The Changing Economic Matrix Between Taiwan and Mainland China Within WTO Framework

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I. Introduction

With the improved information technology and the reduced transaction cost in the past two decades, multilateral trade among countries has increased steadily. In the meantime, several important regional economic organizations had been established, including European Union (EU), North American Free Trade Area (NAFTA), Asian Pacific Economic Cooperation (APEC), and World Trade Organization (WTO). Consequently, the pace of economic globalization has become faster. As an important world member with more than one percent of the total trade of the world, Taiwan cannot escape the impact from the globalization process.

Though it is still sensitive politically, the economic tie between Taiwan and Mainland China has been moving closer both in terms of trade and investment during the past twenty years. This tie will be further strengthened by their new memberships into WTO next year. To join WTO, both Taiwan and Mainland China have to open up their domestic markets to the world and to each other. Therefore, bilateral trade and two-way investment across the Strait will also be speeded up. The process of economic integration between Taiwan and the rest of the world will be significantly influenced by globalization, and the integration process across the Strait will be even faster than the former.

The pace of international integration not only affects Taiwan's economic performance in the short run, but affects Taiwan's economic structure in the long run. Moreover, while Taiwan's economy itself has been experiencing a significant restructuring from a traditional economy to a high-tech economy, it will be very difficult for Taiwan to deal with the integration impact both from the world and from Mainland China at the same time, especially after getting into WTO effective next year.

The purpose of this paper is to describe the current integration process that Taiwan has faced both with the world and with Mainland China, including Taiwanese firms' globalization and their global alliance. Then we will discuss the openness of Taiwan and Mainland China to get into WTO and the current economic tie across the Taiwan Strait. Finally, we will elaborate opportunities and challenges both for Taiwanese firms and their government in view of the changing integration with the world and Mainland.

II. Globalization and Global Alliance

In order to promote multilateral trade and to realize individual country's comparative advantage, a number of regional economic organizations had been established, such as EU, NAFTA, APEC, WTO. The rationale for forming such economic cooperation is to eliminate trade barriers and increase multilateral trade among member countries. Some economic organizations allow production factors such as labor and capital moving freely among member countries and European Union (EU) even forms same monetary system. Table 1 lists major regional economic organizations and their time of establishment.

An important worldwide economic organization was founded in 1947, i.e. the General Agreement of Tariffs and Trade (GATT). The purpose of GATT is mainly to reduce trade barriers and to provide a place for negotiation among its member countries. After three rounds of international negotiations, namely Kennedy round, Tokyo round, and Uruguay round, the worldwide trade barriers were significantly reduced, including tariffs, import quotas, agriculture products, and intellectual property rights. When GATT was reformed as WTO in 1995, the clause of national treaties had sharply reduced unequal treatment in multilateral trade among member countries.

When international economic organizations are working hard to reduce trade barriers among countries and to promote inter-industry trade, a new form of international trade is increasing fast at the same time, i.e. intra-industrial trade. While the inter-industry trade is to realize the so-called comparative advantage among different industries for different countries, the intra-industry trade is to realize the comparative advantage within a same industry for different countries.

One of the main reasons that the total amount of intra-industry trade of the world increasing so fast is related to the improvement of modern technology. In a high-tech industry, for instance, every production step is very clear since the production process is so specialized. Therefore, outputs for each production process can be separated easily, including raw material, parts, semi-product, and final product, etc.

The second crucial reason is the drastically reduced transaction cost both for information cost and for transportation cost. The growing of intra-industry trade is a natural result when the transaction cost is low. For example, for a certain high-tech

product, its raw materials are produced in Country A, its parts and semi-products are produced by Country B, and finally its finished products are assembled by Country C. This type of vertical integration of production and international strategic alliance is very common in recent years. Such production integration is especially common for high-tech products since the size of high-tech products is usually small compared to their high value.

While high-tech industries become more dominant in the past twenty years, Taiwan has experienced a deepening globalization process and Taiwanese firms also have developed closer global alliances with mutli-national enterprises (MNEs) of the world¹.

Table 2 shows the global alliances of selected IC firms in Taiwan with MNEs. Each firm in Table 2 has formed strategic alliances with at least two MNEs. TSMC and UMC have cooperated with more than four MNEs.

According to Lin (1998), there are several reasons for the high-tech firms in Taiwan forming strategic alliances and forming international production integration: First, the production process of high-tech products is so specialized that even small firms have a chance to participate in certain production steps. Secondly, since R&D investment in high-tech industry is so high that firms like to form strategic alliance to share the risk. Sharing risk is very crucial for Taiwanese firms since their size is relatively small compared to international competitors. Third, both information cost and transportation cost are small for high-tech products and, therefore, it is easier to form an international production integration. Fourth, since there are usually more trade barriers for high-tech industry for most countries in the world, MNEs like to form strategic alliances in order to break the trade barriers. Finally, The high-tech industry usually has a higher growth rate which makes the international cooperation easier to realize.

For the above-mentioned reasons, Taiwan has witnessed high growth for both inter-industry trade and intra-industry. It is clearly more profitable for the high-tech firms in Taiwan to form production integration and strategic alliances with international MNEs. Now Taiwan will become a new member of WTO next year, it is no doubt that the globalization process will be accelerated.

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¹ The intra-industry trade among Taiwan and Mainland China is even more significant owing to the huge amount of investment from Taiwan to Mainland China.

III. Economic Relation across the Strait

Trade and Investment across the Strait

Though both sides still face political dilemma², bilateral trade began in 1979 when Mainland China opened its door.

Table 3 shows that total amount of bilateral trade across the Strait was only US\$0.46 billion in 1981. However, bilateral trade has grown at a spectacular pace. In 2000, it was US\$31.2 billions, where Taiwan exports to Mainland China accounted for US\$25.0 billions while Taiwan imports from Mainland China accounted for 6.2 millions. Taiwan enjoyed US\$18.8 billions trade surplus from Mainland China, the largest source of trade surplus for Taiwan³.

There are two reasons for each rapid development: First, the stage of development for Taiwan is completely different from Mainland, while Taiwan's per capita income was around US\$13000 in the year of 2000, Mainland China's per capita income was only 800 at the same year. Moreover, Taiwan's industrial structure is also different from that of Mainland China. Each side has her comparative advantage when they started to trade. Secondly, it generates a significant trade expansion effect when Taiwan investment rushed in to Mainland China. According to Kao, et al (1992, 1995), a high percentage of Taiwanese firms in Mainland China had bought a great amount of raw material, parts, and even machines from their parent firms or other firms in Taiwan. Therefore, when total output of Taiwanese firms had grown fast, so did their imports from Taiwan.

Taiwan's investment to Mainland China began in 1988. Two most important reasons explain why there have been so many Taiwanese firms investing in Mainland China: The first is that Taiwan dollar had appreciated from NT\$35.5 to NT\$28.1 to one US dollar from 1986 to 1988. The drastic appreciation of NT dollar eroded exporting firms' profit badly. However, the appreciated NT dollar made investment to Mainland China much cheaper. The second reason is that by abolishing martial law and by allowing her citizens to visit their homeland, this provided a new opportunity for Taiwan businessmen to invest on the Mainland.

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² The US stopped its diplomatic relation with Taiwan in 1979 and established a formal relation with Mainland China in the some year.

³ In fact, total trade surplus of Taiwan as a whole was only US\$8.3 billions in 2000.

According to official record from Investment Commission, ROC, 22,974 cases of investment form Taiwan went to Mainland China from 1988 to 2000, totalling US\$17.1 billion(see Table 4). However, according to official record from the Ministry of Foreign Trade and Economic Cooperation, PRC, total number of investment projects from Taiwan is 46,624 cases, which amounts to US\$49.4 billions, but the realized amount of investment is US\$26.2 billion.

It should be noted that Taiwan investment to Mainland has shown a significant structural change since 1992: First, the average size of investment has steadily enlarged. Second, the nature of the industry has shifted from labor-intensive such as textile, clothes, and footwear, etc, to technology-intensive such as computer industry, see Table 5. Third, the investment location also shifted from the Pearl River Delta (mainly Guangdong province) to the Yangzi River Delta (mainly Jiangsu province). The reason for such shift is to take advantage of China's domestic market.²

Production Integration and Intra-industry Trade

Taiwan investment to Mainland China has contributed the trade expansion effect. According to Kao, et al (1992, 1995), more than half of raw materials used by Taiwanese firms in the Mainland were imported from Taiwan and more than 70% of machines was from Taiwan⁴. Though the degree of dependence has dropped owing to the localization process, Chiu (1996) argued that more than 40% of raw materials used by Taiwanese firms were still imported from Taiwan. On the other hand, Taiwanese firms in Mainland China also export some parts and final goods to Taiwan, too, either to their parent firms or to other firms in Taiwan.

It turns out that the intra-industry trade is very significant across the Taiwan Strait. Table 6 shows that five out of top ten exporting commodities from Taiwan to Mainland China are related to information industry (HS code 8542, 8541, 8540, 8473, and 8471). On the other hand, Table 7 shows reciprocally that seven out of top ten importing commodities from Mainland China to Taiwan are also related to information industry (HS code 8542, 8504, 8537, 8541, 8517, 8473, and 8471).

² When Taiwan firm started to invest in China in 1988, there were four cities in China which were chosen as special economic zones, including Shenzhen, Xiamen, Zuhia, and Shentou. When Pudong of Shanghai was named as a sez in June 1990, Taiwanese firms, as well as MNEs, started to move to Shanghai. Now, since China decides to develop her great western areas in the tenth-five-year plan starting 2001, we will expect that Taiwanese firms way increase their investment in those areas.

⁴ Some subsidiaries bought from their parent firms in Taiwan, some bought from other firms in Taiwan.

In addition to intra-industry trade across the Taiwan Strait, another indicator shows the close economic relation between Taiwan and Mainland China. Electronic and electric industry accounts for 28.0% of total investment from Taiwan to Mainland China(see Table 6). Moreover, Table 6 also shows that the location for Taiwan investment is concentrated in Guangdong and Jiangsu, of which the former accounts for 35.11% of total investment, while the later accounts for 35.25%. Combining the above two figures, we can see why Guangdong and Jiangsu are the two largest provinces in Mainland China in producing and exporting electronic and electric goods⁵.

Impact on Taiwan

Economic impact of the bilateral trade between Taiwan and Mainland has been felt on Taiwan since 1980. Among others, there are several positive results: First, increasing exports to Mainland China has expanded production, income, and jobs on the island. The Mainland China market not only provides Taiwan a huge trade surplus, it also explains why Taiwan weathered the Asian financial storm in 1997. Without Mainland China's market support, Taiwan might have suffered similar painful results like most Asian countries during that period.

Secondly, since most labor-intensive firms were moved out from Taiwan to Mainland, Taiwan's economy is able to shift to more capital- and technology-intensive. While firms staying Taiwan are more capital intensive, labor productivity becomes higher than before. Moreover, the GDP share of service sector started to increase as soon as Taiwanese firms began to invest in Mainland China since most departing firms were manufacturing. As manufacturing sector shrunk, workers were released. Some of those released workers managed to find their jobs in other manufacturing firms (mainly capital-intensive and high-tech firms) and most of them found their jobs in service sector⁶.

Third, the process of globalization has been fastened for parent firms in Taiwan. Investing in Mainland China is not only as direct investing outside Taiwan, but also provides a good chance to grow like a MNE. Since labor wage and land price in China are much cheaper than that of Taiwan, most Taiwanese firms have built a much larger plant than those in Taiwan. Some of them have grown so fast and have

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⁵ In fact, Electronic and Electric Association in Taiwan has estimated that about 72% of electronic and electric goods exported from Mainland China to the world is contributed by Taiwanese firm.
⁶ Some of them, mainly elder and less educated workers, did lose their jobs and never managed to

Some of them, mainly elder and less educated workers, did lose their jobs and never managed to found another one. We will comment this point later of this section.

already become MNEs now, for instance, Po-Cheng Co. (mainly Nike) in producing shoes, Geu-Da Co.(the Giant) in producing bicycles, and Tong-Yi Co.(The President) in producing food products.

There are two negative consequences, too. The first one is that Taiwan investment in Mainland has made the Taiwan economy highly dependent upon Mainland China's market. In 2000, the export share to Mainland market is 16.9% of total export of Taiwan⁷. There are those who worry about this high dependence ratio with Mainland China.

The other consequence is that, with shrinking manufacturing sector, unskilled workers become unemployed. Though some of those unemployed workers found jobs in other capital intensive firms or in service sector, there were still a good number of workers unemployed.

IV. The Emergence of WTO

WTO officially accepted both Taiwan and Mainland China as their new members in November 2001. While they will have more trade opportunities than before, both Taiwan and Mainland China have to open their domestic markets. It is clear that both are going to face a strong competition from outside. Moreover, the economic relationship across the Strait itself is going to experience a drastic change. For instance, the products of Taiwanese firms in Mainland China will face a heavy competition both in the world market and in Mainland China's domestic market.

To satisfy WTO's regulations, the governments of both sides have already made significant change of their laws and trade policies in the past. And they still have to keep adjusting WTO's regulations in the future. Though Taiwan was admitted into WTO as a developed economy, the impact of changing laws and trade policies is not very significant. Taiwan has followed the rules of game as a world member for a long time.

On the other hand, Mainland China has opened its economy for only twenty years. She has to struggle making significant changes of their laws and trade policies even admitted as a developing economy.

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⁷ However, import share from Mainland China is only 4.4% of total import to Taiwan. The total trade share with Mainland China is 10.8% for Taiwan.

Taiwan's agreements

Taiwan agreed to reduce her import duties for a wide range of products and also agreed to open her domestic market for both agriculture goods and service sector. To be precise, there are 3,470 items of which import duties are reduced. The average import duty will be reduced from current 6.3% to 4.3% as final target. For certain items such as iron and steel, medical equipments, timber woods, agricultural machinery and construction equipments, the import duties will be reduced to zero and the import duty of automobile will be reduced to 17.5%.

Furthermore, government procurement purchase will be completely open to other WTO members and the government apparatus will be set up. The government will simplify her examining procedure for imports and will change her national standard compatible with international standard.

Generally speaking, the impact on manufacturing sector should be relatively small, while the agriculture sector is traditionally less competitive. Financial sector and other service sector would also face certain competition. We are anxious to see how all these sectors will respond to the new pressure.

Mainland China's agreements

To be eligible as a member of WTO, Mainland China has made a great deal of agreement changes and promises, though her requirements are lower than that of Taiwan. In manufacturing sector, the average import duty will be reduced from 24.6% in 1997 to 9.4% in 2005. The import duty of information products will be reduced to zero, timber woods, paper products, and chemical products to 5%, and automobile and its parts to 10%. Furthermore, the import examination and national standard will be set as the same as international standard. The rights both for domestic sale and for exporting will open to the foreign firms within three years.

In service sector, the major agreements on domestic market and distribution channels include: First, US firms could keep all of their rights on domestic sale. Second, US firms could own their independent distribution channel. Third, the restrictions on auxiliary service for distribution channel will be gradually removed.

In telecommunication sector, the major agreements include: First, foreign firms are

free to choose any technology to provide their telecommunication service. Second, foreign investment in telecommunication could hold up to 49% of the ownership in the beginning and then gradually the holding limit will increase to 50%. Third, selected cities will open their telecommunication market to foreign firms in the first year and then other cities to follow within three years.

In financial services, the major agreements include: First, life insurance and reinsurance will be opened in the first year. Other insurance services will be opened four years later. Second, foreign banks could set branches in twenty-four cities in the first year. However, RMB-related service is not allowed for two years. The banking service will open to foreign firms without any restriction five years hereafter. Third, transaction seat for B-type stocks will first open, and then transaction seat for A-type stocks will open within three years.

With relatively low wage, Mainland China's manufacturing goods are very competitive in the world market. Therefore, the impact on manufacturing sector may not be significant, or at least is bearable. However, the service sector will face stiff competition because of its low efficiency. Both unemployment and bankruptcy might occur.

According to the estimation of the US International Trade Commission, the direct impact on Mainland China's economy for participating WTO will be as follow: The economic growth rate will increase by 4.1%, exports increasing 12.2%, and imports increasing 14.3%. Meanwhile, 9.6 million farmers have to switch to other sectors. In same period of time, 598 thousands workers in automobile industry and 582 thousand workers in machinery industry will be unemployed.³

Though the short-run impact is mainly negative, the average productivity in service sector will grow fast in the long run since foreign firms will bring in new information and managerial skill. It will also attract more foreign investment. By modifying her domestic laws to meet WTO's standard, a modernized sector will emerge.

The impact on Taiwanese firms in Mainland China

There are several positive impacts for Taiwanese firms when Mainland China gets into WTO. First, Taiwanese firms there could expand their exports since the world

³ See Tsav(2000).

market opens to Mainland China and thus to Taiwanese firms there. Moreover, since Mainland China's domestic market opens to foreign firms and so to Taiwanese firms whose operation could be mainly export-oriented before. In this case, we could expect more Taiwanese firms investing in Mainland China in the future. However, facing sever competition from MNEs, Taiwanese firms may be reluctant to expand too soon. Second, when legal reform takes place in mainland China, Taiwan businessmen could benefit greatly since they don't have to put much effort to build up personal relationship with government officials. Third, under WTO's regulations, Taiwanese firms will enjoy a better protection since there is no investment protection agreement between Taiwan and mainland China.

On the other hand, there are two disadvantages: First, under the new legal system, it is more difficult for Taiwanese firms to get benefits from rent seeking behavior, such as relying on personal favors from government officials. Second, under the new clause of national treatment, Taiwanese firms could not get some special treatments, which were originally provided for certain political reasons.

V. Challenge and responses after the year of 2000

In the past two decades, Taiwan has experienced a significant structural change shifting from labor-intensive to capital- and technology-intensive. To obtain more advanced technology and to share investment risk, high-tech companies in Taiwan have built up strong business alliances with foreign MNEs. At the same time, a huge number of Taiwanese firms (estimated to be at least 40,000) rush into Mainland China and invested in almost every industry and every coastal city. That move turned out to be a crucial and wise step to become MNEs.

The WTO membership for both Taiwan and Mainland is an encouraging development. One of the immediate impacts is the required openness for these two economies. Both Taiwan and Mainland China are going to face new opportunities as well as strong challenges. For Taiwanese firms, these opportunities and challenges are even greater since, in addition to compete with the international MNES, they have to deal with new policies for both sides.

For Taiwan, to have a seat in WTO is a great diplomatic success. WTO provides Taiwan a forum to settle any international trade arguments. However, opening Taiwan's domestic market could increase unemployment in the short run, a very undesirable situation at the moment.

Mainland China has been quite helpful to Taiwan economy either knowingly or unknowingly. Mainland China has contributed for more than US\$140 billion trade surplus for the past twenty years, the singly largest source for Taiwan's surplus. At the same time, the size of China's domestic market has also provided Taiwanese firms an important step to enlarge it operation. The increased efficiency makes Taiwanese firms more competitive.

To Taiwan government, the intelligent way of response to those opportunities and challenges should be very clear. Since globalization and openness are here to stay, the best way is to accept it and to adapt it.

Economic matrix between Taiwan and China will be the most perplexing issue for Taiwan in the years ahead. The most productive way for Taiwan government to do is to think how to use their abundant labor and resources to help Taiwan economy, and how to use Mainland China's domestic market to make Taiwan as an operation center or an logistic center both for Taiwanese firms and for international MNEs. The strategy is to utilize, not to ignore Mainland China's resources.

To attract foreign MNEs to consider Taiwan as an operation center or a logistic center, Taiwan must make itself as accessible as possible, including free trade, free financial services, and free transportation, both to the world and to Mainland China. This openness is a win-win policy for all the parties concerned.

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Table 1 Regional Economic Organizations

Name of Organizations		Date of Establishment
General Agreement on Tariffs and Trade	(GATT)	1947
Organization of the Petroleum Exporting Countries	(OPEC)	1960
Organization for Economic Co-operation and Development	(OECD)	1961
Central American Common Market	(CACM)	1961
Pacific Basin Economic Council	(PBEC)	1967
Association of South East Asian Nation	(ASEAN)	1967
Pacific Economic Cooperation Committee	(PECC)	1980
Asia Pacific Economic Cooperation	(APEC)	1989
South American Economic Cooperation Zone Moving toward a Common Market	(MERCOSUR)	1991
European Union or European Commission	(EU) or (EC)	1993
Common Market for Eastern & Southern Africa	(COMESA)	1993
North American Free Trade Area	(NAFTA)	1994
West African Economic and Monetary Union	(WAEMU)	1994
World Trade Organization	(WTO)	1995

Source: This study.

Table 2 International Strategic Alliances of IC Industries in Taiwan

Name of Companies	Name of Alliances
United Microelectronics Corporation (UMC)	SGS-Thomson, Thesye, MIS, Meridian
UMAX	Mitsubishi
Macronix International Corporation (MXIC)	NKK, Sanyo, MIPS
Mosel Vitelic	Oki, Fujitsu
Hualon Microelectronics Corporation	Seeg, SGS-Thomson, Tech, AIPS, DHJ, Motorola, Burr-Brown
Taiwan Semiconductor Manufacturing Corporation (TSMC)	Cirrus Logic, ISSI, AMAD, AMD
Winbond Electronics Corporation	SMC, Philips, NCR, SGS-Thomson, HP, Opus, AT&T
Nan Ya Plastics Corporation	Oki

Source: Lin(1998).

Table 3 Bilateral Trade across the Taiwan Strait

Unit: US\$100million

Year	Exports	Imports	Total	Taiwan's Transit Trade Balance with Mainland China	Taiwan Trade Balance with the World
1981	3.8	0.8	4.6	3.0	14.2
1982	1.9	0.8	2.7	1.2	33.2
1983	2.0	0.9	2.9	1.1	48.4
1984	4.3	1.3	5.6	3.0	85.0
1985	9.7	1.2	10.9	8.5	106.2
1986	8.1	1.4	9.5	6.7	156.8
1987	12.3	2.9	15.2	9.4	187.0
1988	22.4	4.8	27.2	17.6	110.0
1989	33.3	5.9	39.2	27.4	140.4
1990	43.9	7.7	51.6	36.2	125.0
1991	74.9	11.3	86.2	63.6	133.2
1992	105.5	11.2	116.7	94.3	94.6
1993	139.9	11.0	150.9	128.9	80.3
1994	160.2	18.6	178.8	141.6	77.0
1995	194.3	30.9	225.2	163.4	81.1
1996	207.3	30.6	237.9	176.7	135.7
1997	224.6	39.2	263.8	185.4	76.6
1998	198.4	41.1	239.5	157.3	59.2
1999	213.1	45.2	258.3	167.9	109.4
2000	250.0	62.2	312.3	188.0	83.1
Total	1847.3	312.9	2610.2	1534.4	1899.5

Source: Mainland Affairs Council, Cross-Strait Economic Statistics, Monthly, 105.

Table 4 Taiwan's Investment in Mainland China

Unit: US\$ million

	Approved by Ministry of Economic				Official Data from Mainland China				
37		Affairs, ROC							
Year	Case	Amount	Average	Project	Contracted	Average	Realized	Realization	
			Amount		Amount	Amount	Amount	Ratio(%)	
1991	237	174.16	0.73	3446	2783	0.81	844	30.33	
1992	264	246.99	0.94	6430	5543	0.86	1050	18.94	
1993	1262	1140.37	0.90	10948	9965	0.91	3139	31.50	
	(8067)	(2028.05)	(0.25)						
1994	934	962.21	1.03	6247	5395	0.86	3391	62.85	
1995	490	1092.71	2.23	4778	5777	1.21	3162	54.73	
1996	383	1229.24	3.21	3184	5141	1.61	3475	67.59	
1997	728	1614.54	2.22	3014	2814	0.93	3289	116.88	
	(7997)	(2719.77)	(0.34)						
1998	641	1519.21	2.37	2970	2982	1.00	2915	97.75	
	(643)	(515.41)	(0.80)						
1999	488	1252.78	2.57	2499	3374	1.35	2599	77.01	
2000	840	2607.14	3.10	3108	4042	1.30	2296	56.81	
Accumulated to	00074	17102.50	0.74	16604	45017	1.02	26160	54.51	
2000	22974	17102.58	0.74	46624	47816	1.03	26160	54.71	

Source: See Table 3.

Table 5 Taiwan's Investment in China, by Industries

Units: US\$ million

	Accumulation		Accumulation				A	.ccumulatio	1
Industry	Cases	Amount	Percentage by Amount (%)	Region	Cases	Amount	Percentage by Amount (%)		
Electronic and Electric Appliances	3611	4796.3	28.04	Guangdon	8165	6304.8	35.29		
Chemicals	1481	1116.5	6.53	Jiangsu	5315	5889.4	34.44		
Basic Metals & Metal Products	1973	1422.9	8.32	Zhejiang	1164	723.5	4.23		
Plastic Products	2072	1340.2	7.84	Fujian	3099	1669.9	9.76		
Food and Beverage Processing	2209	1279.9	7.48	Hebei	1646	972.9	5.69		
Textile	1010	827.0	4.84	Sichuan	368	248.7	1.45		
Non-Metallic Minerals	1159	950.0	5.55	Hubei	407	175.1	1.02		
Transport Equipment	705	724.1	4.23	Shandon	657	382.4	2.24		
Machinery Equipment	770	527.0	3.08	Liaoning	404	213.5	1.25		
Precision Instruments	2208	856.7	5.01	Hunan	250	116.8	0.68		
Others	5776	3261.9	19.07	Others	1499	675.7	3.95		
Total	22974	17102.6	100.00	Total	22974	17102.6	100.00		

Source: See Table 3.

Table 6 Taiwan's Top Ten Exporting Commodities to China

Units: US\$ million

waa i ib ii aa i	Amount			Ranking			
HS Code and Description of Goods	2001	2000	1999	2001	2000	1999	
8542 Other integrated circuits and micro assemblies	2,134.49	2,084.11	1,345.97	1	1	1	
8473 Parts and accessories of the machines	816.14	821.32	709.96	2	2	2	
3903 Polymers of styrene, in primary forms	479.24	558.62	376.62	3	3	6	
5903 Other fabrics of cotton, impregnated, coated, covered or laminated with polyurethane	475.92	511.53	563.12	4	5	3	
5407 Woven fabrics or the like of synthetic textile materials	452.89	519.54	490.07	5	4	4	
7219 Flat-rolled products of stainless steel, hot-rolled in coils	377.57	344.82	228.32	6	7	10	
8471 Automatic data processing machines and other readers	316.43	319.38	230.73	7	8	9	
8540 Parts of cathode-ray tubes and photo-cathode tubes	282.93	397.83	383.63	8	6	5	
4104 Bovine leather, without hair on, vegetable pre-tanned	259.48	257.25	293.02	9	10	7	
8541 Diodes, transistors, and semiconductor devices	245.14	274.30	216.01	10	9	11	

Source: Bureau of International trade, MOE, Quarterly Journal of International Trade Forecasting.

Table 7 Taiwan's Top Ten Importing Commodities from China

Units: US\$ million

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HS Code and Description of Goods	2001	2000	1999	2001	2000	1999
8542 Other integrated circuits and micro assemblies	266.15	270.65	304.34	1	2	1
8504 Transformers and static converters	248.66	219.77	217.70	2	3	2
2701 Coal, briquettes, voids and similar solid fuels manufactured from coal	212.35	90.56	93.50	3	8	6
8473 Parts and accessories of the machines	196.59	164.03	180.49	4	5	3
8536 Switches and protective relays	159.71	164.43	115.23	5	4	4
8541 Diodes, transistors, and semiconductor devices	147.16	160.63	110.26	6	6	5
7207 Semi-finished products of iron or non-alloy steel	127.89	275.11	87.14	7	1	7
8471 Automatic data processing machines and other readers	123.86	86.42	54.82	8	9	10
7108 Gold(including platinum plated gold)	71.39	122.72	61.98	9	7	9
8517 Line telephone sets and telegraphic apparatus	71.32	53.19	39.72	10	13	13

Source: See Table 6.