

Proximity and complementarity in Hong Kong-Shenzhen industrialization.

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The industrialization of China's special economic zone in Shenzhen is attributed to a large inflow of foreign investments for low-tech, labor-intensive manufactures. It is also at a comparative advantage for being adjacent in proximity and culture with Hong Kong. As China further opens up to globalization, Shenzhen is recommended to reform its industrial structure according to the strengthening competition in world trade.

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As a part of its domestic economic reform initiated in 1979, China designated four Special Economic Zones (SEZs): Shenzhen, Zhuhai, Shantou, and Xiamen. Learning from the successful experience of export processing zones (EPZs) in its Asian neighbors, China realized that it should take advantage of its vast reserve of low-cost rural surplus labor to engage in export manufacturing (ultimately earning foreign exchange) and utilize foreign investment to aid its own course of industrialization.(1) The government also recognized the importance of advanced foreign technology in stimulating growth, as well as the channel through which technology transfer often occurs--foreign direct investment (FDI). Therefore, the promotion of foreign investment is not an end in itself but a means to bring foreign technology to China. SEZs were designed to be geographically insulated but economically open areas where special and flexible economic policies are carried out primarily to promote foreign investment, technology transfer, and exports. They were also designed, as secondary objectives, to experiment with new reform policies and a market system and serve as buffer or intermediate zones with Hong Kong, Macao, and Taiwan.

The locations of China's SEZs were carefully chosen by the Chinese government, which paid particular attention to the surrounding regional industrial and commercial cities and financial centers. First, there were intentions to use the SEZs as intermediary zones for reunification with the three territories, especially Taiwan. Second, the government recognized that the overseas Chinese community was a force to reckon with in raising productive capital. Towns along the southeast coast in Guangdong and Fujian have been homes to many overseas Chinese whose historical links would lure them back. In particular, SEZs are close to the setting-off points for three of the most important dialect groups among overseas Chinese: the Cantonese (spoken in Shenzhen and Zhuhai), who predominate in Hong Kong; the Fujianese (spoken in Xiamen), who make up 85% of Taiwan's population and much of Singapore's; and the Teochews from around Shantou.

Since their creation, SEZs have been studied extensively by China watchers around the world. Many authors agree that China's zones have been quite successful in attracting large amounts of foreign investment, mainly due to three factors: access to low-cost labor, land, and raw materials; size of the potential domestic market; and government incentives. A few authors point out the importance of the continuity of the clan system that connects overseas Chinese. In particular, the Hong Kong connection has been singled out, forged by long-established trading links, geographical proximity, and cultural similarity.(2) However, no one has looked at the composition of foreign investment inflows, particularly from the dominant source (Hong Kong), by sector and industry. No effort has been made to evaluate how foreign investment has subsequently affected Shenzhen's industrial structure. This research is an attempt to show the importance of proximity to, and complementarity with, a major source--Hong Kong--in determining foreign investment inflows and industrial structure in Shenzhen, which is by far the largest SEZ and has attracted the largest amount of foreign investment (see Table 1).(3) Using qualitative as well as statistical analysis, I have conducted a single embedded case study to tell a story about Shenzhen for the period of 1979 to 1994.(4) The major theme of the research is that spatial placement, that is, active state initiatives in site selection, is more important in explaining Shenzhen's performance than is acknowledged in the literature, and such spatial placement has significantly biased the composition of foreign investment inflows and as a result the industrial structure of Shenzhen.

TABLE 1 Selected Indicators of China's Four Special Economic Zones for 1994

Indicators	Shenzhen(a)	Zhuhai	Shantou	Xiamen(b)
Area (sq. kms)	2,021	1,266	8,935	1,516

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Population (million)(c)	3.4	0.6	3.9	1.2
Gross value of industrial & agricultural output (current prices, \$billion), 1991(d)	5.5	1.8	4.3	2.2
Gross value of industrial output (current prices, \$billion), 1991(d)	5.5	1.6	3.0	1.9
Contracted foreign investment (\$billion)		1.27	1.33	1.87
Utilized foreign investment (\$billion)	1.73	0.76	0.77	1.24
Exports (\$billion)	18.31	1.49	2.20	3.39

SOURCES: Ministry of Foreign Economic Relations and Trade, Almanac, 1995; Business China, November 27, 1995, p. 9; Shenzhen Statistical Bureau, Statistical Collection, 1991; and State Statistical Bureau, Statistical Yearbook of China, 1995, and China Urban Statistical Year-book, 1993-94.

NOTE: All data are for city proper.

(a) The original Shenzhen SEZ was 327.5 sq. kms and was expanded in 1993 to include Baoan County.

(b) Foreign investment data for Xiamen only include FDI, not foreign loans and other foreign investments.

(c) Population data are for 1993, with the exception of Shenzhen (1994).

(d) These figures are converted from the Chinese currency (RMB), based on the 1991 exchange rate of RMB 5.43 = US\$1.

During the study period, Shenzhen performed beyond the expectations of the central and local governments in attracting foreign investment. By 1994 Shenzhen had already utilized more FDI (close to \$5.35 billion) than the targeted amount for the year 2000 (\$1.50 billion), and the total amount of utilized foreign investment was close to \$7.71 billion. The inflows grew very rapidly, especially after 1991 (see Figure 1). A close look at the sources reveals that the success of Shenzhen in attracting foreign investment can be largely accounted for by the predominance of Hong Kong investment (see Table 2). In the period 1986 to 1994, a total of \$1.45 billion worth of foreign investment was contracted, 78.1% of which was with Hong Kong investors. Why is Shenzhen so attractive to them? I believe it is a positive function of proximity in physical, economic, cultural, and political terms. Based on complementary factor endowments, Shenzhen offers necessary land and labor for Hong Kong industries seeking relocation to increase profitability and maintain competitiveness. Hong Kong, on the other hand, provides Shenzhen with services in trade and finance. Cultural proximity, reflected in shared ancestry and language, enables many Hong Kong businesspeople to use their kinship and networks for the benefit of their investment, and familiarity with the culture and conduct of business on the mainland also enables them to transcend some formal barriers. Because of such cultural proximity, Hong Kong has long been used as a "middleman" by other countries, particularly those in the West, in investment as well as technology-transfer projects. These economic and cultural ties have been reinforced by a political connection: Hong Kong returning to Chinese sovereignty on July 1, 1997.

[Figure 1 ILLUSTRATION OMITTED]

[TABULAR DATA 2 NOT REPRODUCIBLE IN ASCII]

Does proximity to Hong Kong bias the composition of the foreign investment inflows to Shenzhen and dictate Shenzhen's industrial structure? I intend to show that Hong Kong investment during the study period was confined to low-tech and labor-intensive activities. Such a result can be largely accounted for by the nature of Hong Kong's industrial economy, as the major industries in Hong Kong itself were low-tech and labor intensive. In addition, lacking a strong industrial base and

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modernized infrastructure, the only advantages Shenzhen could offer were cheap land and unskilled labor. Faced with limitations in skills and well-trained management staff, investors would naturally establish labor-intensive, assembly-type industries with rudimentary technology, which further limited the zone's attractiveness to high-tech industries. This pattern of investment led to an industrial structure, particularly for the exporting industries in Shenzhen, that mirrored Hong Kong in the 1970s. In the following sections, I look first at the proximity and complementarity between Hong Kong and Shenzhen in the four dimensions, elaborating on the economic and cultural linkages. Then I see how such proximity and complementarity have affected Shenzhen's foreign investment inflows and subsequently its industrial structure. The article concludes with some reflections on the relationship between Shenzhen and Hong Kong.

Proximity and Complementarity

According to traditional theory, the primary factors determining foreign investment inflows, particularly those in labor-intensive industries, are labor costs and skills, domestic market potential or level of economic development, and government policies. I argue that these factors are not sufficient to explain the predominance of Hong Kong investment in Shenzhen, as investors from other sources are not equally attracted. Labor costs could not be a primary factor as other countries have similar labor requirements for investment. This is further confirmed by the fact that a large amount of Hong Kong investment has been in electricity (21%) and hotels and real estate (11%), projects that often involve a very low level of labor inputs. Nor could the local policy environment, or government policies, be the primary attraction, for Hong Kong investors have received the same incentives as other investors including tax exemptions and tax holidays, duty-free imports for inputs used in export production, relaxed foreign exchange controls, and reduced administrative procedures. Similarly, domestic market potential appears not to be essential for Hong Kong investors as they, together with others, are given very limited access to this market. All foreign enterprises are required to export over 75% of their output value. Only with government approval could they sell more products on the domestic market, often as import substitutes.

Having excluded labor costs, government policies, and domestic market potential as the primary factors, it appears that the most important factor underlying Shenzhen's attraction to Hong Kong is the proximity and complementarity between them in physical, economic, cultural, and political terms. Shenzhen is situated next to the New Territories of Hong Kong, separated only by the Shenzhen River. Following the simplified entry/exit procedures, Hong Kong workers and investors could apply for multiple-entry visas. In addition, new entry/exit ports have been established at the border with Hong Kong, and a new passenger line operating between Hong Kong and Shekou in Shenzhen(5) allows Hong Kong businesspeople to commute easily on a day-to-day basis to supervise their branch facilities or joint ventures in Shenzhen. This proves to be a unique advantage because of large savings in the costs of stationing expatriate staff in Shenzhen. According to an estimate by a U.S. joint venture manager, such costs could easily go up to a quarter million dollars per year per expatriate. The need for management supervision by foreign investors was especially strong during the early years when qualified management staff with appropriate technical training was hard to come by in Shenzhen and China. In addition, physical proximity has made it convenient for Hong Kong investors to coordinate supplies of components and parts. For instance, if there were a breakdown in Shenzhen, spare parts from Hong Kong could be obtained within an hour and fifteen minutes. Such convenience is particularly valuable for investors because China still lacks an integrated transport network. The physical proximity also provides Shenzhen's foreign investors with access to Hong Kong's quality producer services--design, marketing, training, consulting, after-sale services, banking, and insurance.

Economic and cultural ties, elaborated below, are reinforced by the aforementioned event of Hong Kong's return to Chinese sovereignty. In the Sino-British Joint Declaration of 1985, China promised to maintain Hong Kong's capitalist system and way of life for 50 years after 1997 under the principle of "one country, two systems." Beijing hoped to use economic interaction to facilitate eventual political reunification, and the creation of SEZs was part of its efforts to encourage commercial relations with Hong Kong. Hong Kong, on the other hand, regarded economic ties with the mainland as a means of cushioning its return to Chinese sovereignty in that Beijing realizes the importance of preserving the territory's political viability and economic prosperity throughout the transition. So for strikingly different motives, political proximity across the border has accompanied an increasing level of economic cooperation and investment flows from Hong Kong.

This political dimension helps explain why Taiwan investment did not come to the Xiamen SEZ in large quantities during the same period, although the two shared physical, economic, and cultural proximity similar to that between Hong Kong and Shenzhen. The "one country, two systems" idea has also been proposed by China as a way to unite with Taiwan, but it remains unacceptable to the latter.(6) Given the long-standing rivalry, Taiwan has kept many restrictions on investment

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and trade links with the mainland. Investment in China via third-country subsidiaries was only allowed after 1986, although trading began earlier. It has been limited primarily to labor-intensive industries as investment in high-tech and heavy industrial projects has been prohibited. In 1992 Taipei finally took an important step by removing the requirement that firms had first to establish subsidiaries in third countries. Contrary to Hong Kong's motives, the interest in promoting economic and cultural ties with the mainland has been seen by Taipei as an alternative to political reunification, not as a means of achieving it.

Economic Complementarity

The most important element here lies essentially in the high level of complementarity in factor endowments, in both natural and human resources. Experience has proven that highly favorable factor-resource conditions exist for complementary development and inter-territorial division of labor under outward processing arrangements, leading to dynamic economies of scale that are mutually beneficial. To crowded Hong Kong, Shenzhen offers space, labor, and energy for the expansion of its industries, services, and tourism. Although China has a large reserve of some natural resources, it is really not a resource-rich country, especially in per capita terms. But land is relatively abundant and inexpensive compared to Hong Kong. The most important advantage of Shenzhen is its human resources--the availability of a large reserve of low-cost and disciplined labor. The majority of this labor force is unskilled or at best semiskilled, though most workers have had elementary education. This reserve mainly consists of rural surplus labor but excess workers from state enterprises have joined the ranks recently. Manufacturing wages in Shenzhen are much lower than those in Hong Kong due to differences in quantity and quality of the labor force as well as capital investment per worker. Given its special status, Shenzhen has also been able to tap into China's pool of gifted and skillful workers.

For its part, Hong Kong has strong advantages in capital and in production, management, and marketing skills. It is a major financial center of the East Asian region, with enormous capacity in raising venture capital and syndicated loans. For over three decades, it has specialized in several manufacturing industries with much success, including textiles, garments, electronics, and machinery, and its large trading companies and merchant houses have had extensive experience in world markets. Hong Kong has served as a trading partner, financier, and middleman for China, with many contacts taking place in Shenzhen.⁽⁷⁾ Meanwhile, Hong Kong's rapid industrialization could not have been sustained without supplies of food, water, energy, and raw materials from across the river, generally at prices much lower than world levels.

The close economic ties between Hong Kong and Shenzhen, moreover, can also be seen as the result of industrial relocation based on joint production and a division of labor. Hong Kong was in a special position to take advantage of the opening up of China and the establishment of Shenzhen as an SEZ. Driven by the loss of price competitiveness in light export manufacturing resulting from high costs of land and labor, the manufacturing sector in Hong Kong began to undergo restructuring in the 1970s, particularly in the textiles and clothing industries. Such restructuring mainly took the form of production relocation to lower-cost countries such as Thailand, Indonesia, and China. Shenzhen became an expansion outlet for Hong Kong's industries and the timing could not have been more perfect. The availability of outward processing facilities in Shenzhen made it possible for Hong Kong to adopt a structural change from domestic exports to re-exports in order to maintain their robust growth. The lower production costs in Shenzhen have also helped to maintain the competitiveness of Hong Kong's exports in the world market. A division of labor between Hong Kong and Shenzhen has developed as a result of such industrial relocation, and Hong Kong's gain has been substantial. Labor costs in Shenzhen are 50% to 70% lower and factory rent is only about one-third that of Hong Kong. With the move of labor-intensive production facilities or processes to Shenzhen, Hong Kong firms have concentrated on the more skill-intensive processes of design, testing, marketing, and technical support. Shenzhen has benefited from the large amount of investment coming from Hong Kong, making possible the zone's rapid industrialization, and although industrial processing does not involve high technology, some transfer is still tangible.

Another trend is the increasing use of Hong Kong's financial services by Shenzhen. Hong Kong's financial industry experienced substantial growth in the 1970s and 1980s, and with the development of local-serving and internationally oriented banking and other services, it has become a genuine financial center next only to New York, Tokyo, and London. The growth of the financial services industry has been facilitated by the relocation of Hong Kong's manufacturing industries, which left a pool of available labor in a tight labor market. In addition to its direct investment in the zone, Hong Kong has arranged or advised on much of Shenzhen's external financing needs. For instance, Hong Kong is the center for raising between 80% and 90% of China's syndicated loans.⁽⁸⁾ In 1987 Chinese enterprises began raising capital on

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the Hong Kong stock market and by early 1994 a number of those firms had been listed. Portfolio investment also started to cross the border following the introduction of special B shares in 1992 solely for purchase by foreigners on the Shenzhen Stock Exchange. In general, foreign and Chinese enterprises in Shenzhen view Hong Kong as a good place to issue both short- and medium-term notes and certificates of deposit, and to obtain advice on arranging long-term loans. Hong Kong also serves as a bridge to Tokyo and the European markets for larger financing needs.

Cultural Proximity

It is clear from the above discussion that the economic cooperation between Hong Kong and Shenzhen, and China as a whole, has been driven largely by market forces and functions. It therefore appears to be rather informal when compared to such blocs as the Association of Southeast Asian Nations (ASEAN) and the North American Free Trade Agreement (NAFTA), where institutional integration has played an important role in the intensified trade and investment links among member countries. But research shows that institutional arrangements such as tariff preferences may not be important for economic intergration.⁽⁹⁾ Economic integration implies the lowering of transaction costs, and tariffs are often only a small part of such costs. Other human factors including cultural affinity and government regulations may prove to be more important. In the case of Hong Kong and Shenzhen, cultural and historical affiliations have significantly facilitated mutual development.

Shared ancestry is the most important element of the cultural proximity. According to official estimates, ethnic Chinese made up close to 98% of Hong Kong's population of 5.8 million in 1988, and about 40% of the present population was actually born in China, mainly Guangdong Province.⁽¹⁰⁾ There are very strong links at the village and kinship levels, and the same dialect--Cantonese--is spoken in Hong Kong and Shenzhen as well as Guangdong but not elsewhere on the mainland. Many people in Hong Kong consider investment in Shenzhen as both a patriotic duty and a convenient way to help their relatives or friends. The tendency of Hong Kong businesses to rely on kinship network and personal ties in overseas operations can be seen in other examples such as their investment in Mauritius. Lower-cost labor and exemption from U.S. clothing import quotas provides some incentives in this island country for Hong Kong investors, but the most important draw is the existence of a small ethnic Chinese community. A few Hong Kong firms acted as pioneers and others followed; before long Hong Kong became the largest foreign investor in Mauritius's clothing industry.

As a result of the kinship network, Hong Kong investors have been able to obtain more favorable concessions than others from local authorities in Shenzhen, often not on paper but nonetheless real. The difference lies in the availability of the pre-existing social connections and the skilled use of reciprocal gift exchange, which requires familiarity with the local culture. The kinship network can be used to access local officials and develop new social connections, and these are reinforced through the system of exchanging gifts, either in material form or in services. In return, Hong Kong businesspeople receive favorable treatment by local officials in the form of information about, or access to, higher authorities or speedy handling of contract negotiations and approval. Such a gift exchange system usually works to the advantage of Hong Kong investors since local officials feel obligated to provide concessions after receiving gifts. Many investors from the West view this as corruption but Chinese, including overseas Chinese, do not necessarily see it in the same way as they take for granted that a big gift is needed to do business and maintain good relations.⁽¹¹⁾

Social connections may be instrumental in protecting Hong Kong investment from many problems in production, personnel management, and marketing. Under normal circumstances, a network of friends, relatives, and social connections conveys a sense of security for Hong Kong businesses that other investors may only obtain through more formal, official channels. However, the gift exchange system is not without disadvantages. It can be problematic for investors to decide among many local officials, provide the needed concessions, and face extenuated gift requests once the system becomes institutionalized. This system over the years has also led to an increasing number of Chinese officials taking large bribes and committing economic crimes.

Investors in Shenzhen from other countries are more likely to encounter such difficulties as cultural and language barriers, differences in negotiating practices, administrative bureaucracies, incompatibility in enterprise and labor management, different perceptions of job definition, and an inadequate legal infrastructure for business as well as the cultural bias against litigation. Ever since Hong Kong was acquired by the British to serve as a trading post to facilitate links with China, no major attempt has been made to isolate Hong Kong from China. As a result, local customs and traditions have been kept largely intact, including many business practices. One key common feature is management style: its characteristics include respect for seniority and hierarchy, group consciousness, importance of saving "face," and importance of personal

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connections (guanxi). Another similarity appears in negotiation practices, which can be typified as slow in decision-making, manipulative in the use of friendship or guanxi, patience, skill in the use of pressure, and persistence in achieving mutual benefit. Hong Kong investors are more apt than others to use social connections and gift exchange to cultivate trust, allowing problems to be resolved as they arise, rather than pursuing lengthy negotiations often experienced by multinationals from other countries. The small scale of Hong Kong-invested enterprises makes them fit well into the bureaucratic society on the mainland. First, small investment projects only need to be negotiated with local authorities, which enables Hong Kong investors to utilize their kinship network and social connections that make negotiation easier, while projects with an investment of over \$30 million must be approved by the central ministries. Second, small-scale enterprises, because of their flexibility, minimize economic risks associated with production in a formerly planned economic system. Research indicates that there is a tendency among Hong Kong investors to set up several small ventures instead of one major venture, so that success is largely dependent upon cultivating good relations with local people.⁽¹²⁾ There is also a preference for establishing joint ventures with collective-owned enterprises and for helping relatives and friends start their own private businesses.

Because of this cultural affinity, firms in many Western countries--and those without formal diplomatic relations with China such as Taiwan and South Korea (before 1993)--have dealt with China via a Hong Kong subsidiary or agent. Quite often the benefits of such practice well exceed the costs of establishing Hong Kong intermediaries. A survey conducted by Thoburn showed that 22% of the joint ventures in Guangdong Province were involved in this form of entry by Western firms.⁽¹³⁾ This implies that the predominance of Hong Kong investment in Shenzhen may be overstated, as some of it could be disguised investment from other countries. Hong Kong has also been an intermediate agent in the process of technology transfer. Through direct investment in the zone, Hong Kong firms bring with them technology they absorbed from the West. Moreover, some multinationals that used to supply inputs for Hong Kong firms now face relocation of their customers to the mainland seeking lower costs, as in the case of the footwear, toy, and garment industries. Thus, some American chemical companies are moving into China in order to keep their customers, often using their Hong Kong subsidiaries to supervise operations.

Hong Kong-Shenzhen Industrialization

During the study period, industrial direct investment in Shenzhen was largely concentrated in several low-tech, labor-intensive subsectors, including textiles and dyeing, electronics, metal products, consumer electronics, rubber and plastics, garments, and glass products. Electricity and computer and electronic systems were the only exceptions among the top ten invested subsectors. Two manufacturing industries were the main beneficiaries of FDI inflows: the textiles and garment industries together received over 10% of all foreign investment, and electronics and consumer electronics over 8%. This pattern resembled that of many EPZs in Asia but unlike many zones that formed an industrial monoculture, Shenzhen was able to attract investment to other subsectors. The electronics industries in Shenzhen attracted a fairly significant amount of direct investment from Japan (about a third), and in the case of consumer electronics from the Netherlands (about 12%).⁽¹⁴⁾

Most foreign invested industrial enterprises in Shenzhen were characterized by assembly operations and simple processing, with foreign firms sending raw materials or parts and components to the zone and exporting products back home or to a third country for further processing into final goods. This was demonstrated by the surge of capital goods imports from Hong Kong, the rise of re-exports through Hong Kong, and the low value-added of these enterprises. It was estimated that about three-fourths of Hong Kong's domestic exports to the mainland were products shipped for further processing. Meanwhile, Hong Kong's re-exports of Chinese origin to overseas markets expanded at a 26% annual rate between 1980 and 1992. Almost 80% of such re-exports were products of outward processing arrangements with Hong Kong firms.⁽¹⁵⁾ Shenzhen alone accounted for 41.9% of all imports from China to Hong Kong related to outward processing between 1989 and 1994 (see Table 3). The case of a joint venture of U.S. origin producing electroplating materials offers a good example. The venture would take over semiprocessed products, which were 50% to 80% finished by the Hong Kong subsidiary of the U.S. firm, and complete the rest (personal interview).

TABLE 3 Imports from China Related to Outward Processing by Processing Areas in China, 1989-1994

Processing Areas	1989	1990	1991	1992
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Estimated Value of Outward				
Shenzhen	50.28	63.73	84.32	108.14
Guangdong Province	106.09	137.03	186.60	236.61
Other provinces in China	7.49	8.08	10.79	17.40
Overall	113.58	145.10	197.38	254.10
Share (in percent)				
Shenzhen	44.3	43.9	42.7	42.6
Guangdong Province	93.4	94.4	94.5	93.1
Other provinces in China	6.6	5.6	5.5	6.8
Overall	100.0	100.0	100.0	100.0

Processing Areas	1993	1994	1989-1994
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Estimated Value of Outward Processing Trade (HK\$ billion)			
Shenzhen	124.30	139.52	570.29
Guangdong Province	275.53	335.18	1,277.04
Other provinces in China	19.67	19.74	83.17
Overall	295.20	354.91	1,360.27
Share (in percent)			
Shenzhen	42.1	39.3	41.9
Guangdong Province	93.3	94.4	93.9
Other provinces in China	6.7	5.6	6.1
Overall	100.0	100.0	100.0

SOURCE: "Trade Involving Outward Processing in China, 1989-1994," Hong Kong Monthly Digest of Statistics, June 1995, Census and Statistics Department, Hong Kong.

NOTE: Refer to the importation of processed goods from China of which all or part of the raw materials or semimanufactures have been under contractual arrangement exported from or through Hong Kong to China for processing.

Net output ratios of these enterprises were very low, ranging between 20% to 30%. As a ratio of net output value to gross output value, net output ratio is an approximate indicator of value-added. A low ratio shows that the input of the local industry was mainly labor, which performed assembly and processing functions dictated by the technology embedded in the production lines. This was particularly true for several major manufacturing industries in the zone that received large amounts of foreign investment inflows, including electronics, textiles and dyeing, metal products, and rubber and plastics. Only foreign enterprises in two subsectors, pharmaceuticals and crafts, had net output ratios higher than 30% in 1991. As a whole, foreign industrial enterprises had a lower net output ratio than all industrial enterprises in Shenzhen.

The sample of 1,621 foreign enterprises provides an in-depth look at the composition and sectoral distribution of direct investment from each source between 1979 and 1990 (see Table 4). With 1,427 enterprises, Hong Kong's dominance in direct investment can be clearly seen. An important finding is that investment from all three major sources--Hong Kong, Japan, and the U.S.--was largely concentrated in such low-end, labor-intensive manufacturing industries as electronics, consumer electronics, chemicals, metal products, textiles and dyeing, garments, machinery, rubber and plastic products, and glass products. Hong Kong invested in the widest range of sectors and industries--66--among all participating countries. Japanese direct investment was highly concentrated in the electronics industries; close to half of Japan's total registered investment went into electronics and consumer electronics, which amounted to over 30% of FDI in those two industries. The projects Japanese investment went to were larger than most, and its electronics projects were particularly so, averaging about \$8 million. These included joint ventures by such major Japanese electronics manufacturers as Hitachi, Sanyo, and Crown. Production in Shenzhen has been very profitable for both Hitachi and Sanyo, and Sanyo has established several joint ventures with different Chinese partners there. The success of these ventures also attracted more Japanese investment to Shenzhen. U.S. investment has been focused narrowly, like that of Japan, and many projects were in fact sponsored by Chinese-American firms.

TABLE 4 Industrial Distribution of Hong Kong, Japanese, and U.S. Direct Investment in Shenzhen, 1979-1990 (ranked by registered investment, cumulative)

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Rank	Manufacturing Industry	Number of Projects	Registered Investment
			Amount (\$)
Hong Kong			
1	Textiles & dyeing	122	169,639,846
2	Metal products	72	82,294,758
3	Garments	128	79,071,908
4	Rubber & plastics	79	74,828,315
5	Electronics	47	67,634,123
6	Computer & electronic systems	51	49,220,408
7	Consumer electronics	43	48,439,547
8	Glass products	17	44,233,346
9	Electrical machinery	48	42,352,250
10	Machinery	57	36,994,200
	Top 10 total	542	571,128,905
	Hong Kong total (sample)	1,427	1,900,132,195

Japan

1	Consumer electronics	5	38,918,629
2	Electronics	4	33,639,492
3	Chemicals	1	5,852,592
4	Printing	2	4,806,867
5	Nonferrous metal	1	4,618,485
6	Computer & electronic systems	5	4,409,935
7	Metal products	1	2,982,268
8	Machinery	5	1,331,925
9	Electrical & lighting tools	1	1,262,762
10	Rubber & plastics	1	593,379
	Top 10 total	19	95,228,267
	Japan total (sample)	40	147,604,461

U.S.

1	Glass products	1	17,282,948
2	Chemicals	7	17,233,888
3	Computer & electronic systems	12	15,297,997
4	Beverage	1	6,563,574
5	Oil refining	1	6,300,072
6	Metal products	5	5,922,010
7	Rubber & plastics	2	5,491,671
8	Machinery	2	3,772,690
9	Textiles & dyeing	1	3,097,797
10	Garments	6	2,955,422
	Top 10 total	29	74,092,161
	U.S. total (sample)	69	118,907,548

Rank	Manufacturing Industry	Registered Investment	
		% of Each Source	Average Project Size (\$)
Hong Kong			
1	Textiles & dyeing	8.9	1,390,491
2	Metal products	4.3	1,142,983
3	Garments	4.2	617,749
4	Rubber & plastics	3.9	947,194
5	Electronics	3.6	1,439,024
6	Computer & electronic systems	2.6	965,106

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7 Consumer electronics	2.5	1,126,501
8 Glass products	2.3	2,601,962
9 Electrical machinery	2.2	882,339
10 Machinery	1.9	649,021
Top 10 total	30.1	1,053,743
Hong Kong total (sample)	100.0	1,331,557

Japan

1 Consumer electronics	26.4	7,783,726
2 Electronics	22.8	8,409,873
3 Chemicals	4.0	5,852,592
4 Printing	3.3	2,403,433
5 Nonferrous metal	3.1	4,618,485
6 Computer & electronic systems	3.0	881,987
7 Metal products	2.0	2,982,268
8 Machinery	0.9	266,385
9 Electrical & lighting tools	0.9	1,262,762
10 Rubber & plastics	0.4	593,379
Top 10 total	64.5	5,012,014
Japan total (sample)	100.0	3,690,112

U.S.

1 Glass products	11.7	17,282,948
2 Chemicals	11.7	2,461,984
3 Computer & electronic systems	10.4	1,274,833
4 Beverage	4.4	6,563,574
5 Oil refining	4.3	6,300,072
6 Metal products	4.0	1,184,402
7 Rubber & plastics	3.7	2,745,836
8 Machinery	2.6	1,886,345
9 Textiles & dyeing	2.1	3,097,797
10 Garments	2.0	492,570
Top 10 total	50.2	2,554,902
U.S. total (sample)	100.0	1,723,298

SOURCE: Shenzhen Bureau of Economic Development and Shenzhen Information Center, Directory of Foreign Invested Enterprises in Shenzhen, 1991.

As the largest source of investment, Hong Kong had a significant impact on the composition of the flow of foreign investment to Shenzhen, particularly in manufacturing industries. With the exception of consumer electronics and chemicals, Hong Kong investment accounted for over 60% of FDI in all of Shenzhen's top ten invested manufacturing industries (see Figure 2). Specifically, over 96% of textiles and dyeing, 78% of metal products, 86% of rubber and plastics, 95% of garments, and 85% of electrical machinery joint ventures in the zone were financed by Hong Kong investors.⁽¹⁶⁾ All were low-tech, labor-intensive industries and four--textiles and dyeing, metal products, garments, and rubber and plastics--were the top areas invested by Hong Kong. These four were also among Hong Kong's top six manufacturing industries (measured by gross output value) at the end of the 1970s, the other two being electrical machinery and clocks and watches. Clearly, Hong Kong's industrial structure was the determining factor that led to the dominance of Hong Kong investment in Shenzhen's manufacturing industries and the technological contents of such investment.

Hong Kong began industrializing in the late 1950s, driven largely by demand from U.S. mass merchandisers. Because of the small domestic market and limited resource endowment, Hong Kong's manufacturers from early on took the route of export processing, producing goods to others' designs and quality standards at minimum costs and maximum efficiency. Adopting a strategy of specializing in only a few of the several stages of the manufacturing process, they found a niche in the global structure of several labor-intensive industries by developing great proficiency in the management of large batch and mass production technology. A combination of consistent economic policies of free enterprise and free trade, an industrious work force, a well-founded industrial infrastructure, an excellent network of worldwide transportation and

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communications, and a fast-growing export market made Hong Kong a leading manufacturing export center by the 1970s.

Export orientation tends to lead to concentration in a rather narrow range of industries. Hong Kong's factor resource endowment has given a comparative advantage to light and labor-intensive manufacturing industries producing mainly consumer goods. In 1977, Hong Kong's top six subsectors in terms of gross output were the labor-intensive industries mentioned previously, and five of these six accounted for over 76% of manufacturing sector employment in 1979.⁽¹⁷⁾ The textiles and garment industries were Hong Kong's largest employers of the total manufacturing work force in both 1979 (42%) and 1991 (44%), and they were also the largest exporting industries, turning out between 40% and 43% of domestic exports during the 1980s. Electronics was the second largest exporter and employer, with a share of around 25% of domestic exports and 10% in manufacturing employment.⁽¹⁸⁾ Domestic exports consisted almost entirely of manufactured goods, and the majority were low value-added products tailored to the lower end of markets and mainly from two subsectors, electronics and textiles and garments.

By the late 1970s and early 1980s, Hong Kong's competitiveness in consumer goods exports was being seriously challenged by several other lower-cost developing countries in the region including Thailand, Malaysia, and Indonesia. Rising labor and land costs in Hong Kong indicated that its export-led economy had reached a point where further growth could not depend solely on domestic factor inputs. Coincidentally, China began its course of opening up at almost the same time. This made Shenzhen, as well as south China, the perfect destination for Hong Kong's industrial relocation, and labor-intensive industries and/or low-end processing operations immediately made the move.

That domestic exports of producer goods from Hong Kong to China outstripped those of consumer goods was a reflection of the increasingly important role of Hong Kong-based outward processing in the mainland. Between 1989 and 1994, over 75% of all exports from Hong Kong to China in four commodity groups (timepieces, garments, toys, and textiles) were related to outward processing in China (see Table 5), and most of these industries were again Hong Kong's top invested areas in Shenzhen. It was reported that most electronics and toy manufacturing had been relocated to China by the early 1990s. While labor-intensive industries moved production to Shenzhen, technology- and knowledge-intensive stages such as designing, testing, and marketing tended to be kept in Hong Kong. Moreover, the manufacturing that stayed in Hong Kong started moving decisively away from labor-intensive production into high value-added exportable products that could compete on quality.⁽¹⁹⁾ Instead of expanding horizontally as in the past, it had to move vertically through raising skill levels and productivity.

TABLE 5 Total Exports to China for Outward Processing by Commodity Group, 1989-1994

1989- Share

Processing Areas	1989	1990	1991	1992	1993
Estimated Value of Outward Processing Trade (HK\$billion)					
Textiles	23.10	27.98	35.62	43.66	44.28
Machinery & electrical equipment	10.39	11.53	13.92	20.55	23.99
Plastics	8.53	10.79	13.20	16.78	17.78
Audio & video products	9.45	11.18	11.69	12.70	16.37
Metal products	3.84	4.55	6.83	8.24	10.40
Clocks & watches	4.02	5.17	5.95	7.21	7.91
Garments	2.26	2.65	3.52	4.59	5.26
Toys	1.74	1.93	2.02	2.39	2.62
Others	13.53	16.14	21.18	25.52	31.57
Overall	76.86	91.92	113.93	141.64	160.18

Estimated Proportion of Outward Processing Trade (percent)(a)

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Clocks & watches	96.2	97.1	97.2	98.1	98.6
Garments	85.8	87.4	87.6	86.8	89.1
Toys	87.5	89.9	86.2	87.5	88.8
Textiles	74.1	77.4	78.2	82.7	81.8
Plastics	68.1	75.7	64.8	67.6	67.0
Audio & video products	69.1	75.2	69.9	64.6	56.0
Metal products	44.6	52.7	53.7	40.8	40.4
Machinery & electrical equipment	32.8	39.6	34.7	34.1	30.8
Others	35.1	37.6	36.9	32.9	30.4
Overall	53.0	58.8	55.5	52.4	47.9

Estimated Value of Outward Processing Trade (HK\$billion)

Processing Areas	1994	1994	(%)
Textiles	51.77	226.41	29.6
Machinery & electrical equipment	28.20	108.58	14.2
Plastics	20.66	87.74	11.5
Audio & video products	20.58	81.97	10.7
Metal products	11.54	45.40	5.9
Clocks & watches	8.23	38.49	5.0
Garments	6.04	24.32	3.2
Toys	2.38	13.08	1.7
Others	31.78	139.72	18.2
Overall	181.18	765.71	100.0

Estimated Proportion of Outward Processing Trade (percent)(a)

Clocks & watches	98.2	97.6
Garments	87.7	87.4
Toys	83.5	87.2
Textiles	78.4	78.8
Plastics	62.3	67.6
Audio & video products	57.1	65.3
Metal products	42.5	45.8
Machinery & electrical equipment	33.8	34.3
Others	27.3	33.4
Overall	47.7	52.6

SOURCE: "Trade Involving Outward Processing in China, 1989-1994," Hong Kong Monthly Digest of Statistics, June 1995, Census and Statistics Department, Hong Kong.

NOTE: Total exports to China for outward processing by commodity group for this period refer to the exportation of raw materials or semimanufactures from or through Hong Kong to China for processing with a contractual arrangement for subsequent re-importation of the processed goods into Hong Kong.

(a) Indicates the share of estimated value of outward processing trade in the value of overall trade in each commodity group.

Hong Kong's manufacturing industries have been characterized by a large number of small- and medium-sized firms, indirectly confirmed in Shenzhen by the fact that Hong Kong investment produced the smallest contract (\$0.7 million) from any major source and was well below the zone average. By comparison, Japanese and Singaporean investment resulted in contracts averaging \$3.0 and \$3.1 million, respectively. Hong Kong's small size limited the amount of land available for industry and precluded the development of large-scale or land-intensive industries. Most of Hong Kong's small firms were

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family or individual businesses, often operating from premises in multi-office buildings, with start-up capital coming from personal or family savings and private borrowing. Many were devoted almost totally to production, to the exclusion of marketing or research and development (R&D). This was made possible by Hong Kong's vibrant marketing network of trading companies and merchant houses with extensive experience in the world's markets.

Hong Kong's technological capabilities were limited by the small size of the capital goods sector, whose development was severely constrained by the territory's limited land and natural resources, as well as by the small size of firms.(20) Moreover, in accordance with its laissez-faire economic policies, the Hong Kong government never actively undertook industry-specific R&D nor the development of strategic industries. As a result, Hong Kong's technological development lagged well behind that of Taiwan and South Korea by the 1980s. Hong Kong firms rarely exported technology in the form of turnkey projects or licensing agreements as their technology was relatively unsophisticated. Technology tended to be transferred through direct investment in the form of processes, products, and software including management, marketing, and training. Hong Kong firms also were usually not innovators and their technological development can at best be considered intermediate. Much of the machinery and equipment used in joint production or processing in Shenzhen was either imported from industrialized countries or taken from the factories of industries phased out in Hong Kong. Thus, technology transfer from Hong Kong to Shenzhen through industrial processing while tangible was very limited in sophistication.

The composition of Hong Kong investment subsequently affected Shenzhen's industrial structure, particularly in the export sector. For example in 1989, a number of manufacturing industries exported more than 75% of their output value,(21) and three of these--garments, textiles, and rubber products--were Hong Kong's top invested areas. On the other hand, exports from industries with higher levels of capital and technology, such as chemicals, oil refining, and communications equipment, amounted to less than 70% of their output value. A number of manufacturing industries that received significant foreign investment--including electronics, metal products, and consumer electronics--also exported less than 70% of their output and so produced comparatively more for domestic sales. The case of the electronics industry is particularly illustrative, as about only one-third of its output value in the late 1980s was exported.(22)

Some service industry investment--mainly from producer services such as banking, insurance, consulting, and marketing--followed manufacturing industries to Shenzhen in an attempt to keep their old customers, a reflection of Hong Kong's changing economic structure. Manufacturing had been for many years both the territory's largest employer and its most important sector, but in the 1980s it lost its dominant position. Now, the tertiary sector accounts for almost 77% of output and 68% of employment, and Hong Kong is becoming the most service-oriented economy in the world. The scope of such service investment in Shenzhen, however, had been limited because those sectors were closed to foreign investment until the late 1980s. Shenzhen's growing income levels nonetheless have attracted Hong Kong investment in some consumer services such as retail, catering, real estate, tourism, and construction, as demonstrated by the absolute dominance of Hong Kong investment in the zone's real estate and hotel sectors.

Summary and Reflections

The success of Shenzhen in attracting a large quantity of foreign investment can be largely accounted for by its ability to attract Hong Kong investors. What Shenzhen uniquely offers Hong Kong firms is a production site right next door with long-established trading and economic links, people who share the same language and culture, and a common political future. This proximity is the primary determining factor underlying Shenzhen's success, and the Chinese government's decision to establish Shenzhen as an SEZ has been a winner.

Proximity to advanced economies with higher factor costs such as Hong Kong favors the development of SEZs over that of China's other cities. Without Hong Kong investment, Shenzhen might still be a small, backward town with little industrial development. It certainly would not have seen the rapid growth of industries that have been major benefactors of Hong Kong investment. Shenzhen's success has shown that joint production with an advanced economy such as Hong Kong can be a viable strategy for economic growth. This proximity also contributes to Shenzhen's popularity among investors from other countries as they can take advantage of the financial, trading, and producer services offered in Hong Kong but absent in China.

Historical affinity is also an important factor in attracting foreign and Hong Kong investment. Hong Kong investors enjoy abundant social connections in Shenzhen based on kinship networks and often obtain more favorable concessions from

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local authorities. Familiarity with business conduct in Shenzhen also enables them to transcend some formal barriers to investment and trade. That investors see advantages in historical ties can be seen in other cases from around China. When 14 coastal open cities were so designated in 1984, for example, foreign companies in large part returned to those places with which they had ties in the past: the Japanese flocked to Dalian; the Americans and Europeans to such former treaty ports as Shanghai and Tianjin; and the South Koreans to neighboring Shandong Province.

The proximity to Hong Kong has also significantly biased the composition, as well as the technological contents, of foreign investment inflows to Shenzhen. Hong Kong investment predominated in those sectors that had been important industries in Hong Kong; the five Shenzhen manufacturing industries that felt the greatest impact of Hong Kong investment were the same industries that in Hong Kong had had the most investments and had been the top producers. The causal relationship here is very convincing: Shenzhen's foreign invested enterprises, much like Hong Kong firms a decade earlier, came in time both to specialize in a few stages of the manufacturing process and be dominated by low-tech and labor intensive light industries.

It appears that Shenzhen's success in attracting foreign investment, particularly from Hong Kong, is not coming at the expense of other localities and should not be considered a zero-sum game for the country as a whole. The opening up of China and the creation of SEZs in the late 1970s coincided with the concurrent need of Hong Kong's manufacturers to restructure and relocate. Investment associated with this relocation could have gone to other countries in the region with low costs such as Thailand, and Malaysia, but Shenzhen's geographical, economic, cultural, and political proximity made it the choice of Hong Kong firms. In other words, Shenzhen was able to capture some investment flows from Hong Kong that otherwise might not have come to China at all. Indeed, despite its special, open policy, Shenzhen was not able to lure many investors from other sources.

As China opens further, Shenzhen's original role is nearing an end, and it needs to redefine its functions and seek new roles. It is already becoming a modern and relatively cosmopolitan city, so it will be unacceptable for it to turn into an industrial backyard or appendage for Hong Kong and other regional economic centers. Above all, it is important that Shenzhen maintain its export orientation because firms involved in competitive struggles for overseas markets are forced to become efficient, and this efficiency will be transmitted back to its domestic suppliers of inputs and gradually to the economy as a whole.

Hong Kong's restoration to China on July 1, 1997, has some significant implications for Shenzhen. Shenzhen's officials have two alternatives: accept the status quo or expand on the administrative line of integration with Hong Kong. Many are concerned that the second option will distance Shenzhen further from the rest of the country, which presents a large market and source of labor. Such concerns are justified since the next 50 years may be merely transitional for Hong Kong and its special status may fade as China opens completely. It is very likely that the division of labor between Hong Kong and Shenzhen in joint production will persist as long as labor and land cost differentials remain sizable. But as industries grow and mature, production costs rise, and land becomes scarce in Shenzhen, Hong Kong foreign investors will look further north for outlets for expansion. This move is already taking place, with the rise of Dalian as a major contender for foreign investment being the most noticeable. The strong industrial base, large market potential, abundant natural resources, better quality of labor force, and strong technological capabilities of the lower Yangtze River Delta region, which embraces the cities of Shanghai, Nanjing, and Ningbo, make it another major attraction for foreign investors.

At the Guangdong provincial level, the cities of Guangzhou, Zhuhai, Shantou, Dongguan, and Foshan have all experienced increasing levels of foreign investment. To compete effectively with other rising coastal open cities with substantial industrial bases, Shenzhen will need both to widen and deepen its industrial structure. As international experience shows, a city is most vulnerable economically when its economy is dominated by a few industries with a relatively narrow specialization. When those industries enter a decline because of either a secular trend or loss of competitiveness, the effect on the urban economy is quickly felt. Shenzhen may be able to avoid such a fate since it has already branched out into some higher-end manufacturing activities. An industrial targeting policy is already under discussion for Shenzhen and, once implemented, will push out many labor-intensive assembly operations.

(1.) For a full discussion on EPZs in Asia, see Hooshang Amirahmadi and Weiping Wu, "Export Processing Zones in Asia," *Asian Survey* 35:9 (September 1995), pp. 828-49. Note: All dollar figures in this article are US\$ unless otherwise indicated.

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(2.) See, for example, Xiangmin Chen, "The Changing Role of Shenzhen in China's National and Regional Development in the 1980s," in *China in Transition: Economic, Political, and Social Developments*, ed. George T. Yu (Lanham, Md. University Press of America, 1993); Thomas M. H. Chan and Reginald Yin-Wang Kwok, "Economic Development in the Shenzhen Special Economic Zone: Appendage to Hong Kong?" *Southeast Asian Journal of Social Science*, 19:1 & 2 (1991), pp. 180-205; David Wall, "Chinese Economic Reform and Opening-Up Process: The Role of the Special Economic Zones," *Development Policy Review* 11 (1993), pp. 243-60; Josephine Smart and Alan Smart, "Personal Relations and Divergent Economies: A Case Study of Hong Kong Investment in South China," *International Journal of Urban and Regional Research*, 15:2 (1991), pp. 216-33.

(3.) Foreign investment consists of foreign loans, foreign direct investment (FDI, including equity joint ventures, contractual joint ventures, and wholly foreign-owned enterprises), and other foreign investments (including international leasing, compensation trade, and assembly/processing).

(4.) The empirical work relied upon several methods, including the use of secondary information, in-person and telephone interviews of joint venture managers and Chinese officials, and case studies of enterprises. A time series on foreign investment inflows has been constructed, complemented by a sample of 1,621 foreign enterprises drawn from an official directory.

(5.) This relaxed border control, however, is only for one direction--from Hong Kong to Shenzhen and does not apply to the other direction. Chinese nationals would still have to go through a lengthy process when applying for entry to Hong Kong.

(6.) Randall S. Jones, Robert E. King, and Michael Klein, "Economic Integration between Hong Kong, Taiwan, and the Coastal Provinces of China," *OECD Economic Studies*, no. 20 (Spring 1993), pp. 115-44. For discussions on the political ties, also see Harry Harding, "The Concept of 'Greater China': Themes, Variations, and Reservations," *China Quarterly*, no. 136 (December 1993), pp. 660-86.

(7.) See Yun-Wing Sung, *The China-Hong Kong Connection: The Key to China's Open-Door Policy* (Cambridge: Cambridge University Press, 1991); and Robert F. Ash and Y. Y. Kueh, "Economic Integration within Greater China: Trade and Investment Flows Between China, Hong Kong, and Taiwan," *China Quarterly*, no. 136 (December 1993), pp. 711-45.

(8.) Yun-Wing Sung, *Non-Institutional Economic Integration via Cultural Affinity: The Case of Mainland China, Taiwan, and Hong Kong*, Occasional Paper, no. 13 (Hong Kong Institute of Asia-Pacific Studies, Chinese University of Hong Kong, 1992).

(9.) *Ibid.*

(10.) See Y. P. Ho, *Trade, Industrial Restructuring and Development in Hong Kong* (Honolulu: University of Hawaii Press, 1992); and Leslie Sklair, "Shenzhen: A Chinese 'Development Zone' in Global Perspective," *Development and Change*, 16:4 (October 1985), pp. 571-602.

(11.) See Martin Lockett, "China's Special Economic Zones: The Cultural and Managerial Challenges," *Journal of General Management*, 12:3 (Spring 1987), pp. 21-31.

(12.) Smart and Smart, "Personal Relations and Divergent Economies."

(13.) Chen, "The Changing Role of Shenzhen."

(14.) This is solely attributed to a \$13 million joint venture with the Dutch electronics giant Philips to produce laser TV sets and CD players. For the full story of Philips's penetration in China, see *Far Eastern Economic Review*, 24 September 1992, p. 92.

(15.) Sung, *The China-Hong Kong Connection*; and Jones et al., "Economic Integration."

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(16.) Percentages are calculated using registered investments, not number of projects. Despite the dominance of Hong Kong investment in textiles and garment industries of the zone, it was reported that only about 10% of production in these industries had relocated from Hong Kong to China, compared to most of toys and electronics manufacturing. See Far Eastern Economic Review, 28 April 1994, p. 68.

(17.) John S. Henley and Mee-Kau Nyaw, "A Reappraisal of the Capital Goods Sector in Hong Kong: The Case of Free Trade," *World Development*, 13:6 (June 1985), pp. 737-48; Mee-Kau Nyaw and Chan-leong Chan, "Structure and Development Strategies of the Manufacturing Industries in Singapore and Hong Kong: A Comparative Study," *Asian Survey* 22:5 (May 1982), pp. 449-69.

(18.) Hong Kong Yearbook, various issues.

(19.) This is confirmed by Hong Kong government's manpower projection for 2000 that there will be a surplus of workers with lower secondary education while there will be a shortfall of workers at the upper secondary level. See Edward K. Y. Chen and Raymond Y. C. Tse, "The Hong Kong Economy in the Year 2000," in Tokyo Club Foundation for Global Studies, *The Economic Outlook toward the Year 2000* (Tokyo: Tokyo Club Foundation for Global Studies, 1993).

(20.) There is a general agreement in the related literature on the importance of the capital goods sector in the promotion of technological capabilities in developing countries. See Edward K. Y. Chen, "Hong Kong," in the series on "Exports of Technology by Newly Industrializing Countries," *World Development*, 12:5/6 (1984), pp. 481-90.

(21.) Huozhao Tang, *Shenzhen Ten Years: 1980-1990* (Beijing: Kunlun Press, 1990).

(22.) Chen, "The Changing Role of Shenzhen."

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