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ACCOUNTING FOR OUTWARD DIRECT
INVESTMENT FROM HONG KONG
AND SINGAPORE: WHO CONTROLS WHAT?

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ABSTRACT

After a brief introduction and examination of the economic rationale for accounting for foreign direct investment (FDI), this paper surveys information on outward investors from Hong Kong and Singapore with the aim of illuminating the implications of accounting for such FDI by geographical source or by country of ultimate beneficial owner. By any measure it is clear that a very large portion of the FDI from these economies comes from foreign-controlled firms and hence that ownership-based estimates of FDI from these two economies would be much smaller than the standard, geography-based estimates. However, because outward investment by foreign firms in Hong Kong and Singapore often involves substantial contributions from local staff and partners, an attempt is made to examine the extent of control over investment decisions exercised by these local staff and partners. Case studies from Hong Kong indicate a tendency for local control over investment decisions to be relatively strong in four types of foreign-controlled Hong Kong firms, recently acquired firms, firms with strong local entrepreneurial involvement, customer-oriented firms, and relocated holding companies. On the other hand, evidence from a sample of Thai affiliates of foreign-controlled Hong Kong or Singapore investors suggested that many of the investors were acting as part of an integrated network of foreign investors. Thus, although it is clear local staff and partners have a large influence over the investment decisions of foreign-controlled outward investors in Hong Kong and Singapore, it does not appear that such firms are a majority among foreign-controlled investors in these economies.

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ACCOUNTING FOR OUTWARD DIRECT INVESTMENT FROM HONG KONG AND SINGAPORE:
WHO CONTROLS WHAT?

Linda Low, Eric D. Ramstetter, and Henry Wai-Chung Yeung¹

1. Introduction

Hong Kong and Singapore provide a unique opportunity to examine the implications of different methods of classifying investments by multinational corporations. On the one hand, classifying investments by country of ownership, that is by country of the owner of the investing parent firm, has gained increasing acceptance and is now widely used in the compilation of U.S. and Singaporean data, for example. This method differs from classification by country of capital source when the investing firm is owned by a firm from a country other than the country of capital source and seems clearly advantageous when, for example, investments are channeled through holding companies in tax havens like the Netherlands Antilles and the Cayman Islands. In Hong Kong and Singapore, there is also a significant amount of investment channeled from foreigners through local holding companies to other foreign countries. In these two economies, however, there is also a large amount of outward investment made by foreign-controlled companies that have a long history in one or both of these economies. Moreover, such firms are often largely controlled and operated by long-term residents of the host economy, who are empowered to take a wide range of decisions, including decisions to invest abroad. These characteristics, combined with the increasing sophistication of local firm management in each of these host economies, mean

that foreign-controlled overseas investors may sometimes have more in common with locally-controlled overseas investors than with their foreign parents. One possible implication of such behavior is that accounting by country of ultimate beneficial owner may be less enlightening than accounting by geographic source of investment in some cases.

The purpose of this paper is thus to illustrate the nature of the problems encountered when trying to decide how to classify foreign investors by ownership by examining the Hong Kong and Singapore examples. The paper outlines the rationales behind various classification rules (Section 2) and summarizes the published information on outward investments from Hong Kong and Singapore by ownership (Section 3). It then examines several cases of outward investment by foreign-controlled firms from these economies (Section 4) and summarizes the major results that emerge (Section 5).

2. Economics and Accounting for Sources of Foreign Direct Investment

What must be considered when foreign direct investment is classified by its sources and what are the implications of various classification schemes? Broadly stated, there are two primary ways of classifying FDI by source, classification by country of capital source and classification by country of ownership. Classification by country of capital source may be viewed as having its logical basis in international economics, which has emphasized the importance of cross-border transactions, especially international trade. Moreover, accounting by country of capital source is the traditional way in which international transactions have been handled in the balance of payments. The advantages of this accounting method include facilitating a focus on the

relationships among international transactions and economic activity (e.g., employment) in a specific location, and the relative ease of implementation, as one needs only to measure cross border transactions. On the other hand, there are also several drawbacks, the most important of which are difficulties encountered when a large amount of entrepot activity is involved. In this context, accounting for the large amounts of outward investments from so-called paper companies in tax havens is the entrepot activity of primary concern. However, the principle question involved in accounting for any entrepot activity is the same: just where is it most reasonable to view a given activity, be it trade or investment, as originating?

Accounting by country of ownership is a method of accounting that has been devised primarily as a means of dealing with the problem of entrepot investments. Indeed, in its simplest form, accounting by country of ownership can be thought of as a means of understanding sometimes large outward investments from relatively small tax havens and is based on the premise that it makes little sense to attribute such investments to the tax havens themselves. Although the distinction may not be very important economically in the cases of portfolio investments, in the case of direct investments it is potentially significant. FDI is distinguished from portfolio investment in that it implies a greater degree of foreign control and in the case of FDI, most of the economic effects of that investment are thought to result, not from the capital flow involved, but from the transfer of knowledge-based, intangible assets (e.g., production technology, marketing networks, and management know-how, and other similar assets) that accompanies the capital flow.² If the nature of these intangible assets depends on the country of the investing parent firm, it then becomes important to establish the source of

investment because investments from different home economies may be expected to have different characteristics.³ Correspondingly, in relatively simple cases, for example when a 100-percent U.S.-owned firm in the Cayman Islands undertakes an investment in Thailand, for most purposes it is clearly more reasonable to attribute such investment to the country of the owner than to the geographic source. However, this accounting can soon become quite complicated, especially in highly developed entrepot centers like Hong Kong and Singapore, and this paper seeks to illuminate some of the grey areas involved in such cases.

One of the grey areas involves multiple ownership. For example, in Hong Kong and Singapore there are several cases of outward investment by firms which are the result of joint ventures between firms from two or more home economies. Furthermore, these joint ventures often involve several partners, none of which has a majority holding. In such cases, it is clearly impossible to unambiguously classify such FDI by country of ultimate beneficial owner.⁴ A second grey area surrounds the issue of management control. In sophisticated entrepots like Hong Kong and Singapore, one rarely sees simple entrepot investments. Much of the reason for this is that high costs of doing business in these two city-states make it relatively expensive to establish and maintain paper companies in these two economies. On the other hand, firms in these economies, both local and foreign, are often very sophisticated and there can be large benefits from entrepot investment that involves a crucial resource contribution from the affiliate through which the investment is being conducted. At the extreme, such entrepot investments may be entirely planned and managed by the staff of the affiliate with minimal assistance from the company's foreign parent. In such cases, the distinction between geography-

based and ownership-based classifications may become clouded because the characteristics of the geographic source of investment may have more bearing on the nature of intangible assets transferred through such investments than do the characteristics of the ultimate parent firm. On the other hand, even if a high degree of autonomy is observed in the investing firm, this autonomy may only be a result of corporate organizational strategy, and one may argue that it is still preferable to classify such investments by country of ultimate beneficial owner.

In any case, the general lack of empirical analysis of this topic makes it of some interest to evaluate (1) how much of the outward FDI from Hong Kong and Singapore is by foreign-controlled firms, and (2) how much of the outward FDI by foreign-controlled firms is by firms that exhibit a good deal of local control.

3. An Overview of Outward Direct Investment from Hong Kong and Singapore

According to traditional geography-based accounting, Hong Kong and Singapore were rather minor sources of the world's outward FDI flows throughout the 1980s, though they were among the major investors from the developing world. Between 1981-1984 and 1988-1990, the world experienced a more than five-fold increase in average annual FDI outflows, with shares of Asian economies rising from 13.8 percent to 24.8 percent (Table 1). Japan and Taiwan accounted for the bulk of this increase; the combined shares of the two economies rose from 11.5 percent to 22.2 percent. Shares for Hong Kong and Singapore were larger than most other developing economies and regions as early as 1981-1984 (1.2 percent and 0.3 percent, respectively) and remained

rather stable throughout this period. Hence the absolute level of outward FDI flows from these economies increased markedly in this period.⁵ In more recent years, Hong Kong has seen its share increase from 1.4 percent in 1988-1990 to 5.3 percent 1991-1993, mainly as a result of its large contributions to the FDI boom in China. Singapore's outward FDI flows and shares of the world total have actually declined somewhat in this recent period. In summary, Hong Kong and Singapore were the among first Asian countries outside of Japan to make substantial outward investments and high levels of FDI from these economies, combined with rapid growth in outflows from Korea and Taiwan, have made Asia's Newly Industrializing Economies (NIEs) an increasingly important source of FDI in recent years.

3a. Hong Kong

In view of Hong Kong's rather large outward FDI, it is perhaps surprising that the Hong Kong Government does not keep any comprehensive records on outward FDI. Thus, before trying to evaluate how much of Hong Kong's outward FDI is undertaken by foreign-controlled firms, it is first necessary to estimate the magnitude of Hong Kong's outward FDI. To estimate the size of total outward FDI from Hong Kong, we have collected data on inward FDI from nine of the major recipients of Hong Kong's outward FDI. Since definitions differ greatly among host countries, an attempt has been made to adjust the data to be consistent, in principle, with balance of payments estimates of FDI flows, such as those presented in Table 1 (see Table 2 for details). According to these estimates, since the mid-1980s, China has emerged as by far the largest host to Hong Kong's FDI, its share of stocks in

the nine economies rising from 9 percent in 1984 to 54 percent in 1988 and 75 percent in 1993. Viewed from the Chinese side, Hong Kong's share of total inward FDI stocks in China rose from 11 percent in 1984 to 49 percent in 1988 and 61 percent in 1993.

Note also that there is significant investment from China to Hong Kong, with stocks of Chinese FDI in Hong Kong's manufacturing industries alone rising from US\$365 million at year-end 1985 to US\$534 million at year-end 1992, these amounts representing 18 percent and 11 percent, respectively, of the total FDI stocks in Hong Kong's manufacturing.⁶ Furthermore, it seems likely that Chinese investments in Hong Kong's service industries are several times larger than investments in manufacturing, though we have no hard figures to support this assertion. The observation of significant Chinese FDI in Hong Kong is consistent with the often heard assertion that much of what the Chinese record as FDI from Hong Kong is in fact investment originating in local Chinese firms, but circulated through Hong Kong in order to benefit from the incentives offered to foreign investors. In this respect, Hsueh and Woo (1991, p. 484; see also Shih 1989) indicate that at least 40 percent of Hong Kong's investment in China is from China-involved companies in Hong Kong and that China's banking groups are a large source of this investment. Moreover, there is also significant indirect FDI in China by foreign-controlled firms in Hong Kong, with Wong, Chen, and Nyaw (1991, p. xxix) citing Chinese figures that 30 percent of Hong Kong's FDI has a foreign origin. Although certainly not comprehensive, these figures suggest that accounting by country of ultimate beneficial owner would substantially reduce estimates of Hong Kong's FDI in China.

Similarly, indirect FDI through Hong Kong is also an important element

of Hong Kong's FDI in other economies. Table 2 indicates that after China, Singapore was the second largest host to Hong Kong FDI in 1993, followed by the United States, Malaysia, Thailand, Indonesia, and Taiwan. Stocks were much smaller in the Philippines and Korea and even smaller in most other host economies for which spotty information was obtained.⁷ This ordering represents a change from 1984, when Malaysia was the largest host followed by Singapore and more distantly by the United States. In other words, these estimates indicate that Singapore and Malaysia, and to a lesser extent the United States, have historically been the most important destinations of Hong Kong's FDI, while Thailand and Indonesia, as well as China, have been more important in recent years.⁸

Some of the earliest outward investment from Hong Kong occurred in the 19th century when some British-controlled banks in Hong Kong extended their operations to Southeast Asia in order to serve increasing British business involvement in these Southeast Asian economies. In more recent years, Hong Kong has also been a springboard for investment by foreign-controlled companies in Southeast Asia as well as in China. One indication of this is the fact that a large number of firms have chosen Hong Kong as operational headquarters for their Asian operations.⁹ A more concrete indication of the extent to which Hong Kong's FDI in Southeast Asia is indirect FDI can be obtained from Singapore's Census of Industrial Production for 1980-1986. Comparisons indicate that classification by country of ultimate beneficial owner reduces the estimates of the importance of Hong Kong-owned establishments in Singaporean manufacturing significantly (Table 3). Reductions of shares are relatively small in terms of the number of firms or employment but much larger in terms of output, sales, value added, exports,

and investment, with estimates often being cut in half or even more. In addition, Hill (1988) indicates that British companies based in Hong Kong account for a large portion of Hong Kong's FDI in Indonesia, while firm level data from Toyo Keizai (1994) show that a number of Japanese investments are routed through Hong Kong-based affiliates.¹⁰ In contrast to these examples, Hong Kong's FDI position in the United States was larger, often much larger, when classified by country of ultimate beneficial owner in 1989-1992, though this was reversed in 1993.¹¹ Thus, although the available data are limited, there is a clear indication that classifying Hong Kong's FDI by country of ultimate beneficial owner greatly reduces such FDI, especially in Asia.

3b. Singapore

The data on outward FDI for Singapore are much more comprehensive than those for Hong Kong and are consistent in suggesting that much of the outward FDI from this economy is also from foreign-controlled firms. The share of foreign-controlled companies in total FDI stocks fell from 48 percent in 1981 to a low of 26 percent in 1985 and then increased to a peak of 58 percent in 1989, before it fell back to 51 percent in 1991 (Table 4). The large increase in this share in the late 1980s came as a result of increased investments by wholly-foreign owned firms, whose share of the total grew from 17-25 percent in 1981-1988 to 45 percent in 1989.

Another similarity with Hong Kong is that neighboring Asian economies have received the bulk of outward FDI from Singapore. Malaysia is by far the largest recipient of Singapore's FDI, accounting for 60 percent of these FDI stocks in 1981, 50 percent in 1984, and 23 percent in 1991 (Table 4). Hong

Kong has been the second largest destination of Singapore's FDI, its share of the total rising from 11 percent in 1981 to 20 percent in 1985 before falling off to 12 percent in 1991. Australia has traditionally been the third largest destination with shares of 4-8 percent, while the United States has seen its share rise from 2-3 percent through 1987 to 4-6 percent since. Shares for the Netherlands and New Zealand have also increased rapidly in recent years, reaching double-digit levels in some years. However, no other individual economy had shares of more than 3 percent.

Despite these similarities, there are also some conspicuous contrasts between Hong Kong and Singapore related to outward FDI. For example, although most outward FDI by locally controlled firms comes from the private sector in Hong Kong, government-linked companies dominate outward FDI by locally-controlled firms in Singapore (Singapore, Economic Development Board 1993). Another difference is the relatively conspicuous role the government plays in Singapore's economy, in particular, the government's active promotion of the development of corporate regionalization strategies and outward FDI in recent years.

The country-wise breakdown of FDI by foreign-controlled companies reveals relatively small shares for Asian economies, 40 percent in 1991, as compared to a similar breakdown for local companies, 61 percent (Table 5). For foreign-controlled companies, shares of Malaysia (18 percent) and Hong Kong (8 percent) are notably low compared to corresponding shares for local companies (28 percent and 17 percent, respectively). Indeed, the only listed Asian economies for which shares are higher in foreign-controlled companies are Japan (1.6 percent versus 0.2 percent) and Thailand (4.0 percent versus 2.6 percent); however, for the other Asia category, the differential is even

larger (4.9 percent versus 1.0 percent). For Europe and the United States also, shares tend to be larger in local-controlled firms (17 percent and 6 percent, respectively) than in foreign-controlled firms (3 percent and 4 percent, respectively). On the other hand, the substantial recent investments in New Zealand and in the other country category appear to have come primarily from foreign-controlled firms.

Contrary to the popular impression that local manufacturing firms facing high labor costs have been the major investors abroad, Singapore's outward FDI is dominated by investments in financial services, with this activity accounting for 60 percent of the FDI stocks of foreign-controlled firms and 48 percent of the FDI stocks of local firms (Table 5). For foreign-controlled firms, the largest shares of these financial service investments are in other countries (46 percent) and New Zealand (31 percent), followed distantly by Malaysia (7 percent) and Hong Kong (7 percent). For local firms the largest shares are in the Netherlands (30 percent), other countries (15 percent), Hong Kong (14 percent), and Malaysia (12 percent). Shares of Australia, New Zealand, and the United States are also relatively large at 5-8 percent. Thus, both foreign controlled and local firms have apparently undertaken somewhat similar patterns of investment in that financial service investments in developed economies, Malaysia, Hong Kong, and other countries are a significant element of both types of investment.¹²

Investment patterns of the two groups of investors are also similar in that manufacturing is the second largest sector of investment, accounting for 16 percent of the FDI by foreign-controlled firms and 24 percent of the FDI by local firms (Table 5).¹³ For both foreign-controlled and local firms, the vast majority of such investments are concentrated in Asia, 91 percent and 85

percent, respectively. For foreign-controlled firms, Malaysia (44 percent), Thailand (19 percent), and other Asia (13 percent) are by far the dominant destinations of such investments with shares in other Asian countries being much smaller (4 percent or less). The pattern for local firms is similar in that Malaysia is the largest destination (42 percent) but differs in that it is much more diversified with notably larger shares in Hong Kong (22 percent), China (7 percent), and Taiwan (5 percent), but lower shares in Thailand and other Asia (2-3 percent). These differences suggest that a relatively large amount of investment by local firms in manufacturing seeks to exploit the so-called Chinese connection, while a relatively large amount of FDI by foreign-controlled firms seeks to expand operations in neighboring Southeast Asian economies, especially Thailand.¹⁴

Among the remaining industries listed in Table 5, commerce (8 percent of the total), business services (7 percent), and real estate (6 percent) were the only industries with shares of total FDI stocks exceeding 1 percent for foreign-controlled firms. Among these investments, commerce investments in Malaysia, business service investments in Japan and the United States (and to a lesser extent Hong Kong and Thailand), and real estate investments in Australia and Hong Kong, are conspicuous. For local companies, construction (15 percent) and real estate (6 percent) were the only industries with shares of total FDI stocks greater than 2 percent. Here construction investments are concentrated in other Europe (43 percent) and four Asian economies (Brunei, 10 percent; Hong Kong, 10 percent; Indonesia, 16 percent; and Malaysia, 13 percent). Thus, outside of the main sectors of investment (finance and manufacturing) differences in the patterns of outward FDI by foreign-controlled firms and local firms are relatively pronounced.

Although revealing, the above estimates of FDI stocks do not cover investments by primarily local individuals, sole proprietors, and partnerships. Another survey was carried out by the Singapore Manufacturers' Association between February to March 1993 has 323 respondents, half of which are small-medium-sized firms.¹⁵ It confirmed Malaysia as the traditional favorite spot for Singapore investors with 34 percent of the respondents reporting that they had operations in that economy. Relatively large shares of the respondents also reported having affiliates in Indonesia (16 percent), China (11 percent), and Thailand (10 percent), but no other economy had over 5 percent of the respondents reporting investments. Thus, these data also suggest that the geographical orientation of local investors venturing abroad, is different that of foreign-controlled firms.

4. Characteristics of Hong Kong's and Singapore's Outward Investors

The data in the previous section indicate that ownership-based estimates of outward FDI from Hong Kong and Singapore would be far smaller than geography-based estimates. The large differences in geography-based and ownership-based classifications, combined with the often complex nature of outward FDI by foreign-controlled firms in these economies, suggests that a closer examination of the criteria underlying these different classifications is warranted. In this context, we are primarily concerned with the issue of control of investment decisions in foreign-controlled firms undertaking outward investment from these two economies. Parallel to the discussion in section 2 above, concern with control stems from recognition that control-related issues underlie many of the arguments in favor of using ownership-

based classifications, combined with recognition that evaluation of the origin of control of investment decisions as well as evaluation of the implications of the origin of that control is sometimes extremely complex in these firms.

To examine these issues more closely, we have assembled survey information on foreign-controlled investors in Hong Kong with the aim of ascertaining just how management decisions, including decisions to invest, are made in the surveyed firms.¹⁶ In addition, we have generated a rather comprehensive list of investors from Hong Kong and Singapore in Thailand, making some more general evaluations of the two groups of investors possible.

4a. Outward Investors from Hong Kong

Table 6 presents a synopsis of 20 case studies of foreign-controlled firms that have undertaken outward investment from Hong Kong.¹⁷ These companies reflect a diverse mix of organizational approaches to multinational operations by the ultimate foreign parent firms through their regional headquarters based in Hong Kong. The case study firms tend to be relatively old, with only three established after 1985 and nine in the 1970s or earlier. By industry, 4 firms are primarily involved in manufacturing, 6 in trade or distribution, 1 in finance, 6 in other services, and 3 firms are involved in a combination of manufacturing, trade, and service operations. All but one of the 20 firms have affiliates in Singapore, about half of the firms have affiliates in Malaysia (11 firms), Indonesia (9 firms), and Thailand (9 firms), and one-fifth of the firms have affiliates in the Philippines.

In order to highlight some basic characteristics of these firms, the ASEAN affiliates of the 20 foreign-owned firms are classified by degree of

autonomy in the Hong Kong-based investor as well as the source of finance and methods of control used for operations in the ASEAN affiliates (Table 7). Perhaps of most interest in this context is that the majority of these affiliates (30 of 56 or 26 of 42) are controlled by relatively autonomous Hong Kong firms. If one looks at the sample of 56 affiliates for which information on the source of finance could be obtained, the vast majority (80 percent) are seen to rely primarily on finance through the internal capital reserves of the foreign-controlled firms (regional headquarters) based in Hong Kong. Furthermore, the reliance on this source of finance is even more pronounced in affiliates of relatively autonomous firms (90 percent) compared to parent-controlled firms (69 percent). Hong Kong capital markets and the ultimate parent companies were the second and third most frequently used sources of finance for affiliates of parent-controlled firms but these sources were not used at all by the affiliates of autonomous firms. This limited sample thus suggests somewhat different financial strategies in the two groups of firms.

A second variable examined here is the method of controlling the ASEAN affiliates used by the Hong Kong-based, foreign-owned firms (Table 7). Most of the 42 affiliates in this sample were controlled by the Hong Kong headquarters in one of the three ways, cost control (26 percent), periodic reports to headquarters (24 percent), and periodic inspections by top executives from headquarters (14 percent). Autonomous firms tend to rely more on these methods, especially reports to headquarters, than do controlled firms, though the ranking of these methods is markedly similar in both groups. Among other methods, reliance on inventory and quality control, guidelines from corporate groups, and information sourcing is observed in a few affiliates of autonomous firms but not in controlled firm groups. On the

other hand, affiliates of controlled firms use production and market planning, mutual exchange of information, and annual meetings, more than do autonomous firm groups. Thus, to a certain extent, there is a regional division of control in which ASEAN subsidiaries report to regional headquarters based in Hong Kong rather than directly to their ultimate parent companies.

Among foreign-owned firms in Hong Kong that have been given substantial autonomy in running the group's operations in the Asia-Pacific region, four broad types are observed in this sample, recently acquired firms, firms with strong local entrepreneurial involvement, customer-oriented firms, and relocated holding companies. This topology is based on the limited sample used here and is by no means exhaustive. Moreover, there are overlaps in organizational structures among the different types of firms. The examples below illustrate how these four types of firms have come to have a good deal of control over their operations, including investment decisions.

The sample contains two autonomous firms that were recently acquired by ultimate foreign parent companies, companies D and J. As has been explained by previous researchers (e.g., Dicken, Forsgren, and Malmberg 1994) these kinds of firms often do not experience much change in their internal operating systems because their management structures tend to be embedded, and these two firms generally fit this pattern. Company D was first established in Hong Kong in early 1980 (Table 3) but it was acquired as a wholly-owned subsidiary by its American ultimate parent company in August 1993. Even after the takeover the firm has continued to be run by its present ethnic Chinese President who continues to make the decisions for the parent firm's operations in Asia. The Company is now owned by a holding company registered in the British Virgin Islands, which is, in turn, wholly-owned by the U.S. parent,

and owns 100 percent of the firm's operations in Hong Kong, China (Beijing, Shanghai, and Shenzhen), Korea, Singapore, and Malaysia.

Company J has been a market leader in the field of market research in Asia, with offices spanning the entire Asia-Pacific region (Australia, Canada, China, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, Taiwan, Thailand, USA and Vietnam). Ever since its establishment in 1964, the firm has been a multinational, with operations in several countries and employees of several nationalities. In the early 1980s, the firm merged with a British research company which owned 30 percent of the firm until the management of the company bought itself out in the late 1980s. After a period as an employee-owned firm, it then merged with the largest U.S. research firm of its type in early 1994. The first merger did not bring significant changes to the group's corporate structure which was characterized by a large degree of decentralization. However, since the merger with the U.S. firm, the firm's Hong Kong-based Executive Committee has tried to exert more influence over the firm's foreign affiliates.

Firms with strong local entrepreneurial involvement can exercise significant control over their foreign investment activities, despite being foreign-owned, as illustrated by two of the cases considered here, companies N and P. Company N is a joint venture between a Hong Kong (ethnic Chinese) entrepreneur (40 percent shareholding) and a large German conglomerate (60 percent shareholding) where the Hong Kong entrepreneur is an expert in the plating industry. The firm is also the regional headquarters for the Far East and is currently in charge of operations in Singapore and Malaysia. Corresponding to the ownership structure of the Hong Kong company, operations in Singapore and Malaysia are both 60-40 joint ventures between the holding

company in Germany and the Hong Kong entrepreneur, who is also the Managing Director for all three Asian firms. The Hong Kong office, as the regional headquarters, has the autonomy to make most of its own operational, marketing, and investment decisions provided it follows the general guidelines laid down by the German head office and reports strategic changes in operations. Daily operations of plants in Singapore and Malaysia are financed by the regional headquarters based in Hong Kong and are managed by top executives sent from Hong Kong who are encouraged to develop their own markets. The relative autonomy given to subsidiaries is due to the German parent's decentralization policy, where parent control is only exercised in financial areas such as budgeting, borrowing from banks, and distribution of profits, and is also reflected in the ownership structure of the parent itself, which has been turned into a trustee holding company and is governed by the Executive Board of Directors.

Company P is a wholly-owned subsidiary of probably the world's largest home furnishing company based in the United States and, as in Company N, Hong Kong is the financial and administrative center for manufacturing operations worldwide. Knockdown furniture components are manufactured in the Far East and final assembly of these components is completed by related firms in the U.S. and European countries. The majority of sales by manufacturing plants in the Far East is thus intra-firm trade. Experienced supervisors from existing plants in ASEAN countries are transferred to help set up new plants in the region as they are initiated. Regional management control is in Singapore where the Chief Executive Officer (CEO) and the Chairman (both former Hong Kong Chinese) are based. All financial matters in ASEAN subsidiaries must be reported to and controlled by the CEO who reports to the U.S. parent at annual

meetings. The Hong Kong office thus exercises control over the accounting of financial matters, while the CEO in Singapore controls investment decisions and the ultimate source of capital is usually the firm's registered holding company in the British Virgin Islands. Hong Kong has been chosen as the operational headquarters mainly for tax purposes and for its accessibility.

The two customer-oriented firms in the sample, companies C and T, tend to exercise their control in a slightly different way. Namely, because frequent contacts with key clients at the highest possible level are required, top-level executives are often sent from ultimate parent companies to Hong Kong and given authority to make *in situ* investment decisions, though this does not necessarily mean that investment capital comes from regional headquarters based in Hong Kong. Company T, for example, is wholly owned by its Belgian parent and is one of more than 40 offices and subsidiaries worldwide, mainly in the form of wholly-owned subsidiaries. It specializes in apparel sourcing, primarily for major garment companies (90 percent of its business) and also for department stores. The Hong Kong office is the regional headquarters for the Far East and controls all subsidiaries throughout the Asia-Pacific region which must report to the regional headquarters, though these subsidiaries make many decisions independently. There are 4 offices in the ASEAN region and 18 throughout the rest of Asia. The regional headquarters in Hong Kong has been given complete control over operations within Asia and, according to the Belgian Managing Director in Hong Kong, there is no interference with decision making processes from the parent.

Company C is a multi-party joint venture among IBM Hong Kong/China (25 percent, financed through IBM Hong Kong/China based in Hong Kong), a New Zealander Managing Director and Chairman (37.5 percent) and a Thai banker

(37.5 percent). Both IBM and the Thai banker are not involved in day-to-day operations. The group controlled by the Hong Kong firm is now one of the largest computer software companies in Asia. It prefers to establish joint ventures when investing in the ASEAN region, the exception being in Singapore, where there is a wholly-owned affiliate. In these joint ventures, the firm seeks out reputable local businessmen and/or companies as partners to strengthen its competitive advantages in host economy markets. Management control is primarily exercised by the Managing Director/Chairman in Hong Kong, though local general managers are put in charge of day-to-day operations. Due to the preference for joint ventures, the sources of investment in ASEAN affiliates are often economies other than Hong Kong, with differences among joint ventures depending on the host country and the partner initiating the investment. For example, in Thailand, although the ownership of the Thai office is shared among the three parties, it is controlled by the local general manager and is financed from Thailand instead of Hong Kong. In contrast, the establishment of the Malaysian firm was initiated by IBM in order to facilitate support of IBM mainframe systems.

There are two firms in the sample, G and Q, that can be classified as relocated holding companies. As companies have tried to grapple with the uncertainties surrounding the return of Hong Kong to China in 1997, many have chosen to relocate their holding companies abroad, often to tax havens such as Bermuda, the British Virgin Islands, and Panama, or in the case of multinationals that had migrated to Hong Kong from other economies, back to the original home economy (primarily the United Kingdom). The two examples considered here fall into the category of firms that were originally British, then incorporated in Hong Kong, but have since moved their headquarters back

to the United Kingdom. However, both firms have maintained their Hong Kong operations at more or less the same level since the relocation.

Company G is a regional subsidiary of its international ultimate parent company which, as an international services and marketing group, operates in over 80 countries worldwide and employs some 48,000 people. The firm has a long history in Asia and other international markets, with some of its businesses dating back more than 150 years. In a period of three to six years, the Group had carried out what they called "business streaming" on a worldwide basis. As a result of this business streaming, all overseas affiliates have to report to a headquarters of that stream, usually based in London. Within this organizational structure, the Hong Kong firm is responsible for the Group's operations in Hong Kong, China, Taiwan, Macau, the Philippines, Vietnam, Cambodia and Laos, focusing on three core businesses, distribution of motors, marketing of premier consumer goods, and international services (insurance, shipping, testing, and buying). The firm and its affiliates in China and Taiwan apparently have control of most daily matters but are often referred to the London parent on strategic matters, including most investment decisions. The Hong Kong firm is the international head office for the Group's global buying services operation, and controls the sourcing of apparel and general merchandise from developing and newly developed countries for major department stores and other buyers, primarily in the U.S., Europe and Australasia. Another of the Hong Kong firm's functions is as regional headquarters for the Group's testing services in the Asia-Pacific region. All major decisions in ASEAN subsidiaries are reported to the Hong Kong firm and frequently reported to the London parent, but the Hong Kong firm has large influence on actual decisions as its familiarity with regional

issues is valued highly by the parent.

Company Q is the merchant banking arm of a large British bank formerly incorporated in Hong Kong that has transferred its holding company back to London. The Hong Kong firm is the regional headquarters for the Asia-Pacific region and is seeking to become the market leader in merchant and investment banking with strong financial support from the holding company. Although the Hong Kong firm and its Asian operations are wholly owned by the holding company in London, it is run rather independently. Key investment decisions are made at Board meetings usually held in Hong Kong. The parent is represented at Board meetings and directors can raise questions on investment proposals. Outside of these meetings, however, the parent exercises little control over how these investment proposals are executed. One reason is that the holding company is much more concerned with the commercial banking arm of the Group. Investment projects are financed from various sources in Hong Kong or local capital markets. It appears that ownership has very little relation to outward direct investments and the control of these investments. The Malaysian office, for example, is managed autonomously, with the Malaysian Director reporting to the Chief Executive Officer in the Hong Kong firm as well as the Chief Executive Officer in the bank's Malaysian branch.

These case studies thus indicate that there is often a high degree of autonomy exercised by foreign-owned Hong Kong firms investing in Southeast Asia and it is evident that several foreign-owned companies are using Hong Kong not only as a "stepping-stone" to penetrate into the lucrative and emerging Asian markets, but also as a regional center of decision making and control in its own right. This might suggest that the geography of ownership often does not correspond to the geography of control. On the other hand,

even among the relatively autonomous firms, there are a number of examples where the autonomy is a result of a conscious decentralization strategy by the parent firm. In other words, the very lack of a correlation of the geography of ownership and the geography of control may be dictated by the parent firm.

4b. Investors from Hong Kong and Singapore in Thailand

There are a number of published corporate directories in Thailand which have made it possible to classify 95 Thai affiliates of Hong Kong and Singapore investors by whether the Hong Kong or Singapore investor can be identified as foreign-controlled or not (see Table 8 for some summary statistics; the firm list upon which other observations are based is available from the authors). It should be noted that a few of the firms not identified as foreign-controlled are probably foreign-controlled but it simply has not been possible to identify them as such. On the other hand, we are reasonably sure that all the affiliates identified as foreign-controlled (the results of indirect investment) are indeed ultimately owned by a firm or individual that is not from Hong Kong or Singapore.

The most conspicuous pattern observed from these data is that 59 percent of the affiliates of Hong Kong firms and 64 percent of the affiliates of Singapore firms are actually controlled by investors outside of Hong Kong and Singapore. This finding is consistent with the data presented in section 3 that suggested a large portion of the FDI from Hong Kong and Singapore is of the indirect variety.¹⁸ These data also suggest that, in terms of the number of investors at least, the shares of indirect investment are similar in Hong Kong and Singapore. If measured in terms of sales, however, the shares are

somewhat different with 18 foreign-controlled affiliates accounting for 68 percent of the sales of the 33 Hong Kong affiliates for which sales data were available, but 29 foreign-controlled affiliates accounting for only 50 percent of the sales of the 50 Singapore affiliates for which data were available.

Also as indicated by the numbers in section 3 and the Hong Kong case studies above, these investments are in a wide range of activities. By industry, the largest number of firms were in trade (36 percent) and another large group combined trade with manufacturing (19 percent) or other activities (2 percent). The remaining sample firms were evenly divided between manufacturing (21 percent) and other activities (22 percent), primarily services. If one compares foreign-controlled investors and investors not known to be foreign controlled, the shares of trade combined with other activities and other industries are larger for foreign-controlled investors than for investors not known to be foreign controlled, while the reverse is true in manufacturing and trade alone, for both Hong Kong and Singapore investors.¹⁹ In contrast the differences between investors by country are less consistent, suggesting that distinguishing the level of foreign control may be more important for understanding investment patterns than distinguishing the geographical source of investment.

Another interesting characteristic is that affiliates of Hong Kong and Singapore firms are rarely characterized by high foreign ownership shares, with only 13 percent of the sample firms having total foreign ownership shares of 90 percent or greater and 29 percent with shares of 50 percent or greater. Low foreign ownership shares are due in part to Thai policies that restrict foreign equity shares in a number of activities, but there are many ways around these equity restrictions and the sources used to construct Table 8

suggest that high foreign ownership shares are generally more common among foreign affiliates in Thailand.²⁰ In this sample, there is also a tendency for total foreign ownership shares to be larger in affiliates of foreign-owned investors, with the differences being largest in the Singaporean case.

However, when comparing affiliates of foreign-owned investors and other affiliates, the more pervasive difference is the relatively large gap between total foreign ownership shares and Hong Kong/Singapore investor ownership shares in the case of affiliates of foreign-owned investors. In other words, indirect investment from Hong Kong or Singapore is often accompanied by investment from other foreign firms, most often those in the investing firm group. This pattern is especially common among Japanese investors in this sample. A related pattern of some significance in this case is the tendency for many Japanese affiliates to receive equity investment from other affiliates located in Thailand.²¹ The combination of investment from foreign affiliates and indirect investment through Thai affiliates is perhaps best understood as a way to secure ownership control in the presence of equity restrictions. On the other hand, the combination of indirect investment through Hong Kong and Singapore affiliates and investment from other foreign sources, usually Japanese parents, indicates that these Hong Kong and Singapore affiliates are acting as an integrated parts of a worldwide network. Interviews with a few Japanese firms in Thailand that received equity investment from related firms in other Asian economies (mainly Hong Kong and Singapore, but also some from Malaysia), also indicated that this type of investment pattern is often the result of deliberate efforts by parent firms to spur regional integration and coordination among foreign affiliates.

Finally, there are clear differences between the Hong Kong and Singapore

economies, notably the more dominant role of foreign multinationals (e.g., Ramstetter 1994) and the relatively small size of the local entrepreneurial class in Singapore (e.g., Lee and Low 1990), that might lead one to think that investment patterns from the two economies would differ greatly in a place like Thailand. However, this sample suggests that the patterns are quite similar in a number of respects.

5. Conclusions

This paper has surveyed information on outward investors from Hong Kong and Singapore with the aim of illuminating the implications of accounting for such FDI by geographical source or by country of ultimate beneficial owner. By any measure it is clear that a very large portion of the FDI from these economies comes from foreign-controlled firms and hence that traditional, geography-based estimates of FDI from these economies greatly exceed corresponding ownership-based estimates. Examination of case studies from Hong Kong indicated a tendency for investment decisions to be relatively autonomous in four types of foreign-controlled Hong Kong firms, recently acquired firms, firms with strong local entrepreneurial involvement, customer-oriented firms, and relocated holding companies. On the other hand, evidence from some of these case studies and a sample of Thai affiliates of foreign-controlled Hong Kong or Singapore investors suggested that many of the investors were acting a part of an integrated network of foreign investors, even when the foreign-controlled investor in Hong Kong and Singapore had a large degree of control over investment decisions. Moreover, if the Thai sample is representative, it does not appear that autonomous, foreign-

controlled investors constitute a majority among foreign-controlled investors in Hong Kong and Singapore.

Endnotes

1. The authors would like to thank Robert E. Baldwin, Robert E. Lipsey, Rachel McCulloch, other participants of the conference on "Geography and Ownership as Bases for Economic Accounting" of the NBER Conference on Research in Income and Wealth, Washington, D.C., May 19-20, 1995, and participants of a corresponding pre-conference held in December 1994 for comments on earlier versions of this paper. However, the authors bear all responsibility for any remaining errors.
2. See Caves (1982), Dunning (1993), and Markusen (1991), among others for related theoretical analyses.
3. For example, Kojima (1990) and Ozawa (1979) have argued that Japanese FDI is different from U.S. and European investments in a number of regards.
4. Moreover, given the international convention of defining FDI as a foreign investment where foreign ownership shares exceed a given minority percentage (usually 10-25 percent), there is substantial potential to double-count such investments, attributing them to more than one home economy.
5. Since, as noted in Table 1, 1981-1984 figures for Hong Kong exclude investments in China, the growth of the Hong Kong share is exaggerated somewhat. Note that this is also true for Malaysia, but China's share of Malaysia's FDI is much smaller than its share of Hong Kong's FDI.
6. Data on FDI stocks come from Hong Kong Industry Department (1993) and are translated into US\$ using end-of-period exchange rates from the International Monetary Fund (1995).
7. The only other host economies in which substantial FDI stocks from Hong Kong are known to exist are Canada (US\$1,261 million in 1990) and Australia (US\$556 million in 1990; International Monetary Fund 1995; United Nations 1993, 1994). In the United Kingdom, FDI stocks from developing Asian economies rose from US\$1,712 million in 1987 to US\$3,771 million in 1991 (United Kingdom, Central Statistical Office, 1991) and we suspect that a substantial portion of this FDI is from Hong Kong. Japanese figures on approved FDI also indicate rather large FDI stocks from Hong Kong (US\$613 million as of March 31, 1993) but, on a worldwide basis, actual stocks at year-end 1992 were only 58 percent of total approved stocks as of March 31, 1993, so actual FDI stocks are likely much smaller than approved stocks (International Monetary Fund, various years; Japan, Ministry of Finance, 1993).
8. For details on Hong Kong's investment in Southeast Asia see Yeung (1994, 1995a, 1995b).
9. According to a small-scale survey by the Industry Department in 1985, 163 of 470 affiliates of foreign multinationals in Hong Kong were operational headquarters in charge of the Asian region. An enlarged survey in 1990 found that 572 of 2,310 affiliates were operational headquarters, with half of the operational headquarters being affiliates of U.S. firms (Wilson, 1992).

10. See section 4b for examples of indirect investment in Thailand. Casual thumbing through the Toyo Keizai surveys indicates substantial indirect investment in China and other Southeast Asian economies as well.
11. The ratio of Hong Kong's FDI position (stocks) classified by ultimate beneficial owner to the FDI position classified by country of each member of the parent group was 3.6 in 1989, 1.5 in 1990, 1.1 in 1991, 1.4 in 1992 and 0.8 in 1993 (United States, Department of Commerce, 1994).
12. We speculate that the large investments in other countries are concentrated in tax havens such as the Bahamas, the Cayman Islands, and the Netherlands Antilles, though we have no concrete evidence of this.
13. Note also the correlation between the data in Table 4, which indicate that foreign-controlled firms accounted for 41 percent of Singapore's manufacturing FDI in 1991, and the data in Table 3, which suggest that classification by country of ultimate beneficial owner reduces the scope of activities by Singapore-owned establishments for many years in the 1980-1986 period, with exports, sales, and output, being the activities most affected. Although these two data sources are not consistent in that the latter sample includes a large number of local establishments that do not invest abroad, they are consistent in suggesting that a large portion of manufacturing activity that would be considered Singaporean if country of capital source is the basis for classification would not be Singaporean if country of ultimate beneficial owner is the basis of classification.
14. One of the authors has personally encountered several examples of investments in Thailand through affiliates in Singapore and Malaysia during a recent survey of intra-firm trade and networking in multinationals operating in Thailand.
15. The results of this survey are quoted from the *Straits Times*, 30 April 1993.
16. Originally, we had hoped to have parallel coverage of investors from Hong Kong and Singapore, but difficulties in obtaining interviews with Singapore-based firms have precluded this.
17. These cases are abstracted from a larger project in which one of the authors has interviewed more than 110 headquarters firms in Hong Kong and another 60 odd subsidiaries and/or affiliates in Indonesia, Malaysia, Singapore, and Thailand. For confidentiality reasons, company names are not revealed.
18. Due to the bias of the sample towards large investors and investors from Japan, it is likely to overstate the relative importance of indirect investors. At the same time, however, the sample is reasonably comprehensive and this bias is not likely to be large.
19. Comparisons of shares for foreign-controlled firms versus firms not known to be foreign controlled are as follows: manufacturing only in Hong Kong, 9%

vs. 47%, in Singapore 16% vs. 24%; trade only in Hong Kong, 23% vs. 47%, in Singapore, 27% vs. 57%; trade and manufacturing or other activities in Hong Kong, 32% vs. 0%, in Singapore, 32% vs. 5%; and other activities only in Hong Kong, 36% vs. 7%, in Singapore 24% vs. 14%.

20. For example, defining foreign firms as firms with 10 percent or more of their equity coming from foreign investors, 20 percent of 516 foreign firms listed in Advanced Research Information (1992) had ownership shares of 90 percent or greater and 29 percent had shares of 50 percent or greater. In a 791 firm sample from SEAMICO Business Information and Research (1993), these shares were 26 percent and 44 percent, respectively. Finally, of the 533 Japanese affiliates listed Toyo Keizai (1993) which had their equity financed by Japanese parents only, these shares were 20 percent and 34 percent.

21. Note that 38 percent (329) of the 872 Thai affiliates of Japanese firms listed in Toyo Keizai (1993) received equity investment from affiliates of Japanese investors located outside of Japan, including other affiliates located in Thailand.

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Table 1: Estimated Outward Flows of Direct Foreign Investment by Investing Economy (US\$ millions)

Investing Economy	1981-1984	1985-1987	1988-1990	1991-1993
World	41,610	97,061	214,022	198,506
Africa	289	105	81	120
Asia	5,743	16,161	53,073	37,094
Japan	4,755	13,483	42,140	20,573
Asian NIEs	741	2,130	9,809	14,368
Hong Kong	489	1,529	3,090	10,504
Korea	88	109	425	1,153
Singapore	119	208	856	653
Taiwan	46	283	5,438	2,058
Other Asia	246	548	1,124	2,153
China	68	574	820	1,638
Malaysia	178	-88	211	344
Pakistan	-1	3	19	-6
Sri Lanka	0	1	2	5
Thailand	2	57	71	172
Europe	23,986	52,074	123,745	108,568
Latin America	245	325	687	1,374
Middle East	197	411	668	1,371
North America	10,117	24,312	31,800	48,944
Oceania	1,034	3,672	3,968	1,034

Notes and Sources: Data come from the International Monetary Fund's (various years) balance of payments data or are adjusted to be, in principle, consistent with those data. For Thailand, 1993 data come from Thailand, Bank of Thailand (various years). For Hong Kong and Malaysia, estimates based on data from selected recipients of outward FDI from these economies (see Table 2). For these two countries, note that 1981-84 figures exclude FDI in China, while figures for subsequent years include it; this exclusion is large for Hong Kong but not large for Malaysia. In any case, figures for both these economies are underestimates as FDI in only a few selected host economies is covered.

Table 2: Estimated Flows and Stocks of FDI from Hong Kong to Selected Host Economies

HOST	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
STOCKS OF FDI FROM HONG KONG (US\$ millions)										
Subtotal	3,832	4,692	6,036	8,420	11,113	14,509	17,689	22,171	31,827	49,200
China	341	1,151	2,284	3,882	5,978	8,055	9,969	12,456	20,269	36,684
Indonesia	275	272	298	337	393	459	632	876	1,192	1,442
Korea	31	38	46	86	104	116	131	137	150	162
Malaysia	1,208	1,308	1,491	1,370	1,322	1,464	1,510	1,938	2,429	2,186
Philippines	43	48	48	67	126	163	198	239	253	301
Singapore	986	881	765	1,000	1,197	1,480	1,806	2,127	2,568	3,016
Taiwan	162	181	214	301	418	585	722	825	950	1,070
Thailand	213	236	273	304	414	637	911	1,365	1,937	2,109
U.S.A.	574	576	617	1,073	1,161	1,549	1,808	2,210	2,078	2,229
HONG KONG'S SHARE OF TOTAL FDI STOCKS (percent)										
Subtotal	2.3	2.5	2.7	2.9	3.0	3.2	3.4	4.0	5.3	7.4
China	11.1	24.4	34.6	43.6	49.4	52.0	52.5	53.3	59.0	60.7
Indonesia	9.2	8.2	8.3	8.5	8.7	8.8	10.0	11.2	12.5	12.5
Korea	2.8	2.9	2.6	3.6	3.2	2.9	2.8	2.4	2.4	2.4
Malaysia	13.5	13.6	14.8	13.0	11.8	11.3	9.9	10.1	10.2	7.8
Philippines	5.6	6.1	5.3	5.5	5.9	6.0	6.1	6.3	6.3	6.3
Singapore	10.0	8.1	6.1	6.5	6.3	6.7	6.6	6.6	6.6	6.6
Taiwan	11.2	10.1	10.1	10.6	11.0	10.8	10.7	10.3	10.7	10.9
Thailand	9.5	9.9	10.2	10.1	10.1	10.8	10.8	13.1	15.4	15.0
U.S.A.	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5

Notes: In principle, estimates are obtained by first calculating total FDI flows and stocks, where stocks are defined as cumulative flows from 1970 forward. Second, Hong Kong shares are multiplied by these totals to obtain a proxy for FDI from Hong Kong that is in principle consistent with balance of payments estimates. Note, however, that calculation methods differ significantly among host economies. Contact the authors for more details.

Sources: China, State Statistical Bureau (various years), Hill (1988, 1991), Indonesia, Bank Indonesia (various years), International Monetary Fund (various years, 1995), Korean Foreign Trade Association (1992), Malaysia Industrial Development Authority (various years), Malaysia, Ministry of Finance (various years), Pangestu (1991), Philippines, Central Bank of the Philippines (various years), Republic of China, Investment Commission (1993), Republic of China, Investment Commission (various years), Samudram (1995), Singapore, Department of Statistics (1993c, 1994), Thailand, Bank of Thailand (various years), United States, Department of Commerce (1990, 1994), Zhang (1992).

Table 3: Ratios of Selected Indicators for Hong Kong- and Singapore-owned Establishments in Singapore's Manufacturing Sector Classified by Country of Ultimate Beneficial Owner to the Same Indicators Classified by Capital Source (for original indicators, no.=number, S\$m=S\$ millions)

Indicator	1980	1981	1982	1983	1984	1985	1986
HONG KONG-OWNED ESTABLISHMENTS							
Establishments (no.)	0.86	0.90	0.87	0.90	0.86	0.86	0.81
Employees (no.)	0.57	0.68	0.72	0.74	0.67	0.73	0.72
Output (S\$m)	0.48	0.54	0.42	0.54	0.42	0.43	0.42
Value Added (S\$m)	0.49	0.58	0.51	0.62	0.53	0.53	0.54
Sales (S\$m)	0.49	0.56	0.42	0.53	0.42	0.44	0.41
Exports (S\$m)	0.42	0.52	0.37	0.45	0.31	0.37	0.38
Fixed Investment (S\$m)	0.39	0.46	0.56	0.52	0.36	0.16	0.30
SINGAPORE-OWNED ESTABLISHMENTS							
Establishments (no.)	1.05	1.05	1.05	0.99	0.98	0.98	0.98
Employees (no.)	1.12	1.12	1.10	0.97	0.96	0.96	0.95
Output (S\$m)	0.93	0.77	0.73	0.67	0.72	0.72	0.73
Value Added (S\$m)	1.07	1.04	1.02	0.90	0.86	0.91	0.81
Sales (S\$m)	0.94	0.77	0.73	0.68	0.72	0.72	0.73
Exports (S\$m)	1.00	0.64	0.61	0.53	0.58	0.62	0.62
Fixed Investment (S\$m)	1.09	1.07	1.04	0.96	0.90	0.94	0.84

Sources: Singapore, Department of Statistics (various years); Singapore, Economic Development Board (1994).

Table 4: Singapore's Direct Investment Stocks Abroad by Ownership of Investing Firm and Country of Investment (S\$ billions)

Variable	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
TOTAL OUTWARD FDI STOCKS											
Cumulative flows (IMF)	1.2	1.8	1.9	2.1	2.7	3.0	3.5	3.7	4.6	5.5	6.7
Stocks (DOS)	1.7	2.1	2.2	2.4	2.3	2.6	3.0	3.0	5.3	7.8	8.6
OUTWARD FDI STOCKS BY OWNERSHIP OF INVESTING FIRM (DOS)											
Foreign-controlled	0.8	1.0	1.0	1.0	0.6	0.7	1.1	1.1	3.0	3.9	4.4
Wholly Foreign	0.3	0.4	0.5	0.6	0.4	0.5	0.7	0.7	2.4	NA	NA
Majority-Foreign	0.5	0.6	0.5	0.5	0.2	0.2	0.4	0.4	0.7	NA	NA
Local-controlled	0.9	1.1	1.2	1.4	1.7	1.9	1.8	1.9	2.2	3.9	4.2
Majority Local	0.3	0.3	0.4	0.3	0.7	0.7	0.8	0.7	0.7	NA	NA
Wholly Local	0.6	0.8	0.9	1.1	1.0	1.1	1.1	1.2	1.6	NA	NA
OUTWARD FDI STOCKS OF ALL INVESTORS BY HOST ECONOMY (DOS)											
Asia	1.3	1.6	1.7	1.8	1.7	1.8	1.9	2.0	3.0	3.8	4.3
Brunei	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	NA	0.1
China	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	NA	0.2
Hong Kong	0.2	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.8	0.9	1.1
Indonesia	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	NA	0.2
Japan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NA	0.1
Malaysia	1.0	1.2	1.2	1.2	1.0	1.0	1.0	1.0	1.4	1.8	2.0
Philippines	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	NA	0.1
Taiwan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	NA	0.2
Thailand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	NA	0.3
Other Asia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	NA	0.5
Europe	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.3	0.3	0.9	0.8
Netherlands	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	-0.1	1.2	0.5
U.K.	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	NA	0.2
Other Europe	0.0	-0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3	NA	0.1
Other Regions	0.3	0.4	0.5	0.5	0.4	0.6	0.7	0.7	2.0	3.0	3.4
Australia	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.4
New Zealand	NA	NA	NA	NA	NA	NA	NA	NA	0.8	NA	0.9
United States	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	NA	0.4
Other countries	0.2	0.3	0.3	0.3	0.2	0.3	0.4	0.4	0.5	NA	1.6

Sources: IMF=International Monetary Fund (1995, various years);
DOS=Singapore, Department of Statistics (1991, 1993a, 1993b, 1993c).

Table 5: Singapore's Direct Investment Stocks Abroad by Capital Source, Country and Industry of Investment, 1991 (S\$ millions)

Variable	All indus- tries	Manu- fac- turing	Con- struc- tion	Com- merce	Trans- port	Fi- nance	Real Es- tate	Busi- ness ser- vices	Other indus- tries
OUTWARD FDI STOCKS OF FOREIGN-CONTROLLED COMPANIES BY HOST ECONOMY									
All countries	4,370	705	12	367	48	2,629	284	288	37
Asia	1,742	640	3	330	16	506	139	81	27
Brunei	6	0	0	6	0	0	0	0	0
China	27	22	0	6	0	0	0	0	0
Hong Kong	341	18	0	19	0	172	98	21	12
Indonesia	46	24	2	3	0	11	2	3	1
Japan	68	16	0	1	1	15	0	35	0
Malaysia	793	312	0	238	14	196	19	3	12
Philippines	28	14	0	4	0	1	6	3	0
Taiwan	43	7	0	27	0	9	0	0	0
Thailand	175	134	0	5	1	4	14	16	1
Other Asia	214	94	0	21	0	99	0	0	0
Europe	122	25	0	15	4	72	2	1	4
Netherlands	-57	9	0	0	0	-65	0	0	0
United Kingdom	113	1	0	14	1	96	2	0	0
Other Europe	65	15	0	1	3	42	0	1	4
Other Regions	2,507	41	9	22	28	2,050	144	206	6
Australia	214	30	7	9	2	26	135	0	5
New Zealand	818	4	0	7	0	805	1	0	0
U.S.A.	157	6	0	2	3	0	4	141	0
Other countries	1,318	1	2	3	23	1,219	3	64	2

Table 5 (continued)

Variable	All indus-tries	Manu- fac- turing	Con- struc- tion	Com- merce	Trans- port	Fi- nance	Real Es- tate	Busi- ness ser- vices	Other indus- tries
OUTWARD FDI STOCKS OF LOCAL COMPANIES BY HOST ECONOMY									
All countries	4,181	1,019	69	609	94	1,921	272	101	95
Asia	2,551	864	40	561	80	621	235	69	81
Brunei	47	1	7	3	0	37	0	0	0
China	125	73	0	27	19	2	0	4	1
Hong Kong	716	226	7	81	15	262	103	20	2
Indonesia	129	32	11	0	29	44	6	0	6
Japan	9	0	0	6	3	0	0	0	0
Malaysia	1,164	427	9	298	6	231	113	13	67
Philippines	34	13	0	0	0	16	0	0	4
Taiwan	179	46	3	108	0	20	0	1	0
Thailand	109	19	2	39	3	8	7	31	1
Other Asia	40	27	0	0	5	0	6	1	0
Europe	719	28	29	3	2	641	0	3	13
Netherlands	584	0	0	0	0	582	0	2	0
United Kingdom	83	8	0	1	2	59	0	1	13
Other Europe	52	20	29	2	1	0	0	1	0
Other Regions	911	127	0	46	11	659	37	30	1
Australia	219	18	0	34	2	155	9	0	1
New Zealand	115	0	0	0	3	93	0	19	0
United States	256	92	0	10	2	122	21	10	0
Other countries	320	18	0	1	5	289	7	1	0

Source: Singapore, Department of Statistics (1993b).

Table 6: Characteristics of Case Study Foreign-owned Firms in Hong Kong

	Year		Country of	Country
Com-pany	Estab-lished	Main Business	Ultimate Parent Firm	of ASEAN Operation
A	1975	Electronic manufacturing	Netherlands	S
B	NA	Solder chemical manufacturing	USA	S
C	1983	Computer software solutions	USA,Thailand	I,M,S,T
D	1980	Electronic components, distributor	USA	M,S
E	NA	Power supplies, distributor	USA	S
F	1971	General insurance	Netherlands,UK	I,M,P,S,T
G	1987	Distribution, testing services	UK	M,S,P,T
H	1972	Travel services	Australia	S,T
I	1975	Pharmaceuticals manufacturing & trade	Sweden	I,M,S,T
J	1964	Market research	USA	I,M,P,S,T
K	1983	Software distribution	UK	M,S
L	1990	Software distribution	USA	S
M	1836	General insurance	USA	S
N	1984	Lead frame manufacturing	Germany,Netherlands	M,S
O	1965	General insurance	Indonesia	I
P	1959	Furniture manufacturing	USA	I,M,S,T
Q	1981	Merchant banking	UKG	I,M,S,T
R	1977	Chemical products, transportation	SIN	I,M,S,T
S	1989	Electronic components trading	SIN	S
T	1981	Department store trading, sourcing	BEL	I,S,P,T

Note: for country of ASEAN operation I=Indonesia, M=Malaysia, P=Philippines, S=Singapore, T=Thailand.

Source: Field interviews by Henry Yeung

Table 7: Source of Finance, Methods of Control, and the Extent of Ultimate Control for ASEAN Subsidiaries of a Sample of Foreign-owned Firms in Hong Kong

Source of Finance, Methods of Control	Con- trolled	Auton- omous	Total
SOURCE OF FINANCE, NUMBER OF FIRMS	26	30	56
Regional headquarters, Hong Kong	18	27	45
Capital market, Hong Kong	4	0	4
Family reserve, Hong Kong	0	1	1
Host country partners	1	2	3
Ultimate parent company	3	0	3
SOURCE OF FINANCE, PERCENT OF FIRMS	100.00	100.00	100.00
Regional headquarters, Hong Kong	69.23	90.00	80.36
Capital market, Hong Kong	15.38	0.00	7.14
Family reserve, Hong Kong	0.00	3.33	1.79
Host country partners	3.85	6.67	5.36
Ultimate parent company	11.54	0.00	5.36
METHODS OF CONTROL, NUMBER OF FIRMS	16	26	42
Production, market planning from headquarters	2	1	3
Inventory, quality control by headquarters	0	2	2
Cost control by headquarters	4	7	11
Broad guidelines from corporate groups	0	1	1
Centralized decision making from headquarters	1	2	3
Inspections by top management from headquarters	2	4	6
Reports from local managers to headquarters	3	7	10
Sourcing information from headquarters	0	1	1
No specific ways	1	0	1
Mutual exchange of information	2	1	3
Annual meetings	1	0	1
METHODS OF CONTROL, PERCENT OF FIRMS	100.00	100.00	100.00
Production, market planning from headquarters	12.50	3.85	7.14
Inventory, quality control by headquarters	0.00	7.69	4.76
Cost control by headquarters	25.00	26.92	26.19
Broad guidelines from corporate groups	0.00	3.85	2.38
Centralized decision making from headquarters	6.25	7.69	7.14
Inspections by top management from headquarters	12.50	15.38	14.29
Reports from local managers to headquarters	18.75	26.92	23.81
Sourcing information from headquarters	0.00	3.85	2.38
No specific ways	6.25	0.00	2.38
Mutual exchange of information	12.50	3.85	7.14
Annual meetings	6.25	0.00	2.38

Source: Field interviews by Henry Yeung.

Table 8: A Sample of Thai Affiliates of Firms Based in Hong Kong and Singapore

Mea- sure	Industry										Ownership Shares			1991		1991 Sales (US\$m)
	MF	TR	TO	OI	Major Foreign Country					H.K. or Sing.	For- eign total	Local	Year of ploy- start- up	Em- ment (no.)		
					HK	SP	JP	EN	OC						UN	
AFFILIATES OF FOREIGN-CONTROLLED HONG KONG FIRMS																
NO.	2	5	7	8	0	0	16	4	2	0	22	22	22	22	20	18
MEAN	-	-	-	-	-	-	-	-	-	-	34.0	49.6	4.4	1980	465	28.378
STDS	-	-	-	-	-	-	-	-	-	-	19.3	16.8	11.3	8	949	36.011
AFFILIATES OF HONG KONG FIRMS NOT KNOWN TO BE FOREIGN-CONTROLLED																
NO.	7	7	0	1	4	0	0	1	1	9	15	15	15	15	6	15
MEAN	-	-	-	-	-	-	-	-	-	-	44.2	46.7	0.0	1983	1,092	15.743
STDS	-	-	-	-	-	-	-	-	-	-	18.1	16.5	0.0	8	1,218	10.058
AFFILIATES OF FOREIGN-CONTROLLED SINGAPORE FIRMS																
NO.	6	10	12	9	1	0	30	6	0	0	37	37	37	37	29	29
MEAN	-	-	-	-	-	-	-	-	-	-	33.7	58.6	1.6	1986	214	13.449
STDS	-	-	-	-	-	-	-	-	-	-	23.2	25.5	6.3	7	374	14.388
AFFILIATES OF HONG KONG FIRMS NOT KNOWN TO BE FOREIGN-CONTROLLED																
NO.	5	12	1	3	0	9	0	0	0	12	21	21	21	21	7	21
MEAN	-	-	-	-	-	-	-	-	-	-	35.1	38.2	0.0	1978	337	18.722
STDS	-	-	-	-	-	-	-	-	-	-	24.5	22.8	0.0	12	394	20.566

Notes and sources: -=not applicable, MF=manufacturing, TR=trade, TO=trade plus manufacturing or other industries, OI=other industries, HK=Hong Kong, SP=Singapore, JP=Japan, EN=Other OECD Economies, OC=other countries, UN=unknown, no.=number of employees, NO.=number of firms in sample, MEAN=mean value, STDS=sample standard deviation. Data taken from published lists of firms operating in Thailand; primary sources are International Business Research (Thailand) (1994), Advanced Research Group (1992), SEAMICO Business Information and Research (1993), and Toyo Keizai (1992, 1993). The former two publications cover most large- and medium-sized firms in Thailand and the majority of these firms with sales of US\$4 million or more are included in one of these lists. The third source covers so-called supporting industries and includes some smaller firms. The last source covers only Japanese firms. Hence the sample is biased toward large firms and firms with ultimate parents in Japan. In addition to these primary sources which provided the information on the Thai firms, a number of secondary sources, namely Datapool (1993), American Chamber of Commerce in Thailand (1992), and Thai-Canadian Chamber of Commerce (1994), were used to obtain supplemental information on ultimate parents.

Table A1: Hong Kong's Shares of FDI Flows and Stocks in Selected Host Economies

Host Economy	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
HONG KONG'S SHARES OF TOTAL FDI FLOWS (ratios)												
China-E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
China-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
China-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indonesia-E	NA	NA	NA	NA	NA	NA	NA	NA	13.8	15.8	22.1	20.7
Indonesia-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indonesia-2	NA	NA	NA	NA	NA	2.1	37.7	20.9	15.6	5.7	2.8	21.8
Korea-E	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.8	0.0	1.1
Korea-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.8	0.0	1.1
Malaysia-E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.2
Malaysia-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Malaysia-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Malaysia-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.4	NA
Malaysia-4	NA	NA	NA	NA	NA	NA	NA	NA	5.5	4.6	1.5	7.4
Philippines-E	NA	NA	NA	NA	1.9	2.3	3.3	5.2	5.0	-14.9	1.5	10.3
Philippines-1	NA	NA	NA	NA	1.6	3.7	4.8	6.9	5.0	2.7	6.7	12.8
Singapore-E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.3
Singapore-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.3
Singapore-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.5	19.1	13.1
Taiwan-E	6.0	15.6	13.8	13.2	14.6	31.2	14.8	17.0	12.5	9.1	8.3	9.0
Taiwan-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Taiwan-2	6.0	14.2	12.6	12.8	15.5	29.1	14.9	16.8	11.4	9.0	8.5	8.9
Thailand-E	7.7	5.8	5.6	15.5	12.8	3.4	5.5	9.1	-20.8	25.3	28.7	5.0
U.S.A.-E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5	0.1
U.S.A.-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.5	0.1

Table A1 (continued)

Host Economy	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
HONG KONG'S SHARES OF TOTAL FDI STOCKS (ratios)												
China-E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
China-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
China-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indonesia-E	NA	NA	NA	NA	NA	NA	NA	10.2	10.8	11.4	12.3	12.8
Indonesia-1	NA	NA	NA	NA	NA	NA	NA	10.2	NA	NA	NA	NA
Indonesia-2	NA	NA	NA	NA	11.6	8.6	9.7	9.6	NA	10.6	11.5	12.0
Korea-E	NA	NA	NA	NA	NA	NA	NA	NA	2.0	2.0	2.0	1.9
Korea-1	NA	NA	NA	NA	NA	NA	NA	NA	2.0	NA	NA	NA
Malaysia-E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.8	12.7
Malaysia-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Malaysia-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Malaysia-4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.9	5.1
Philippines-E	NA	NA	NA	1.3	1.4	2.1	2.8	3.9	4.1	3.8	4.3	5.9
Philippines-1	NA	NA	NA	1.3	1.4	2.1	2.8	3.9	4.1	3.8	4.3	5.9
Singapore-E	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.1	12.2
Singapore-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.1	12.2
Singapore-2	NA	NA	NA	NA	NA	NA	NA	NA	12.0	11.2	13.1	13.1
Taiwan-E	6.0	10.4	11.1	11.7	12.5	14.5	14.6	14.9	14.4	13.4	12.4	11.9
Taiwan-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Taiwan-2	6.0	10.4	11.1	11.7	12.5	14.5	14.6	14.9	14.4	13.4	12.4	11.9
Thailand-E	7.7	6.8	6.3	9.4	10.9	9.6	9.1	9.1	6.8	8.1	12.1	10.5
U.S.A.-E	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1	0.2	0.2
U.S.A.-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2	0.2

Table A1 (continued)

Host Economy	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
HONG KONG'S SHARES OF TOTAL FDI FLOWS (ratios)												
China-E	NA	NA	NA	48.9	60.4	69.1	65.6	61.2	54.9	57.0	70.0	63.0
China-1	NA	NA	NA	NA	60.4	69.1	65.6	61.2	54.9	57.0	NA	NA
China-2	NA	NA	NA	48.9	59.2	68.4	64.9	62.1	56.4	57.0	70.0	63.0
Indonesia-E	-5.6	1.9	-3.0	-1.2	10.4	10.0	9.7	9.7	15.8	16.4	17.8	NA
Indonesia-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indonesia-2	13.4	4.4	63.8	6.2	1.2	9.3	5.2	8.6	11.4	3.2	9.9	NA
Korea-E	10.1	2.7	5.4	3.2	1.7	6.7	2.1	1.6	2.1	0.5	NA	NA
Korea-1	10.1	2.7	5.4	3.2	1.7	6.7	2.1	1.6	2.1	0.5	NA	NA
Malaysia-E	-0.6	36.9	7.5	14.5	37.4	-28.6	-6.6	8.5	2.0	10.7	11.0	-5.6
Malaysia-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-2.7
Malaysia-2	NA	NA	NA	NA	NA	-0.2	-9.8	3.4	0.0	4.3	NA	NA
Malaysia-3	NA	NA	3.0	2.9	3.3	4.3	6.1	4.1	2.1	3.5	0.4	1.5
Malaysia-4	0.9	16.7	3.4	5.7	5.2	3.7	6.4	NA	NA	NA	NA	NA
Philippines-E	-13.1	5.3	14.7	41.2	0.4	6.2	6.3	6.5	6.7	7.5	6.3	6.3
Philippines-1	3.5	5.2	7.2	11.4	-14.1	11.7	19.4	7.8	7.8	7.9	NA	NA
Singapore-E	11.4	3.4	4.5	-10.0	-6.8	8.3	5.4	9.8	5.9	6.6	6.6	6.6
Singapore-1	11.1	-1.8	1.4	-20.0	-23.0	7.7	5.4	9.4	6.0	NA	NA	NA
Singapore-2	12.4	3.9	-0.8	-21.8	-13.8	8.3	4.2	10.5	6.6	2.8	NA	NA
Taiwan-E	10.4	6.1	11.6	5.7	9.9	12.3	12.1	10.4	10.3	8.1	14.2	13.1
Taiwan-1	NA	NA	NA	NA	NA	NA	NA	14.6	0.3	0.0	NA	NA
Taiwan-2	10.7	6.0	11.6	4.2	9.9	12.8	13.3	10.3	10.3	7.2	14.6	14.0
Thailand-E	13.7	10.6	3.6	14.6	13.8	8.8	10.0	12.5	10.9	22.5	27.1	11.2
U.S.A.-E	0.4	0.7	1.2	0.0	0.1	0.8	0.2	0.6	0.5	1.5	-1.2	0.7
U.S.A.-1	0.4	0.7	1.2	0.0	0.1	0.8	0.2	0.6	0.5	1.5	-1.2	0.7

Table A1 (continued)

Host Economy	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
HONG KONG'S SHARES OF TOTAL FDI STOCKS (ratios)												
China-E	NA	NA	11.1	24.4	34.6	43.6	49.4	52.0	52.5	53.3	59.0	60.7
China-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	59.0	NA
China-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indonesia-E	11.1	10.1	9.2	8.2	8.3	8.5	8.7	8.8	10.0	11.2	12.5	12.5
Indonesia-1	NA	NA	NA	8.2	NA	NA	8.7	8.8	NA	NA	12.5	NA
Indonesia-2	10.4	NA	NA	9.0	NA	11.0	10.8	NA	NA	8.7	8.1	NA
Korea-E	2.5	2.5	2.8	2.9	2.6	3.6	3.2	2.9	2.8	2.4	2.4	2.4
Korea-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Malaysia-E	10.0	14.1	13.5	13.6	14.8	13.0	11.8	11.3	9.9	10.1	10.2	7.8
Malaysia-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.2	7.8
Malaysia-2	NA	NA	NA	NA	5.9	5.2	4.7	4.5	4.0	4.0	NA	NA
Malaysia-4	4.0	5.7	5.4	5.4	5.4	5.1	5.5	NA	NA	NA	NA	NA
Philippines-E	5.5	5.5	5.6	6.1	5.3	5.5	5.9	6.0	6.1	6.3	6.3	6.3
Philippines-1	5.5	5.5	5.6	6.1	5.3	5.5	5.9	6.0	6.1	6.3	NA	NA
Singapore-E	12.0	10.9	10.0	8.1	6.1	6.5	6.3	6.7	6.6	6.6	6.6	6.6
Singapore-1	12.0	10.9	10.0	8.1	6.1	6.5	6.3	6.7	6.6	NA	NA	NA
Singapore-2	13.0	12.4	11.2	9.2	7.4	7.6	7.0	7.5	7.3	6.7	NA	NA
Taiwan-E	11.7	11.1	11.2	10.1	10.1	10.6	11.0	10.8	10.7	10.3	10.7	10.9
Taiwan-1	NA	NA	NA	NA	NA	NA	11.7	12.6	1.3	10.9	NA	NA
Taiwan-2	11.7	11.1	11.2	10.1	10.1	10.6	11.0	10.8	10.7	10.3	10.7	10.9
Thailand-E	10.9	10.8	9.5	9.9	10.2	10.1	10.1	10.8	10.8	13.1	15.4	15.0
U.S.A.-E	0.2	0.2	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5
U.S.A.-1	0.2	0.2	0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.5

Table A1 (continued)

Notes and Sources:

General: Except for China, Thailand, and the United States, total FDI flows are taken from the International Monetary Fund (various years). For China, Thailand, and the United States, total FDI flows are taken from national sources (China-1, Thailand-1, United States-1). For all countries stocks are then estimated as cumulative flows from 1970 forward and Hong Kong's shares of total stocks or flows are then multiplied by these totals to generate estimates of Hong Kong's FDI flows and stocks. Due to differences in data availability the precise nature of these calculations differs among countries as detailed in the country-specific notes below.

China-E: these are the estimates used here. Flow shares taken from China-1 for 1986-1991, from China-2 for 1985, 1992-1993. Stock shares taken from China-1 for 1992; 1985-1991 and 1993 stocks are calculated by subtracting or adding flows and the 1992 stock figure. Flow data for 1985-1990 include FDI from Macao, while the stock data for 1992 and the flow data for 1991-1993 refer only to Hong Kong.

China-1: these data refer to flows and stocks of realized FDI. All flow data and total stocks come from China, State Statistical Bureau (various years). Hong Kong's share of the total stock in 1992 comes from Zhang (1992).

China-2: these data refer to flows of FDI and other foreign investments (e.g., compensation trade, processing & assembly, international rent). They also come from China, State Statistical Bureau (various years).

Indonesia-E: these are the estimates used here. Stock shares taken from Indonesia-1 for 1977, 1985, 1988, 1989, 1992. For 1979-1982, stock shares calculated as the growth (from 1977) of the share taken from Indonesia-2 times the 1977 share from Indonesia-1. For 1978, 1983-1984, 1986-1987, and 1990-1991, stock shares are calculated by adding the share in the year previous (e.g., for 1990-1991, the share for 1989) and the average change of the share in the period from the year previous to the year following (e.g., for 1990-1991, the change in 1989-1992). The 1993 share is assumed to be equal to the 1992 share. Flows are first differences of stocks.

Indonesia-1: these data refer to flows and stocks of implemented FDI, excluding oil and finance. Sources are: Indonesia, BKPM (1993), stock data for 1992, as of 30 April 1993; Hill (1988, 1991), stock data for 1977, 1985 and 1989--as of 30 June 1989); Pangestu (1991), stock data for 1988.

Indonesia-2: these data refer to flows and stocks of approved FDI, excluding oil and finance, from: Hill (1988), stock data for 1985); Indonesia, Bank Indonesia (various years), flow data for 1975-1992, stock data for 1974-1977, 1979-1982, 1987, 1991-1992; Pangestu (1991), stock data for 1988). Note that stock and flow data are not consistent in this source due to adjustments for withdrawals and takeovers.

Korea-E: these are the estimates used here. Flow shares for 1979-1991 and stock shares for 1978 are from Korea-1; stocks for 1979-1991 are calculated from 1978 stocks and 1979-1991 flows. 1992-1993 stock shares are assumed to equal the 1991 share and flows for 1992-1993 are calculated from resulting stock estimates.

Korea-1: data refer to flows of FDI arrivals from (stocks estimated as cumulative flows from 1962) from Korean Foreign Trade Association (1992).

Table A1 (continued)

Malaysia-E: these are the estimates used here. Stock shares for 1992-1993 come from Malaysia-1; for 1986-1991 stock shares are estimated as 2.5 times the figure from Malaysia-2; for 1980-1985 stock shares are estimated as 2.5 times the figure from Malaysia-4. Flows are estimated by first differencing stocks.

Malaysia-1: these data refer to foreign equity stocks in all industries (flows estimated as first differences of stocks) from Samudram (1995).

Malaysia-2: these data refer to foreign paid-up capital stocks in manufacturing (flows estimated as first differences of stocks) from Malaysia Industrial Development Authority (various years).

Malaysia-3: these data refer to approved FDI (equity & loans) flows in manufacturing from Malaysia Industrial Development Authority (various years).

Malaysia-4: these data refer to approved FDI equity flows in manufacturing (stocks estimated as cumulative flows from 1978) from Malaysia Industrial Development Authority as cited in Malaysia, Ministry of Finance (various years).

Philippines-E: these are the estimates used here. Stocks shares through 1991 are taken from Philippines-1 and stock shares for 1992-1993 are assumed to equal the share in 1991. Flows are then calculated as first difference of stocks.

Philippines-1: these data refer to Central Bank approved FDI stocks (flows estimated as first differences of stocks) from Philippines, Central Bank of the Philippines (various years).

Singapore-E: these are the estimates used here. Stock shares through 1990 taken from Singapore-1 and shares for 1991-1993 are assumed to equal the share for 1990. Flows are estimated as first differences of stocks.

Singapore-1: these data refer to FDI equity stocks (flows estimated as first differences of stocks) from Singapore, Department of Statistics (1993c).

Singapore-2: these data refer to total foreign equity stocks (flows estimated as first differences of stocks) from Singapore, Department of Statistics (1993c, 1994). These data are given for reference only.

Taiwan-E: these are the estimates used here. Stock shares are taken from Taiwan-2 and flows are estimated as the first differences of stocks.

Taiwan-1: these data refer to shares of paid-up capital stocks (flows calculated as first differences of stocks) from Republic of China, Investment Commission (various years). These data are given for reference only.

Taiwan-2: data are approved FDI flows (stocks calculated as cumulative flows from 1970) from Republic of China, Investment Commission (1993).

Thailand-E: these are the estimates used here; flows of FDI taken from Thailand, Bank of Thailand (various years) and stocks calculated as cumulative flows from 1970.

U.S.A.-E refers to estimates used here; total flows and Hong Kongs shares of flows for all years and stocks for 1980 taken from U.S.A.-1; stocks for 1979 and 1981-1993 calculated as 1980 stocks plus or minus relevant flows.

U.S.A.-1 refers to FDI flows (equity, loans, and reinvested earnings) and stocks, where stock figures also include valuation adjustments, from United States, Department of Commerce (1990, 1994).

Table A2: Flows of FDI from Malaysia to Selected Host Economies

Host economy	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
FDI FLOWS FROM MALAYSIA (US\$ millions)										
Subtotal	NA	-70	-138	-56	214	145	274	213	342	478
China	NA	0	0	0	1	0	1	2	24	24
Indonesia	0	0	0	0	3	3	1	5	3	4
Philippines	1	0	0	1	4	1	2	1	2	3
Singapore	87	-68	-165	-36	143	124	233	210	286	290
Taiwan	0	2	2	5	11	14	3	4	5	9
Thailand	1	1	0	-0	2	2	17	1	5	-7
U.S.A.	0	-5	24	-26	51	0	19	-9	18	156
MALAYSIAN SHARES OF TOTAL FDI FLOWS (percent)										
China-E	NA	0.01	0.02	0.01	0.04	0.01	0.02	0.04	0.22	0.09
China-1	NA	NA	0.02	0.01	0.04	0.01	0.02	0.04	NA	NA
China-2	NA	0.01	0.02	0.00	0.03	0.01	0.02	0.04	0.22	NA
Indonesia-E	0.00	0.00	0.00	0.07	0.46	0.48	0.08	0.34	0.15	0.19
Philippines-E	6.85	2.41	0.29	0.31	0.41	0.26	0.30	0.13	0.70	0.33
Singapore-E	6.67	-6.52	-9.67	-1.26	3.90	4.30	4.17	4.29	4.24	4.24
Singapore-1	1.41	-20.02	-23.01	7.74	5.35	9.35	5.99	NA	NA	NA
Singapore-2	12.66	10.92	8.72	6.60	7.05	6.19	5.67	0.00	NA	NA
Taiwan-E	0.22	0.67	0.65	0.73	1.18	0.86	0.19	0.29	0.56	0.99
Taiwan-2	0.22	0.21	0.51	0.48	0.93	0.68	0.08	0.06	0.53	1.02
Thailand	0.31	0.43	0.11	-0.10	0.17	0.12	0.71	0.04	0.21	-0.48
U.S.A.	0.00	-0.03	0.07	-0.05	0.09	0.00	0.04	-0.03	0.18	0.73

Notes and sources are the same as in Table A1 with four exceptions: (1) China-E, the estimates used here, are based directly on flow shares and the share for 1993 is estimated as the average of shares in 1990-1992. (2) Indonesia-E, the estimates used here, are based directly on shares of FDI approvals; (3) U.S.A.-E, the estimates here, are based directly on shares of FDI flows; (4) Data for FDI in Hong Kong and Korea are not available.

Table A3: A Sample of Thai Affiliates of Firms Based in Hong Kong and Singapore (shares in percent, employment in number, sales in US\$ millions)

Firm No.	Year	In- dus- try Business	H.K./ Sing. Share	For- eign Share	Local group Share	Coun- try of UBO	1991 Employ ment	1991 Sales
THAI AFFILIATES OF FOREIGN-CONTROLLED HONG KONG FIRMS								
1	1987	M Insulation	37	47	8	Japan	50	6.413
2	1988	M Clocks, watches	70	80	0	Japan	378	33.503
3	1980	M,T Carbon black	36	54	0	India/H.K.	300	38.816
4	1974	M,T Artificial fibers	20	48	0	India/U.K.	850	139.736
5	1988	M,T Forms, plastics, cards	30	30	0	Japan	113	4.272
6	1988	M,T Bags	75	75	0	Japan	3233	7.000
7	1984	M,T Bread	10	59	15	Japan	100	4.230
8	1971	M,T Ink, dyestuffs	13	91	0	Japan	72	30.725
9	1967	M,T Canned fruit	44	64	0	U.S.A.	3100	63.303
10	1984	T General trading	55	55	0	Japan	9	1.304
11	1975	T Detergent, shampoo	22	27	0	Japan	580	67.754
12	1974	T Bearings	45	45	0	Japan	44	15.580
13	1990	T Metal products	40	40	0	Japan	NA	15.135
14	1967	T Liquor	59	59	0	U.K.	36	19.958
15	1972	Z Finance, broker	20	25	0	Canada	196	22.471
16	1987	Z Leasing	20	40	10	Japan	45	NA
17	1984	Z Investment	39	49	51	Japan	0	NA
18	1990	Z Leasing	10	35	14	Japan	29	2.347
19	1972	Z Office buildings	9	49	0	Japan	23	5.000
20	1989	Z Advertising	45	45	0	Japan	70	NA
21	1972	Z Finance, investment	14	37	0	Japan	70	NA
22	1975	Z Transport, packaging	36	38	0	U.S.A.	NA	16.412
MEAN	1980	-----	34	50	4	-----	465	28.378
STDS	8	-----	19	17	11	-----	949	36.011
THAI AFFILIATES OF OTHER HONG KONG FIRMS (NOT KNOWN TO BE FOREIGN CONTROLLED)								
23	1985	M Kraft papers	50	50	0	Hong Kong	136	18.200
24	1988	M Electronic parts	100	100	0	Hong Kong	2200	35.271
25	1980	M Chemicals	19	28	0	India/U.K.	34	5.377
26	1990	M Carpets	31	46	0	NA	681	29.124
27	1966	M Cigarette filters	37	48	0	NA	NA	8.760
28	1988	M Shoes	39	39	0	NA	NA	22.226
29	1987	M P.E.T. bottle	26	26	0	NA	NA	6.168
30	1990	T Frozen shrimp	49	49	0	Hong Kong	NA	8.030
31	1983	T Diamonds, gems	45	45	0	Hong Kong	500	20.480
32	1983	T Edible oils	49	49	0	NA	NA	27.713
33	1988	T Garments	49	49	0	NA	NA	5.782
34	1983	T Molasses	49	49	0	NA	NA	8.378
35	1987	T Precious stones	39	39	0	NA	NA	5.726
36	1982	T Crops, jute, rice	46	46	0	NA	NA	11.332
37	1964	Z Construction	36	39	0	U.S.A.	3000	23.576

Table A3 (continued)

Firm No.	Year	In- dus- try Business	H.K./ Sing. Share	For- eign Share	Local group Share	Coun- try of UBO	1991 Employ ment	1991 Sales
MEAN	1983	-----	44	47	0	-----	1092	15.743
STDS	8	-----	18	17	0	-----	1218	10.058
THAI AFFILIATES OF FOREIGN-CONTROLLED SINGAPORE FIRMS								
38	1990	M Electric parts	49	49	0	Germany	60	3.919
39	1988	M PCB Assembly	66	66	0	Japan	347	19.595
40	1988	M Power supplies	20	95	0	Japan	310	12.418
41	1984	M General machinery	25	50	0	Japan	6	0.839
42	1990	M Refrigerated cases	38	95	0	Japan	175	NA
43	1965	M Refrigerators	17	21	0	U.S.A.	850	16.482
44	1988	M,T Electric machinery	42	100	0	Japan	1801	43.468
45	1989	M,T Connectors	20	100	0	Japan	300	14.184
46	1989	M,T Vynil compunds	10	93	7	Japan	110	7.661
47	1989	M,T Plastic moulding	65	65	15	Japan	134	3.070
48	1989	M,T Chemicals	33	49	0	Japan	4	13.638
49	1988	M,T Electric belts	5	40	0	Japan	126	NA
50	1988	M,T Aluminum products	3	78	0	Japan	320	38.475
51	1987	M,T Mechanical parts	25	100	0	Japan	439	7.137
52	1991	M,T Diamonds	5	49	0	Japan	20	NA
53	1988	M,T Resistors	9	100	0	Japan	147	3.315
54	1985	T Shoes	39	39	0	Hong Kong	NA	5.670
55	1989	T Photo film	16	49	0	Japan	NA	51.002
56	1990	T General trading	16	16	36	Japan	4	1.879
57	1989	T General trading	16	49	0	Japan	26	NA
58	1986	T Control equipment	30	30	0	Japan	40	NA
59	1987	T Chemicals, plastics	16	49	0	Japan	11	13.274
60	1991	T Optical devices	52	52	0	Japan	14	1.704
61	1971	T Phones, precision eq.	100	100	0	Netherlands	NA	11.897
62	1975	T Chemicals, commun. eq.	28	28	0	Netherlands	NA	7.858
63	1978	T Copiers	49	49	0	U.K.	750	33.769
64	1989	T,Z Plastic parts	29	59	0	Japan	5	0.222
65	1968	T,Z Watches	100	100	0	Switzerland	NA	21.039
66	1991	Z Travel agent	30	49	0	Japan	24	NA
67	1972	Z Construction	10	29	0	Japan	NA	NA
68	1989	Z Construction	39	39	0	Japan	72	NA
69	1988	Z Distribution	48	49	0	Japan	50	1.470
70	1990	Z Distribution, transp.	49	51	0	Japan	12	0.007
71	1990	Z Warehouse	49	49	0	Japan	NA	6.153
72	1985	Z Construction	33	33	0	Japan	NA	40.270
73	1990	Z Construction	49	49	0	Japan	3	7.838
74	1990	Z Transport	16	49	2	Japan	41	1.756
MEAN	1986	-----	34	59	2	-----	214	13.449
STDS	7	-----	23	26	6	-----	374	14.388

Table A3 (continued)

Firm No.	Year	In- dus- try	Business	H.K./ Sing. Share	For- eign Share	Local group Share	Coun- try of UBO	1991 Employ ment	1991 Sales
THAI AFFILIATES OF OTHER SINGAPORE FIRMS (NOT KNOWN TO BE FOREIGN CONTROLLED)									
75	1981	M	Paper boxes	40	40	0	NA	140	6.866
76	1980	M	Dyestuff	80	80	0	NA	150	9.666
77	1986	M	Electronic parts	36	38	0	Singapore	1200	7.961
78	1988	M	Video tape	60	62	0	Singapore	NA	8.142
79	1980	M	Crops, corn	18	18	0	Singapore	NA	9.198
80	1966	M,T	Pharmaceuticals	8	10	0	Singapore	390	7.724
81	1988	T	Garments	49	49	0	NA	NA	6.727
82	1968	T	Chemicals, flour	13	13	0	NA	NA	60.678
83	1986	T	Corn, sorghum	21	21	0	NA	NA	10.202
84	1988	T	Diamond, jewelery	10	20	0	NA	NA	34.201
85	1990	T	Pagers	40	40	0	NA	NA	7.582
86	1984	T	Generators, cranes	14	29	0	NA	NA	6.135
87	1974	T	Keys, grinding stones	18	31	0	NA	NA	12.529
88	1986	T	Crops, corn	20	20	0	NA	NA	6.201
89	1988	T	Fabric	49	49	0	Singapore	NA	23.433
90	1984	T	Fuel oil	10	10	0	Singapore	NA	28.291
91	1952	T	Elec. & indus. equip.	100	100	0	Singapore	NA	7.005
92	1947	T	Machinery	50	50	0	Singapore	150	16.184
93	1972	Z	Holding company	17	37	0	NA	80	33.129
94	1968	Z	Property development	37	37	0	NA	250	85.572
95	1986	Z	Investment	49	49	0	Singapore	NA	5.727
MEAN	1978	-----	-----	35	38	0	-----	337	18.722
STDS	12	-----	-----	25	23	0	-----	394	20.566

Notes and sources: M=manufacturing, T=trade, Z=other industries, NA=not available, MEAN=mean value, STDS=sample standard deviation (NA observations excluded from MEAN and STDS calculations). For other notes and sources see Table A3. Data taken from published lists of firms operating in Thailand. The four primary sources used are International Business Research (Thailand) (1994), Advanced Research Group (1992), SEAMICO Business Information and Research (1993), and Toyo Keizai (1992, 1993). The former two publications cover most large- and medium-sized firms in Thailand and the majority of these firms with sales of US\$4 million or more are included in one of these lists. The third source covers so-called supporting industries and includes some smaller firms. The last source covers only Japanese firms. Hence the sample is biased toward large firms and firms with ultimate parents in Japan. In addition to these primary sources which provided the information on the Thai firms, a number of secondary sources, namely Datapool (1993), American Chamber of Commerce in Thailand (1992), and Thai-Canadian Chamber of Commerce (1994), were used to obtain supplemental information on ultimate parents.