

**Hong Kong's Economic Integration with the Pearl River Delta:
Quantifying the Benefits and Costs
Final Report***

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1. Introduction

Hong Kong's economic integration with the PRD (Pearl River Delta) has been highly beneficial for both parties. This study aims to quantify the major benefits and costs of integration to Hong Kong. Since the opening of China in 1979, Hong Kong has been transformed from a low value-added manufacturing center to a higher value-added service hub of an industrialized PRD through outsourcing. Outsourcing generates gains by reallocating resources from lower value-added to higher value-added uses. Besides reallocative effects, integration with the PRD may also affect technical change and innovation and thereby affect long run economic growth in Hong Kong.

The benefits of outsourcing mainly involve the income and employment generated from Hong Kong's exports of goods and services related to the PRD. The costs include frictional unemployment that arises from structural change, and also risks of specialization in higher value-added services. Allocative effects, including benefits and costs, will be quantified in detail. Growth effects are much more difficult to quantify, and the analysis will be more qualitative.

Hong Kong's integration with the PRD involves interactions through the following four types of markets:

- a. Market for goods and services, i.e., trade in goods (domestic exports, retained imports, and re-exports) and services (tourism, trade-related services, transportation, financial services, insurance services, and other services).
- b. Capital market, e.g., direct investment in manufacturing and in real estate.
- c. Labour market, e.g., imports of professionals from the Mainland.
- d. Financial market, e.g., listing of Mainland enterprises in Hong Kong.

Hong Kong's integration with the PRD involves mainly interactions in the first two types of markets as the integration was driven by Hong Kong's investment across the border, and these offshore activities are mainly supported by services from Hong Kong. Interactions through the labour market are heavily restricted by Hong Kong's immigration controls, and interactions through the financial market are tightly restricted by Mainland's foreign exchange controls and regulations of financial markets. The study will focus on interactions

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through the first two types of markets. Analyses of interactions through the labour market and the financial market will be brief.

As Hong Kong's integration with the PRD is driven mainly by Hong Kong investments that have generated huge trade flows of goods and services, most of the economic interactions are reflected in statistics on trade of goods and services, and also in statistics on investment and investment income. Statistically, investment income is small because Hong Kong investors in the PRD usually use transfer pricing to book their profits in Hong Kong. The bulk of investment income thus appears as part of the re-export margin of Hong Kong's entrepot trade instead of investment income (Sung and Wong, 2000: 209-210). The earnings of Hong Kong employees in the Mainland are also small. This implies that the income generated by Hong Kong's PRD-related exports of goods and services would capture the major benefits of outsourcing.

For the reason of convenience in data collection and compilation, the PRD encompasses the eight cities of Guangzhou, Shenzhen, Zhuhai, Dongguan, Zhongshan, Foshan, Huizhou and Jiangmen, the same definition as in Sung et. al. 1995. This is slightly different from the official definition of the Pearl River Delta Economic Zone, which excludes the Longmen County in the City of Huizhou, but includes the urban district of Zhaoqing, Gaoyao, and Sihui. Statistically, the differences are very minor. For instance, the total 2002 foreign trade of the PRD as defined in this study was US\$210,526 million, which was 99.4% of the trade of the PRD Economic Zone. As this study concentrates on Hong Kong's PRD-related exports, using a simplified definition of the PRD would not result in any significant bias.

1.1. Organization of study

This study will be divided into eight sections. After the introduction, section two will detail the conceptual issues in the identification of costs and benefits. Section three will quantify the benefits to Hong Kong in income and employment generation arising from Hong Kong's PRD-related exports of goods and services. Section four will examine the costs to Hong Kong in terms of risks of specialization and frictional unemployment. Sections five, six, and seven will respectively examine the interactions in the financial, labour, and real estate markets. Section eight will conclude.

Section 3, which quantifies the income and employment generated by Hong Kong's PRD-related exports, is the main exercise of this study. The exercise uses input-output analysis, which is based on national income accounts of the production approach instead of the expenditure approach. The GDP figures used in Section three refer to GDP at factor cost, which is obtained from the production approach. GDP at factor cost is slightly less than GDP at market prices,¹ which is obtained from the expenditure approach. However, in the

¹ In 2001, GDP at factor cost was 95% of GDP at market prices. Conceptually GDP at factor cost is less than GDP at market price by the amount of taxes on production and imports. However, in practice, there is also a small statistical discrepancy.

other parts of the study not involving input-output analysis, figures of GDP at market prices are adopted as the expenditure approach is more popular and has a longer history of use in Hong Kong.

2. Identification of benefits and costs

A complete and accurate identification of the benefits and costs of Hong Kong's integration with the PRD is impossible for the simple reason that history is not subject to experimentation: We cannot know with precision what would have happened if China had not opened to the outside world in 1979.

It is nevertheless possible to make educated guesses about Hong Kong's development without China's opening. As Hong Kong already had the highest costs among the Asian "four dragons" (HK, South Korea, Taiwan, and Singapore) in the 1970s, Hong Kong's labour intensive manufacturing industries would be phased out. The few big manufacturing firms in Hong Kong would likely relocate to Southeast Asia. The vast majority of small manufacturing firms would go bankrupt, as they lack the ability to operate internationally. The valuable know-how they accumulated in the production and export of labour intensive manufactures during Hong Kong's industrialization in the 1950s and 1960s would just be obsolete. However, the opening of the Mainland allowed Hong Kong's small manufacturing firms to utilize their know-how to build up a "global factory" in the PRD.

Unlike relocation to the PRD, relocation to Southeast Asia would not generate many service jobs in Hong Kong as Southeast Asia is too far away to service from Hong Kong. It is also difficult for Hong Kong to upgrade into high-tech manufacturing as Hong Kong had the lowest level of educational attainment among the "four dragons". Moreover, in comparison with Taiwan, Singapore, and South Korea, Hong Kong had a late start in high-tech manufacturing. Hong Kong's comparative advantage is in services rather than electronics.

Without the opening of China and the boom generated for Hong Kong from mid 1980s to 1997, Hong Kong would have a lower rate of inflation and a more competitive cost structure. This implies that Hong Kong's labour-intensive manufacturing would be phased out more gradually, and Hong Kong would be able to export more services to the region outside of China. However, Hong Kong would lose its labour-intensive manufacturing quite fast even with a lower cost structure: South Korea and Taiwan, which have much lower costs than Hong Kong, have long lost their labour-intensive manufactures.

While Hong Kong would be able to export more services to the region outside of China, it must be remembered that the elasticity of demand for services tends to be quite low. In comparison with the world market for goods, the market for services tends to be riddled with regulations and barriers. Demand for services is often location specific. For Hong Kong, the amount of extra services exports generated from a lower cost structure is unlikely to be very

large.² In a nutshell, without China's opening, Hong Kong would lose most of its labour intensive manufacturing without large gains in the service sector or in high-tech industries.

The PRD is thus of crucial importance to Hong Kong. SMEs accounted for around 90 percent of the enterprises in Hong Kong, and many of them, especially manufacturing firms, are saved from bankruptcy. They maintained competitiveness in the world market by expanding their operations across the border, and also created income and jobs in supporting services in Hong Kong. While big firms could relocate overseas, relocation to the PRD is more lucrative, and also generates more income and jobs for supporting services in Hong Kong.

This study quantifies the income and employment generated from Hong Kong's *PRD-related exports*, which include exports to the PRD, and Hong Kong's sales of PRD goods to the world market. As Hong Kong uses the PRD as a base of export processing for the world market, the bulk of Hong Kong's exports to the PRD (including semi-manufactures and services) are used to support sales of PRD goods to the world market. Without the demand of the world market, most of Hong Kong's PRD-related exports would disappear. Conceptually, the benefits generated from Hong Kong's PRD-related exports should be attributed to the world market (demand side) as well as the PRD (supply side).

There is no analytically neat way to disentangle the effects of demand and supply as both are necessary in any economic transaction. This study nevertheless focuses on the supply side for practical reasons. As the world market is very large relative to the HK-PRD nexus, it can easily absorb more exports from HK-PRD. The constraint to expanding exports is often on the supply side rather than the demand side. In terms of policy, there is not much that the HKSAR government can do about the world market. However, there is a lot that the government can do to expand the supply capacity of the HK-PRD nexus, e.g., by promoting integration. This study will take the world market as given, and attribute the income generated from Hong Kong's PRD-related exports to integration with the PRD.

Strictly speaking, the income generated by PRD-related exports overstates the benefit of such exports because the resources used to produce these exports can generate income elsewhere. Conceptually, the benefit of such exports is the *extra* income generated in comparison with using these resources in the next best alternative.

In the case of Hong Kong's Mainland/PRD-related exports, most of the exports are services, e.g., entrepot services and trade-related services. The resources involved in such exports are location specific as Hong Kong is the natural entrepot of the PRD and of South China. While Hong Kong's entrepot services command a high value in the PRD and South China, it would not command a high value in other uses. For instance, for trade between

² It may be argued that the demand for financial services is more price-sensitive. However, financial services were only 5% of Hong Kong's services exports in 2002. Hong Kong's exports of financial services in 2002 were still marginally less than that in 1997. Transportation, travel, and trade-related services accounted for 84% of Hong Kong's services exports in 2002, and the demand for these services tend to be location specific.

Indonesia and Malaysia, Singapore instead of Hong Kong is the natural entrepot, and Hong Kong would not be able to service such trade. Hong Kong's resources used to service Mainland/PRD trade would not be of much use for servicing trade elsewhere. The bulk the income generated is *extra* income, as the resources involved will not be able to generate much income elsewhere.

2.1. The Gortex border

It has often been stressed that there is a problem of "Gortex border" between Hong Kong and the Mainland/PRD, i.e., while Hong Kong's talents, capital, and tourists are free to flow to the Mainland/PRD, reverse flows are controlled. This asymmetry allegedly leads to the "hollowing out" of the Hong Kong economy, as Hong Kong loses its talents, capital, and consumption expenditure to the Mainland without adequate compensating inflows.

Mainland's opening since 1979 is epoch-marking but incomplete. Activities that earn foreign exchange (i.e., exports, incoming tourism, inward foreign investment) are encouraged, but uses of foreign exchange (i.e., imports, outgoing tourism, outward foreign investment) are controlled. Complaints about the "Gortex border" appear to be persuasive on the surface. For instance, in commodity trade with the Mainland, Hong Kong has a persistent deficit since the mid 1950s. In tourist trade, Hong Kong also has a persistent deficit till 2001 (Hong Kong has a surplus since 2002). In investment flows, Hong Kong's investments in the Mainland are substantially larger than reverse flows. As for skilled personnel, by the end of 2002, there were only 256 and 268 successful applications respectively in the schemes for mainland talents and professionals (*Report of the Task Force on Population Policy*, 2003: 25). On the other hand, by 2001, 190,800 Hong Kong residents had worked in the Mainland, and around 43 percent of them were professionals and associate professionals (Census and Statistics Department, 2001).

A deeper analysis reveals that the complaints about the Gortex border are quite superficial. Most of the restrictions on flow of mainland professionals to Hong Kong are imposed by Hong Kong instead of the mainland. The relaxation of Hong Kong's controls in 2003 has led to a marked increase in inflows of mainland professionals. Hong Kong also enjoy very favourable balances in trade of goods and services, as will be examined below.

2.1.1. Commodity trade

While Hong Kong has a slight deficit in commodity trade with the Mainland (Imports in 2002 were 12 percent bigger than exports), over 90 percent of Hong Kong's imports from the Mainland are not genuine imports into Hong Kong as they are re-exported elsewhere. Such imports in fact represent Hong Kong's exports of entrepot services. In 2002, Hong Kong's exports of goods and entrepot services³ related to the Mainland were \$301.5 billion (composed of domestic exports to the Mainland of \$41.4 billion, and exports of Mainland-

³ Exports of entrepot services are equal to the re-export margin, i.e., the difference in value between re-exports and imports for re-exports.

related entrepot services of \$260.1 billion). Hong Kong's retained imports (i.e. imports retained for internal use instead of re-exported elsewhere) from the Mainland were only \$45 billion, or around one-seventh of Hong Kong's exports of goods and entrepot services related to the Mainland.

Before 1979, Hong Kong's retained imports from the Mainland were large. Hong Kong's domestic exports to the Mainland were negligible and Hong Kong's Mainland-related re-exports were small. The balance of trade for Hong Kong was unfavourable. Since Mainland's opening in 1979, Hong Kong's domestic exports to the Mainland grew rapidly, and Mainland-related re-exports soared as Hong Kong regained its status as China's foremost entrepot. Since 1987, Hong Kong's Mainland-related exports of goods and entrepot services have surpassed the retained imports from the Mainland, and Hong Kong enjoyed a favourable balance of payments through the commodity trade with the Mainland. The situation has become increasingly favourable to Hong Kong because retained imports from the Mainland only grew by 12 percent from 1987 to 2002, while Mainland-related re-exports grew nearly 16 times during the period.

2.1.2. Services trade

Table 2.1 shows trade in services with the Mainland, starting from 1995 when data was first available. The three main items of services trade are travel (tourism), trade-related services, and transportation. From 1995 to 2002, Hong Kong enjoyed surpluses in trade-related services and transportation. However, Hong Kong has a deficit in travel as the Mainland was a popular tourist destination, while the number of Mainland tourists visiting Hong Kong was limited by controls. Hong Kong has an overall deficit in services trade from 1995 to 1997 due to the large deficit in travel. However, Hong Kong's exports of merchanting and other trade-related services to the Mainland grew rapidly and more than offset the deficit in travel, with the result that Hong Kong enjoyed a surplus in services trade starting 1998. Hong Kong's exports of services to the Mainland continued to grow rapidly while imports of services from the Mainland declined. By 2002, Hong Kong's services exports to the Mainland were \$91 billion, exceeding imports of \$57 billion by a large margin. Hong Kong's surplus in services trade were \$33.6 billion or 2.7 percent of Hong Kong's GDP.

Hong Kong's deficit in travel services also narrowed rapidly due to the very large increase in incoming tourists since 2000 and the decline in outgoing tourist consumption since 1998. Though the number of Hong Kong residents visiting the Mainland continued to rise, there was a sharp drop in per capita expenditure because Hong Kong goods have become cheaper with deflation, with the result that tourist consumption in the Mainland dropped. On the other hand, Hong Kong's exports of travel services to the Mainland rose rapidly from \$11.9 billion in 1999 to \$29.9 billion in 2002, as the quota on group tours to Hong Kong was first relaxed and then abolished in 2002. The rise in the number of

incoming Mainland tourists was so sharp that Hong Kong enjoyed a surplus in travel services in the first quarter of 2003. This was temporarily reversed by SARS in the second quarter, but Hong Kong again enjoyed a surplus in tourist trade from July 2003 onwards (*Ming Pao* 20 October 2003). With the promulgation of individual tours from Mainland cities to Hong Kong since August 2003, Hong Kong's surplus in services trade with the Mainland is projected to rise sharply.

Table 2.2 shows the consumption expenditure of Hong Kong residents making personal travel to the Mainland. Of all trips to the mainland in 2002, business travel accounted for 31 percent (or 17.2 million person-trips) and personal travel for 69 percent (or 38.4 million person-trips). Personal travel can be further distinguished into those going on package tours and individual tours. Individual tours accounted for the bulk of the consumption expenditure. The average expenditure per person trip of Hong Kong tourists in Mainland/Guangdong/Shenzhen has fallen sharply from 2000 to 2002, with the result that their total consumption expenditure in the Mainland/Guangdong/Shenzhen also declined. In 2002, the consumption expenditure of Hong Kong residents in Shenzhen (non-package tours) were \$5.8 billion, which was only 0.46 percent of Hong Kong's GDP or 0.82 percent of Hong Kong's private consumption expenditure in the same year. The consumption expenditures of Hong Kong residents in Shenzhen/Guangdong were not large and they have decreased in the last few years. This shows that the adverse impact on Hong Kong consumption due to the "neighbourhood effect" of the PRD is not large. Moreover, such outflow of expenditures have been more than made up for by the expenditures of Guangdong's tourists in Hong Kong, which have exploded since 2002. In a nutshell, Hong Kong enjoys favourable balances in all major items of trade with the Mainland, including tourist trade.

2.1.3. Investment flows

Hong Kong and the Mainland is each other's foremost partner in investment. Hong Kong has been the foremost source of EDI (External Direct Investment) in the Mainland since 1979, and the Mainland has replaced the UK as the foremost source of EDI in Hong Kong since 1998. Most of Mainland's investment in Hong Kong came from outside the PRD/Guangdong, as will be seen in section 5. However, nearly half of Hong Kong's direct investment in the Mainland was in Guangdong.

Table 2.3 shows Hong Kong's outward EDI in the Mainland and Hong Kong's inward EDI from the Mainland. The sudden jump in both outward and inward EDI in 2000 is due to prominent merger and acquisitions activities in the telecommunication sector at the height of the TMT (Technology-Media-Telecommunication) bubble. Hong Kong's outflow of EDI to the Mainland is substantially bigger than the reverse inflow. From 1998 to 2001, the total outflow was \$560 billion, which was 2.7 times the inflow of \$208 billion. However, Hong Kong's 2001 stock of inward EDI from the Mainland of \$958.1 billion was larger than the

outward stock of \$844 billion. This is because the Mainland had invested in Hong Kong since 1949, well before Mainland's opening in 1979. The Mainland has built up a huge stock of investment as it has a very long history of investing in Hong Kong.

Though Hong Kong's outflow of EDI to the Mainland is much bigger than the reverse flow, it would be misleading to conclude that the outflow represents a net drain or hemorrhage for the Hong Kong economy. It is well known that Hong Kong serves as an intermediary channeling capital to the Mainland. A substantial part of the capital raised came from outside Hong Kong. The outflow to the Mainland is thus matched by an inflow of capital from overseas. Table 2.3 shows that, from 1998 to 2001, Hong Kong's inflow of EDI from the world was \$615 billion, which was close to the total outflow of EDI of \$657 billion.

Hong Kong's investment in the Mainland is exaggerated because it includes investments from elsewhere channeled to the Mainland through Hong Kong. Mainland's investment in Hong Kong is likely to be biased downwards because there is an incentive for local authorities and enterprises in the Mainland to establish unofficial subsidiaries in Hong Kong to evade Mainland's controls on foreign trade and foreign exchange.

As the Mainland continues to liberalize its foreign exchange controls, more and more mainland capital is expected to flow to Hong Kong as Hong Kong has stricter protection of property rights than the Mainland and the funds can also be used more flexibly in Hong Kong. In the long run, mainland investment in Hong Kong is likely to exceed Hong Kong's investment in the mainland.

2.1.4. Investment income

Table 2.4 shows Hong Kong's investment income flows from/to the Mainland since 1995. For direct investment income, inflows were larger than the outflow. Portfolio investment income flows were small and inflows were much larger than outflows. This is because external investments in Mainland's securities markets are severely restricted. Other investment income mainly reflected bank loans. Investment income flows declined after 1998 due to fall in interest rates and the bankruptcy of the GITIC (Guangdong International Trade and Investment Corporation) in 1998, which discouraged foreign loans to China. Since 1998, investments flows between Hong Kong and the Mainland were dominated by direct investment income flows.

From data on the stock of EDI in Table 2.3, the rate of return to Hong Kong's direct investment in the Mainland can be computed. The rate of return for investment in the Mainland is unreasonably low: The 1998 rate of return for Hong Kong's EDI in the Mainland and in other places were 4.4% and 8.5% respectively. If Hong Kong's EDI in the Mainland were as profitable as that in other places, the 1998 inflow of direct investment income from the Mainland should be nearly twice as large.

As mentioned above, inflows of investment income from the Mainland are smaller than

expected because a very substantial part of the profits of Hong Kong's investment in the Mainland is booked in Hong Kong through transfer pricing⁴ as property rights are more secure in Hong Kong, e.g., use of profits are not subject to foreign exchange controls. Such transferred profits appear as the re-export margin of Hong Kong's Mainland/PRD-related entrepot trade instead of investment earnings. The income generated by Mainland/PRD-related entrepot trade computed in this study would include transferred profits, which is huge. The practice of transfer pricing implies that the Mainland loses tax revenue to Hong Kong.

The rates of return of Hong Kong's direct investment in the Mainland and in other places converged over time. From 1998 to 2001, the rate of return of Hong Kong's direct investment in the Mainland rose from 4.4 percent to 7.5 percent, while that in other places fell from 8.5 percent to 5.5 percent. In 2001, Hong Kong's investments in the Mainland appeared to be slightly more profitable than investments elsewhere, and the pattern is consistent with anecdotal observations.

The convergence in the rates of return implies that transfer pricing is getting less prevalent. This may be due to better protection of property rights in the Mainland. Another plausible factor is that Hong Kong investment has gradually shifted from outward processing to enterprises geared towards Mainland's domestic market. It is much more difficult to divert profits in the latter type of enterprises by transfer pricing because the output of the subsidiary in the Mainland is not sold back to the Hong Kong parent.

It should be noted that investment incomes affect Hong Kong's GNP rather than GDP. This study will not quantify the effects of investment income flows in detail as the inflows from the Mainland were largely offset by outflows. In 2002, total investment income inflow from the Mainland was 6.1 percent of Hong Kong's GDP and outflow was 4.2 percent of Hong Kong's GDP. Net inflow was only 1.9 percent of Hong Kong's GDP.

2.1.5. Mainland's relaxation of foreign exchange controls

The popular conception of the Gortex border is flawed as Hong Kong enjoys favourable balances in commodity trade, in services trade, in tourist expenditure, and in investment income. Moreover, economic development has reached a stage where the Mainland will liberalize its foreign controls, as heralded by the CEPA, individual tours to Hong Kong, and the discussion on QDII. The flows will be even more favourable to Hong Kong in the future.

2.2. **Outsourcing and unemployment**

There is a misconception that outsourcing will always lead to high unemployment. This is obviously false. Though the relocation of Hong Kong manufacturing to the Mainland had

⁴ The prices of inputs supplied by the Hong Kong parent to its Mainland subsidiary are over-reported, while the prices of outputs sold by the Mainland subsidiary to the Hong Kong parent are under-reported in order to transfer the profit of the subsidiary to the parent

led to a dramatic decline in manufacturing employment since 1987, Hong Kong's unemployment rate remained extremely low up till the mid 1990s because the rapid loss of jobs in manufacturing was more than compensated by the creation of jobs in services. Job creation in services was rapid because Hong Kong had a temporary monopoly in producer services in South China, and the industrial base that Hong Kong created in Guangdong depended on Hong Kong for services. China's services were underdeveloped due to the Marxian bias against services, and China did not start to liberalize FDI in services till Deng Xiaoping's 1992 tour in support of economic reforms. Favorable global economic conditions also helped job creation in services.

However, due to Mainland's rapid economic development and the gradual liberalization of Mainland's services since the early 1990s, Mainland's service providers started to compete with Hong Kong's in the mid 1990's, and there was a structural displacement of service jobs to the Mainland. The most obvious case is the diversion of Guangdong's trade and international cargo from the Hong Kong port to ports in Shenzhen, which rose to prominence in the second half of the 1990s with the help of Hong Kong investment.

The year 1996 can be taken as a watershed. The share of Mainland's trade re-exported through Hong Kong jumped from 15 percent in 1986 to a peak of 41 percent in 1996, but declined thereafter to 25 percent in 2002. Employment in Hong Kong's import/export trades peaked at 532,300 (17.3 percent of total employment) in 1996, and declined to 511,700 (15.8 percent of total employment) in 2002. It must be stressed that the erosion of Hong Kong's temporary monopoly and the job loss in services since 1996 is structural rather than cyclical.⁵ From 1996 to 2002, the external trade of Guangdong and China grew by 101 and 108 percent respectively, but Mainland's trade re-exported via Hong Kong only grew by 22 percent. Given the Asian Financial Crisis and the economic slowdown of the global economy in 2001, Mainland's trade has done surprisingly well, but Hong Kong's share of Mainland's trade has dwindled because of trade and cargo diversion to Shenzhen.

This study distinguishes two phases of outsourcing: The first phase from 1987 to 1996, in which Hong Kong had a temporary monopoly in services in the China market, and the second phase from 1996 to 2002, in which Hong Kong rapidly lost its temporary monopoly. Despite the initial loss of its temporary monopoly, the growth momentum generated in phase I continued to propel Hong Kong in the first three quarters of 1997, until the boom was punctured in late 1997 by the Asian Financial crisis. Hong Kong's lackluster macroeconomic performance in phase II can be attributed to the structural loss of monopoly

⁵ Besides re-exports, there are many other indicators of the loss of Hong Kong's temporary monopoly in services in the China market. For instance, the share of Hong Kong in Mainland's EDI declined from the peak of 69% in 1992 to 30% in 2002. Prominent multinationals have moved their China headquarter from Hong Kong to the Mainland. Though the number of regional headquarters in Hong Kong reached 966, an all time high in 2003, the employment of overseas companies has decreased substantially as many of them have relocated parts of their operations to the Mainland. The list of such indicators is quite long. This study focuses on Mainland-related re-exports because they generated a very substantial share of Hong Kong's GDP.

compounded by unfavourable cyclical events in the global economy.

Table 2.5 shows employment by industry since 1986. In phases I and II, Hong Kong lost respectively an average of 64,500 and 23,917 manufacturing jobs per year. Job loss in manufacturing in phase two was less rapid because the more footloose manufacturing operations had already relocated in phase one.

The shrinkage of the manufacturing sector was more than compensated by expansion in services. However, the pace of job creation in phase II was much slower than that of phase I: Employment in services rose by an average of 103,622 per year in the tertiary sector in phase I, but by an average of only 47,950 per year in phase II. As a result, job creation in the whole economy was much more rapid in phase I (42,511 jobs per year) than in phase II (25,917 jobs per year). This led to a significant rise in unemployment rate in phase II as employment creation in the tertiary sector was not sufficient to absorb the growth of the labour force.

While outsourcing has led to a dramatic fall in manufacturing employment, it has not led to significant contractions in any service sector at the one digit level. The impact of outsourcing on employment in services can only be found at the sub-sector level: The significant contraction of employment in import/export trades mentioned above was perhaps the most obvious case. This is not surprising as manufacturing is more footloose than services. Only backroom services can be outsourced while front-end services have to stay in Hong Kong. As a result, the relocation of manufacturing proceeded much more rapidly than relocation of services. However, employment expansion in services have slowed down in phase II due to competition from Mainland service providers.

It should be noted that, in a globalized economy, Hong Kong's backroom services would relocate even without the PRD. For instance, some banks in Hong Kong have relocated their software support to India, while others have relocated their data processing and accounting divisions to Southeast Asia or Australia.

It is true that, for those services that cannot relocate far away, the "neighbourhood" effect of the PRD is significant. The best example is perhaps the consumption of Hong Kong residents in Shenzhen. However, as detailed in section 2.1.2, such consumption is not large.

It must be stressed that the erosion of Hong Kong's monopoly position as Mainland's services hub is not unexpected. Given the very rapid development of the Mainland, it is unrealistic to expect that nearly half of Mainland's trade would pass through Hong Kong forever. It is just natural that Hong Kong would lose its monopoly position, and Hong Kong has to compete through upgrading its skills and quality of services. As long as Hong Kong maintains its lead in skills and quality of services, outsourcing will not lead to the hollowing out of the economy.

2.3. Growth effects of integration

As mentioned above, Hong Kong has been transformed from a low value-added

manufacturing center to a higher value-added service hub of an industrialized PRD through outsourcing. However, outsourcing is mostly a once for all activity as the benefits would be exhausted with the relocation of footloose activities. The major source of economic growth in the long run has to be technical change and innovation. The crux of the debate on “hollowing out” boils down to whether integration with the PRD will contribute to technical change and innovation in Hong Kong, and thus help Hong Kong maintain its lead in skills and high quality services.

Long run growth-effects are very difficult to quantify, and this study will only summarize the main factors involved. There is only one study, Sung and Wong (2000), trying to quantify the effects of the China factor on Hong Kong’s growth. Sung and Wong (2000: 221) estimated that immigration from the Mainland lowered the growth rate of Hong Kong in the mid 1990s by nearly one percent per year due to the low skill endowment of immigrants from the PRD. However, Hong Kong’s direct investment in the Mainland raises the return to Hong Kong capital and has a favourable effect on Hong Kong’s growth through stimulating investment in Hong Kong. This is estimated to raise Hong Kong’s growth rate by around 1.5 percent in the late 1980s. The impact of the China factor on Hong Kong’s growth was thus, on the net, positive (Sung and Wong, 2000: 217-9). Other factors were not considered because they were very difficult to quantify.

Sung and Wong’s estimation that immigration from the Mainland lowered Hong Kong’s growth by nearly one percent per year was mechanical as only the effects of lower skill endowment on growth were considered. It did not take into account the fact that immigrants usually have stronger incentives to work and to learn, which should have a positive impact on growth. Given Hong Kong’s rapidly aging population, the immigration of the children of Hong Kong residents in the PRD rejuvenates the Hong Kong population and is likely to have a large positive impact on growth that may even out weight the adverse effect of unskilled adult migrants. In terms of policy it is easier to correct for skill deficits than to induce more births to rejuvenate an aging population. On the net, the availability of cross-border marriages may be a big plus for Hong Kong.

In fact, there are many more examples of stimulants to growth through integration, though the effects of these cannot be quantified. For instance, integration stimulates growth and technological change through learning-by-doing. As Hong Kong firms expand their operations across the border, they operate on a larger scale, enter new markets or product lines, and they have more opportunities to learn.

In the 1970s, none of Hong Kong’s service providers were big enough to compete in the world market against global service providers. However, many of Hong Kong’s big firms became competitive world-class service providers in the 1980s and 1990s through relocation to the PRD, expansion in the China market, and also rapid growth in Hong Kong as a result of the prosperity generated by the China factor. Prominent example included the HSBC,

Hutchison Whampoa, and many real estate developers. It is no accident that the world's top three biggest Chinese companies outside the Mainland are Hong Kong companies⁶.

The synergy of the R & D capacity of the PRD with the capabilities of Hong Kong in high-tech finance and high-end services is also a big plus for long-run growth. On the net, the effect of integration on growth appears to be strongly positive, as is emphasized in many studies of Hong Kong's integration with the PRD, e.g., Enright et. al. 2003, Federation of Hong Kong Industries 2003.

2.4. Allocative effects of integration

As mentioned above, the allocative effects of outsourcing will be quantified in detail. The benefits can largely be quantified as the income and employment generated by PRD-related exports, while the costs involve frictional unemployment and possibly risks of specialization.

- a. Effects from investments of the PRD in Hong Kong – While Mainland's investments in Hong Kong are large, investments from the PRD are quite small. This study largely ignores such effects, partly because they are small, and also because Hong Kong has always been open to Mainland/PRD investment even in the Cold War era when the integration between Hong Kong and the PRD was minimal. Hong Kong had been the foremost destination of Mainland's external investment since the establishment of the People's Republic in 1949.
- b. Effects from investments of Hong Kong in the PRD – As mentioned in section 2.1.4, investment income inflows from the Mainland were largely offset by outflows, and the net inflows were small. While Hong Kong's investments in the Mainland/PRD are large, the investment earnings are understated because a significant part of the profits are booked in Hong Kong instead of the Mainland through transfer pricing. A substantial part of investment earnings appear as the earnings of Hong Kong's entrepot trade, which will be quantified in detail.
- c. Effects from Hong Kong's PRD-related exports – The concept of PRD-related exports is very comprehensive as it includes the exports of all goods and services related to the PRD. PRD-related exports were very large: 92% of Hong Kong's GDP in 2002. The income and jobs generated by such exports will be quantified in detail as they are very substantial. It is the sum of the following five items:
 - i. Domestic exports (exports of goods made in Hong Kong) to the PRD,
 - ii. Hong Kong's re-exports to the PRD,
 - iii. Hong Kong's re-exports of PRD goods to other markets,
 - iv. Exports of services to the PRD,
 - v. Services embodied in Hong Kong's merchanting of PRD goods to other markets.
Merchanting involves the trading of goods which are purchased from and then sold

⁶ Hutchison-Whampoa, Cheung Kong, and Sun Hung Kai.

to parties outside Hong Kong without the goods ever entering or leaving Hong Kong. Merchanting is part of Hong Kong's offshore trade (i.e. trade conducted by Hong Kong firms that does not touch Hong Kong).

Re-exports can be measured by its gross value, or by its net value, i.e., the re-export margin (re-exports minus imports used for re-exports). The net value conceptually represents entrepot services embodied in re-exports. Gross value exaggerates the importance of re-exports, as the rate of re-export margin of re-exports is quite low (19% in 2002). In this study, we often use the term *PRD-related exports (net)*, in which re-exports are measured by their net values. *Mainland/Guangdong-related exports (net)* are similarly defined.

- d. Effects from Hong Kong's retained imports from the PRD – Imports of goods from the Mainland/PRD were mostly re-exported, and only 6 percent (2002 figure) represented *retained imports*, i.e. imports retained for internal use. *Imports from the PRD for re-exports* are not genuine imports because they represent exports of Hong Kong's entrepot services. Retained imports are genuine imports in that they are used internally in Hong Kong. Though retained imports from the Mainland are relatively small, their benefits to Hong Kong are substantial as they are mostly necessities, e.g., potable water, and fresh food. Conceptually, the benefit for Hong Kong of such imports is equal to the extra expenses involved in importing these goods from the next best alternative source. The extra expenses involved in importing potable water or fresh food from the next best alternative source can be extremely high as the PRD is the natural hinterland of Hong Kong. This study will nevertheless ignore the benefits from retained imports simply because Hong Kong has been open to such imports long before 1979. The PRD had been the main supplier of fresh food for Hong Kong even in the Cold War when integration between Hong Kong and the PRD was minimal.
- e. Effects from Hong Kong's imports of services from the PRD –The bulk of Hong Kong's imports of services from the PRD are tourists services, and imports of non-tourist services from the PRD are only around one percent of Hong Kong's GDP. Imports of non-tourist services from the PRD are ignored in this study because they are small. Moreover, the largest item of non-tourist services imported is transportation, and Hong Kong had been importing such services from the PRD even in the Cold War era when the integration between Hong Kong and the PRD was minimal.⁷ Imports of tourist or travel services from the PRD are around 1.7 percent of Hong Kong's GDP. Such imports have declined since 2000. This study will not quantify the benefit of such services for Hong Kong, which cannot be very large as they are not necessities. Imports of such services can adversely affect Hong Kong retailers, as shopping in Shenzhen/PRD may substitute for shopping in Hong Kong. Such effects, which were examined in section

⁷ The China Merchant Company had been important in transportation for a long time.

2.1.2, are small and are of declining importance.

- f. Effects from Hong Kong residents working in the Mainland and Mainlanders working in Hong Kong: The labour income involved is very small. In 2002, Hong Kong's labour inflow (outflow) from (to) the world was only \$15 million.⁸ The impact on Hong Kong's labour market of immigrants (instead of temporary workers) from the Mainland/PRD are more substantial, as will be detailed in section 6 of this study.

To summarize, the income and jobs generated by Hong Kong's PRD-related exports of goods and services are very substantial (around a quarter of Hong Kong's GDP and one-fifth of Hong Kong's employment), and this study will quantify such benefits in detail. Other effects will be analysed in less detail because they are not large.

2.5. Overview of Hong Kong's exports of goods and services

Hong Kong's exports of goods and services are very large and close to 60 percent of these exports are related to the Mainland. As mentioned before, it is more useful to measure re-exports by its net value (i.e., the re-export margin embodied in re-exports) rather than gross value, as the latter exaggerates the importance of re-exports.

Table 2.6 shows Hong Kong's rate of re-export margin since 1989. The rate of re-export margin for re-exports of Mainland origin rose rapidly from 11.5 percent in 1989 to over 20 percent in 1991, and rose further to a peak of 28.5 percent in 2000 before declining to 25.5 percent in 2002. The rate of re-export margin for goods originating from the rest of the world is much lower, less than 10 percent since 1991. The rapid increase in the rate of re-export margin for re-exports of Mainland origin in the early 1990s is due to the rise of outward processing. The rate of re-export margin for goods involving outward processing is high because the Hong Kong firms involved tend to provide value-adding activities in the form of order-taking, product design, trade documentation, and financing. Moreover, subsidiaries of Hong Kong firms in the Mainland tend to book their profits in Hong Kong through transfer pricing.

Though cargo diversion to Shenzhen ports started in the mid 1990s, the higher value-added cargo, especially those that require rapid delivery, continued to go through Hong Kong. This may account for the continual rise in the rate of re-export margin in the late 1990s. However, the rate of re-export margin declined after 2000. This may indicate that competition pressure from Shenzhen ports has become so intense that it depresses the gross margin of re-exporting. More generally, it shows that firms in the PRD have been able to source producer services locally rather than from Hong Kong, i.e., the PRD is starting to compete with Hong Kong in producer services.⁹

⁸ Census and Statistics Department, Hong Kong. Data on inflows/outflows with respect to the Mainland were not available.

⁹ The rate of value-added for the Mainland of its processed exports has increased from around 1/5 in the mid 1990s to around 1/3 since 1998, indicating that the Mainland is substituting local producer services for imported ones. See Sung (2000).

Table 2.7 compares Hong Kong's Mainland-related exports (net) to its total exports (net)

in 1995 and 2002 (Data on services exports to the Mainland were first available in 1995). Mainland-related exports have grown much faster than total exports and its share of the total rose from 42.8 percent in 1995 to 58 percent in 2002. From 1995 to 2002, while the average annual rate of growth of Hong Kong's total exports (net) was only 1.8 percent, that of Hong Kong's Mainland-related exports (net) was 6.2 percent. It should be noted that the slow growth of Hong Kong's total exports since 1995 was largely the result of unfavourable external economic factors. In recent years, the our external sector performed no worse in comparison with our competitors such as Taiwan or Singapore, and its performance was quite credible in comparison with our very weak domestic sector (Kwok 2002). However, the credible performance of Hong Kong's total exports could be attributed entirely to the rapid increase in Mainland-related exports.

From 1995 to 2002, mainland-related exports (net) increased by \$151 billion while total exports (net) only increased by \$85 billion. In other words, were it not for the growth of Mainland-related exports, total exports would decline by 17 percent or \$66 billion instead of increasing by 13 percent! The dominating role of Mainland-related exports in Hong Kong's growth since 1995 is obvious.

3. Benefits of exports of goods and services

This section will quantify the income and jobs generated by Hong Kong's Mainland/PRD-related exports in detail. In addition to *direct* income and employment generation, *indirect*, and *induced* effects are also computed. Indirect effects arise from industries supporting PRD-related exports, and induced effects arise from consumption induced by the increase in income. Direct and indirect effects, which are also known as *total* effects, are widely used, and they are taken to be the best measure of benefits generated.

Induced effects are not emphasized to avoid overstating the benefits of PRD-related exports. As mentioned before, the benefit in terms of income for Hong Kong of PRD-related exports is somewhat less than the income generated from such exports because the resources used in these exports have alternative uses. As will be seen below, total effects were two-thirds of induced inclusive effects. This study effectively discounts the benefits of PRD-related exports by one-third to arrive at the true benefits.

3.1. Value of exports of goods and services

The value of Hong Kong's Mainland-related exports (starting from 1995, the year in which exports of services to the Mainland are available) are obtained from trade data, and Hong Kong's Guangdong-related exports and then PRD-related exports are estimated from Mainland-related exports with the help of supplementary sources that will be detailed below. While the estimates are rough, their reliability is acceptable simply because Guangdong accounts for around 80 percent of Hong Kong's Mainland-related exports and the PRD

accounts for around 90 to 95 percent of Guangdong's exports. The income and employment generated by these exports are estimated by input-output analysis that will be explained below.

Table 3.1 shows the value of Hong Kong's Mainland-related exports.¹⁰ While our analysis starts from 1995, it is useful to bear in mind the pattern of growth in trade since the opening of China in 1979. Hong Kong's domestic exports to the Mainland had grown rapidly from 1979-92 (average of 40% per year), stagnated from 1992-97, and decreased thereafter due to the decline of manufacturing in Hong Kong. Mainland-related entrepot trade had grown rapidly from 1979-95 (average of 32% per year), and grew slowly from 1995-2002 (average of 4.9% per year) as a result of competition from Shenzhen ports. Exports of services to the Mainland have grown rapidly since 1995 (average of 13% per year).

Guangdong-related exports are estimated from Table 3.1. PRD-related exports are in turn estimated from Guangdong-related exports, and the results are shown in Table 3.2. The method of estimation is given in Appendix I. Hong Kong's PRD-related exports were around 90 to 95 percent of Guangdong-related exports, which were in turn around 80 percent of Mainland-related exports. The patterns of the two tables were similar: Re-exports were the largest item, constituting close to 90 percent of Hong Kong's Mainland/PRD-related exports. Domestic exports and services exports were relatively small. In 2002, Mainland/PRD-related exports were respectively 122 percent and nearly 92 percent of Hong Kong's GDP. From 1995 to 2002, the ratios of Mainland/PRD-related exports to GDP have risen significantly, showing that such exports have become relatively more important in Hong Kong's economy. However, the Tables exaggerated the importance of entrepot trade because the gross values of re-exports are much greater than their net values.

The net values of re-exports are obtained by multiplying the gross values of re-exports by their rates of re-export margin, giving Hong Kong's Mainland/PRD-related exports (net) in Tables 3.3 and 3.4 respectively. Though the rate of re-export margin is low, the net value of entrepot trade is still large because the volume of entrepot trade is very large. In 2002, the value of services embodied in Mainland/PRD-related entrepot trade was close to 60 percent of Hong Kong's Mainland/PRD-related exports (net).

The share of PRD-related exports (net) in Mainland-related exports (net) rose from 72 percent in 1995 to 77 percent in 2002. Of the growth of Mainland-related exports (net) from 1995 to 2002 of \$151 billion (Table 2.7), 86 percent (or \$131 billion) were due to the growth of PRD-related exports. From 1995 to 2002, were it not for the growth of PRD-related exports, Hong Kong's total exports (net) would decline by 7 percent or \$45 billion. The importance of PRD-related exports in Hong Kong's economic growth is evident.

¹⁰ Hong Kong's re-exports of Mainland origin to the Mainland are included under re-exports of Mainland origin. They are deducted from Hong Kong's re-exports to the Mainland to avoid double counting.

The share of Hong Kong's Mainland/PRD-related exports (net) to Hong Kong's GDP has risen from 27.6/19.8 percent in 1995 to 36.3/27.9 percent in 2002. Among the components of such exports, the share of domestic exports has declined from 6.1/4.4 percent to 3.4/2.7 percent; the share of service exports has risen sharply from 3.9/2.8 percent to 7.5/5.9 percent, while the share of entrepot services has increased moderately from 17.0/12.1 to 21.5/16.3 percent.

While Hong Kong's Mainland-related exports (net) grew at the average annual rate of 8.6 percent from 1995 to 2000, it stagnated from 2000 to 2002. The prospect of growth of Mainland-related exports is not optimistic because close to 60 percent of such exports were entrepot services. Growth of Mainland-related entrepot services will be slow due to the rapid cargo diversion to Shenzhen. Moreover, Mainland's substitution of locally produced services for imported services has a depressing effect on Hong Kong's re-export margin.

Though Hong Kong's Mainland-related entrepot trade increased marginally by 3.5 percent from 2000 to 2002, the value of entrepot services peaked in 2000 at \$280 billion, and declined to \$260 billion in 2002 (Table 3.3) as a result of the decline in the rate of re-export margin mentioned above.

However, PRD-related entrepot services still increased slightly by 3.7 percent from \$190 billion in 2000 to \$197 billion in 2002 (Table 3.4) because Hong Kong is more competitive in PRD-related entrepot trade than in the non-PRD portion of its Mainland-related entrepot trade. As a result, Hong Kong's Mainland-related entrepot trade is increasingly dominated by the PRD.

Nevertheless, the growth in Hong Kong's PRD-related entrepot trade is expected to slow down as competition from Shenzhen ports will stiffen. Moreover, Hong Kong's re-export margin of PRD goods is likely to decline further as PRD firms will increasingly source producer services locally rather than from Hong Kong. This implies that the value of Hong Kong's PRD-related entrepot services may decline. Since entrepot services accounted for close to 60 percent of Mainland/PRD-related exports (net), very rapid growth in services exports is required to offset the possible decline of entrepot services.

Tables 3.3 and 3.4 show the components of exports of services to the Mainland and the PRD respectively. Travel, trade-related services, and transportation are the three major components of service exports and they have been growing rapidly. The rapid growth of trade-related services and merchanting of Mainland/PRD goods is related to the rise in offshore trade, which in turn is due to the diversion of PRD cargo from Hong Kong to Shenzhen. The diversion leads to a deceleration in the growth of Hong Kong's entrepot trade and an acceleration in the growth of offshore trade because exports out of Shenzhen ports are often handled by Hong Kong firms. The rapid growth of offshore trade only partially offset the slowdown in growth of entrepot trade because the margin of offshore trade was only 9 percent, which is much lower than the rate of re-export margin of 20 percent (2001

figure).

The rapid growth in exports of travel services (i.e., incoming tourism) is largely attributable to Mainland's liberalization of outbound tourism. The rapid growth in exports of transportation services is related to the rise in passenger and cargo traffic between Hong Kong and the Mainland. Exports of insurance and financial services to the Mainland are small, and exports of other services have declined.

While the export of travel services is likely to grow rapidly, travel services were less than 7 percent of Hong Kong's Mainland/PRD-related exports (net) in 2002. Very rapid growth in travel services is required to offset a possible decline in entrepot services, which accounted for close to 60 percent of Mainland/PRD-related exports (net) in the same year.

3.2. Computation of Income and employment generated by exports

Income generated is different from the value of exports due to *linkage*, *leakage*, and *induced* effects. Linkage refers to income generated from other industries that support export industries. Leakage refers to expenditure on imports, which do not generate income for Hong Kong. Induced effects refer to the fact that rise in exports would induce more consumption and investment, which in turn generate income. As a result, the following three categories of value added will be distinguished:

1. Direct value added, i.e., income generated directly from the export industries.
2. Total or direct and indirect value added, i.e., direct value added plus the income generated from other industries supporting the export industries. Indirect value added arises from linkage effects.
3. Induced inclusive value added, i.e., total value added plus the income generated from induced consumption and investment.

While direct value-added can easily be obtained from industrial surveys, total value-added usually requires an input-output table. The most updated input-output table for Hong Kong was for the year 1980 (Lin and Sung, 1984). The method of updating the Table is explained later.

3.2.1. Classification of industries

The 1980 input-output table has a total of 90 industries, including 69 manufacturing industries, which reflect the importance of manufacturing at that time. For the purpose of this study, such a detail breakdown of manufacturing is not necessary. In the interest of brevity, the 1980 input-output table is aggregated into 11 industries. The aggregation is given in Appendix II.

The 11 industries are chosen to reflect the structure of Hong Kong's exports of goods and services to the PRD. They are:

1. The primary industry, which is not important in exports but basic in industrial classification.
2. Manufacturing - The 69 manufacturing industries in the 1980 Table are aggregated into

a single manufacturing industry, as domestic exports have declined in importance.

3. Power and Water.
4. Construction.
5. Retail trade.
6. Foreign trade (Import/Export trade).
7. Restaurants.
8. Hotels, which, together with (5) and (7), are important in exports of travel services (incoming tourists).
9. Foreign Transport, which together with (6), are very important in exports of entrepot services, trade-related services, and transportation services.
10. Finance and Insurance, which is an important industry in Hong Kong, though the exports of insurance and financial services to the Mainland are quite small.
11. Other services, which are a residual catch-all industry.

3.2.2. Updating of input-output table

The 1980 input-output Table is given in Appendix III. As the Table is quite outdated, the coefficients of direct value-added from 1995 to 2002 in each industry is updated by data from national income accounts obtained through the production approach (Table 3.5). The coefficients of direct value-added and intermediate inputs in each industry should sum to one. As no current data on intermediate inputs are available, the coefficients of intermediate inputs are scaled proportionally such that the coefficients of direct value-added and intermediate inputs sum to one.

Despite considerable structural change in the economy since 1980, the procedure is quite robust. Changes in the structure of the economy can be decomposed as follows:

1. Inter-industry changes, e.g., decline of manufacturing and rise of services.
2. Intra-industry changes in
 - a. Ratio of direct value-added to gross output, and
 - b. Given the ratio of direct value-added to gross output, the distribution of intermediate inputs within an industry may change.

The procedure adopted in this study takes into account (1) and also (2a). Inter-industry changes do not affect input-output coefficients because they are determined within the industry. Changes in the ratios of direct value-added to gross output (2a) are taken into account as they are obtained from current data on value-added. The only changes not taken into account are changes in the distribution of intermediate inputs within the industries, i.e., (2b). Such changes cannot be large because the Hong Kong economy is dominated by services, which do not use a lot of intermediate inputs. From 1995 to 2001, the share of intermediate inputs in gross output in the tertiary sector only fluctuated slightly, ranging from 41% to 42%. Such shares are quite small, and distributional changes within such shares should not result in large changes.

3.2.3. Total value added by industry

Table 3.5 gives the direct and total (direct and indirect) value added coefficients for the 11 industries from 1995 to 2002 obtained from the updated input-output Tables. Total value-added coefficients can be much higher than direct value-added coefficients. For instance, the direct value-added coefficient of foreign transport in 2001 was only 0.3084, which was the lowest among all industries, but its total value-added coefficient was 0.7703, which was very high. This is because the industry uses substantial amounts of local inputs from itself and from other industries.

All the total value-added coefficients are less than unity because all industries use imported inputs, which represent a source of leakage. For instance, the total value-added coefficient of manufacturing in 2001 was 0.54, which shows that each dollar of exports of manufacturing generated \$0.54 of total value added, directly from itself and also indirectly through local inputs from other industries. The coefficient implies that the total leakage of manufacturing was \$0.46 ($0.54 + 0.46 = 1$), which shows that each dollar of exports of manufacturing used (directly and indirectly through other industries) \$0.46 of imported inputs. In other words, each dollar of exports of manufacturing generated a total of \$0.54 in income for Hong Kong, and a total of \$0.460 in income for other economies through imported inputs. In comparison with manufacturing exports, service exports tend to generate higher value-added because services have lower leakage as they use less imported inputs.

3.2.4. Employment by industry

Table 3.6 gives direct and total employment per million dollar final demand in the 11 industries. In terms of total employment generated, the three industries closely associated with tourism, namely, Hotel, Restaurants, and Retail Trade, are all labour-intensive.

3.2.5. Classifying exports to industries

To compute the total value-added and employment generated by exports, we need to classify Hong Kong's exports of goods and services into exports of the 11 industries. Such classification is straightforward for all exports excepting tourism (travel), which will be explained later.

Domestic exports are classified as exports of Manufacturing (2) because Hong Kong's domestic exports of primary products are insignificant. For exports of services, exports of transportation are classified into Foreign Transport (9); exports of insurance and financial services are classified into Finance/Insurance (10); exports of trade-related services are classified into Foreign Trade (6); and exports of other services are classified into Other Services (11).

Tourism exports are a composite of expenditures on hotels, restaurants, retail trade, foreign trade, other services, and manufacturing. Table 3.7 shows the composition of expenditure from Mainland/Guangdong/PRD tourists estimated with the help of data from

shopping surveys.¹¹ The composition of expenditure of the three groups of tourists is assumed to be the same. Foreign trade and retail trade are the main beneficiaries because Mainland tourists spend a lot on shopping, and a major portion of the goods bought are imported. Manufacturing is also an important beneficiary as part of the goods bought (e.g., jewelry) is made in Hong Kong. Moreover, many Hong Kong manufacturing firms are involved in production overseas and they benefit from the sales to tourists of goods produced by their overseas subsidiaries.

3.3. Income and employment generated by exports

Table 3.8 shows the direct, total (direct and indirect), and induced-inclusive income (or total value-added) generated by Mainland/Guangdong/PRD-related exports. In a previous input-output study of the Hong Kong economy, total effects were two-thirds of induced-inclusive effects¹² (Lin and Sung 1983: 37), and the same ratio is applied to this study.

This study will concentrate on total effects. Induced-inclusive effects overstate the benefits for Hong Kong because not all the income/employment generated is *extra* income/employment. The resources used in producing PRD-related exports will generate some income/employment elsewhere, though the income/employment generated will be considerably less because Hong Kong is strategically situated to serve the PRD. If we assume two-thirds of the income/employment generated represent *extra* income/employment, total effects would give a good estimate of benefits.

As a percentage of GDP, total income generated by PRD-related exports rose from 16.6 percent in 1995 to 24.8 percent in 2002. The income generated is very substantial, and has grown by 74 percent in 7 years, or an average of 8.2 percent per year. This rate of growth is very high given the poor performance of the overall economy. The average rate of growth of Hong Kong's GDP in the period was only 2.2 percent per year. The incomes generated by Mainland/Guangdong-related exports are also very large.

As the bulk of the exports are services which have low leakage, income generated is only slightly less than the value of exports. For example, in 2002, PRD-related exports were 28 percent of GDP (Table 3.4) while total income generated by such exports was 25 percent of GDP (Table 3.8).

Table 3.9 shows the employment generated by Mainland/Guangdong/PRD-related exports. As a share of total employment, the direct and indirect employment generated by PRD-related exports rose from 16 percent in 1995 to 22.9 percent in 2002. The employment generated is very substantial, and has increased by nearly 59 percent in 7 years, or an average of 6.9 percent per year. In comparison, the average annual rate of growth of Hong Kong's total employment in the same period was only 1.5 percent.

¹¹ The Hong Kong Tourism Board conducts surveys on visitor spending. These surveys are supplemented with the author's survey on tourist shopping (Lin and Sung 1983: 34) which gives the margin of retailers and importers on tourist shopping and also data on the shopping of local goods versus imported goods.

¹² The exact ratio is 67.57 percent.

Table 3.10 shows the contribution of Mainland/Guangdong/PRD-related exports to Hong Kong's economic growth from 1995 to 2002. Of the increase in GDP, over 76 percent is accounted for by the increase of total income generated by PRD-related exports. Moreover, the increase in direct and indirect employment generated by PRD-related exports accounted for nearly 85 percent of the rise in total employment.

3.4. Income and employment generated classified by type of exports

Tables 3.11 and 3.12 show respectively direct and indirect income and employment generated by PRD-related exports classified by type of exports. In 2002, the income and employment generated by entrepot services were respectively 63 percent and 58 percent of the total. The employment share is less than the income share because entrepot services is not labour-intensive. As the prospect of growth of entrepot services is not good, the large weight of entrepot services will slow down the growth of total income and employment generation in the future.

The income and employment generated by domestic exports have declined while the income and employment generated by services exports have rose very rapidly, largely due to the fast expansion of travel and trade-related services. In 2002, the income and employment generated by travel services (tourism) were respectively 5.6 percent and 8.3 percent of the total. The employment share is much higher than the income share because tourism is labour intensive.

3.5. Income and employment generated classified by industry

Tables 3.13 and 3.14 show respectively income and employment generated by PRD-related exports classified by industry. The shares of income generated by PRD-related exports were high in the following industries (2002 figure): Foreign trade (76%), manufacturing (27%), and Hotel (22%). The very high share of Foreign trade is due to Mainland's dominance in Hong Kong's entrepot trade. The high share for Hotel is expected as the Mainland accounted for 41 percent of incoming tourists in 2002. The high share of manufacturing is also expected as the Mainland accounted for 32 percent of Hong Kong's domestic exports in 2002.

As expected, the shares of employment generated by PRD-related exports were very high (2002 figure) in foreign trade (77 percent), and also high in manufacturing (29 percent) and Hotel (23 percent).

3.6. Contribution of tourism

Incoming tourism merits separate analysis as a result of its rapid growth. Table 3.15 shows the income and employment generated by incoming tourists from the PRD. As a share of the GDP, income (direct and indirect) generated has risen from 0.6 percent in 1995 to 1.4 percent of the GDP in 2002. As a share of total employment, the employment (direct and indirect) generated has risen from 0.8 percent in 1995 to 1.9 percent in 2002. The employment share is higher than the GDP share because tourism is labour-intensive.

Table 3.16 and 3.17 show respectively income and employment (direct and indirect) generated by incoming PRD tourists classified by industry. The share of income generated by tourism is significant in the following industries (2002 figure): Hotel (22%), Retail trade (6.5%), and Restaurants (6%). These industries benefit substantially from tourism. The share of employment generated by tourism (2002 figure) is significant in the same industries: Hotel (23%), Retail trade (6.5%), and Restaurants (6.3%).

The contributions of individual tours will be assessed in section 8.

4. Costs of integration for Hong Kong

Integration with the PRD has generated a lot of exports, income, and employment for Hong Kong, and the resources used in PRD-related exports do not command a high value in other uses. However, it is possible that, due to Hong Kong's specialization Mainland-related exports, integration with the Mainland has led to risks in terms of instability in Hong Kong's export earnings. This can happen if the Mainland market is unstable, or if re-exports are more unstable than domestic exports, or if services exports are more unstable than exports of goods.¹³

4.1. Instability in export earnings

In this study, the degree of instability is gauged by the Semilog Standard Error (SME) Measure¹⁴ over three periods: (i) 1961-1978, (ii) 1978-1997, and (iii) 1997-2002. The division into three periods is determined by the change in growth rates in exports triggered by regime shifts. The first turning point in 1978 is related to the opening of China, and the second turning point of 1997 is related to the Asian Economic Crisis and Hong Kong's reversion to China. The average annual rate of growth of merchandise exports accelerated from 16 percent in period I to 18 percent in period II. Moreover, while domestic exports and re-exports grew at the same pace in period I, domestic exports grew slowly in period II while re-exports grew very rapidly. The third period was characterized by slow growth.

Table 4.1 shows that, for the value of commodity exports, the SSE Measures were higher in period II, indicating greater instability. However, the instability is only the result of inflation. Table 4.2 shows the SSE Measures for the volume of commodity exports (with inflation taken out), and the SSE Measure for total commodity exports in Period II was lower. The Measures for the period III were lower still. Moreover, the exports of services were more stable than exports of goods. There is thus no strong evidence that Mainland's opening has led to more stability in Hong Kong's export earnings.

¹³ Integration may increase instability on the supply side as well as the demand side. On the supply side, besides supply shocks in HK itself, supply shocks in the PRD as well as shocks to HK-PRD links will affect HK's PRD-related exports. On the demand side, HK is vulnerable to additional shocks such as Sino-US trade disputes, or shocks in the China market.

¹⁴ The Measure assumes that growth of exports is exponential. The exponential growth path is first estimated with the least-squares method (i.e., fitting a semi-logarithmic time trend). The standard error of the unexplained residuals from the estimated trend is then used as an index of instability. See Lin, Mok, and Ho (1980: 36) for details.

4.2. Frictional unemployment

Hong Kong's integration with the PRD has led to rapid structural change in the Hong Kong economy and may result in frictional unemployment. It has been found that the Hong Kong's natural rate of unemployment has risen by around one percent, from 2-3% in the early 1990s to 3-4% in the late 1990s (Pang, Cheung, and Fan 2001), and the rise may be due to the friction of structural change. In particular, manufacturing workers who have dropped out of manufacturing need time and retraining to find work elsewhere. There is also evidence of an increase in skill mismatch in the financing and personal service sectors, "probably because these industries require more advanced education and specialized skills, which may not be fully met by the existing labour force" (Pang, Cheung, and Fan 2001: 41).

It should be stressed that even without the PRD, Hong Kong's labour intensive industries would still be phased out and there would still be frictional unemployment. Globalization implies structural change, which leads to frictional unemployment. A knowledge-intensive economy usually implies more specialized skills, which increases the probability of skill mismatch. In a nutshell, frictional unemployment is a necessary price to pay for globalization and specialization. While retraining can alleviate frictional unemployment, it cannot be completely avoided.

Moreover, without the PRD, there would be much less new jobs created. In addition to frictional unemployment, Hong Kong would also have massive and endemic unemployment. PRD-related exports generated 740,425 jobs in 2002 (Table 3.9). Without the PRD, mechanical calculation indicates that the 2002 unemployment rate would be 28.6% instead of 7.3%.

5. Interactions in the financial market

Interactions in the financial markets are mainly with the Mainland as a whole rather than the PRD because Mainland's financial policies are national rather than regional. Moreover, Mainland's financial activities are in Shanghai rather than the PRD. Table 5.1 shows the market capitalization of Mainland-affiliated enterprises in the Hong Kong stock market. Mainland-affiliated enterprises include Mainland enterprises listed in Hong Kong (H-shares) and "Red Chips", i.e., listed Hong Kong companies controlled by Mainland shareholders. Mainland-affiliated enterprises are subdivided into those at the state-level, those affiliated to Guangdong, and others.

The share of Mainland-affiliated enterprises in the market capitalization of the Hong Kong stock market rose rapidly from 7.1 percent at the end of 1995 to a peak of 27.6 percent at the end of 2000, and then hovered at around 27 percent till the end of 2002. Among Mainland-affiliated enterprises, the share of Guangdong-affiliated enterprises in market capitalization is quite small.

The Asian Financial Crisis and financial scandals in corporate governance uncovered in the late 1990s have dealt a heavy blow to Guangdong-affiliated enterprises. Their market

capitalization of \$33 billion in 2002 was still substantially lower than the peak of \$41 billion in 1997. Their share of the market capitalization of the Hong Kong stock market declined from a peak of 1.4% in 1997 to a low of 0.5% in 2000, but recovered to 0.9% in 2002. Their share of the market capitalization of Mainland-affiliated enterprises also declined from a peak of 11.6% in 1996 to a low of 1.6% in 2000, but recovered to 3.4% in 2002.

The share of Guangdong-affiliated enterprises in the Mainland-related segment of Hong Kong's stock market is very small. However, if we exclude state-level enterprises, which include giants such as China Mobile, Guangdong's share of 19.5% in 2002 was not insignificant. Moreover, Guangdong's share has rebounded since 2000 as its enterprises recovered from the financial scandals of the late 1990s.

5.1. Other financial interactions

The prospect of conducting offshore *Renminbi* business in HK is related to national rather than regional policy, though Guangdong will be an important player in the market as nearly half of Hong Kong's outward EDI in the Mainland is in Guangdong.

The prospect of the revaluation of the *Renminbi* has taken the pressure off Hong Kong's Linked Exchange rate, thereby strengthening investors' confidence in Hong Kong.¹⁵ It has also lowered interest rates in Hong Kong, which is good for economy recovery. While such developments have important impacts on HK's financial markets, the prospect of revaluation of the *Renminbi* is related to the national picture rather than the PRD.

6. **Interactions in the labour market**

The government's *Report of the Task Force on Population Policy* has summarized most of the pertinent issues and it is not necessary for this study to re-invent the wheel. As emphasized in the government's report, Hong Kong residents have a large number of spouses and children in the PRD. Immigration of these children into HK rejuvenates HK's aging population, but has an adverse impact on the skill level. Through immigration, we can have more young people, but they are less educated than the local population.

In terms of policy, it is easier to correct for skill deficits than to induce more births to rejuvenate an aging population. The availability of cross-border marriages is thus a big asset for Hong Kong, as it will widen the choice of marriage partners and encourage marriage and child-bearing. The share of cross-border marriages among newly weds in Hong Kong has risen from 10.6% in 2000 to 33.4% in the first seven months of 2003 (*Ming Pao*, 2 September 2003). Cross-border marriages will have significant benefits for rejuvenating of the Hong Kong population.

Mainland new arrivals are important in the labour market. They contributed to around

¹⁵ Though the *Renminbi* and Hong Kong dollar are two different currencies, their exchange rates are interdependent in a number of ways. First, a revaluation of *Renminbi* would make Hong Kong more competitive. Second, due to China's foreign exchange controls, international investors often take advantage of opportunities in the China market by investing in red chips in the Hong Kong market. An expected revaluation of *Renminbi* would lead to capital inflow into Hong Kong.

30% of the growth of the labour force between end-1999 and end-2001 (*Report of the Task Force on Population Policy*, 2003). While adult immigrants from the Mainland have lower skills than the local labour force, they have stronger incentives to work and to learn. As a result, many studies found that immigrants can be absorbed in the long run without much difficulty. The impact of immigrants on local wages is small in the long run. The impact is large only in the short run, and only when a large wave of immigration coincides with a severe recession (Lam and Liu 1997: 91). In the present recession in Hong Kong, it is easy for the community to be overwhelmed by the short run adverse impacts and lose sight of the long term and very positive contribution of young immigrants to a shrinking and aging population.

Illegal immigration and cross-border crime are problems that need to be carefully managed. Loopholes in immigration policies need to be closed. For instance, it has been recently reported that business visas have enabled many mainland container truck drivers to work in Hong Kong.

7. Interactions in the real estate market

Information on Hong Kong residents living in the Mainland and sales of Mainland property in Hong Kong can be obtained from various government and private sector surveys as well as information provided by real estate agencies. However, many of these surveys are of doubtful value as the sample size is small. The most valuable and authoritative source is the territory wide *Thematic Household Survey* of the Census and Statistics Department conducted in mid 2001. Figures in this study are taken from the Survey unless otherwise specified.

Among 5.3 million persons aged 18 and over in the Hong Kong Resident Population at the date of the Survey, some 41,300 persons, or 0.8% of the total, had taken up residence in the Mainland. Among those who had taken up residence in the Mainland, only 7,200 persons (17.4% of the total) resided in owned-occupied units. The others resided in rented units (6,400 persons), premises provided by employers (17,500 persons), and rent free units (9,200 persons).

At the date of the Survey, Hong Kong residents owned a total of 189,000 residential properties in the Mainland, 88% of which were in Guangdong. In 2002, Hong Kong residents reportedly bought 21,000 units in the Mainland worth around HK\$10 billion (HKGCC Bulletin, Nov 2002).

In recent years, the number of units in the Mainland purchased by Hong Kong residents were large. However, the adverse impact on the Hong Kong real estate market was much less than what the number of units would indicate for the following reasons. First, flats in the Mainland are not good substitutes for flats in Hong Kong as primary residences because very few people in Hong Kong have moved their residence to the Mainland. As mentioned above, only 41,300 persons or 0.8% of all persons 18 and over had taken up residence in the

Mainland, and only 7,200 of them resided in owner-occupied units. Second, flats in the Mainland are not good investment vehicles due to the China's complicated legal system and the lack of convertibility of the *Renminbi*. Of the 189,000 units owned by Hong Kong residents, only 18,400 or 9.7% of the total, were leased out. The great majority of the units owned are used as second homes. Third, the expenditure involved is not very large as the median price of the units was only \$200,000, which was much less than the median price of units in Hong Kong. The big difference in price indicates that units in Hong Kong and in the Mainland are not close substitutes and they are used for different purposes. From 1997 to September 2003, the total amount of loans from banks in Hong Kong to purchase properties in the Mainland were \$11 billion, which was only 1.3% of the amount of loans used to purchase properties in Hong Kong.¹⁶ Given the relatively small amount of expenditure involved, the impacts on the Hong Kong market cannot be large.

Economic integration with the PRD, in so far as it promotes growth and prosperity, will generally benefit real estate prices in Hong Kong. However, the city center will benefit more than peripheral areas as residences in peripheral areas and in Shenzhen are closer substitutes. For peripheral areas, they benefit in general from growth and prosperity, but suffer from cross-border competition, and the net effect may go either way. From the experience of the inauguration of 24-hour crossing at Lok Ma Chau in late 2002, shops in Northwestern New Territories appear to suffer from cross-border competition while residential units seem to benefit from the ease of access to Shenzhen.

According to the Survey, of the 5.3 million persons age 18 and over in Hong Kong, only 172,000 persons (3.2%) intended to take up residence in the Mainland in the next ten years. This percentage is much lower than the 15.6 percent obtained in the 2000 survey of the "Hong Kong-China Relation Strategic Development Research Fund". However, the latter survey was a telephone survey of only 1,121 people. It is less reliable than the Thematic Household Survey, which covered 10,100 households.

To summarize, according to the Survey, of the 5.3 million persons age 18 and over in Hong Kong in mid 2001, 4% of them (212,100 persons) owned a total of 189,000 units of residential property in the Mainland, but only 0.8% of them (41,300 persons) had taken up residence in the Mainland. Another 3.2% of them (172,000 persons) intended to taken up residence in the Mainland in the next ten years. These numbers imply that the impact on the residential market in Hong Kong would not be large.

8. Conclusion

This study will conclude by discussing three important policy issues, namely CEPA, tourism and individual tours, and the social problems of integration (illegal immigration, crime, public health etc), to be followed by a note on the limitations of this study, and a summary or balance sheet of benefits and costs of integration. This study will conclude with

¹⁶ Data obtained from monthly Residential Mortgage Surveys of the HKMA.

a note on management of integration.

The building of the HK-Zhuhai-Macau bridge, and coordination between Guangdong and Hong Kong, are important for integration, but analyses of these two items are outside the scope of this study. It should be noted that the building of the HK-Zhuhai-Macau bridge and coordination to ease border congestion are important for Hong Kong's status as the premier hub of the PRD, thereby promoting services trade, entrepot trade, and investment. The benefits for Hong Kong can be large because entrepot services alone accounted for close to 60 percent of Hong Kong's PRD-related exports (net). However, the building of the bridge will take a long time, while Shenzhen is likely to surpass Hong Kong in container throughput in the medium term. While the bridge will come too late to reverse the likely result of the race in container throughput, it will still have tremendous benefits for Hong Kong in promoting services trade and investment.

8.1. Mainland-Hong Kong CEPA

This study does not aim to analyse CEPA in detail. Instead, it will highlight the implications of CEPA in the context of this study, which stressed that the major benefits of integration for Hong Kong can be analysed in terms of the income and employment generated by PRD-related exports.

Mainland's service sectors will develop faster with liberalization after WTO entry, and Hong Kong's status as the premier service hub of China will face more competitive pressure. In the production chain of processed exports, the Mainland will increasingly source producer services locally rather than from Hong Kong, and Hong Kong's rate of re-export margin may decline further. However, WTO entry and economic development will open up new markets for high-end services in which Hong Kong has a comparative advantage, e.g., financial services. Hong Kong will lose out in low-end entrepot services, especially trade-supporting services that are directly related to physical movement of cargo (e.g. shipping, trucking, warehousing), and Hong Kong has to look for opportunities in high-end niches such as logistics, financing, insurance, arbitration, company headquarter functions, and high quality personal services. In other words, Hong Kong has to face the challenge of rapid structural change in its service sector, and Hong Kong can only succeed if it maintains its lead in skills and service quality.

The CEPA helps Hong Kong to rise to the challenge of structural change in services as it gives preferential access for Hong Kong firms to Mainland's services sector. The CEPA also strengthens Hong Kong's position as the premier service hub of China and thereby stimulates overseas investment in Hong Kong.

In the short run, it is unlikely that the CEPA will have large effects on PRD-related exports. CEPA gives tariff exemption for Hong Kong's domestic exports to the Mainland, but the share of such exports in Hong Kong's PRD-related exports (net) has declined rapidly from 22.1% in 1995 to only 9.8% in 2002 (Table 3.4). While CEPA may slow down the

rapid decline of Hong Kong's domestic exports to the PRD, it is not likely to reverse the trend.

CEPA will give preferential access to Hong Kong companies in 18 services sectors, including three sectors in Financial services (Banking, Securities, and Insurance), and eight sectors in Other services.¹⁷ However, the shares of the three sectors of Financial services and the eight sectors of Other services in PRD-related exports (net) in 2002 were only 0.3% and 1.6% respectively. The three sectors in transportation services (Freight forwarding, Storage and warehousing, and Transport services) are more significant, but still only 4.9% of PRD-related exports (net) in 2002. Hong Kong firms are also given concessions in Tourism services, which accounted for 6.4% of PRD-related exports (net) in 2002. The analysis of tourism will be deferred to the next section.

As mentioned before, the big items in Hong Kong's PRD-related services were related to trade: entrepot services and services involving offshore trade. The shares of the two in Hong Kong's PRD-related exports (net) in 2002 were 58.6% and 18.5% respectively.¹⁸ Though CEPA gives preferences to Hong Kong firms in three trade-related sectors,¹⁹ it is unlikely CEPA can reverse the very rapid cargo diversion from Hong Kong to Shenzhen, though it may slow the pace of diversion.

In a nutshell, in the short run, it is unlikely that CEPA will have large beneficial effects on PRD-related exports except for tourism, which will be analysed in the next section. In the short run, the main benefits of CEPA will come from an increase in overseas investment. CEPA already has a significant impact on investors' sentiments towards Hong Kong.

In the long run, the effects of CEPA on PRD-related exports can be large. Though exports of financial services to the PRD are presently small, Mainland's financial liberalization can turn Hong Kong into an offshore center for *Renminbi* business. The share of PRD-related services exports (which includes services exports to the PRD and merchandising of PRD goods) in PRD-related exports (net) has risen rapidly from 16.8% in 1995 to 31.7% in 2002, while the share of PRD-related entrepot services has declined slightly. With the help of CEPA, PRD-related services exports may rival or exceed PRD-related entrepot services in the long run. CEPA will help to transform Hong Kong's structure of exports away from low-end entrepot services to high-end services.

There is a fear that the CEPA will increase the flow of Hong Kong entrepreneurs and professionals to the Mainland, leading to further hollowing out in Hong Kong. However,

¹⁷ Including five sectors in Business services (Management consulting, Advertising, Accounting, Audio visual, and Legal services), and one sector each in Medical and dental, Real estate and construction services, and Telecommunication services.

¹⁸ Composed of exports to the PRD of merchandising and other trade related services (8.1%), and merchandising of PRD goods (10.4%) in 2002. See Table 3.3B.

¹⁹ Preferential access is given in three trade-related sectors: Exhibition and Convention services, Distribution services, and Logistics). Together with the concessions in the three sectors in transportation, and policy coordination to ease border congestion, the impacts on entrepot services and services involving offshore trade can be significant.

increased flows of Hong Kong entrepreneurs and professionals northward will enlarge Hong Kong's business network in the PRD/Mainland, which is a great asset for HK as it strengthens Hong Kong's position as the foremost hub of China's commerce. Moreover, the CEPA will also increase the flow of Mainland skills southward.

Ultimately, Hong Kong must maintain its lead in skills and service quality in order to retain its position as the premier service hub of China. Otherwise, China's WTO entry and the CEPA will only lead to the further hollowing out of Hong Kong services.

8.2. Tourism and Individual tours

The World Tourism Organisation projected that by 2020, the Mainland will generate 100 million outbound tourists a year. Moreover, it will attract 130 million international arrivals a year and will surpass France to become the world's leading tourist destination (*South China Morning Post*, 21 October 2003). As Hong Kong is China's foremost hub of air traffic, a substantial portion of these tourists may pass through Hong Kong and tour Hong Kong on their way to the final destination. The Mainland can generate almost an unlimited number of tourists for Hong Kong. In the light of this projection, the report that individual tours would bring another four million tourists a year for Hong Kong (*SingTao Daily*, 20 August 2003) appears to be quite modest.

It is quite easy to estimate the impacts on Hong Kong's GDP and employment of the 4 million extra tourists arising from individual tours. In 2002, the 4.9 million incoming tourists from the PRD generated 1.4% of Hong Kong's GDP and 1.9% of Hong Kong's employment (direct and indirect effects in Table 3.15). If we assume the 4 million tourists on individual tours would spend the same amount as the average Mainland tourist, mechanical calculation (multiplying the contributions of PRD tourists by 4/4.9) indicates that individual tourists would generate income of \$13.7 billion or 1.1% of the 2002 GDP. They would also generate 49,932 jobs or 1.5% of the 2002 employment.

The calculation is mechanical as the expenditures of tourists on individual tours may be quite different from those on group tours. One survey indicates that they spend an average of \$8,652 per person trip, which is much more than the average expenditure of the Mainland tourist of \$5,000 in 2002 (*Ming Pao* 24 November, 2003). They are more likely to buy insurance and open securities and bank accounts in Hong Kong. They also spend less on hotels and more on shopping. Without a good survey, it is not possible to be more precise.

It is important to stress that the contribution of individual tours goes far beyond tourism. Individual tours lower the transaction cost of business between Hong Kong and the Mainland. It is more convenient for Mainlanders to conduct businesses in Hong Kong, e.g., to open security accounts for trading of securities, to search for investment property, or to undergo medical operations etc. Like the CEPA, individual tours improve access for Hong Kong's services industries to the Mainland market.

Moreover, individual tours facilitate and hasten opening and economic reforms in the

Mainland. As services are performed on people, there are two alternative ways to export Hong Kong services to the Mainland. One way is to allow Mainlanders to come to Hong Kong, and the other way is to allow Hong Kong's services firms to set up outlets in the Mainland. The two ways interact and reinforce each other. For instance, individual tours facilitate the trading of H shares in Hong Kong by mainlanders.²⁰ This may hasten the introduction of QDII. Moreover, individual tours imply more tourists bringing more *Renminbi* to Hong Kong. This may hasten the liberalization of *Renminbi* business for Hong Kong banks.

8.3. Social problems of integration

The public is concerned with many social problems of integration, namely, illegal migrant workers, crime, public health etc. The spread of SARS from Guangdong to Hong Kong has highlighted the risks and costs of integration. Such problems are very real, but quantification of the costs is difficult and is beyond the scope of this paper. The costs can be very large, as evidenced by the SARS near-epidemic.

Two opposite approaches can be taken to manage such social problems. One approach is isolation, i.e., severing the ties of integration. The opposite approach is management through deep integration, i.e., coordination and cooperation on both sides of the border to manage the problems. While a full discussion of the two approaches is beyond this paper, the well-known SARS episode can be taken to illustrate the two approaches.

Taiwan took the isolationist approach. All passengers, including Taiwanese, from the Mainland and from Hong Kong have to be quarantined on arrival in Taiwan. While there had been proponents in Hong Kong to take the isolationist approach by sealing the border with Shenzhen, Hong Kong eventually took the approach of deep integration to manage the crisis. Cooperation between Hong Kong and the Mainland to fight SARS developed along many fronts, including border monitoring, provision of medical supplies and equipment, medical research and clinical treatment.

Taiwan's isolationist approach turned out to be quite ineffective. Taiwan was the last region in the world to be removed from the list of infected areas of the World Health Organization. Taiwan's refusal to purchase medical supplies from the Mainland exacerbated the scramble for masks in Taiwan. More seriously, Taiwan's isolationist approach hampered learning from SARS outbreaks in Hong Kong and the Mainland, which occurred before the outbreak in Taiwan. If Taiwan had adopted the best practices then used in Hong Kong or the Mainland, its hospital outbreaks might have been avoided.²¹

Though Hong Kong was slow in its effort to cooperate with the Mainland to fight SARS,

²⁰ Individual tours reportedly accounted for close to 30% of the transaction in Red Chips in mid August 2003. A prominent security company reported that the majority of its new clients in August 2003 were Mainlanders (*Wen Hui Pao*, 19 August 2003).

²¹ Until the outbreak in Hopping Hospital in mid-April 2003, there were no limitations placed on the number of visitors to hospitals in Taiwan.

the belated approach of deep integration has shown encouraging results. For example, the cooperation of Hong Kong and Guangdong medical experts has led to the discovery of the Coronavirus as the cause of SARS. Joint research on the animal carriers of the Coronavirus and the testing of SARS vaccines have made significant progress. Hong Kong has also invited Mainland specialists in Chinese medicine to treat SARS patients in Hong Kong, and the efforts have been fruitful.

To manage the social problems arising from integration in a globalized world, a strong case can be made that isolation is not only economically inefficient but also ineffective. Deep integration can be a much more effective strategy to control such social problems. For instance, Hong Kong has been quite successful in its coordination with the Mainland to fight cross-border crime. The same case can be made for illegal immigrant workers. For example, Mainland authorities have refused to grant individual travel permits to suspects who may illegally work in Hong Kong.

8.4. Limitations of the study

While this study has quantified the benefits of Hong Kong's PRD-related exports in detail, it has not quantified the long run effects of integration on Hong Kong's capacity for innovation and technical change. Though such an exercise is very difficult, it is also worthwhile and valuable. Moreover, this study has not quantified the social costs of integration, and has not analysed in any detail strategies to cope with the social problems of integration.

The benefits of Hong Kong's PRD-related exports have been very large. The future potential benefits of further integration are also large, as the PRD is one of the fastest growing regions of a very dynamic Chinese economy. However, as Hong Kong's temporary monopoly as *the* service hub of the Mainland is rapidly eroding, Hong Kong has to compete and also cooperate with rival hubs to realize the potential benefits of integration. This study has not analysed the preferable strategies of competition and cooperation, which are vital to the realization of potential benefits.

Lastly, to quantify the benefits of PRD-related exports, this study updates the author's 1980 input-output table with current data on direct value added. However, as there is no current data on intermediate inputs, the distribution of intermediate inputs is assumed to be constant. While the biases may not be large, collecting detail data on intermediate inputs would certainly give better results. The table can be used for policy analysis in many different contexts. While the expenses involved are considerable, the effort is certainly worthwhile.

8.5. Summary of benefits and costs

This study argues that Hong Kong's labour intensive activities would be phased out with or without the opening of the Mainland. Without the PRD, most of Hong Kong's small manufacturing firms would go bankrupt, and the consequence for Hong Kong would be

disastrous. While the few big Hong Kong firms would be able to relocate, relocation to distant locations is much less beneficial for Hong Kong than relocation to the PRD. Outsourcing to the PRD has generated huge benefits for Hong Kong in terms of income and employment.

Moreover, with the opening of China, Hong Kong is bound to lose its temporary monopoly as *the* service hub of China. Had Hong Kong adopted an isolationist strategy in response to Mainland's opening, Shenzhen's ports would be built with the help of overseas investors instead of Hong Kong investors, and Hong Kong would still lose its temporary monopoly. The results would be worse for Hong Kong as Hong Kong companies would lose the opportunity to expand into one of the world's fastest growing markets.

8.5.1. Allocative effects

This study distinguishes between allocative effects and growth effects. Allocative effects, which can largely be quantified as the income and employment generated by PRD-related exports, are first summarized.

Benefits:

- Income (direct & indirect) generated by PRD-related exports accounted for 16.6% of Hong Kong's GDP in 1995, rising to 24.8% in 2002. The increase in income generated by PRD-related exports from 1995 to 2002 accounted for 76% of the growth of GDP in the period.
- Employment (direct & indirect) generated by PRD-related exports accounted for 16% of Hong Kong's employment in 1995, rising to 23% in 2002. The increase in employment generated by PRD-related exports from 1995 to 2002 accounted for 85% of the growth of employment in the period. Without the growth of PRD-related exports, the unemployment rate of Hong Kong in 2002 would be 15.2% instead of 7.3%.

Costs:

- Specialization in PRD-related exports, composed mainly of entrepot services and services exports, may lead to instability in export earnings. However, there is no evidence that this is the case.
- Integration has led to rapid structural change, leading to frictional unemployment. Hong Kong's natural rate of unemployment may have risen by around one percent, from 2-3% in the early 1990s to 3-4% in the late 1990s.

8.5.2. Long run growth effects

Long run growth effects are important, but very difficult to quantify.

- Hong Kong's direct investment in the Mainland raises the return to capital in Hong Kong and thus stimulates investment in Hong Kong. A previous study estimated that it would raise Hong Kong's growth rate by around 1.5% (Sung and Wong 2000: 217).
- Integration stimulates growth by providing more opportunities of learning-by-doing. As Hong Kong firms expand across the border, they operate on a larger scale; enter new

markets or product lines, and they have more opportunities to learn.

- Some of Hong Kong's well-known firms grew large to become competitive, world-class players in the 1980s and 1990s through expansion in the China market and rapid growth in Hong Kong as a result of the prosperity generated by the China factor. Hong Kong has the world's biggest and most globalized Chinese companies, and this is important for long run growth.
- The synergy of the R & D capacity of the PRD with the capabilities of Hong Kong in high-tech finance and high-end services is a big plus for long term growth.
- Hong Kong residents have a large number of spouses and children in the PRD. Immigration of these children into the Hong Kong rejuvenates Hong Kong's aging population, which is very positive for long term growth.
- Adult immigrants from the Mainland have an adverse impact on the skill level. A previous study estimated that the immigration of low-skilled mainlanders lowered the growth rate of Hong Kong in the mid 1990s by nearly one percent per year (Sung and Wong, 2000: 221). However, immigrants have stronger incentives to work and learn than local workers. Past experience indicates that they can be smoothly assimilated in the long run.
- In terms of policy, it is easier to correct for skill deficits than to induce more births to rejuvenate an aging population. On the net, the availability of cross-border marriages is a big asset for Hong Kong.

8.5.3. Interactions in selected markets

The financial market:

- "Red-Chips" and H-shares are important in Hong Kong's stock market. They constituted around 27% of the market capitalization of the Hong Kong stock market. However, Guangdong-affiliated enterprises constituted less than 1% of the market capitalization in Hong Kong. Most of the big China-affiliated enterprises are state-level enterprises rather than regional enterprises.
- Interactions in the financial markets are related to the Mainland as a whole rather than Guangdong because Mainland's financial policies are national rather than regional. For instance, the prospect of conducting offshore *Renminbi* business in Hong Kong is related to national rather than regional policy, though Guangdong will be important in the market as nearly half of Hong Kong's outward EDI in the Mainland is in Guangdong.

The Labour Market:

- Most of the pertinent issues have been summarized in the government's *Report of the Task Force on Population Policy*.
- Many international and local studies found that the impact of immigrants on local wages is small. The impact is large only in the short run, and only when a large wave of immigration coincides with a severe recession. In the long run, the Hong Kong labour

market has been able to absorb large numbers of immigrants without great difficulty.

The Real Estate Market:

- According to the government's Thematic Household Survey, of the 5.3 million persons age 18 and over in Hong Kong in mid 2001, 4% of them (212,100 persons) owned a total of 189,000 units of residential property in the Mainland, but only 0.8% of them (41,300 persons) had taken up residence in the Mainland. Another 3.2% of them (172,000 persons) intended to take up residence in the Mainland in the next ten years.
- Most of the residential units purchased by Hong Kong buyers are used as vacation homes. Such properties are not substitutes for residential property in Hong Kong.
- From 1997 to September 2003, the total amount of loans from banks in Hong Kong to purchase properties in the Mainland were \$11 billion, which was only 1.3% of the amount of loans used to purchase properties in Hong Kong. Given the relatively small amount of expenditure involved, the impacts on the Hong Kong market cannot be large.

8.5.4. Social issues

The many social problems of integration, namely illegal immigration, crime, and public health hazards, can be very costly, as evidenced by SARS. However, in a globalized world, the best strategy to tackle such problems is not isolation but deep integration. Pro-active cross-border cooperation is often the best way to deal with such problems.

8.6. Pro-active management of integration

The benefits of HK-PRD integration are huge for both parties because Hong Kong is the business platform linking the global factory of the PRD to the world market. The bulk of Hong Kong's PRD-related exports are destined for the world market. HK-PRD nexus should not be an inward-looking bloc.

Before 1997, Hong Kong's integration with the PRD was largely market-driven with very little government direction. As Hong Kong had a temporary monopoly as a service hub, Hong Kong had been able to maintain full employment despite massive loss of jobs in manufacturing. Integration during phase one was exceeding benign for Hong Kong. After 1997, Hong Kong has lost its temporary monopoly as a service hub, and the process of integration is no longer so smooth.

As the PRD is one of the most dynamic regions of the rapidly growing Chinese economy, the potential benefits of integration for Hong Kong are still huge, but Hong Kong has to manage the process of integration to maximize the benefits and minimize the costs. For instance, before 1997, the PRD had to depend on Hong Kong's port despite border congestion because there was a lack of alternative ports. After 1997, cutting down border congestion is crucial for the competitiveness of Hong Kong as a shipping hub. Coordination of infrastructure and logistics between Hong Kong and the PRD is crucial, or else there will be excessive duplication of ports and airports.

In particular, integration with the PRD should be managed to avoid the hollowing out

of the Hong Kong economy. For instance, schemes have been instituted to admit Mainland professionals. In a nutshell, spontaneous and market-driven integration would no longer suffice, and pro-active management of integration is required.

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