# Hong Kong: From an Industrialized City to a Center of Manufacturing-Related Services[1]

Zhigang Tao[2]

YC Richard Wong[3]

March 2002

**Abstract**

Significant transformation of economic activities has taken place in Hong Kong in the past two decades. Hong Kong's manufacturing industry has declined substantially relative to its service industry, in terms of employment and of contribution to GDP. Hong Kong has emerged as a center of services, mainly manufacturing-related producer services. While growth of producer services is expected for most advanced economies, Hong Kong's transformation from an industrialized city to a center of manufacturing-related services has been dramatically sped up by the opening up of the mainland Chinese economy in the past two decades. In addition to its relocation of manufacturing to mainland China, Hong Kong has played an increasingly important role as an intermediary for trade between mainland China and the world market.

[1] This paper is based on a larger study entitled "An Economic Study of Hong Kong's Producer Service Sector and its Role in Supporting Manufacturing," which was generously supported by the Industrial Support Fund of the Hong Kong Special Administrative Government. We thank Michael Enright, Alan Siu, participants at the 2001 CES meeting (Xiamen, China) and the 2001 WEA meeting (San Francisco, USA), an anonymous referee, and guest editor Ken Small for comments and suggestions. We would also like to thank Chi Shing Chan, Ginnie Choi, and Molly Du for excellent research assistance.

[2] School of Business, The University of Hong Kong, Pokfulam Road, Hong Kong
Tel: (852)-2857-8223; fax: (852)-2858-5614; email: ztao@hku.hk

[3] Faculty of Business and Economics, The University of Hong Kong, Pokfulam Road, Hong Kong
Tel: (852)-2857-8222; fax: (852)-2858-5614; email: director@business.hku.hk

# HONG KONG: FROM AN INDUSTRIALIZED CITY TO A CENTER OF MANUFACTURING-RELATED SERVICES

## I. Introduction

Significant transformation of economic activities has taken place in Hong Kong in the past two decades. Hong Kong's manufacturing industry has declined substantially relative to its service industry in terms of employment and of contribution to gross domestic product (GDP). Between 1980 and 1997, the percentage of Hong Kong workers employed in service rose from 42.1% to 79.3%, while the percentage employed in manufacturing fell from 45.9% to 9.8%. These sectors' shares in nominal GDP changed in a similar fashion. These changes have led to public concern that the decline of Hong Kong's manufacturing sector relative to the service sector may erode its competitiveness.

What has actually happened is that Hong Kong has transformed itself from an industrial city to a center of services, mainly manufacturing-related producer services. In the late 1970s, when mainland China launched its economic reform and adopted the open-door policy, many Hong Kong manufacturing firms relocated their labor-intensive production processes and lower-value-added activities to the mainland to take advantage of the low production costs available there. However, higher-value-added business activities related to manufacturing—the services—continued to be performed in Hong Kong (Suen and Chan, 1997). Since that time, the boundary between traditional manufacturing and services has become increasingly blurred. A large number of Hong Kong firms are now classified as services because they provide

producer services that are intimately connected to the manufacturing sector. Hence, we should take a broader view of the manufacturing process so as to include in our definition of this process the contribution made by these manufacturing-related service firms.

The objective of this paper is to examine empirically the key role of producer services in the Hong Kong economy. Measuring producer services is a challenging problem, because the classification of a service as a producer service or a consumer service is a function of its economic purpose, not of the service's physical attributes. By using a technique first developed by Grubel and Walker (1989), we estimate the level and growth of Hong Kong's producer services in the last two decades, and investigate the size and growth of various types of producer service industries. In particular, we find that business services, finance, import/export, and insurance have led the growth of producer services in Hong Kong.

To gain an international perspective, we compare the case of Hong Kong with that of Singapore. We focus our discussion on the differences between Hong Kong's and Singapore's service sectors to highlight the different roles of producer services in these two economies.

While growth of producer services is expected for most advanced economies, we believe that Hong Kong's transformation from an industrial city to a center of manufacturing-related services has been drastically sped up by the opening up of the mainland Chinese economy in the past two decades. In addition to its relocation of manufacturing to the mainland China, Hong Kong has played an increasingly

important role as an intermediary for trade between mainland China and the world market. The deregulation of foreign trade in China creates a challenging problem for multinationals to spot trading opportunities, to find trustworthy trading partners in China, and to carry out transactions efficiently in an imperfect legal environment. Being a combination of the East and the West, Hong Kong is in a unique position to play the role of an intermediary (Sung, 1998). Hong Kong people speak the same language spoken in China, and at the same time they have great ease in communication with Western people. More importantly, a significant percentage of Hong Kong people were originally from various parts of China. There are thus informal links between Hong Kong people and people in all parts of China. This network of friends and relatives allows Hong Kong people to spot trading opportunities and identify trustworthy trading partners, effectively alleviating the information problem of market transactions. In addition, the informal network has fostered attention on the part of both Chinese firms and their Hong Kong counterparts to reputation, which serves as a partial substitute for the imperfect contract enforcement in China.

The plan of the paper is as follows. The service economy in Hong Kong is investigated in section 2. A comparison between Hong Kong and Singapore with respect to producer services is made in section 3. In section 4, the growth dynamics of producer services are discussed. The paper concludes with section 5.

## II. The Service Economy in Hong Kong

### Decline of Hong Kong's Manufacturing Industries Relative to Service Industries

In the past two decades, service industries have grown rapidly in Hong Kong. The nominal GDP contribution of total services increased from HK$90.7 billion in 1980 to HK$1050.4 billion in 1997. Table 1 summarizes the relative contribution of manufacturing and services to nominal GDP in selected years. The percentage share of services increased from 67.5 percent in 1980 to an estimated 85.2 percent in 1997, while the share for manufacturing decreased substantially, falling from 23.7 percent in 1980 to an estimated 6.5 percent in 1997. Similar findings are obtained when the relative contributions to real GDP are used. Manufacturing real value added grew at an annual rate of 8.7 percent in 1980–89, but then sharply declined at an annual rate of –4.5 percent in 1990–97.

Employment changes are even more dramatic, as seen in Table 2. In the period 1980–97, the service sector's share of employment grew from 42.1 to 79.3 percent, while the manufacturing share fell from 45.9 to 9.8 percent. A linear extrapolation of the employment trends for this period would imply that by the year 2004, all employment in Hong Kong would be in the service sector. These figures have led to the widespread perception that manufacturing in Hong Kong has declined, and created public concern that the decline of Hong Kong's manufacturing industries relative to the service industries may erode the city's competitiveness.

What has actually happened is that, in the past two decades, Hong Kong has transformed itself from an industrialized city into a service hub dominated by producer services. This is the result of the convergence of several factors, including the globalization of economic activity, rapid economic growth and integration of the Asia Pacific region, and especially the opening of mainland China.

**Estimating Hong Kong's Producer Services**

Measuring producer services is a challenging problem, because the classification of a service as a producer service or a consumer service is a function of its economic purpose, not of its physical attributes. For example, restaurant service is considered a producer service when used by a business executive on assignment, but considered a consumer service when used by a tourist on vacation. In fact, almost all services are purchased by both consumers and producers. Only the share of services bought by producers can properly be considered producer services.

In early studies, producer services are typically identified as the total production in some subsectors of the service sector. The choice of what is to be included varies from study to study. A common classification identifies producer services with finance, insurance, business services, and real estate. Unfortunately, this classification is both too narrow, in that it excludes other services purchased by producers, and too broad, in that many of the services produced by finance, insurance, business services, and real estate companies are purchased by final consumers.

We measure the level and growth of producer services in the Hong Kong economy, using a technique first developed by Grubel and Walker (1989). Here we provide a general description of the methodology, with reference to Table 3. Further details can be found in Wong and Tao (2000). In this classification scheme, the entries in the consumer services and producer services categories are identical. This reflects the idea that the same type of service can be used either for final consumption or as embodied services in the production of other goods.

The GDP accounts of Hong Kong contain a consistent time series on the total size of the service-producing sector of the economy, as measured by its value added or GDP. *Consumer services output* refers to all those services used in final consumption. Data on the purchase of *consumer services* are obtained from consumer expenditure surveys, and they are reliable and consistent. Data on g*overnment services output* are Hong Kong Census and Statistics Department estimates and are available from published GDP estimates.

We estimate *producer services output* by subtracting consumer and government services output from total service sector output. Producer services therefore contain the output of the industries producing intermediate inputs (e.g., "business services," "wholesale services"). They also include as a residual some of the output of those industries widely viewed as serving mainly consumers (e.g., restaurants, hotels, and transportation). A significant fraction of the output of these industries is used by business and government as input into the production of additional goods and services.

**Comment [rb1]:** Page: 8
Shouldn't these items be in the same order as they are in the table (i.e., producer services, then produ services, and then govt. services)?

There is probably a downward bias in our estimation of producer services because many of the services produced by the government are used as inputs by business. The most obvious of these are the output of the Trade and Industry Departments in Hong Kong, but most other government departments serve both consumers and business. Unfortunately, it is not possible to determine the relative magnitude of the two. By not allocating any of the government service output to the category of producer services, our procedure understates the latter.

To assess the contribution of producer services to the economy, we further have to derive the *real* values of producer services (see Wong and Tao (2000) for details). We first calculate the real value added of all economic activities (i.e., real GDP) and of the goods-producing sectors—agriculture and fisheries, mining and quarrying, manufacturing, construction, and utilities. We then calculate the real value added of total services by subtracting the real value added of the goods-producing sectors from that of all economic activities. Finally, we obtain the real value of producer services by subtracting the real values of government services and consumer services from the real value added of total services. The price deflator of producer services is the ratio between the nominal value and real value of producer services.

**Changing Patterns of Producer, Consumer, and Government Services**

Table 4 lists the results of these calculations. It shows the real value added of producer services as a percentage of real GDP, their standard deviations, and 95% confidence intervals, for the years 1980–1997. Using these figures, Figure 1 illustrates the size of the total service sector and its three components as a percentage of real

GDP for the years 1980–97. In 1980 consumer and government services represented 26.8 percent and 4.7 percent, respectively, of GDP, while producer services held the largest share at 42.7 percent. Since then, the share of government services increased to 5.8 percent in 1997. Producer services trended upward, and by the end of the period had reached 50.0 percent. Consumer services increased very modestly to 27.8 percent by 1997.

Relative growth rates are brought out effectively in Figure 2, which uses the information contained in Figure 1 but expresses the share of GDP of each sector in 1980 as an index value of 100 and traces the development of this share through time. According to this figure, total services during this period have risen by about 12.3 percent, government services have risen by about 25.4 percent, and consumer services have risen by about 4.6 percent, all expressed as a share of GDP. The growth in the share of producer services by about 16.9 percent has been very rapid, especially since 1985 when it was at a low point. Although government services grew even more rapidly overall, they have declined on average since 1985; they are a much smaller part of total services and hence far less important than producer services in their overall size contribution to total GDP.

Figure 3 contrasts the changing pattern of producer services with that of manufacturing. According to this figure, producer services grew very robustly from the late 1980s onwards. At about the same time, we witnessed the decline of the manufacturing sector: manufacturing expressed as a share of GDP fell by about 57.6 percent. This is consistent with the hypothesis that the relocation of the manufacturing

industries to the Chinese hinterland and the rest of Asia paved the way for the growth of producer services in Hong Kong.

Hong Kong's relocation of manufacturing industries into mainland China was associated with significant investment flows, which then created a demand for China-related trade activities in Hong Kong and gave impetus to the growth of Hong Kong's reexports. Indeed, Figure 4 shows the close relationship between the annual growth rate of real producer services and the percentage change in the value of utilized stock of foreign direct investments that Hong Kong had made in the Chinese hinterland. (Data on the foreign direct investments are obtained from China Statistical Yearbook, various issues.) Figures 5 shows clearly how the percentage growth of real producer services is closely related to the percentage growth of real reexports from Hong Kong. (Data on the re-exports are obtained from Hong Kong Annual Digest of Statistics, various issues.)

In addition to the relocation of manufacturing to mainland China, Hong Kong has played an increasingly important role of intermediary for trade between mainland China and the world market. As shown in Figure 6, there is a close relation between the percentage growth of real producer services and the percentage growth of the real value of all Hong Kong trade with mainland China. (Data on the trade are obtained from Hong Kong Annual Digest of Statistics, various issues.)

### The Size and Growth of Various Types of Producer Service Industries

Besides estimating the overall contribution of producer services in the Hong Kong economy, we also investigate the percentage contribution to producer services made by different types of service industries (see Appendix for details).

Figures 7a–c present the percentage contribution of the various types of service industries to total real producer services for the years 1980–1997. They are grouped into three separate figures according to whether the sectors have tended to decline, remain stable, or rise over time. The trends are summarized in Table 5.

Insurance, financing, import/export trade, and business services have led the growth of total real producer services. The growth mainly occurred in the late 1980s and early 1990s. The rise of producer services, and especially of the above components, has transformed Hong Kong from a center of manufacturing industries into a hub for managing outsourcing and intermediation activities.

## III. Comparison between Hong Kong and Singapore

Both Hong Kong and Singapore have experienced rapid economic growth measured in real gross domestic product per capita. They have traversed somewhat similar growth paths. Both started as major entrepôts in the Far East, became significant exporters of labor-intensive manufactured products, have increasingly dominant service sectors (including finance, telecommunication, and transportation), and are

prepared to develop other innovative high-value-added economic activities. In the past decade, Singapore's growth rate has risen slightly faster than Hong Kong's. This probably reflects Hong Kong's much more rapid economic transformation toward a service economy during this period (Young, 1992, 1995). It is well known that *measured* rates of productivity change in the service sector tend to be lower than corresponding rates in the manufacturing sector (Baumol, 1967), and this may have decreased the *measured* rates of GDP growth.

Figures 8 and 9 show that producer services are more important than consumer services and manufacturing in both Hong Kong and Singapore throughout the periods for which data are available. In Singapore manufacturing is larger than consumer services, whereas in Hong Kong manufacturing is even smaller than consumer services. Together consumer and producer services dominate economic activity in both economies, and producer services have grown rapidly in both. Also noteworthy is the rapid decline of the manufacturing sector in Hong Kong after the late 1980s. (Data on Singapore's manufacturing, producer services and consumer services are obtained from CEIC DRI Asia Database.)

Table 6 shows the percentage share of manufacturing and producer services in real GDP for the years 1977, 1987, and 1997 in Singapore and Hong Kong. Hong Kong's producer service sector has grown more rapidly than Singapore's. The contribution of producer services to real GDP in Hong Kong grew by over nine percentage points between 1987 and 1997. For Singapore, the corresponding contribution grew up to 1987, but has since leveled off. Statistical analysis reveals that by 1997 the percentage

share of producer services in the Hong Kong economy is significantly higher than that of Singapore at 5% level.

The rapid growth of the producer service sector in Hong Kong in the past decade reflects the growing integration of Hong Kong's economy with the rest of the region and especially with mainland China. These producer services primarily support the manufacturing production base that has migrated offshore. The process has taken place to a much greater extent in Hong Kong than in Singapore. One piece of supporting evidence can be found in the changing importance of the role of manufacturing in the two economies. The percentage contribution of manufacturing to real GDP in Singapore has been rather constant, declining slightly from 26.2 percent in 1977 to 23.9 percent in 1997. In contrast, the share of manufacturing in the real GDP in Hong Kong has fallen dramatically, plummeting from 17.8 percent in 1987 to 9.0 percent in 1997. Another piece of supporting evidence lies in the different structure of exports in the two economies. In Hong Kong, the proportion of reexports in total exports rose from 34 percent in 1986 to 73 percent in 1996. The change was much less pronounced in Singapore, where reexports only rose from 34 percent to 38 percent over the same period. (Data on Singapore's re-exports are obtained from CEIC DRI Asia Database.)

## IV. Causes and Effects of Growing Producer Services

While producer services gain importance in many economies, their growth dynamics remain to be understood. It is commonly held that the trigger point for the prominence

of producer services is consumers' insatiable need for more varieties of goods and services, which leads to lower demand for each type of those goods and services. This poses a significant challenge to producers. How can the producers cope with low-volume but greater-variety demand for goods and services? Producers have responded to the changing consumer preferences by increasing demand for specialized parts and services as intermediate inputs and adopting new organizational structures.

Traditionally, firms had all the parts and services provided in house. Vertical and horizontal integration was considered ideal. However, specialization of parts and services within those firms is difficult to achieve. This is because specialization generally involves substantial investments, but the scale of production for parts and services within a single firm is not large enough to justify such large investments. In addition, as the parts and services subsidiaries are assured of demand within the firm, they lack the incentive to improve the quality of intermediate goods and services. The above two problems can be overcome when the specialization of intermediate goods and services is provided on the market rather than within the firms.

Independent firms specializing in production of parts and services can sell their products to a large number of downstream firms, thereby enjoying economies of scale and justifying substantial amounts of specialized investment. The new theory of the firm (Milgrom and Roberts, 1992) has also explained why a subsidiary within a firm may have difficulty selling its products to other downstream firms, consequently failing to achieve the economies of scale. Furthermore, compared with subsidiaries of big corporations, independent firms have stronger incentive to improve the production of parts and services and to develop new parts and services. This is confirmed by

empirical studies in various industries and countries (Marshall et al., 1986), and elucidated in the new theory of the firm.

Finally, even if specialized firms have advantages over in-house parts and services subsidiaries, there is still a question of how to get those specialized firms started in the first place. In many industries such as the automobile, a few firms control most of the business and they are vertically integrated. In such an industry, a new and independent firm has weak bargaining power vis-à-vis the big downstream firms, and consequently it has a low incentive to undertake specialized investment. There are at least two possible ways to get around this problem. One is for the vertically integrated firms to spin off some of their upstream business. A recent example is GM's spinoff of Delphi. The other is to ensure that there are sufficiently large numbers of downstream firms that are interested in the products of the specialized firms. A recent study by McLaren (2000) shows that international openness facilitates vertical disintegration and the growth of specialized parts and services companies. With a higher degree of international openness, a specialized firm has more downstream firms/buyers from different regions/countries, and hence it has higher incentive to make specialized investments. This point is especially relevant to Hong Kong, as its transformation from an industrial city to a center of producer services coincides with the opening up of the economy in mainland China.

## V. Conclusion

The relocation of Hong Kong's manufacturing base offshore is part of the restructuring of production that is taking place worldwide. In this process, we are witnessing a major shift of selected parts of the production systems of advanced economies to the emerging economies of the developing world. We are also finding that core production activities, including research and development, high-value-added products and services, or technology-intensive activities, remain anchored in the developed economies, where high-skilled individuals, especially those who contribute to the production of advanced services, are now one of the most important factor inputs. It is interesting to investigate how such a division of labor between developed and developing economies will evolve as the latter group of economies catches up with the others.

## References

W Baumol, "Macroeconomics of Unbalanced Growth," *American Economic Review*, 57, June 1967.

H G Grubel and M A Walker, *The Canadian Service Industries*, The Fraser Institute, Vancouver, 1989.

J N Marshall, et al., *Uneven Development in the Service Economy: Understanding the Location and Role of Producer Services.* Report of the Producer Services Working Party, Institute of British Geographers and the ESRC, August 1986.

J McLaren, "Globalization and Vertical Structure," *American Economic Review*, 90, December 2000.

P Milgrom and J Roberts, *Economics, Organization and Management*, Prentice-Hall, 1992.

W Suen and W Chan, *Labour Market in a Dynamic Economy*, City University of Hong Kong Press, 1997.

Y W Sung, *Hong Kong and South China: The Economic Synergy*, City University of Hong Kong Press, 1998.

Y C R Wong and Z G Tao, An Economic Study of Hong Kong's Producer Service Sector and its Role in Supporting Manufacturing, working paper, Hong Kong Institute of Economics and Business Strategy, May 2000.

A Young, "A Tale of Two Cities: Factor Accumulation and Technical Change in Hong Kong and Singapore," *NBER Macroeconomics Annual*, National Bureau of Economic Research, New York, 1992.

A Young, "The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience," *Quarterly Journal of Economics*, 110, August 1995.

## Appendix: Estimating the Contributions to Producer Services Made by Different Types of Service Industry

According to government classification, the service sector can be divided into the following economic activities: wholesale trade; retail trade; import/export trade; restaurants; hotels; transport, storage, and communications; financing; insurance services; real estate; business services; community, social, and personal services; ownership of premises; and adjustment for financial intermediation services (residual category).

All these economic activities may include both consumer and producer services. The following will explain how we estimate the nominal values of producer services from each economic activity.

(a) For wholesale trade, we take the proportion of the value added of producer services to be 100%.

(b) For retail trade, we assume that producer services are services provided to tourists. From survey data provided by the Hong Kong Tourist Association, we take figures under the category of "shopping" as an estimate of the amount of gross output value attributable to retail trade activity associated with the provision of producer services. These account for about 40 to 50 percent of the total gross output attributable to retail trade over the period 1980–97. Accordingly, we take 45 percent across the board to be the proportion of the value added of producer services.

(c) For import/export trade, we take the proportion of the valued added of producer services to be 100 percent.

(d) For the restaurant industry, we assume that the producer services are mainly for tourists. From data provided by the Hong Kong Tourist Association, we take figures under the category of "meals out" as an estimate of the gross output value attributable to the restaurant industry associated with the provision of producer services. These account for about 10 to 20 percent of the total gross output attributable to the restaurant industry over the period 1980–96. Accordingly, we take 15 percent across the board to be the proportion of the value added of producer services.

(e) For the hotel industry, we assume that producer services are for tourists, and we take the proportion of the value added of producer services to be 100%.

(f) For the transport, storage, and communications service sector, figures under the category of "transport and communication" are available in the expenditure account for consumption. We take these as the estimated value added of consumer services, which accounts for about 50 to 60 percent of the total value added. We take an average 45 percent across the board to be the proportion of value added of producer services.

(g) For the finance industry, we take the value added of consumer services to be the profit earned by the banks and deposit-taking companies from professional and private-individual loans. We assume that the banks and deposit-taking companies earn about 2 to 2.5 percent on loans, which accounts for about 8 to12 percent of the total

value added. We take an average of 90 percent across the board to be the proportion of the value added of producer services.

(h) For insurance services, according to the information from the Office of the Commissioner of Insurance, the proportion of insurance related to business activities is about 20 percent. We take 20 percent across the board to be the proportion of the value added of producer services.

(i) For the real estate industry, we assume that the proportion of producer services is directly related to the proportion of the value accrued in nonresidential building. The proportion of the value of nonresidential building activity in total activity was about 40 to 50 percent in the period 1980–97. We assume that the value added from nonresidential building should be lower during the recession in the construction industry. Thus, we take the proportion of the value added of producer services to be 50 percent, except in the period 1983–86, when the construction industry was in recession. For those years, we take the proportion to be 40 percent.

(j) For business services, we take the proportion of the value added of producer services to be 100 percent.

(k) For community, social, and personal services, figures under the categories of "medical care and health expenses," "recreation and entertainment," "education," and "other services" are available in the expenditure account on consumption. Accordingly, we take these as the estimated value added of consumer services, which account for about 50 to 55 percent of the total value added. Also under this category

are “government services.” The value of this part accounts for about 40 to 45 percent of the total value added. Hence, we take an average 5 percent across the board to be the proportion of value added of producer services.

(l) For ownership of premises, according to the information from the Rating and Valuation Department, the proportion of rates from nonresidential premises was about 45 percent. Accordingly, we take 45 percent across the board to be the proportion of the value added of producer services.

(m) For the adjustment of indirectly measured financial intermediation services, we take the residual between the sum of the figures from (a) to (l) and the total value added of the services industry to be the valued added of these services. As both producers and consumers use the services, the resulting adjustment for producer services should be negative and cannot be greater than the total adjustment in absolute terms.

Similarly to total services, the production-based approach only provides the nominal values of the sector components. Since a great margin of error may be created in the process of constructing price deflators for each component, it is more appropriate to use the price deflator of producer services across the board. This allows for the real values of producer services in each service subsector to be derived by dividing the nominal values of producer services obtained above by the price deflator of total producer services.

## Table 1: Percentage Share of Services and Manufacturing in Nominal GDP in Selected Years

| | **Services** | **Manufacturing** |
|---|---|---|
| | | |
| 1980 | 67.5 | 23.7 |
| 1985 | 69.6 | 22.1 |
| 1990 | 74.5 | 17.6 |
| 1995 | 83.8 | 8.3 |
| 1996 | 84.4 | 7.3 |
| 1997* | 85.2 | 6.5 |

Data sources: Hong Kong Annual Digest of Statistics, various issues
*1997 figures are our own preliminary estimates

## Table 2: Percentage Share of Services and Manufacturing Employment in Selected Years

| | **Services** | **Manufacturing** |
|---|---|---|
| | | |
| 1980 | 42.1 | 45.9 |
| 1985 | 54.0 | 36.1 |
| 1990 | 62.7 | 27.8 |
| 1995 | 77.6 | 13.4 |
| 1996 | 78.8 | 11.2 |
| 1997 | 79.3 | 9.8 |

Data sources: Hong Kong Annual Digest of Statistics, various issues

## Table 3: A Goods and Service Industry Taxonomy with Service Sector Classified by Use of Expenditure

| **I. Goods-Producing Sector** |
|---|
| Agriculture and Fisheries |
| Mining and Quarrying |
| Manufacturing |
| Construction |
| Utilities |
| |
| **II. Service-Producing Sector** |
| ***1. Consumer Services Output*** |
| Imports/Exports |
| Wholesale and Retail Trade |
| Transport, Storage, and Communications |
| Restaurants and Hotels |
| Community and Personal Services |
| Finance, Insurance, Business Services, and Real Estate |

| |
|---|
| ***2. Producer Services Output*** |
| Imports/Exports |
| Wholesale and Retail Trade |
| Transport, Storage, and Communications |
| Restaurants and Hotels |
| Community and Personal Services |
| Finance, Insurance, Business Services, and Real Estate |
| ***3. Government Services Output*** |
| Government Services |

**Comment [rb2]:** Page: 7
Can this heading be eliminated, since there is nothing under it? Alternatively, you could add a category such as "none" under this heading.

## Table 4: Percentage Shares of Producer Services in Real GDP, their Standard Deviations and 95% Confidence Intervals, 1980–1997

| | Real Value Added of Producer Services as a % of Real GDP | Standard Deviations of the estimators % | 95% Confidence Intervals | |
|---|---|---|---|---|
| | | | Lower Limits % | Upper Limits % |
| 1980 | 42.7 | 0.89 | 41.0 | 44.5 |
| 1981 | 42.1 | 0.95 | 40.2 | 43.9 |
| 1982 | 40.1 | 0.98 | 38.2 | 42.0 |
| 1983 | 37.7 | 0.96 | 35.8 | 39.6 |
| 1984 | 37.5 | 0.89 | 35.8 | 39.2 |
| 1985 | 37.5 | 0.93 | 35.7 | 39.3 |
| 1986 | 39.0 | 0.89 | 37.2 | 40.7 |
| 1987 | 40.6 | 0.85 | 38.9 | 42.2 |
| 1988 | 41.2 | 0.82 | 39.6 | 42.8 |
| 1989 | 39.5 | 0.81 | 37.9 | 41.0 |
| 1990 | 40.6 | 0.86 | 38.9 | 42.2 |
| 1991 | 41.7 | 0.93 | 39.9 | 43.6 |
| 1992 | 44.1 | 0.96 | 42.2 | 45.9 |
| 1993 | 46.5 | 0.99 | 44.5 | 48.4 |
| 1994 | 48.8 | 0.99 | 46.9 | 50.8 |
| 1995 | 48.3 | 1.01 | 46.4 | 50.3 |
| 1996 | 50.0 | 1.03 | 48.0 | 52.0 |
| 1997 | 50.0 | 1.02 | 48.0 | 52.0 |

## Table 5: Percentage Share of Various Services in Total Producer Services: Selected Years and Averages over Selected Periods

| | 1980 | 1997* | 1980–89 | 1990–97 |
|---|---|---|---|---|
| | | | | |
| Wholesale trade | 5.0 | 2.6 | 4.3 | 3.3 |
| Retail trade | 5.8 | 3.0 | 5.2 | 3.5 |
| Import and export trade | 28.1 | 37.7 | 34.1 | 37.9 |

| | | | | |
|---|---|---|---|---|
| Restaurants | 1.2 | 0.8 | 1.3 | 1.0 |
| Hotels | 2.5 | 2.3 | 3.2 | 2.7 |
| Transport, storage, and communications | 8.7 | 8.8 | 10.1 | 9.7 |
| Financing | 15.4 | 19.4 | 15.7 | 18.2 |
| Insurance | 0.3 | 0.4 | 0.42 | 0.44 |
| Real estate | 17.9 | 11.6 | 11.7 | 11.7 |
| Business services | 6.0 | 9.2 | 8.2 | 8.6 |
| Community, social, and personal services | 1.6 | 1.9 | 2.0 | 1.8 |
| Ownership of premises | 10.6 | 13.4 | 12.5 | 12.0 |
| Adjustment for financial intermediation services | -3.0 | -10.9 | -8.9 | -10.7 |

* 1997 figures are our own preliminary estimates

## Table 6: Share of Manufacturing and Producer Services in real GDP—A Comparison of Hong Kong and Singapore for Selected Years

| | **Manufacturing** | | | **Producer Services** | | |
|---|---|---|---|---|---|---|
| | 1977 | 1987 | 1997 | 1977 | 1987 | 1997 |
| Hong Kong | n.a. | 17.8 | 9.0 | n.a. | 40.6 *[38.9, 42.2]* | 50 *[48.0, 52.0]* |
| Singapore | 26.2 | 25.6 | 23.9 | 33.0 | 39.6 | 40.4 |

Note: 95% confidence intervals of the estimators are given in square brackets.

**Figure 1: Types of Services as a Share of Real GDP (%)**

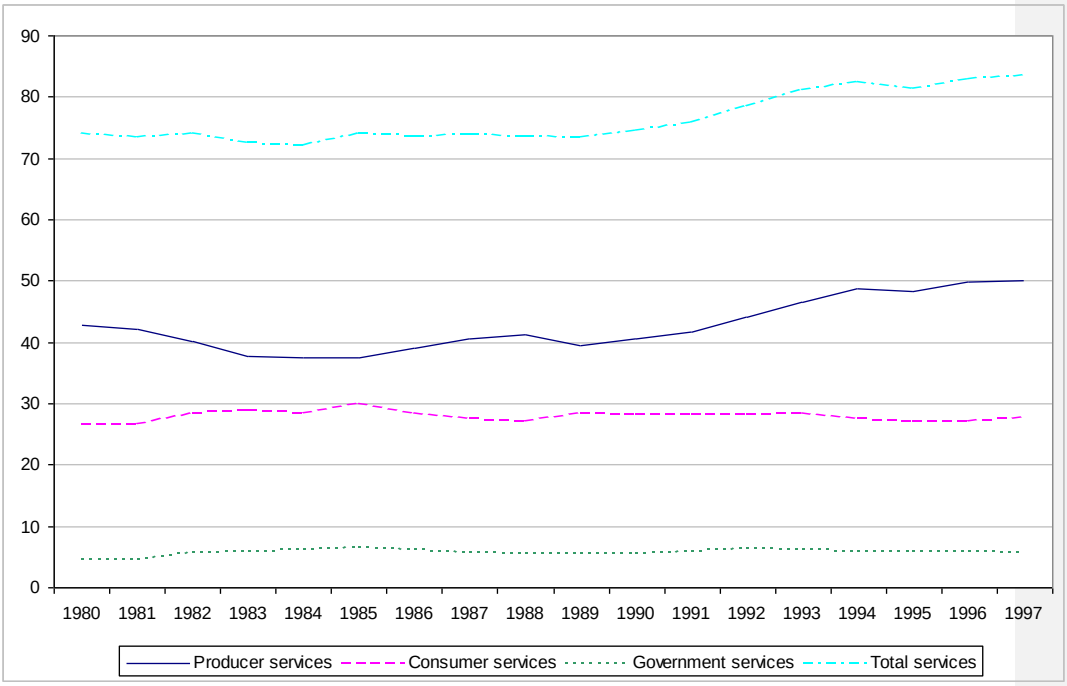


**Figure 2: Growth of Types of Services as a Share of Real GDP (1980=100)**

**Figure 3: Growth of Manufacturing and Producer Services as a Share of Real GDP (1980=100)**

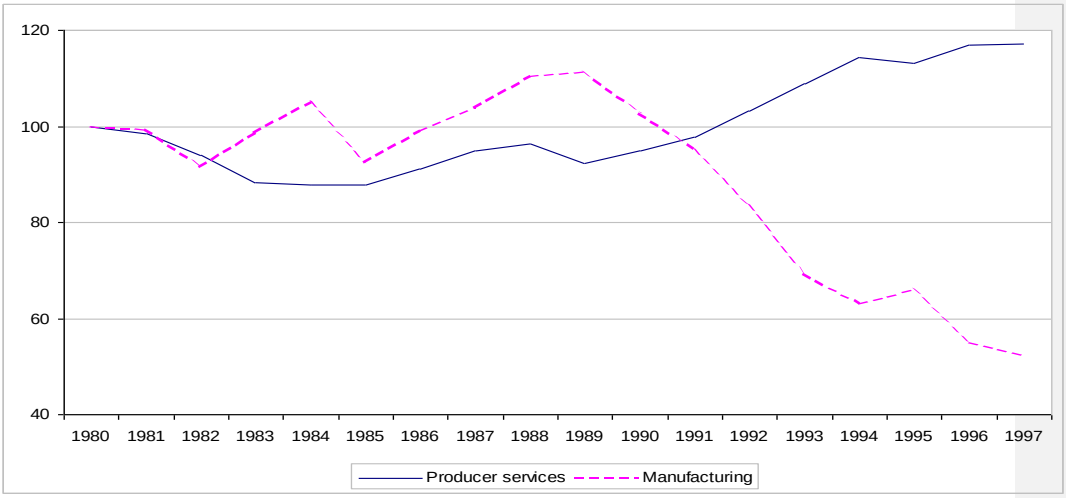


**Figure 4: Real Producer Services and China's Foreign Direct Investment from Hong Kong (Growth Rate in Percentage)**

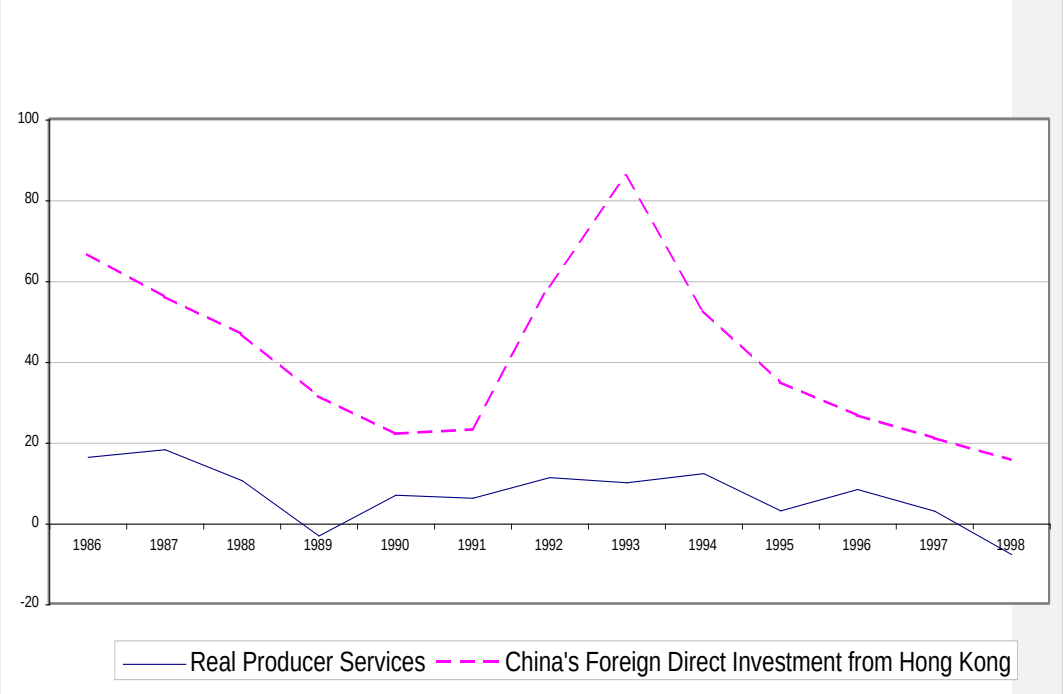

**Figure 5: Real Producer Services and Real Reexports**
**(Growth Rate in Percentage)**

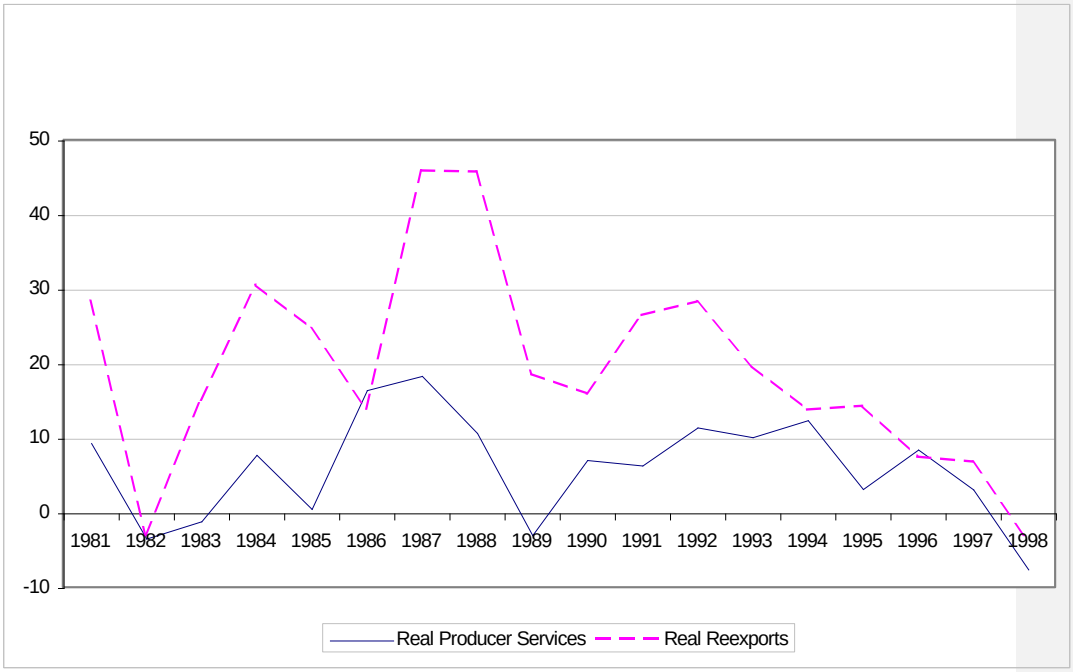


**Figure 6: Real Producer Services and Real Value of Trade with Mainland China**
**(Growth Rate in Percentage)**

**Figure 7(a): Component Shares in Real Producer Services (%)**

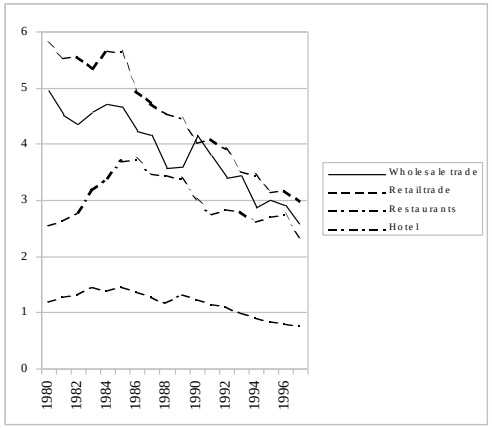


**Figure 7(b): Component Shares in Real Producer Services (%)**

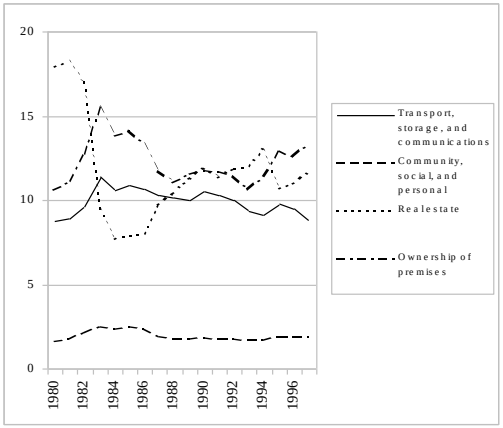


**Figure 7(c): Component Shares in Real Producer Services (%)**

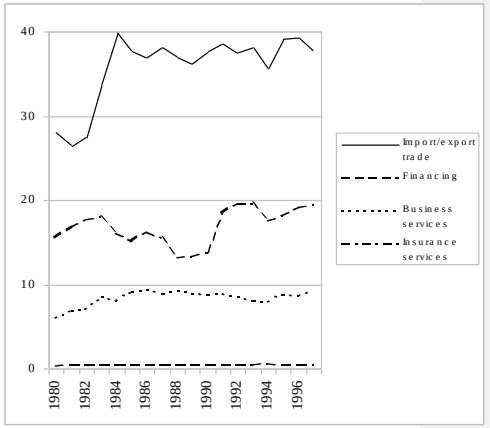

**Figure 8: Hong Kong—Selected Economic Activities as a Share of Real GDP (%)**

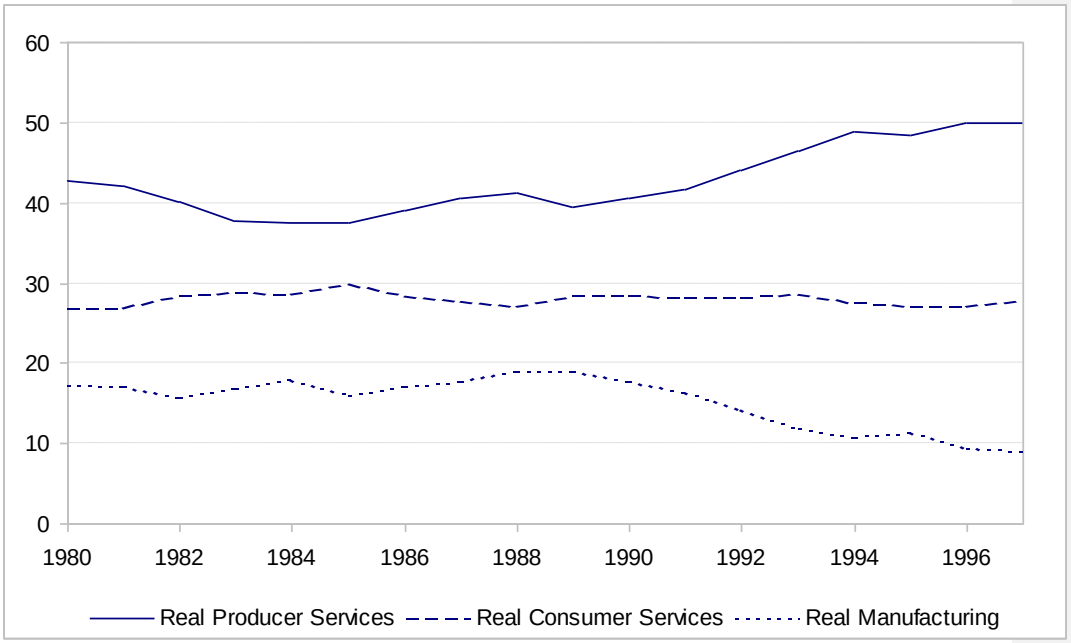


**Figure 9: Singapore—Selected Economic Activities as a Share of Real GDP (%)**