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Taiwan's Domestic Stability: An Economic Perspective

Da-Nien Liu

This paper analyzes Taiwan's stability from an economic perspective. It first discusses challenges to Taiwan's economy, with particular focus on the influence of China's economic rise. In recent years, the PRC's policy toward Taiwan has been to contain and isolate Taiwan politically in the international community while at the same time striving to attract Taiwan's capital and technology by means of the mainland's economic strength. Almost all East Asian countries, including Taiwan, have felt enormous pressure from China. The paper also examines whether Taiwan's economy has the wherewithal to weather this economic storm and avoid any political or social instability that could be caused by economic depression. The argument is that although Taiwan's economic performance has not been outstanding in recent years, long-term depression in Taiwan is unlikely. As the global economy recovers, so should Taiwan's fortunes. However, to ensure Taiwan's economic security and maintain strong international competitiveness in the long term, Taiwan should follow the overall principle of "consolidating the island's original equipment manufacturer (OEM) base, creating indigenous brands, and expanding niches."

Keywords: cross-Strait relations; hollow out; economic security; technology advantages; market niches.

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Taiwan's remarkable economic development has not only been widely praised all over the world but has also become a paradigm for many developing countries. Between 1951 and 1990, Taiwan maintained an average economic growth rate of 8.9 percent. Even more outstanding is that Taiwan has also evolved into a society characterized by low inflation, low unemployment, and equal income distribution.[1]

Nevertheless, Taiwan's economic growth began to slow in the 1990s, with economic performance also showing signs of decline. The year 1991 marked the start of this economic downturn. The economic growth rate, around 7.6 percent in 1991, dropped to merely 4.6 percent by 1998. Despite subsequent revival, in the year 2001 Taiwan experienced—for the first time in fifty years—a negative rate of economic growth. The main reasons for this sharp deterioration, as this paper will argue, were the global economic downturn coupled with unfavorable domestic conditions.

On the other side of the Taiwan Strait, however, China has experienced rapid and mostly steady economic growth ever since adopting the reform and opening-up policy in the early 1980s. In the 1980s, China's average economic growth rate was 9.9 percent; in the 1990s, the country's economic performance was no less remarkable. Although other East Asian countries suffered greatly from the Asian financial crisis, China was able to maintain high economic performance. The country's average economic growth rate in the 1990s was an impressive 10.4 percent.[2] In 2001, when the world was hit by economic stagnation, China still managed a 7 percent growth rate and became the fastest growing economy in the world.[3]

China's rapid economic growth has affected other East Asian countries. First, the vast domestic market of China (currently the world's

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[1] For more details regarding the successful economic development of Taiwan, see Shirley W.Y. Kuo, *The Taiwan Economy in Transition* (Boulder, Colo.: Westview Press, 1983).

[2] *Taiwan Statistical Data Book* (Taipei: Council for Economic Planning and Development, 2001).

[3] *Zhongguo tongji nianjian* (Statistical yearbook of China) (Beijing: State Statistical Bureau, 2001).

seventh largest economy) holds tremendous allure for other countries, as evidenced by the increase in exports and investment from other East Asian countries to China. Second, China has crowded out other East Asian countries in the competition for foreign capital. Furthermore, this flow of capital into China has led to fear among its neighbors that their domestic enterprise base will be hollowed out. In addition, the rapid development and heightened export competitiveness of China's industries is posing a great threat to other East Asian countries.[4]

Due to the political hostility between Taiwan and China, the rise of the Chinese economy not only poses a challenge to Taiwan's economic development but also has important implications for the future development of cross-Strait relations. Likewise, whether Taiwan can quickly recover from economic slowdown and resume high rates of growth is important not only to Taiwan's future economic development but also to the stability of cross-Strait relations given that China has already indicated that domestic political stability on Taiwan—even any caused by extreme economic disruption—would be grounds for the People's Liberation Army (PLA) to invade the island. This paper will therefore discuss Taiwan's economic stability, drawing implications for cross-Strait relations.

This paper is divided into three sections. The first discusses challenges to Taiwan's economy in recent years, problems which constitute by far the most formidable economic crisis the island has ever encountered. The author will analyze problems in the following three dimensions: the domestic economy, the impact of China, and the international economic environment. The second section analyzes whether Taiwan's economy has the wherewithal to weather this economic storm and avoid any political or social instability that could be caused by economic depression. This section includes analysis of the dynamics of Taiwan's macroeconomics, high-tech industrial base, and foreign investment. *The argument is that although Taiwan's economic performance has not been outstanding in re-*

[4]According to figures released by the Economist Intelligence Unit (EIU; London) in December 2001.

cent years, long-term depression in Taiwan is unlikely. As the global economy recovers, so should Taiwan's fortunes. In order to secure the island's competitive advantage and economic strength, however, Taiwan still needs to develop strategic guidelines based on the principle of economic security. The third and concluding section suggests several policy recommendations for future development and adjustment: stated most broadly, Taiwan should follow the overall principle of "consolidating the island's original equipment manufacturer (OEM) base, creating indigenous brands, and expanding niches."

Taiwan's Current Economic Challenges

Taiwan's recent economic decline—especially evident in 2001—can be attributed to three factors: changes in Taiwan's domestic economy, the impact of China, and the influence of the global economy.

The Domestic Scene

Domestically, there are four main problems plaguing the island's economy. First, traditional industries find themselves unable to break out of recession. In recent years, while Taiwan's computer-related electronics and telecommunications industries have flourished, the traditional industries—such as food, textile, construction, and steel—have suffered recession. Industries of the latter type have been undervalued on the stock market and have encountered much difficulty in raising capital. As a result, profits in these sectors have been low. The domestic reason for this bottleneck is that Taiwan's traditional industries lost their competitive advantage vis-à-vis other newly industrialized countries (NICs) due to rising production costs on the island. In addition, these traditional industries did not have the ability to strategically position themselves in a manner as to affect timely transformation. In the global production environment, international corporations have begun using their advantages in brand recognition, design, and research to ally with those NICs with lower production costs. This alliance has brought great pressure to bear on Taiwan's traditional industries—industries that are essential for stable economic development for the following reasons. First, their technologies are relatively sophisticated and their products are daily necessities; their markets do not fluctuate much. In addition, traditional industries such as garment, plastics, petrochemical, and steel have consistently provided a substantial number of job opportunities. As these industries move off the island in order to remain competitive, unemployment has subsequently risen and other social problems have followed.[5]

The second problem facing Taiwan's economy is the negative impact of high-tech industries. In contrast to the recession-plagued traditional industries, the high-tech sector—led by the PC-related electronics industry—has become the force driving Taiwan's current economic growth. In 1986, the gross domestic product (GDP) of the high-tech industries was only 14.9 percent of that of the manufacturing sector. In 1991, the percentage increased to 16.75 percent. In 1999, the figure further rose to 26.75 percent.[6] In 2000, the exports of PC-related electronics products, including precision instruments, accounted for 41.36 percent of the total exports of the manufacturing sector.[7] These figures reflect the increasing importance of the PC-related electronics industry in the high-tech industries and even the manufacturing sector as a whole. Thus, the development of the PC-related electronics industry has not only facilitated the transition from labor-intensive to a technology- and capital-intensive industrial focus, but has also been the motor driving Taiwan's economic growth in recent years. The strength of this sector is also the reason why Taiwan was able to weather the Asian financial crisis in the late 1990s more successfully than other countries.

Nevertheless, the flourishing of the PC-related electronics industry

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[5]For more details see "Regain the Competitive Advantage of Taiwanese Traditional Industries," Chung-Hua Institution for Economic Research (CIER) project for the Industrial Development Bureau, Ministry of Economic Affairs (MOEA), 2001; in Chinese.

[6]*National Income in Taiwan Area of the Republic of China* (Directorate-General of Budget, Accounting, and Statistics, Executive Yuan, Republic of China, 2001).

[7]MOEA Statistics Department, *Economic Indicator* (Taipei: 2000).

also has had a number of negative impacts on the overall competitiveness of Taiwan's industrial sector.[8]

1. Facing global competition, plagued by slowed growth, and adopting a low-pricing policy, Taiwan's PC-related electronics firms have followed the lead of their major clients in investing in China in order to take advantage of China's economies of scale in the international division of labor. This transition has not only indirectly helped promote China's PC-related electronics industry but has also affected the competitiveness of Taiwan's own such industry. In 2000, China surpassed Taiwan to become the third largest (next to the United States and Japan) electronics manufacturing base of the world.

2. Taiwan's PC-related electronics industry is still highly dependent on imports for key components, parts, and materials—a state of affairs which hurts the local industry's chances to upgrade as well as balance of payments.

3. High-tech industrial development has not been diversified enough, being overly concentrated on the PC-related electronics industry. Once a worldwide cyclical slowdown occurs, the competitiveness of high-tech industries and economic growth are both likely to be greatly affected.

4. The strong advance of the high-tech industries has crowded out room for the development of the traditional industries. This change subsequently dampens job-creation and leads to unbalanced economic development.

The third problem weighing on the island's economy is the malignant legacy of the asset bubble. Since the 1990s, the relaxation of restrictions on establishing new banks on Taiwan led to vicious competition in the financial sector. The subsequent lending drive led many firms to overextend credit. Note that in Taiwan, firms often use land and stocks as collateral; the real-estate market, however, went bust in 1990. The sharp downturn in the stock market in the wake of the 1997 Asian financial crisis, moreover,

[8]For further elaboration on this subject see "Reorienting the Future Direction of Taiwanese Economic Development," CIER project for MOEA, 2001; in Chinese.

also triggered a financial crisis for many firms. Although the Taiwan stock market index nearly reached the 10,000-point mark before the presidential election in 2000, the market plummeted to the 3,000-4,000-point level with the later weakening of the economy. Unsurprising is that many firms have since encountered crises. Bad debts and delinquent loans have also increased, causing banks to be more conservative in lending. As a result, financial institutions to some extent have lost their function of capital intermediation, thereby affecting firm investments and even the island's overall economic dynamic. Although the real-estate and stock markets have shown signs of recovery, the government should step up efforts at correcting this structural problem in the financial sector.

The fourth problem facing Taiwan is the impact of industry emigration on domestic economic development. In recent years, many domestic firms have moved off the island due to mediocre economic performance, the sluggish domestic investment environment, and the attraction of other countries (China in particular). In the early stages, only small- and medium-sized enterprises (SMEs) transferred to China. Yet even large corporations and business groups have followed suit in recent years. The concerns that drove Taiwan to make such investments in China changed from cost-reduction in the early years to present factors related to the international division of labor and market expansion. As businesses undertook investments in China, talent and capital also flew from Taiwan. This trend has created the fear that Taiwan's talent and capital will be drained, industries will be hollowed out, and the economy will be marginalized. As a matter of fact, mimicking the flight of Taiwan companies to China are enterprises from Japan, South Korea, Singapore, Hong Kong, and the members of the Association of Southeast Asian Nations (ASEAN); this trend has given rise to the fear that China will hollow out the economies of *all* its Asian neighbors. This concern is especially large because China has attracted the lion's share of foreign investment. A significant portion of Japan's investment in Hong Kong, moreover, has also been diverted to China. Having monopolized foreign investment in Asia, China has thus crowded out other Asian countries and affected their opportunities to develop their own economies.

The China Factor

The rise of Chinese economic power has resulted in three main problems for Taiwan's economy. The first is that Taiwan's trade dependency on China has skyrocketed, creating economic risks. Since the initiation of trade relations, China has become Taiwan's third largest trading partner (next to the United States and Japan), second largest export market (behind only the United States), and sixth largest import area. Taiwan is China's ninth largest export market and the second largest import area (next to Japan).

As trade has grown between China and Taiwan, the interdependence of trade between the two has also increased. Taiwan's dependency on China has, in particular, expanded rapidly. According to table 1, the ratio of bilateral trade to Taiwan's external trade has shown an upward trend over the years. The figure rose from 8.88 percent in 1993 to 10.59 percent in

Table 1
Trade Dependency Ratio: Taiwan and China, 1993-2001

Unit: %

Year	Taiwan on China			China on Taiwan		
	Export Dependency Ratio	Import Dependency Ratio	Trade Dependency Ratio	Export Dependency Ratio	Import Dependency Ratio	Trade Dependency Ratio
1993	15.20	1.90	8.88	1.59	12.44	7.36
1994	15.14	2.63	9.15	1.85	12.18	6.90
1995	13.24	2.99	8.31	2.08	11.19	6.37
1996	13.96	2.74	8.70	1.86	11.66	6.55
1997	13.46	2.97	8.39	1.86	11.54	6.10
1998	15.10	3.69	9.55	2.10	11.90	6.35
1999	16.07	3.57	10.11	2.03	11.79	6.51
2000	17.19	3.60	10.59	2.02	11.33	6.44
2001*	21.05	4.37	13.18	1.87	10.83	6.19

*January to August only.

Note: Taiwan's export dependency ratio vis-à-vis China refers to the ratio of Taiwan's export volume to China to that of Taiwan's total exports. China's export dependency ratio vis-à-vis Taiwan refers to the ratio of China's export volume to Taiwan to that of China's total exports.

Sources: Compiled by the author from Taiwan and China's Customs Import Tapes.

2000 and 13.18 percent in 2001 (January to August). Taiwan's export dependency ratio vis-à-vis China also increased from 15.20 percent to 17.19 percent and 21.05 percent in the same time periods. Meanwhile, Taiwan's import dependency ratio vis-à-vis China rose from 1.90 percent to 3.60 percent and 4.37 percent, respectively.

On the other hand, China's trade dependency on Taiwan has not been as high. From January to August 2001, China's trade dependency ratio vis-à-vis Taiwan was only 6.19 percent, less than half of that of Taiwan vis-à-vis China. Because Taiwan still imposes import restrictions on Chinese products, China's import dependency ratio vis-à-vis Taiwan has remained at 10 to 12 percent.

As mentioned earlier, Taiwan's growing trade dependency on China, though demonstrating the importance of the China market to Taiwan, has also raised the risks for Taiwan and affected the island's economic stability. In the 1980s, for example, Taiwan was highly dependent on the United States for trade, leading to a trade surplus. The United States constantly pressured Taiwan to close this trade gap and Taiwan has had to make responses accordingly. In addition to aggressive attempts to diversify the island's export markets, Taiwan also granted the United States several special favorable trade treatments. This move cost Taiwan considerably, however, when Taipei applied for accession to the General Agreement of Tariffs and Trade (GATT), as other countries also demanded the same treatment. This example helps show how overconcentration of one country's export to one specific region is not a healthy sign. In terms of cross-Strait relations, Taiwan's dependency on China has certainly increased the uncertainty for Taiwan—especially since Taiwan's capital has also moved *en masse* to China.

The second problem that China's economic rise has created for Taiwan is that both countries export to the same markets, basically the United States and Japan. In recent years, the structure of China's export products has changed. Although electronics/machinery and textiles have remained the backbone of China's exports, the ratio of the former has risen while that of the latter has dropped. In the year 2000, electronics and machinery products took up nearly 30 percent of overall exports, ten percentage points higher than that in 1996.[9] This shows that the focus of China's exports has gradually changed from labor-intensive textiles to capital-intensive electronics and machinery. In fact, foreign capital played an important role in the development of electronics and machinery industries in China. Since electronics and machinery attract the most foreign capital and foreign enterprises are usually export-oriented, unsurprising is that the value of electronics exports has increased greatly. Furthermore, industrial upgrade has taken place in China's electronics and machinery industries. Their product lines have also diversified and expanded. All these factors pose competitive pressure and thus threaten Taiwan.

The third problem that the PRC's rising economy has created for Taiwan is that China increasingly threatens the island's status as a manufacturing base in the global economy as China trades off domestic market access for foreign technology. Spurred by Taiwanese and other foreign investments in China, the PRC has become an important manufacturing base for global high-tech products. In addition, China has used exceptionally favorable policies to attract Taiwanese and other foreign PC-related corporations.[10] Furthermore, China has used its vast domestic market to demand technology transfers and to entice international corporations to establish research and development (R&D) centers in China's major cities. Since R&D talent is comparatively cheaper in China, more and more Taiwanese and other foreign corporations have begun establishing R&D centers in China. As a result, China has stepped up learning—and diffusing—new technologies. This new development challenges the existing pattern of division of labor among Taiwan's firms that previously treated China as merely the manufacturing base and kept their R&D center in Taiwan. If Taiwan does not enhance its R&D and innovation capabilities at home, China will be able to bypass the island and gain OEM and ODM (original design manufacturer) orders directly from other advanced countries. Such a development would pose a great threat to Taiwan.

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[9] *Zhongguo tongji nianjian* (2001).
[10] This was not the case after China joined the WTO in 2002.

Global Economic Challenges

As to the international economic environment, liberalization and regionalization are the main trends of the twenty-first century. Taiwan's tariffs will lower given the island's accession to the World Trade Organization (WTO); Taiwan has thus begun to fully cope with the liberalization schedule set by the WTO. The trend of regionalization is therefore what will cause the most challenges for Taiwan. In recent years, the world witnessed a revival of regional integration with the establishment of many regional trade agreements (RTAs). As a result, intraregional trade has become more frequent and interregional trade is now less important. Table 2 lists the trade activities in three RTAs with which Taiwan is closely affiliated. The table reveals that the growth rates of intraregional trade are universally higher than those of interregional trade. In the North American Free Trade Agreement (NAFTA), the percentage of intraregional exports to total trade increased from 42.6 percent in 1990 to 56.0 percent in 2000. The percentage of intraregional imports also increased from 34.4 percent in 1990 to 40.3 percent in 2000. The case of the ASEAN Free Trade Agreement (AFTA) is similar. Although the 1997 financial crisis caused a decline in intraregional exports, the growth rate of such exports was as high as 28 percent (the year 2000), higher than that of external regional exports (only 17 percent in that same year). As for the European Union (EU), although the percentage of intraregional trade has declined, the figure is still impressive—above 60 percent—due to the EU's high degree of economic integration and interaction.

In general, we can expect that intraregional trade will become more important as regional integration intensifies. Meanwhile, with further integration of RTAs and liberalization, intraregional trade will become even more crucial.

Despite these trends, Taiwan has not yet joined any RTA and is thus likely to be marginalized in the wave of regional integration. To prevent this from happening, Taiwan should more aggressively seek to establish or join an RTA with other countries. Any such move on Taipei's part, however, may result in interference from China for political reasons. Beijing, on the other hand, has been active in promoting RTAs. In 2001, China

Table 2
Trade Levels of Selected Regional Trade Agreements (RTAs)

	2000	1990	1995	2000	1990-2000	1999	2000
	Value (US$ billion)		Share (%)			Growth Rate (%)	
NAFTA							
Total Exports	1,224	100.0	100.0	100.0	8	6	14
Intra-exports	686	42.6	46.1	56.0	11	12	18
Extra-exports	539	57.4	53.9	44.0	5	0	9
Total Imports	1,672	100.0	100.0	100.0	10	11	18
Intra-imports	674	34.4	37.7	40.3	11	12	18
Extra-imports	998	65.5	62.3	59.7	8	11	18
AFTA							
Total Exports	427	100.0	100.0	100.0	11	9	19
Intra-exports	101	20.1	25.5	23.7	13	10	28
Extra-exports	326	79.9	74.5	76.3	11	9	17
Total Imports	367	100.0	100.0	100.0	8	8	23
Intra-imports	90	16.2	18.9	24.5	13	9	31
Extra-imports	277	83.8	81.1	75.5	7	7	20
EU							
Total Exports	2,251	100.0	100.0	100.0	4	0	2
Intra-exports	1,392	64.9	63.1	61.8	4	1	0
Extra-exports	859	35.1	36.9	38.0	5	–1	7
Total Imports	2,362	100.0	100.0	100.0	4	2	5
Intra-imports	1,396	63.0	63.8	59.1	4	1	0
Extra-imports	966	37.1	36.2	40.9	5	3	13

Source: Adapted from table 1.9 in World Trade Organization (WTO), *International Trade Statistics 2001*.

reached an agreement with the ASEAN to establish the ASEAN-China Free Trade Agreement. This trade block will certainly pose a great threat to Taiwan's economic future.

Ensuring Taiwan's Economic Security[11]

The above discussion has revealed that Taiwan is indeed encounter-

[11]For the concept of "economic security," see Christopher M. Dent, "Being Pulled into

ing an unprecedented number of severe economic problems. Economic stagnation and an exodus of industries have led to fears of a hollowing out of Taiwan's economy. Meanwhile, as Taiwan's trade dependency on China increases as a result of higher flows of Taiwan's investment and trade across the Strait, the level of uncertainty and risks rises as well. Furthermore, because of the difficulties Taiwan faces in joining RTAs, there exists the real danger that Taiwan will become further marginalized and isolated.

All the above factors should have a negative impact on Taiwan's long-term economic development. There even exists the possibility that China could intervene militarily if prolonged economic depression should lead to social disorder in Taiwan. Despite the troubling economic problems mentioned in the previous section, however, this worst-case scenario is not likely to occur due to the following reasons.

First, Taiwan still enjoys considerable economic strength. This health is a natural by-product of a long period of development. The island has, moreover, survived two energy crises as well as the more recent Asian financial crisis. According to official statistics, Taiwan's GDP was US$310.2 billion in 2000, ranking 15th highest in the world.[12] The island's exports that year totaled US$148.4 billion, making Taiwan the 15th largest trading country in the world. The total import value was US$140 billion, ranking 14th largest in the world.[13] In 2002, moreover, Taiwan became a formal member of the WTO. Although the required reduction of trade barriers may have a negative impact on some industries in the agricultural and industrial sectors, Taiwan's accession into this trade organization should have an overall positive impact on production, imports, exports, and job creation given that Taiwan's economy is still highly oriented toward exports.[14]

China's Orbit? Navigating Taiwan's Foreign Economic Policy," *Issues & Studies* 37, no. 5 (September/October 2001): 3-10.

[12]Wharton Econometric Forecasting Associates (WEFA), *World Economic Outlook*, Second Quarter 2001.

[13]WTO, *Annual Report* (2001).

[14]For an assessment of the impact of Taiwan's accession into the WTO on the domestic econ-

Table 3
Forecasts of Taiwan's Economy by Various Institutes

Institute	2001	2002
Directorate-General of Budget, Accounting, and Statistics (DGBAS)	–2.12	2.23
World Bank	–1.30	3.30
International Monetary Fund (IMF)	–2.20	0.70
Asian Development Bank (ADB)	–2.00	2.00
Chung-Hua Institution for Economic Research (CIER)	–1.96	2.36

Sources: DGBAS, Executive Yuan, Republic of China, *Quarterly National Economic Trends, Taiwan Area, the Republic of China* (2001); World Bank, *East Asia Update: Regional Overview* (2001)*; IMF, World Economic Outlook* (October 2001); ADB, *Asian Development Outlook 2001 Update* (2001); forecast numbers by CIER in December 2001.

In addition, although Taiwan's economic growth slowed in 2000 and even suffered negative growth in 2001, economic forecasts both at home and abroad (see table 3) all hold that Taiwan's economy has already reached rock bottom and should rise again. Although the estimates vary, the common view is that in 2002 Taiwan will at least not experience negative growth, and should recover along with the global economy.

A second strength is the solid foundation of Taiwan's high-tech industries. Prior to the 1980s, Taiwan's high-tech industries focused on consumer electronics, including color televisions, radios, and appliances. When the U.S. computer industry began to restructure in 1985, Taiwan's high-tech industries managed to become integrated into the industry, subsequently manufacturing computers for such U.S. corporations as Compaq and Dell. In the late 1980s, the PC-related electronics industry became the backbone of Taiwan's economy. The electronics industry thus has not only become more important in terms of both production and export, but

omy, please consult: "A Study of the Impact of Taiwan's Accession into the WTO on Domestic Manufacturing Industry," CIER project for the MOEA Industrial Development Bureau, 2001; "A Study of the Impact of Taiwan's Accession into the WTO on Other Countries' Trade," CIER project for the MOEA Board of Foreign Trade, 1999; and "The Impact of the Uruguay Round Conclusions on the Adjustment of Taiwan Industries," CIER project for the MOEA Industrial Development Bureau, 1995; all in Chinese.

has also replaced textiles as Taiwan's largest export industry. In addition, the development of the computer hardware industry has given rise to the development of a mid-stream component industry and even an upstream semiconductor industry. Taiwan's PC-related electronics industry has over time become more integrated and competitive. Not even the Asian financial crisis in 1997 was able to affect the island's competitive advantage in these two areas. Taiwan has thus been able to maintain export competiveness and market share as well as economic stability and vitality.

The island has, moreover, become a manufacturing stronghold in the global computer industry. Taiwan has established strategic cooperative partnerships with such important international computer companies as Compaq, Dell, and International Business Machines (IBM). These relationships are symbiotic rather than merely being defined solely by supply and demand. After the devastating earthquake of September 21, 1999, these international corporations not only directly expressed concern to their long-term partners in Taiwan but also asked their international purchase offices (IPOs) to report to the head offices the extent of damage of their partners on the island—after objective evaluation, these foreign partners did not place their orders elsewhere.

That a devastating disaster like the 921 earthquake did not affect Taiwan's competitive advantage in the PC-related electronics industry must be attributed to such strengths of the industry as flexibility, quick response capabilities, an integrated industrial structure, massive overseas production bases, and long-term strategic partnerships with international corporations. Such sources helped Taiwan to resist negative external forces.

This brings us to the third bright spot of Taiwan's economic portfolio: the fact that the extent of capital outflow was not sufficient to hollow out Taiwan's domestic industries. According to the statistics released by the United Nations as shown in table 4, Taiwan has engaged heavily in foreign investment. In 2000, Taiwan's foreign investment totaled US$6,701 million, about 0.6 percent of the total world investment—ranking 17th in the world. Among the NICs and developing countries, the island's foreign investment activities are outstanding. Taiwan was one of only three developing economies among twenty major countries that actively invested

Table 4
Foreign Direct Investment Levels by Major Countries in the World in 2000

Rank	Country	Investment Volume US$ million	(Percentage)
	World	1,149,903	(100.0)
1	Britain	249,794	(15.0)
2	France	172,478	(12.1)
3	United States	139,257	(7.2)
4	Belgium/Luxembourg	82,977	(6.4)
5	Netherlands	73,054	(5.5)
6	Hong Kong	63,036	(4.7)
7	Spain	53,716	(4.2)
8	Germany	48,557	(3.8)
9	Canada	44,047	(3.4)
10	Switzerland	39,623	(3.4)
11	Sweden	39,481	(3.4)
12	Japan	32,886	(2.9)
13	Finland	23,154	(2.0)
14	Italy	12,098	(1.1)
15	Denmark	8,561	(0.7)
16	Norway	7,368	(0.6)
17	Taiwan	6,701	(0.6)
18	Portugal	5,784	(0.5)
19	Australia	5,231	(0.5)
20	Chile	4,778	(0.4)

Source: United Nations, *World Investment Report 2001*.

in foreign countries in 2000.[15]

Table 5 lists the proportion of foreign direct investment (FDI) in domestic capital formation in twenty major countries. Between 1989 and 1994, the figure for Taiwan was once as high as 9.0 percent. The figure began to decline afterwards, however, dropping to 6.7 percent in 1999. The percentage of FDI in domestic capital formation is not high.

Table 6 shows the levels of foreign investment as a percentage of GDP in major countries. Taiwan has demonstrated an upward trend over

[15]The other two economies were Hong Kong and Chile.

Table 5
Percentage of Foreign Direct Investment in Domestic Capital Formation in Major Countries

Country	1989-94 (average)	1995	1997	1999
World	4.9	5.7	7.4	15.4
Britain	14.0	23.7	28.0	80.6
France	7.9	5.4	14.1	45.0
United States	5.4	8.3	7.3	8.6
Belgium/Luxembourg	13.3	19.4	13.4	218.0
Netherlands	22.7	26.0	33.7	81.1
Hong Kong	30.2	58.7	42.5	47.4
Spain	2.9	3.5	11.5	35.0
Germany	5.2	7.1	9.2	23.1
Canada	5.3	11.7	19.3	14.7
Switzerland	14.1	18.6	35.3	69.6
Sweden	16.3	30.2	35.8	55.4
Japan	2.9	1.5	2.2	1.9
Finland	8.2	7.1	24.0	29.2
Italy	2.6	3.5	4.9	3.1
Denmark	8.6	6.9	11.3	36.3
Norway	4.6	7.7	11.9	14.6
Taiwan	9.0	4.5	7.9	6.7
Portugal	1.5	2.8	7.4	11.5
Australia	3.6	4.0	6.8	–3.1
Chile	3.0	4.8	9.7	32.8

Source: See table 4 above.

the years. In 1999, FDI constituted only 14.7 percent of GDP, far higher than the 0.2 percent in 1980, though still lower than the world average of 16.7 percent.

The above analysis has shown that among developing countries, Taiwan has been one of the most active foreign investors. Nevertheless, Taiwan's FDI has not been comparable to those of developed countries in terms of volume, scale of growth, and percentage of domestic capital formation and GDP. Taiwan's FDI will continue to expand as Taiwan becomes a developed country. The key question is whether Taiwan will be able to maintain a domestic talent pool as the island engages in foreign investment

Table 6
FDI as a Percentage of GDP in Major Countries in the World

Country / Year	1980	1985	1990	1995	1999
World	5.3	6.4	8.6	10.2	16.7
Britain	15.0	21.9	23.4	27.4	49.8
France	3.6	7.1	10.1	13.5	24.7
United States	8.1	6.2	7.8	9.9	13.0
Belgium/Luxembourg	4.9	11.4	19.7	30.4	97.5
Netherlands	24.5	37.3	36.2	42.4	65.7
Hong Kong	0.5	6.7	15.9	56.6	202.8
Spain	0.9	2.7	3.2	7.8	19.0
Germany	4.7	8.6	9.1	10.7	18.9
Canada	9.0	12.4	14.8	20.6	30.6
Switzerland	21.1	27.0	28.9	46.3	73.9
Sweden	3.0	10.7	21.5	31.6	47.4
Japan	1.9	3.3	6.8	4.6	5.7
Finland	1.4	3.4	8.3	11.9	26.8
Italy	1.6	3.9	5.2	10.0	15.8
Denmark	3.1	3.1	5.5	13.7	21.5
Norway	0.9	1.7	9.4	15.4	25.3
Taiwan	0.2	0.3	8.0	9.7	14.7
Portugal	1.8	2.5	1.3	3.0	10.6
Australia	1.5	4.2	10.3	15.0	22.5
Chile	0.2	0.6	0.6	4.7	19.0

Source: See table 4 above.

as aggressively as other advanced countries.

Accordingly, Taiwan should base its overall strategy for future economic development on the principle of "economic security." Such an approach calls on Taiwan to expand market niches and—in order to prevent the domestic economy from being hollowed out—adopt the principle of maintaining the island's technological advantages. In recent years, Taiwanese firms have moved not only their manufacturing base but also R&D sections off the island, in effect deferring industrial upgrade at home. Consequently, Taiwan's economic performance has been sluggish. The unfavorable investment environment and this inactive engagement in R&D have also impeded industrial upgrade.

The most urgent task for Taiwan is to upgrade the island's level of technology. Furthermore, technology should not be understood as being limited to only those related to production; management- and logistics-related technology is also crucial. In terms of concrete measures, methods for the government to improve the investment environment include implementing related laws that are conducive to the creation of a favorable investment environment. Above all, the government should more aggressively attempt to establish Taiwan as an R&D center. This strategy can ensure that Taiwan maintains a key position in the value chain in the international division of labor. In the past, Taiwanese firms occupied an important position in the international division of labor due to their advantages in manufacturing. Nevertheless, Taiwan's economic development in the past placed much emphasis on cultivating manufacturing ability rather than product development. Most firms did not have their own brand names or control over distribution channels. In the past decade, Taiwan has witnessed a massive outflow of the island's manufacturing base. If Taiwan cannot develop R&D and innovation ability, international corporations will likely bypass Taiwanese manufacturers for those in countries with lower costs (such as China). Since difficult is for Taiwan to develop new brand names and to control distribution channels in a short period of time, the emphasis of future industrial policy should be on establishing the island as an R&D center. In addition, Taiwan should focus its industrial policy on strengthening the production ability of key components and material industries as well as consolidating the island's key position in the value chain. Only by so doing can Taiwan maintain its advantage in manufacturing and consolidate its status as a manufacturing base as well as lock in international corporations.

In the long run, Taiwan should develop its own global brand names in order to consolidate the core competitive capabilities of Taiwan's industry. In the past, Taiwan sustained contract manufacturer status mainly by reducing costs. The establishment of brand names, however, can bring about added value. The success of brand-name creation depends on full collaboration between R&D and marketing. Capable research, good products, and strong marketing ability to promote the product are all required. Although strong in manufacturing, Taiwan has been traditionally weak in marketing. In the future, the government should assist industries to develop marketing ability and cultivate marketing talent more aggressively.

Conclusion

This paper has analyzed the bottlenecks of Taiwan's current economic development under the current international economic environment, with particular focus on the influence of China's economic rise. In recent years, the PRC's policy toward Taiwan has been to contain and isolate Taiwan politically in the international community while at the same time striving to attract Taiwan's capital and technology by means of the mainland's economic—especially market—strength. Almost all East Asian countries, including Taiwan, have felt enormous pressure from China.

Compared to other East Asian countries, Taiwan has faced even greater competition and threats from China, especially given that the island's export dependency on China is the highest among all East Asian countries.[16] This reliance increases the level of uncertainty. China has also constantly tried to constrain and isolate Taiwan in the international economic arena. Beijing has, for example, worked to obstruct the island's participation in the Asia-Pacific Economic Cooperation (APEC) and completely blocked Taipei's admission to ASEAN.

In terms of the appropriate adjustment policy, in order to ensure economic development and security, Taiwan must strengthen the island's technological capabilities and competitive advantage. To sustain vitality, Taiwan must keep technology at home. Only by preserving a technological base can Taiwan become a so-called operations center. Only technological advantages can help the island maintain a competitive advantage vis-à-vis

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[16]For example, Taiwan's export dependency ratio vis-à-vis China in 2000 was 17.19 percent. The next most dependent country was South Korea at 10.58 percent. The ratio for other Southeast Asian countries was below 10 percent.

China. Meanwhile, Taiwan should create indigenous brand names so that Taiwanese products can reach global markets. This strategy will not only reduce Taiwan's dependency on the Chinese economy but also strengthen Taiwan's own economy and increase Taiwan's leverage in trade.