeting	5 th Meeting	Total
AVS	5	3	5	5	2	20
TD-SCDMA	5	3	5	4	4	21
Mobile Memory	5	3	4	3	2	17
Board Screen	3	4	4	5	5	21
LED Semi-conductor	—	3	3	5	3	14
Lighting	—	3	3	3	5	14
Green Energy	—	—	2	3	2	7
IPTV	—	—	2	3	2	7
Total	18	19	26	28	23	114

Source: Se (2009).

poration. Almost all of these belong to the high-tech category.

D. Cross-Strait Unification of ICT-Related Technical Standards Have Yet to Be Worked Out

Because ICT-related high-tech industries comprised more than 90% of Taiwan's investments in China in recent years, an increasing number of Taiwanese companies are aware that they can transform an out-ward looking strategy into an inward-looking approach, especially after 2008 world financial crisis and China's launch of its domestic-market driven economic development policy. This implies that Taiwanese high-tech industries need to gradually give up or readjust their old OEM-based business practices, and begin seeking potential Mainland partners or collaborators to seize opportunities generated by the rising domestic market. My field study on the Pearl River Delta in the summer of 2009 revealed a similar trend. Both Foxconn Technology Group and ChinPao's collaboration with Zhong Xing Electronics and Huawei Technologies Co. Ltd., as well as the knockoff mobile phone and notebook business of MediaTek Inc. and VIA Technologies, are good examples. Trend Micro Taiwan's collaboration with the Chinese authorities at Beijing I-Chuan Industrial Park in developing cloud technology is another example. Table 2 lists the five consecutive meetings that have taken place and

the consensus reached regarding this issue.

E. Cross-Strait Direct Flights Made Taipei a Gateway to the Greater Shanghai Area, Attracting More Real Estate Investments and Bringing Forth More Speculations

With regard to the effects of the improved cross-strait relations on cities, what deserves particular attention is that even before the policies for Mainland investors have been formulated by the Taiwanese government, a number of well-known Chinese real estate companies, such as Vanke and China SOHO, have visited Taiwan. Given the apprehension of the general public in Taiwan regarding the possibility of soaring housing prices (in a market already characterized by expensive housing) once Chinese real estate companies penetrate the Taiwanese market, the government position thus far has been to prohibit Chinese real estate companies from investing in residential real estate. Mainland investments are to be limited to office and commercial buildings. To date, two sites/areas in Taipei City have caught the attention of Mainlanders: Hsinyi District surrounding Taipei 101 and the areas adjacent to the Taipei Sungshan Airport. Specifically, aside from buildings near Taipei 101, Dunhua North Road, and the 5th Readjustment Area of Neihu, as well as Nankong Software Park, areas close to Sungshan Airport are also popular sites. China Southern Airlines Co. Ltd., China Eastern Airlines Co. Ltd., and Air China, together with Taiwan's Mandarin Airlines and Macao's Macao Airway, have all clustered around Sungshan Airport.¹⁴ These developments speak for themselves given that Taipei 101, the second world tallest building, is a reputable brand itself. Bank of China and China Communications Bank (CCB) recently set up their Taipei office in Hsinyi District and Taipei 101 respectively. In addition to office

¹⁴ Since direct flights began in July 2008, nine different Mainland air companies have had passenger carriages to Taiwan. These are Air China, China Eastern Airlines Co. Ltd., China Southern Airlines Co. Ltd., Hainan Airlines, Shanghai Airlines, Xiamen Airlines, Sichuan Airlines, Shandong Airlines, and Shenzhen Airlines. Air China, China Eastern Airlines Co. Ltd., and China Southern Airlines Co. Ltd. accounted for 60% of the total flights. In terms of cargo, the three airline companies also served as the main carriers. From 4 July 2008 to 14 December 2008, frequency of flights reflected values of 336,000 times/persons for the weekend shuttle. From 15 December 2008 to 30 June 2009, frequency of flights reflected values of 1,261,000 times/person for the weekday shuttle. Taiwan Airways' average carrier is 81.5% compared with Mainland Airways' 75.3%.

spaces, at least three to five five-star hotels within the area, such as W Taipei, Meridien, *etc.*, have recently opened. The areas close to Sungshan Airport have become the gateway for cross-strait connections since direct flights to China began in July 2008. By October and December 2010, when Taipei-Tokyo (Haneda) and Taipei-Seoul (Gimpo) direct flights began to operate, Sungshan Airport may well play the role of air hub within the East-Asia region. The area is situated between Neihu Science Park and the financial center of Dunhua North Road, where many international companies are already concentrated. A so-called “one day living/commuting circle” between Taipei and the greater Shanghai area seems to have formed given that many Taiwanese high-tech companies have factories in both locations. An average of 20% to 40% housing price increase from 2008-2010 in the area surrounding Sungshan Airport is already observed. As cross-strait relationships are further enhanced, more Mainland provinces are expected to consider establishing their Taiwan headquarters in Taipei; the above-mentioned areas will certainly gain more customers from China. Land and housing prices will unavoidably increase to even higher levels thereafter.

Mainlanders are not alone in this regard. Because of the deregulation, some Taiwanese businessmen returned to Taiwan and bought either expensive office buildings or luxurious condominiums, stocks, and media companies. Ting Hsin International Group has thus far bought 23.5% shares of Taipei 101 stock. Star WantWant Group Taiwan, Ju Teng International Holdings Limited, 85 °C & Cheng-hsin Rubber Co. all issued Taiwanese deposit receipts (TDR). In addition, Star WantWant Group Taiwan has purchased Taiwan TV Company and one newspaper that focuses on the reportage of Mainland affairs. Array Inc. and Cowealth Medical Holding have registered as emerging companies.

F. Increasing Number of Chinese Tourists Have Undoubtedly Benefited Taiwan's Economy

Nearly 2 million Chinese tourists have visited Taiwan since the open tourism policy was implemented two years ago. Some of the tourists arrived in Taiwan *via* international boats. Keelung Harbor received 42 freights and 11 freights by the end of March and April 2009, respectively. In 2008 alone, Taiwan has received 500,000 times of professionals and 80,000 times of businessmen visits from Mainland respectively. The allowable duration of stay in Taiwan for these tourists has also been extended from the original 14 days to one month at a time. Thus

far, an average of 4,000 visits per day has made Chinese tourists the most frequent travelers, exceeding the Japanese. If each individual stays in Taiwan for one week and spends an average of USD 250 daily, the total foreign exchange generated will reach as high as NT 0.91 billion.

G. The Service Sector, Especially Financial Institutions, Is Earnestly Waiting for Permission from China/Taiwan: What Role Does HK Play within the Greater China Region?

After some 20 years of investing in China, an increasing number of Taiwanese service sector companies are interested in penetrating the Chinese market. During the third round of negotiations run by the Strait Exchange Foundation and the Association for Relations across the Taiwan Strait, an MOU with regard to financial institutions was discussed. The agreement addresses not only banking, but also stocks, futures, insurance, and exchange rates. Only a Mainland Qualified Domestic Institutional Investor is allowed to enter Taiwan. The TDR can be applied after the signing of the ECFA. Thus far, four Chinese banks have been permitted to set up branch offices in Taiwan: Bank of China, China Communications Bank, China Merchants Bank, and China Construction Bank. The largest private shipping company, Yangtze River, has also recently filed an application with the Taiwanese government.

Note that along with the considerably relaxed China-Taiwan relations, HK's attitude toward Taiwan has also undergone dramatic changes. Aside from granting Taiwanese tourists a "no visa requirements" status, Hong Kong Trade Development has formally established an office in Taipei, and some Hong Kong stocks in the form of ETFs have been issued in the Taipei stock market as of mid-August 2009. Setting up official/government organizations in both sides has also been proposed. Six "China-concept" ETFs have been issued in Taipei by HK: A50 China, Hengshen H Stock, Shanghai-Shenzhen 300, Shanghai Stock 50, I Stock China, and Hengshen 25. "Digital China" is also ready for issuance in the Taipei stock market.

IV. Concluding Remarks: “Chiwan” or “Prisoner’s Dilemma”¹⁵ — Can Taiwanese High-tech Industries Really Benefit from the So-called “Peace Dividend” from China?

Aside from Mainland tourism, likely opportunities for Taiwanese industries created by China’s domestic-market driven development policy include at least the following: 1) public work projects, which have actually boosted the price of related Taiwan stocks such as Taiwan Cement, Chia Hsin Cement Corporation, Asia Cement, Goldsun Group, and Chien Kuo Group; the steel industry (such as China Steel) has also benefited; 2) “Home appliances shipped to the countryside” and “Automobiles shipped to the countryside” policies may facilitate the growth of Taiwanese ICT sectors; 3) the expansion of power facilities will certainly open new investment avenues; and 4) railway constructions, telecommunication base constructions, and even knockoff mobile phone and notebook businesses have brought forth opportunities for all kinds of business collaborations. One of the most surprising joint venture projects was China Mobile’s decision to buy a 12% share (USD 5.33 billion) of Taiwan Fareast Telecommunications stocks, although this project is still under review by the Taiwanese government.

In addition, China’s 10 industrial reconstruction projects related to automobile, petrochemical, textile, light industry, equipment manufacturing, IT, and logistics, signaled to Taiwan potential opportunities and possibilities for both vertical and horizontal differentiation/collaboration. For example, China advocates the following measures for the automobile industry: 1) The cultivation of the automobile market; 2) the reorganiza-

¹⁵ The concept of “prisoner’s dilemma” dates back to 1928 when the Hungarian mathematician Von Neumann published his article on “Theory of Parlor Games.” Together with his fellow economist Oskar Morgenstern, he published another article on “Theory of Games and Economic Behavior” in 1943, which was believed to have paved the way for Game Theory. In 1950, Tucker proposed the term “prisoner’s dilemma” and Kreps, Wilson, Milgroom, and Roberts further elaborated on its related concepts in the 1960s to the 1980s, laying down even more solid foundations for Game Theory. “Prisoner’s dilemma” was first introduced by Flood and Dresher in 1950. Tucker adopted the mathematical construct to further elucidate dilemmas confronted by prisoners when forced to make decisions under non-zero-sum and simultaneous circumstances. Strategies such as competition, cooperation, and/or both may be involved. Antagonism, coercion, communication, conflict, exchange, and mutual-help, as well as trust, are embedded in the processes. This paper borrows the idea to highlight the issues brought about by the ECFA signed between Mainland China and Taiwan.

tion of the automobile industry; 3) the facilitation of innovation and transformation of technology; 4) the implementation of new energy automobile strategies; and 5) the development of brands, establishment of automobile and parts bases, the development of modern automobile services, and provision of adequate automobile consumption credits.

In China, producing cars is not a problem; the issue lies in how to manufacture profitable cars. Statistics has shown that during the first season of 2009, only five auto companies earned profits. These are BYD Company, Geely Holding Group,¹⁶ Beijing Automobile Work Co. Ltd.,¹⁷ Qing Ling Motor, and Harbin Hafei Automobile Industry Group Co. Ltd. Brilliance Auto, Suzuki Corporation, Xiamen King Long Motor Co. Ltd., and Anhui Jianghuai Automobile Co., Ltd. all incurred deficits. In light of the "Automobiles shipped to the countryside" policy, the Chinese government also announced the plan "1,000 new energy cars for 10 cities within the next three years." The Market Intelligence and Consulting Institute of Taiwan estimated that the Chinese automotive electronics market will grow from a RMB\$1,260 billion industry in 2008 to an approximately RMB\$2,100 billion market by 2011. This new policy is therefore expected to benefit Taiwan's automotive electronics market, promoting such products as GPS units and entertainment information.

These, along with the recently approved "Twelfth Five-year Plan" (which officially endorses the domestic-driven economic policy focusing on economic structural transformation) seem to point to a bright future for Taiwan in terms of economic and industrial development. Local economists (Lin 2011; Tsai 2011) believe that green energy, cloud technology, bio-tech, energy-saving cars, and related services are areas that will provide ample opportunities for Taiwanese businessmen in the next five years. However, some are strongly skeptical about risks associated with close relationships with China. Opposition party (DPP: Democratic Progressive Party) members are especially concerned with the "First Economy, then Politics" principle advocated by both sides of the Strait implies that Taiwan's economy will become even more dependent on China. This overdependence will eventually give the Mainland the upper hand in dealing with cross-border political issues. Many party members have criticized President Ma's ECFA as "leaning toward China." Furthermore,

¹⁶ Geely Holding Group successfully merged with Volvo in August 2010. This will undoubtedly help Geely Holding Group enter the Euro-American market.

¹⁷ Beijing Automobile Work Co. Ltd. expressed interest in merging with OPEL. Other than the opposition from the OPEL workers' union, "price" is another main concern.

some members believe that the Mainland will benefit more from Taiwan's technology, knowledge transfer, and even human resource, particularly in the area of semi-conductor and display panel industries, which are areas that Taiwan is very good at. Politically, although President Ma has adopted the "No Unification, No Independence and No Use of Force" policy toward the Mainland, many Taiwanese continue to believe that numerous risks in terms of cross-strait relations exist, specifically investment protection, intelligence property protection, and equal market competition mechanism. The Taiwanese government has set aside a four-year budget of NTD 85.32 billion for initiating the "New Cheng-ho Plan," which aims to expand Taiwan's export markets to newly developed regions, such as India, Brazil, Russia, Middle East, and the ASEAN countries. In a way, the ECFA was also raised along this vein. The question is whether Taiwan will accept the conditions suggested by the Mainland, that is, only the west side of the Strait¹⁸ and not the whole of China is to serve as the experiment site. Although achieving consensus between the central and the local government is crucial for China, the West Side of the Strait seems to be extraordinarily aggressive so as to set aside Ping-tang Island, the place closest to Taiwan, as an experiment site for the implementation of the "five-togetherness policy."¹⁹ I gathered from my November 2010 field trip that a large Taiwanese high-tech company, one of the biggest Taiwanese real estate companies, as well as three Taiwanese universities, are not only interested in such collaborations but have already taken action. Additionally, the Chinese central authority has gone as far as mapping out the high-speed rail route connecting Beijing to Hsinchu, Taiwan.

On the city level, because the time it takes to travel by airplane to Shanghai or Guangzhou from Taipei is less than one and half hours, a kind of "one-day living/commuting circle" has been established. Sungshan Airport's status as the cross-strait airport is stable. Increased differentiation/collaboration among Nankung Software Park, Neihu Industrial Park, and Shanghai's Zhangchiang High-tech Industrial Park and Suzhou Industrial Park can easily be conceived. However, as argued in the pre-

¹⁸ The Chinese government has divided the west side of the Taiwan Strait into four special districts, namely, the agricultural economic special district, cultural economic special district, industrial economic special district, and financial economic special district. Although the Taiwanese government reacted to such plans, it still expects that the ECFA will not be limited to only one province—Fujian.

¹⁹ "Five-togetherness policy" refers to the principle of planning, investing, running, and managing together, as well as benefitting together.

vious section, land and housing speculation in Taipei has already transpired. A kind of “M shape society” phenomenon in the real estate market seems inevitable.

To conclude, in addition to common language and cultural/historical background, similar to what have been so vividly elucidated by Chan (2011), Takaki and Lim (2011), Park (2011), and Ho (2011) with regard to HK-China, Busan-Fukuoka, Incheon-Qingdao, and Singapore-Malaysia-Batam, geographical proximity as well as industrial complementariness have made cross-strait economic ties possible. Nevertheless, whether the ties will develop into the “Chiwan phenomenon”²⁰ or a “prisoner’s dilemma” remains unclear as these countries seem to coexist as the circumstances surrounding cross-strait relations continue to unfold. As Kim’s (2011) observation, Taiwan seems to have already been pulled into China’s economic orbit and many of its companies have long since accepted the centrality of the Mainland in their future. The issue on whether Taiwan can maintain (and for how long) its comparative advantages with regard to quality of life, human resource, and a much more globalized business environment to avoid full absorption by China will be dictated by political wisdom and the general public’s good will from both ends. Although the situation continues to evolve, either direction which may turn into a zero-sum or win-win game deserves continuous scrutiny.

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²⁰ The term was first introduced by Koreans; it is the shorthand of China + Taiwan.

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