

**Recent Trends in Foreign Direct Investment in Asia:
The Aftermath of the Crisis to Late 1999**

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Recent Trends in Foreign Direct Investment in Asia: The Aftermath of the Crisis to Late 1999

Eric D. Ramstetter, February 2000

Abstract

This paper examines recent trends in foreign direct investment (FDI) in Asia and the relationship of those trends to other economic activities of multinational corporations (MNCs) in the region. The paper first examines trends in aggregate FDI and FDI income, showing that inward flows remained remarkably robust in most of these economies even after the Asian financial crisis. Second, patterns of investment by country and by industry are examined. Here it can be seen that a large portion of the FDI in these economies comes from other Asian economies, though there is also a large European and U.S. presence as well. Industrial patterns vary across economies with manufacturing, trade, and finance being among the major sectors for FDI and MNCs. Third, the paper compares trend in FDI and other indicators of economic performance in MNCs in Asia. In this regard, the paper emphasizes that there are often large differences in trends in FDI flows, on the one hand, and trends in other indicators of economic activity in MNCs such as stocks and flows of fixed assets, employment, production, and exports, on the other hand. Correlations between FDI stocks and these other indicators are somewhat higher but even in this case there are sometimes important differences in trends. Thus, although trends in FDI flows are an important indicator of investor sentiment in the MNCs undertaking FDI, trends in FDI are often poor indicators of trends in other economic activities of MNCs. This means that economists and other observers must be very careful when interpreting the meaning of trends in FDI flows.

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Eric D. Ramstetter¹, February 2000

1. Introduction

Especially since the boom of foreign direct investment (FDI) that accompanied an overall economic upturn in many Asian economies in the late 1980 and early 1990s, flows of FDI to Asian economies have attracted significant attention in the literature. However, data bases on FDI and other activities of the multinational corporations (MNCs) in Asia are generally very weak and inconsistent across economies. Although there are a number of publications that compile these data for Asian countries (e.g., Japan External Trade Organization, various years; Mifuji 1999; United Nations, 1992, 2000, various years), these publications often fail to sufficiently emphasize the large differences in data definitions across countries and thereby contribute to the confusion that often surrounds the use of these data. Moreover, when several measures are available (e.g., Japan, Malaysia, Thailand), these publications often choose to use data on approved or reported FDI that are fundamentally incomparable across countries, even when more standard estimates (e.g., remittances compiled in the balance of payments and other measures of actual FDI) are available. Moreover, the time series in these publications are often very short and none of the sources I know of attempt to compile the increasing amount of high frequency data. Partially as a result of the lack of a reliable and timely data base, there is also a disturbing tendency to make statements about the roles of FDI and MNCs in Asian economies that are simply incorrect. These mistakes are most common in the mass media but academics also commit important mistakes simply because they have failed to understand the meaning of the data they are using. A even more common problem, however, is a disturbing tendency to misinterpret the meaning of trends in FDI and how they relate to the economic activities of MNCs.

The primary purpose of this paper is to help facilitate more accurate analysis of FDI and MNCs for 11 Asian economies by presenting a relatively consistent set of estimates for FDI flows for the last 15-20 years,

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including the estimates for 1999 that are available, and to describe the relationships among these trends and trends in other indicators of economic activity in MNCs. To this end, data on aggregate FDI flows are presented in Section 2 and data on FDI by country and by industry are then presented in Section 3. Much of the discussion in these sections focuses on explaining the nature of available data. Another concern in these sections is to further document trends in FDI in the aftermath of the financial crisis which began with the depreciation of the Thai baht in July 1997. Here it should be emphasized that these trends are most meaningful in that they reflect investor sentiment in the MNCs undertaking these investments. In contrast, trends in FDI often correlate very poorly with trends in other economic activities in MNCs and thus reveal very little about those activities or the effects of MNC activities. This point is emphasized in Section 4 which first explains how FDI relates to a corporate balance sheet and then compares trends in FDI and other measures of MNC activity such as fixed assets stocks, employment, production, and exports. Some concluding remarks are then offered in section 5.

Before proceeding, it should be emphasized that this paper is incomplete in many respects. The lack of comprehensiveness is partially the result of inevitable data constraints. However, it also results from the choice of methodology and the author's inability to compile all relevant data. As a result, the author hopes to revise and improve, as well as update, the paper in future. Accordingly, all readers are encouraged to read this paper with a critical eye and offer comments and/or criticisms.

2. Trends in Aggregate Foreign Direct Investment and Foreign Direct Investment Income

Table 1 presents estimates of aggregate FDI inflows that are defined in a manner that is more or less consistent with the definition used in the Fifth Edition of the *Balance of Payments Manual* (International Monetary Fund 1993). Correspondingly, this paper does not attempt to present data on reported or approved values of FDI. This means that there are important gaps in the data, There are two major exceptions to this general rule, Hong Kong and Malaysia. In Hong Kong there are no balance of payments data and estimates of FDI are made by first differencing estimates of FDI stocks or by adding up investments to and from some of the major partner economies. In Malaysia, balance of payments estimates are not up to date and estimates of balance of payments flows for 1980-1997 are thus supplemented with estimates of equity investment for 1991-

1999. This equity investment is defined in a manner similar to FDI equity in that it refers to investments in Malaysia where foreigners exercise an effective voice in management, but it may include some portfolio investment and excludes FDI loans and reinvested earnings. Another important point is that reinvested earnings are not explicitly estimated in the balance of payments for a large number of economies, China, Hong Kong, Korea, Indonesia, Malaysia, Singapore, Thailand, and probably Vietnam. In another economy, Japan, reinvested earnings are included only in recent years. The size of reinvested earnings varies greatly from country to country but it can be very large.

Two additional points need to be stressed when examining trends in FDI. First, FDI, like other investment flows, tends to be quite volatile over time. Indeed, the explaining the volatility of investment over time has long been an important task that economists inevitably find very difficult. Given that investment tends to be highly volatile, one needs to exercise due caution not to overemphasize the importance of short-term changes that may not last. On the other hand, sharp changes in investor behavior are often thought to be major factors in changes in the business cycle so one must also be careful not to underestimate the importance of swings in investment.

Second, although FDI is a volatile investment flow, in most cases it is less volatile than other foreign investment flows. This has clearly been the case in Asia's so-called crisis economies in recent years. For example, in the eighteen years from 1981 through 1998 total inward FDI in Korea, Indonesia, and Thailand, the three most severely affected of the crisis economies, averaged US\$4.3 billion annually and the standard deviation was somewhat smaller than the mean, US\$3.9 billion (International Centre for the Study of East Asian Development, pp. 61-62, 89-90, 145-146). On the other hand, inward portfolio investment averaged US\$6.1 billion in these three economies combined, with a standard deviation more than 1.5 times larger than the mean, US\$9.3 billion. Inward other investment, which consists largely of loans in one form or another, was the largest flow, averaging US\$7.4 billion but in this case the standard deviation was 2.7 times the mean, US\$19.9 billion. In the 1990s, fluctuations in portfolio investment and other investment were particularly pronounced. Inward portfolio investment in these three economies rose from 0.1 billion in 1990 to US\$18 billion in 1993, fell back to US\$15 billion in 1994, then rose to US\$30 billion in 1996 before declining to US\$14 billion in 1997 and US\$ -2 billion in 1998. Fluctuations in inward other investment were even more pronounced, from US\$21 billion in 1991 to US\$7 billion in 1993, US\$43 billion in 1995, US\$37 billion in 1996, and then US\$ -33 billion in 1997, and US\$-39 billion in

1998. In marked contrast inward FDI rose rather steadily from US\$4-5 billion annually in 1990-1994 US\$ 8 billion in 1995, and US\$11-12 billion annually in 1996-1998.

In two of these crisis economies, Korea and Thailand, inward FDI increased to historically high levels in 1997 and then again in 1998 (Table 1). Moreover, the total for the first three quarters of 1999 exceeded the total for 1998 in Korea, indicating that another record high is likely in this economy. In Thailand, the total for the first three quarters of 1999 was sharply lower than the total for the same period in 1998 (\$4.4 billion versus \$5.9 billion), but this amount was still larger than the annual total for any year previous. In both Korea and Thailand, part of these increases in inward FDI can be attributed to policy changes. Both countries have a history of rather restrictive foreign ownership limits, many of which were removed in the reforms that have followed the crisis. This combined with the financial distress in many local firms, has led to a large amount of investment by foreign MNCs in previously local firms. Moreover, many of the local partners in previous joint ventures were often in severe financial difficulty and this often resulted in increased investment by the foreign partner, with a commensurate increase in the foreign ownership share. However, these policy changes may not be the most important element of the story. Rather, large declines in asset prices, combined with the existence of aggressive plans for expansion in these economies by several MNCs, may have been more important factors. Unfortunately, it is very difficult to test which factors are the more important in this respect.

Another country where economic malaise has been accompanied by large increases in FDI 1997 and then in 1999, albeit from very low levels, is Japan. Japan has always been characterized by very low levels of FDI and foreign MNC activity compared to the size of the economy. There is also considerable debate as to whether this is the result of policy biases or other factors (e.g., Encarnation 1992; Ramstetter and James 1993). However, considering that Japan is a larger economy than China if measured in current U.S. dollars and not much smaller if measured in current international dollars (International Centre for the Study of East Asian Development, pp. 7-8), the level of FDI in Japan is still remarkably low. Nonetheless, there was a very large increase in inward FDI to \$12 billion in 1999 (Table 1). However, closer examination of the data (see below) suggests that this may have been due to one large investment and the data in Table 1 show that this investment took place in the second quarter of the year. Thus, the increase in 1999 may not be indicative of future trends. On the other hand, one hears a lot about foreign investor interest in Japan these days and this could lead to continued increases in inward FDI.

In marked contrast to the examples above, Indonesia has been far more seriously affected by the crisis and its aftermath than other Asian economies, and this is one reason that MNCs have withdrawn previous investments and hesitated make new ones in this economy. As a result, FDI has plunged sharply in Indonesia, from over \$6 billion in 1996 to -\$0.3 billion in 1998 and -\$1.5 billion for the first three quarters of 1999 (Table 1). It should be stressed that political factors are probably far more important than economic factors in this respect, though here again it is difficult to provide objective evidence to support this assertion. More specifically, there are three political problems that need to be addressed before MNCs will regain the confidence necessary to make new investments. The first problem, the need for a peaceful and credible change of government, was realized in late 1999 with the election of President Wahid and his coalition government. The second problem is how to insure the stability of the new government. In this respect, it will be important to make progress on establishing a good working relationship between the politicians and the military and on reducing the level of ethnic and religious violence that now plagues parts of Indonesia. The third problem is to restore some measure of confidence in Indonesia's ability to press ahead with reform of its financial and corporate systems.

In the Philippines, FDI initially increased somewhat after the crisis in 1998 but then declined slightly in the first three quarters of 1999 compared to 1998 (\$618 million versus \$671 million, Table 1). Moreover, there was an unusually large flow in the fourth quarter of 1998, further suggesting that FDI may decline sharply for the entire year. Among the crisis economies, Malaysia has traditionally been the most dependent on MNCs and received relatively large amounts of FDI.² As indicated above, there are no recent estimates of total FDI for Malaysia after the crisis. Moreover, the data on equity investment which are available for recent years often show very different trends than the series on total FDI, which also includes loans. For example equity investment rose markedly in 1994 despite a fall in total FDI and then equity investment fell by about 1/3 in 1997 while total FDI changed very little. Equity investment continued to fall in 1998 but data for the first three quarters of 1999 indicate a slight rebound in FDI equity flows compared to the same period in 1998 (\$870 million versus \$757 million). Like its neighbor, Singapore is also highly dependent on foreign MNCs which accounted for the vast majority of economic activity in manufacturing and large shares in some service sectors as well (see below). Indeed, Singapore was the largest recipient of FDI in Asia until the mid-1980s and the second largest

²For example, value added of MNCs accounted for much larger shares of manufacturing GDP in Malaysia than in Korea, Indonesia, or Thailand (Ramstetter 1998).

recipient for several more years through 1998. FDI flows did fall somewhat in 1998 after the crisis and the Singapore economy was affected by the downturn in neighboring economies. Unfortunately, I know of no comparable estimates for 1999.³

China became the largest Asian recipient of FDI in the mid-1980s, when it surpassed Singapore, and has been by far the largest recipient ever since (Table 1). Flows increased particularly rapidly in the early 1990s, but the growth of FDI slowed markedly after 1994, and FDI remained stagnant at about \$45-46 billion in 1997-1998 (Table 1). Data for the first three quarters of 1999 suggest a slightly lower level than in 1998 (\$29 billion versus \$31 billion) but flows are still at quite high levels. Data on FDI in Hong Kong are extremely difficult to come by because Hong Kong does not compile balance of payments statistics and did not estimate net FDI stocks separately until 1994. The available estimates suggest large increases to very high levels of FDI in 1996 and 1997. Data from a few of the major investors in Hong Kong (Japan, Malaysia, Singapore, Thailand, and the United States) are consistent in suggesting large increases in these years. However, these very incomplete estimates also suggest a large decline in 1998 and 1999. Unlike, FDI in China or Hong Kong, FDI in Taiwan has been relatively small in recent years. In 1998 there was a large decline in inward FDI due to a large withdrawal in the fourth quarter but FDI then rebounded to more or less normal levels in 1999.

Finally, Vietnam experienced large increases in FDI after the *doi moi* economic reforms began to take hold in the early 1990s (Table 1). By the mid-1990s, Vietnam was probably more dependent on FDI as a source of balance of payments finance than any other economy taken up in this paper. The estimates in Table 1 suggest that FDI increased through 1997 but then declined markedly in 1998 and 1999. Given the high dependence on FDI for balance of payments finance, this decline could force changes in economic strategy in Vietnam (e.g., force stronger measures to boost domestic savings and/or foreign borrowing) if the decline is not reversed soon. Moreover, the data in Table 1 may actually overestimate FDI in Vietnam in recent years, because they do not net out repayments of FDI loans (which are rather large in recent years; see below).

Data on payments of FDI income (Table 2) are important because they highlight some areas where data on FDI alone may give a misleading impression. For example, Japan appears much larger relative to other Asian economies in terms of income payments on inward FDI than in terms of inward FDI itself. It is still smaller than

³The Singapore government does now publish quarterly estimates of net (inward less outward) FDI but these estimates are not very useful here because Singapore is also a large outward investor (see below).

China by this measure but the differential is far less pronounced. This indicates that the stock of FDI in Japan is larger than the data on FDI flows suggest and/or that foreign MNCs in Japan are much more profitable than foreign MNCs in China.⁴ In China, FDI income payments were very small until 1995, despite very high levels of FDI flows in earlier years. The large payments of income on inward FDI by Hong Kong, which is by far the largest payee of FDI income among the countries listed in Table 2, indicates that the FDI stock there is also very large and/or very profitable. Another interesting contrast in this respect is that FDI income payments were much larger in Taiwan than in Korea (\$33 billion versus \$20 billion in 1980-1996) even though FDI levels were rather similar until the crisis (\$12 billion versus \$14 billion in 1980-1996; c.f., Table 1). Payments of FDI income in Korea, Taiwan, Malaysia, and the Philippines have also been rather stable compared to the rather large fluctuations in FDI flows in the economies.

At the beginning of the period under study, Japan was by far and away the largest Asian source of outward investment (Table 3). This dominance continued during the 1980s as Japanese FDI increased extremely rapidly. Japan became the largest source of FDI worldwide in 1989-1990 with annual totals of \$46-\$50 billion but Japan's outward FDI then declined rapidly to as low as \$14 billion in 1993. It subsequently recovered to \$22-\$26 billion annually in 1995-1999 and there is no strong downward or upward trend in recent years. Although the estimates in Table 3 are incomplete, data from 7 host countries (Japan, China, Malaysia, the Philippines, Singapore, Thailand, and the United States) suggest that Hong Kong actually surpassed Japan as the largest Asian investor in 1993 and 1994. As will be seen below, China is host to the vast majority of this investment. Hong Kong's outward FDI remained relatively high in 1998 but figures for the first half of 1999 suggest that it may decline in this year. China became a relatively large outward investor in the early 1990s but FDI levels fell off thereafter and there are no estimates for recent years. Korea and Taiwan also became important outward investors since the mid-late 1980s and outward FDI levels have remained relatively high through the crisis years. Taiwan's FDI did fall substantially in 1998, but from quite high levels in 1997, and data for the first three quarters of 1999 indicate little decline compared to the same period in 1998 (\$2.8 billion versus \$3.0 billion). Korea contrasts here with outward FDI rising in 1998 and then declining in the first three quarters of 1999 compared to

⁴Here it is important to note that the stock of inward FDI in Japan may be much larger if valued at current replacement cost than if valued at historical cost (as is the case in the FDI data in Table 1) because the stock is relatively old and many of the assets associated with the stock may have appreciated in value.

1998 (\$2.4 billion versus \$3.3 billion).

In Southeast Asia, there was a remarkably common pattern with outward FDI declining markedly in 1997 for all five economies where data are available (Table 3).⁵ Moreover, the decline continued into 1998 in all of these economies except the Philippines, where levels remained very low despite a small increase. Likewise, levels remained low in 1999 despite some recovery during the first three quarters in Malaysia and Thailand. In short, declines in outward FDI were common among Southeast Asia's crisis economies and Singapore, whereas there was a much greater variety of experiences on the inward side. Among these economies, Indonesia, the Philippines, and Thailand are still relatively small outward investors, but Singapore has become a relatively large investor and Malaysia is a moderately large outward investor. Here it is important to note that a very large portion of Singapore's outward FDI is undertaken by foreign MNCs operating in Singapore and this pattern is also observed in Hong Kong as well.⁶ Given the large presence of foreign MNCs in Malaysia, it would also not be surprising if foreign MNCs accounted for a large portion of Malaysia's outward FDI as well. In the Malaysian case, there are no balance of payments estimates for outward FDI, but there are data on equity investments where Malaysians exercise an effective voice in management.⁷

Only a few Asian economies have data for income earned on outward FDI. Of these economies, Hong Kong has earned by far the largest amount of income in recent years (Table 4). This is somewhat surprising because the stock of Japanese FDI is likely to be well over 2 times larger than the stock of Hong Kong's outward FDI.⁸ The relatively high levels of income and relatively low FDI stocks in turn imply that Hong Kong's FDI is much more profitable than Japan's FDI. Although consistent with findings of low profitability for Japanese MNCs compared to other MNCs in Singapore (e.g., Ramstetter 1999), the low Japanese income figures (or the high Hong Kong figures) do seem to be somewhat of a puzzle. At this point none of the other reporting

⁵Note that outward FDI from the sixth Southeast Asian economy, Vietnam, is thought to be negligible.

⁶For example, foreign controlled companies accounted for 50 percent of Singapore's outward FDI stock (equity and loans) in 1997 (Singapore, Department of Statistics, various years c). See this source and Low, Ramstetter, and Yeung (1998) for further details on Hong Kong and Singapore.

⁷It is not known whether this includes some equity usually classified as portfolio investment but the vast majority of this category is thought to be FDI equity.

⁸For example in according to estimates in Table 1, Japanese FDI in 1985-1998 totalled \$351 billion or more than 2.3 times larger than the \$150 billion total for Hong Kong's FDI. Due to poor coverage for Hong Kong, this comparison overstates the differential somewhat but probably not by a lot.

economies earn a large amount of FDI income but the amounts reported by the Philippines are also very large relative to the rather small stock of outstanding FDI for this economy. Korea also reports unusually high income figures for the early 1980s. I wonder if this might not be a simple database error but the same numbers are given in both Korea, National Statistical Office (2000) and Korea, Bank of Korea (2000).

3. Trends in Foreign Direct Investment and Foreign Direct Investment Income by Region and Industry

The primary focus of this section is on region- and industry-wise patterns of FDI inflows and outflows. As in the previous section, this section restricts itself to data on FDI flows that are defined in a manner more or less consistent with the definition used in the Fifth Edition of the *Balance of Payments Manual* (International Monetary Fund 1993). In other words, this paper does not attempt to present data on reported or approved values of FDI, only data on actual disbursements of FDI. As a result, there are important gaps in the data presented here. Alternative estimates, usually on an approved or reported basis, are sometimes available and they will be pointed out as relevant in the discussion. However, it is important to recognize that these alternative measures often display very different trends over time and different industry- or country-wise patterns than data on actually implemented FDI. Moreover, the relationships among trends and patterns in these alternative measures and actually implemented FDI are extremely complex. Thus, this paper limits its focus to the trends and patterns observed in implemented FDI alone.

The Japanese case is one where the limits of this approach are immediately evident because there are no data on disbursed FDI by industry. Moreover, detailed data on FDI by region and country have only been available since 1995. Before 1988 it is also impossible to ascertain the amount of disbursed FDI in Asia, the region of primary concern here. A more common shortcoming of the Japanese data is that reinvested earnings have only been explicitly included in FDI and FDI income estimates since 1995. These data are summarized in Table 5, which shows that Asia (the region of major concern here) has generally accounted for a small portion of inward FDI, US\$2.7 billion of the US\$22.2 billion in inward FDI in the 11½ years from 1988 to mid-1999, but a somewhat larger portion of outward FDI, US\$62.9 billion of the US\$337.4 billion in outward FDI in the 12½ years between 1987 and mid-1999. Moreover, outward FDI in Asia was much higher in recent years, US\$41.4 billion from 1995 through the first half of 1999, than in previous years, US\$18.9 billion in 1987-1994. This trend is in

marked contrast to the markedly lower levels of total outward FDI since 1992.

On the outward side, Japan's FDI to Asia actually set a record in 1997, the year the Asian crisis broke, and remained at relatively high levels in 1998. If data for the first half of 1999 are extrapolated to the entire year, they indicate a large fall back to levels experienced in 1993-1994, however (Table 5). Outward FDI in Asia is spread over a large number of countries. In 1986-1994, Asia's Newly Industrializing Economies (NIEs: Hong Kong, Korea, Singapore, and Taiwan) accounted for the majority of Japan's FDI (US\$11.7 billion of the US\$18.9 billion total) but the NIEs accounted for a much smaller share in 1995-1999 (US\$13.8 billion of the US\$41.4 billion total). China's share also fell somewhat between these periods, though the absolute amount rose from US\$5.0 billion in 1986-1994 to US\$8.9 billion in 1995-1999. In contrast, FDI in the remaining Asian economies rose dramatically from US\$2.3 billion to US\$18.6 billion. Data for the latter period show that the vast majority of this FDI (US\$15.9 billion) was in the four large Southeast Asian nations, Indonesia, Malaysia, the Philippines, and Thailand. Again in the latter period (1995-1999), the largest single Asian recipients were Singapore and Thailand (US\$5.9 billion each), Indonesia (US\$5.0 billion), and Hong Kong (US\$4.6 billion). Interestingly, FDI in the economies most affected by the crisis (Korea, Indonesia, Thailand) fell to very low levels in the first half of 1999, after maintaining relatively high levels in 1997 or 1998. Although it is yet to be seen whether the trend continued in the last half of the year, this trend could indicate that Japanese firms may have exhausted most of the good buying opportunities that existed immediately after the crisis. It may also reflect the continued existence of excess capacity in a large number of Japanese firms in Indonesia and Thailand, as well as improvements in the financial position of local partners in joint ventures in Korea and Thailand, which in turn reduces the need for recapitalization from the Japanese side.

Inward FDI in Japan has generally been rather small as noted above. Largely as a result of a very large French investment in the first half of 1999, France was the largest single investor in the period for which data are available (Table 5). This investment is probably related to the purchase of Nissan by Renault. Other large investors are the United States, the United Kingdom, Germany, and Hong Kong. Korea, Singapore, and Taiwan also have modest investments in Japan. There were also substantial investments from Central and South America in a few years.

Although there are no data on disbursed FDI by industry it is possible to obtain data on equity stocks of foreign affiliates in Japan and Japanese affiliates abroad from surveys conducted by Japan, Ministry of

International Trade and Industry (1998, various years a, various years b, various years c) and the changes in these equity stocks should in theory be equal to the equity portion of FDI plus other equity investment, including that of local partners in joint ventures. There are two problems that make it very difficult to discern trends over time from these data, however. First, these surveys are not mandatory and as a result coverage varies widely from year to year. Thus, changes observed may be due to changes in survey coverage, not just to changes in economic activity. Second, the data are reported in yen, and different methods of converting the data to U.S. dollars generate very different results.⁹ In any case, these data thus indicate very different trends than the FDI data (Table 5). However, the country-wise breakdown of equity is rather similar, with the United States and Europe being major sources of inward equity, while these economies and Asia are major recipients of outward equity. Industry-wise patterns were very similar on both the inward and outward sides, and manufacturing was the largest major industry group. Commerce and services were also rather large on the outward side but services have not been very large on the inward side. In manufacturing, transport machinery, electric machinery, and chemicals (including pharmaceuticals) were the largest industries.

For China, I know of no data on the patterns of actual outward FDI, though United Nations (2000) does report some data on an approved basis. As for data on utilized inward FDI, it is now possible to get rather detailed and up to date data by both industry and source economy, and these data are reported in Table 6. Perhaps the most conspicuous characteristic observed is the large amount of FDI from Hong Kong which amounted to US\$132 billion of the US\$261 billion total from 1992 through the first half of 1999. The share of Hong Kong has been declining somewhat in recent years, however. Taiwan, the United States, and Japan are the next largest sources with US\$20-US\$22 billion each in this period. If combined, the 14 European economies listed in the table also accounted for a similar amount during this period, US\$18 billion. Data by industry are only available for the last 2½ years of this sample and they indicate that manufacturing accounted for 59 percent of the total FDI during this period. Real estate management follows with about 13 percent of the total but other industries have been much smaller recipients.

Although data from China alone indicate that Hong Kong is a major outward investor, there are no official estimates of outward FDI from Hong Kong (Table 7). As indicated above, major reason for this is that

⁹Note that different methods are used for inward equity and outward equity, reflecting differences in survey methodology. See the notes to Table 5 for more details.

FDI is a balance of payments concept and Hong Kong does not publish balance of payments data. Table 7 presents some limited estimates of Hong Kong's outward FDI based on data assembled from 6 Asian host economies and the United States.¹⁰ These data show that investment in China is far larger than investment in the other economies listed. It should be noted that a large portion of these investments are actually made by affiliates of foreign MNCs that operate in Hong Kong and that estimates of Hong Kong's FDI would be much smaller if accounting is done by ultimate beneficial owner (Low, Ramstetter, and Yeung 1998).¹¹ On the inward side, comprehensive estimates including the non-manufacturing sector are only possible since 1994 and Table 7 shows both stock and flow estimates. By industry, investments in nonmanufacturing, particularly trade, finance, and holding companies, are far larger than investments in manufacturing. By source economy the United Kingdom is the largest source in stock terms, followed by China, the United States, and Japan. In flow terms China was relatively large in 1995 and 1997 while U.S. and U.K. investment was relatively large in 1996-1997.

I have not been able to find data on actual FDI arrivals in Korea for recent years but there are some data for previous years through 1994 (Table 8). These data show that Japan, the United States, and major European economies were the largest sources of FDI in 1985-1994 and that most of this investment went into manufacturing, particularly chemicals and the machinery industries. In non-manufacturing, hotels and finance were relatively large. Outward FDI has been largest in Southeast Asia, North America, and Europe, though there have been some large investments in Latin America in recent years as well. Manufacturing and trade are by far the largest industries of outward investment.

Taiwan is a particularly difficult economy to analyze in this context because there are no data on actual FDI by country or industry, on either the inward or outward side. There are some detailed data on an approval basis but these data appear to greatly overestimate inward FDI and underestimate outward FDI compared to balance of payments estimates of remitted FDI. As in Japan there are surveys of affiliates of foreign MNCs in Taiwan and it is possible to get estimates of equity stocks in local currency from these surveys, though I have

¹⁰It is possible to make more comprehensive estimates by adding data from other host economies (e.g., Low, Ramstetter, and Yeung 1998) but trends would not differ much because China is by far the largest host to Hong Kong's FDI.

¹¹A sizeable portion of outward FDI by foreign MNCs based in Hong Kong is so-called round-tripping FDI that originates from parent firms in China and is then funneled back into China through affiliates in Hong Kong.

yet to acquire the most recent surveys.¹² In the Taiwanese surveys, it is also possible to isolate the foreign contributions to equity stocks and the first differences of these stocks, which are given in Table 9, are thus very close in principal to the equity portion of FDI flows. However, the Taiwanese surveys are also similar to the Japanese surveys in that survey coverage differs greatly from year to year, which makes it very difficult to use these data to track trends over time. Moreover, there are two series, a revised series and a non-revised series. The revised series displays similar trends to the overall FDI series in 1986-1990, but there are large differences between FDI and the two series in other years. Moreover, there are extremely large fluctuations in both series on equity stocks that appear to be clearly unrealistic. Given these drawbacks it is necessary to use these data with extreme caution. For example, Japan accounted for about half of the total equity flows in 1985-1994 but due to very large flows of U.S. and European equity in 1995, this share fell to only 7 percent for the 1985-1995 period. In contrast, the U.S. share rose from 10 percent in 1985-1994 to 69 percent in 1985-1995 and the European share rose from 12 to 15 percent. Most of this rapid increase was in services where the share rose from 10 percent in 1985-1994 to 68 percent in 1985-1995. Conversely, manufacturing's share fell from 37 percent to 8 percent.

In Indonesia, I have had problems similar to those in Korea in that I have been unable to update my series on realized FDI past 1996. Moreover, these estimates are usually published as cumulative stocks and I have been unable to obtain data for 1991 by industry and for a large number of years by country as well. Accordingly, Table 10 presents both flow and stock data for the industry-wise breakdown, but only the stock data for the breakdown by source economy. These estimates indicate that manufacturing has been the largest recipient of FDI in Indonesia with chemicals and pharmaceuticals being the largest manufacturing category. In non-manufacturing, mining is the largest category. Here it is important to emphasize that these data exclude large investments in the oil and gas sector, which take the form of production-sharing contracts and have been dominated by U.S. firms in the past (Hill 1988, p. 55).¹³ Although more recent estimates are not available, it is very likely that this investment has grown much more slowly because the oil and gas sector has grown much more slowly than the rest of the economy in recent years. Excluding oil and gas, Japan was by far the largest cumulative investor in 1996, followed by the United States, Hong Kong, and Singapore. The United Kingdom,

¹²Table 9 only has data through 1995 but data through 1996 or 1997 should be available by now.

¹³Please note that FDI in banking is also excluded.

the Netherlands, Korea, and Taiwan were also relatively large investors by this time.

For Malaysia, there are a large number of sources on inward FDI, none of which are strictly compatible with the balance of payments estimates. Data on the foreign contribution to equity of majority-foreign limited companies is available by major industry and show that manufacturing accounted for three-quarters of inward flows in 1985-1995 (Table 11).¹⁴ Banking and finance accounted for another one-fifth and other industries were much smaller. The most up to date series refer to equity investment by source economy but these data excluded FDI loans and reinvested earnings. These data suggest that the largest inward investor from 1991 to the third quarter of 1999 was Singapore (a 22 percent share), followed by Japan (18 percent) and the United States (15 percent). The United Kingdom, Hong Kong, and Taiwan (shares of 7-8 percent each) were also relatively large investors, as was Germany (a 5 percent share). Marked declines in equity investment from Singapore in 1998-1999, Taiwan in 1997-1999, and the United Kingdom in 1999 were thus a factor in the downward trend of total investment in these years. There is also a similar series on outward equity investment which indicates that Singapore (a 20 percent share in 1991-1999) is also the largest destination for Malaysian investment, followed by the United States (a 15 percent share), the United Kingdom (a 9 percent share), and Hong Kong (a 7 percent share). China, Australia, and South Africa also attracted relatively large shares (4-5 percent each).

For the Philippines, I know of no data giving breakdowns of outward FDI but there are rather detailed and current estimates of inward FDI through the first three quarters of 1999. These data show that Japan has been the largest investor since 1985, accounting for 22 percent of the US\$8.4 billion total. The United States (18 percent), Netherlands (13 percent), and Switzerland (10 percent) are also large sources. Hong Kong, the United Kingdom, the British Virgin Islands, and Singapore follow. Thus, FDI in the Philippines is less dominated by the Asian NIEs than is FDI in other Asian economies. Manufacturing is the largest major industry, accounting for about half of the total in this period, followed distantly by banking and other finance, public utilities, and mining. In manufacturing, other manufacturing, food, and petroleum and coal are the largest industries of activity.

In Singapore, total outward FDI can be disaggregated only from 1995 forward. However, breakdowns

¹⁴Another important source of data on actual FDI in manufacturing is the Malaysian Industrial Development Authority (various years), which contains data on paid-up capital stocks in manufacturing by industry and country in great detail. Note also these data refer to actual paid-up capital stocks of firms in operation and contrast markedly with often-cited data on FDI approvals in manufacturing, which are also published by the same agency.

of both inward and outward FDI equity are available for a much longer period. On the inward side, Japan accounted for the largest share of inward FDI equity flows in 1984-1997, 19 percent (Table 13). The United States (17 percent) and Switzerland (11 percent) followed. After these economies came Australia, Malaysia, and the United Kingdom, which had much smaller shares (3 percent of the total each). By industry, financial and business services is the biggest category, and investment in this industry accounted slightly more than half of the total for 1984-1997. Manufacturing (31 percent) and commerce (12 percent) followed. In Singapore, foreign firms literally dominate the manufacturing sector. In 1995, for example, majority-foreign firms accounted for 64 percent of all shareholders' equity, 63 percent of total assets, and 66 percent of fixed assets in limited companies in Singapore's manufacturing industries (Singapore, Department of Statistics 1997).

Shares of majority-foreign firms were also rather large in financial services (24 percent of shareholders' equity, 69 percent of total assets, and 22 percent of fixed assets) but somewhat smaller in other non-manufacturing industries (18 percent of shareholders' equity, 31 percent of total assets, and 20 percent of fixed assets).

One consequence of the large role played by foreign MNCs in Singapore is the fact that wholly-foreign firms also account for a very large portion of the outward FDI stock, 38 percent in 1997. Majority-foreign firms (excluding wholly-foreign firms) accounted for another 12 percent and minority-foreign firms accounted for another 23 percent of the total. Thus, firms with foreign participation account for almost three quarters of Singapore's stock of outward FDI and foreign-controlled firms account for half of this stock. In other words, as in Hong Kong, if accounting is done by ultimate beneficial owner, outward FDI would be much smaller than reported in Tables 1 and 13. Breakdowns of outward FDI stocks are only available for 1994-1997 so flows can only be estimated for 1995-1997. In these three years, China was the largest destination with a share of 23 percent. The United Kingdom (18 percent) and Indonesia (10 percent) followed, while all other destinations listed in the table had shares of 4 percent or less. The other category was also very large (29 percent). In stock terms at the end of 1997, China and Malaysia were the largest (13 percent each), followed by Hong Kong and the United Kingdom (11 percent each), and Indonesia (8 percent; stock data from Singapore, Department of Statistics, various years c). Here again all other destinations listed in the table had shares of 4 percent or less, and the other category was large (22 percent). By industry, finance is largest accounting for 56 percent of the stock at the end of 1997 and 63 percent of flows in 1995-1997. Manufacturing was the next largest, 19 percent in stock terms and 14 percent in flow terms but all other industries were much smaller. It is also interesting to note

that a lot of the FDI by firms in Singapore is in industries other than the industry of operation in Singapore. For example, of the total FDI stock in manufacturing activities abroad at yearend 1997, only 29 percent was accounted for by manufacturing firms in Singapore and 52 percent of this stock was from finance parents in Singapore. Of the total FDI stock in finance abroad, finance parents in Singapore accounted for 60 percent and manufacturing parents accounted for another 27 percent (Singapore, Department of Statistics, various years c). Finally, data on the equity portion of outward FDI is available for a longer span and is presented in Table 13. Not surprisingly, these data show similar patterns as observed for total FDI in many respects.

For Thailand data on inward FDI by country and by industry exclude some banking investments and the totals are thus somewhat lower than the totals given in the balance of payments for recent years in which there were large investments in this sector (Table 14). Japan was the largest source of FDI that can be disaggregated by source, accounting for US\$8.5 billion of the US\$29 billion total for 1985 through third quarter of 1999. The United States was the second largest investor (US\$4.8 billion), followed by Hong Kong (US\$3.9 billion), Singapore (US\$3.2 billion), and Taiwan (US\$1.5 billion). No other single country accounted for more than US\$1 billion in this period, but the European Union combined to account for another US\$3.5 billion. By industry, manufacturing has been the largest major industry with investment amounting to US\$12 billion in the same period. Within manufacturing, electrical appliances attracted the largest amount, US\$3.6 billion, followed by machinery and transport equipment (US\$2.1 billion), chemicals (US\$1.7 billion), and metals and non-metallic minerals (US\$1.5 billion). In non-manufacturing, trade received the largest investments, US\$5.9 billion, followed by real estate (US\$4.7 billion), construction (US\$1.8 billion), and services (US\$1.7 billion). It is of some interest to note a large rise in investments in the machinery and transport equipment industry and a large fall in real estate in recent years. The automobile and real estate industries have been among the most severely affected during the crisis and foreign MNCs rushed to prop up their automobile ventures since the crisis but generally avoided the real estate sector.

On the outward side data refer only to equity investment and Thailand's outward FDI is still quite limited. Total FDI equity that can be disaggregated by country or industry amounted to only US\$3.5 billion from 1985 through the third quarter of 1999. The United States (US\$624 million for this period) and Hong Kong (US\$606 million) have been the largest destinations, followed by China (US\$340 million), the Philippines (US\$294 million), Singapore (US\$242 million), and Vietnam (US\$157 million). By industry, the largest portion was in

manufacturing (US\$1,314 million), followed by services (US\$724 million), other industries (US\$508 million), and financial institutions (US\$394 million). Within manufacturing, electrical appliances (US\$371 million), construction materials (US\$259 million), and food and sugar (US\$242 million) were the largest industries.

For Vietnam, there are several sources of estimates of inward FDI flows and these estimates vary in a wide range (Table 15). A recent country report by the International Monetary Fund (1999b) contains perhaps the most detailed estimates showing both gross and net flows of FDI in its compilation of the balance of payments. However, these estimates are much lower than estimates from other sources, especially for 1998, the latest year available from this source. Nonetheless, this is the only known source available with a recent series on actual (as opposed to approved) FDI broken down by industry, and I know of no source that reports recent trends in actual FDI by country. Of the US\$10.1 billion reported by this source for 1988-1998, US\$2.1 billion was invested in oil and gas, US\$1.6 billion in heavy industries, US\$1.3 billion in light industries, and US\$1.2 billion in hotels and tourism. Although I have been unable to obtain Vietnamese data on actual FDI by source, Taiwan, Singapore, Japan, and Hong Kong are thought to be among the largest sources in the country.

4. Comparing Foreign Direct Investment and Other Measures of Economic Activity in Multinationals

One of the biggest problems with using FDI as a measure of economic activity is that it is often misunderstood. As is well known, FDI is a balance of payments concept that refers to foreign investment where the investor has an ownership share exceeding a certain threshold. This threshold varies across countries and has changed over time in many countries as well. In recent years using a 10 percent threshold is common. However, as pointed out in previous studies (e.g., Ramstetter 1998), inward FDI and other measures of economic activity in foreign MNCs in Asian economies such as production by affiliates of foreign MNCs often display very different trends over time.

To understand why this can occur it is helpful to refer to a simplified version of a corporate balance sheet as follows:

$$(1) K_{At} = K_{Ft} + K_{Ot} = K_{Lt} + K_{Et}$$

where K_{At} is the stock of total assets at the end of period t , K_{Ft} is the stock of fixed assets at the end of period t , K_{Ot} is the stock of other assets at the end of period t , K_{Lt} is the stock of liabilities at the end of period t , and

KEt is the stock of equity investment in the firm at the end of period t. Assuming constant prices and zero depreciation for simplicity¹⁵, the following relationship obtains:

$$(2) \text{ IAt} = \text{IFt} + \text{IOt} = \text{ILt} + \text{IEt}$$

where IAt is the change in total assets during period t ($=\text{KAt} - \text{KAt-1}$), IFt is the change in fixed assets during period t ($=\text{Kft} - \text{Kft-1}$), IOt is the change in other assets during period t ($=\text{KOt} - \text{KOt-1}$), ILt is the change in liabilities during period t ($=\text{KLt} - \text{KLt-1}$), and IEt is the change in equity during period t ($=\text{KEt} - \text{KEt-1}$). Equation (2) thus yields 5 potential measures of investment, IAt, IFt, IOt, ILt, and IEt. One can then define FDI by rewriting equation (2) as follows:

$$(2a) \text{ IFt} + \text{IOt} = \text{ILFDIt} + \text{IEFDIt} + \text{ILOt} + \text{IEOt}$$

where ILFDIt is net loans to firms where foreign ownership exceeds a certain threshold (usually 10 percent) remitted from foreign parents and other affiliates abroad in period t, IEFDI is equity investment (including reinvested earnings) in firms where foreign ownership exceeds the chosen foreign ownership threshold remitted from foreign parents and other affiliates abroad in period t, ILOt is other liabilities incurred in period t, and IEOt is equity investment from other sources in period t. Here FDI is the sum of IEFDI and IOFDIt, where IEFDI is defined to include both equity remitted from abroad and reinvested earnings.¹⁶ Rearranging equation (2a) then yields the following:

$$(2b) \text{ FDI} = \text{ILFDIt} + \text{IEFDIt} = \text{IFt} + \text{IOt} - \text{ILOt} - \text{IEOt}$$

The most important point here is that FDI is very different conceptually than common other common measures such as fixed investment, even in wholly-foreign-owned affiliates where IEO is zero. The difference between FDI and fixed investment is particularly important because production is usually thought to be a function of fixed capital stocks and fixed capital stocks are the cumulation of past fixed investments less capital consumption. Relationships between FDI and other variables such as employment and international trade of affiliates are even more complex. Hence if one wishes to investigate the employment, production, or trade of

¹⁵In reality, accounting for depreciation (or capital consumption) and for changes in prices can be very difficult tasks, especially when trying to measure stocks in real terms. However, the point here is that even if these problems are abstracted from, there can be large differences among different measures of investment.

¹⁶Note that FDI equity remitted from abroad and reinvested earnings are separated in the balance of payments because reinvested earnings enter into both the income portion of the current account and into FDI portion of the financial account. Note also that many economies, including Thailand, do not report data on reinvested earnings.

MNCs, for example, or the effect of MNCs on these variables in an economy, it is clearly preferable to measure the variable of concern directly rather than using FDI flows or stocks as a proxy. Moreover, if one is forced to use a measure of capital, it is often preferable to use capital stocks rather than investment flows, because stocks are more closely related to other variables of concern (e.g., production) than are flows.

This point can be further underscored by comparing trends in FDI and trends in other indicators of economic performance in MNCs. In Table 16, trends in cumulative FDI, and annual FDI are compared with trends in a maximum of eight other indicators of MNC performance, equity stocks, annual changes in equity, fixed asset stocks, annual changes in fixed assets, employment, sales, value added, and exports. Then in Table 17 some simple correlation coefficients between cumulative FDI or annual FDI, on the one hand, and these other indicators, on the other hand, are calculated. The focus of the analysis below is on the relationships involving stock measures of investment (e.g., cumulative FDI, equity stocks, and fixed asset stocks), sales, value added, and export because relationships involving investment flows (e.g., annual FDI or annual changes in equity or fixed assets) are more ambiguous theoretically (see above) and correlations involving investment flows are often much weaker. This reflects the relatively large variation in investment flows compared to other variables.

The first case depicted is that of foreign MNCs in Japan in all industries. The data in the table cover the 1986-1996 period, during which cumulative FDI grew at an annual average of 15 percent, compared to only 5 percent for equity stocks, 10 percent for sales, and 12 percent for exports, for example (Table 16). One possible reason for the relatively rapid increase in cumulative FDI is that older investments may be undervalued relative to newer ones in the cumulative FDI series, where the difference between historical cost and replacement value (in current prices) is not considered. It is also notable that the growth rate of employment was much slower, 5 percent. This results from both the choice of factor mix by the investing MNCs and also from inflationary effects that have not been removed from the other variables, which are valued at current or historical prices.¹⁷ There is also a tendency for variation, as measured by the coefficient of variation or the ratio of the standard deviation to

¹⁷No attempt is made to deflate these series, largely because it is very difficult to find appropriate deflators for stock variables. This can be a severe shortcoming because prices of production, investment, and exports, for example, are known to differ. However, the primary purpose is to look at trends and correlations in published data are correlated and I express all variables in U.S. dollars to facilitate comparisons across countries. This compounds any problems relating to deflating the variables. Accordingly, I worry that deflating these variables could make the comparisons here even more confusing than they already are. Hence I have decided not to deflate here. See Ramstetter (1999) for an example of how deflation affects variables for Hong Kong, Taiwan, Indonesia, Malaysia, and Singapore when valued in local currency.

the mean, to be somewhat larger for cumulative FDI than for equity stocks, employment, sales, or exports. If one looks at the correlations among these variables (Table 17), correlations with cumulative FDI are moderately high (0.82-0.86) for sales and exports, but lower for other variables. As indicated above, variation in annual FDI and annual equity flows is relatively large and correlations involving annual FDI are usually much lower than correlations involving cumulative FDI.

For Japanese FDI and MNCs abroad in all industries in 1986-1996, there are similar patterns in that the annual growth rates of FDI stocks was relatively high (22 percent) compared to corresponding growth rates of sales (15-16 percent) and employment (10-11 percent, Table 16).¹⁸ Growth rates of FDI equity stocks were also relatively high (19 percent) and variation in cumulative FDI and in equity stocks was again larger than variation in sales and employment. In this case, equity stocks, sales, and employment all correlate quite highly with cumulative FDI (correlation coefficients of 0.89 or higher, Table 17).¹⁹ This may appear surprising given the large differences between these data sets that have been pointed out elsewhere (e.g., Ramstetter 1996b). However, it is not surprising in that the correlations are measured in levels and that Japanese FDI and MNC activity has been growing very rapidly. Indeed, the failure to observe high correlations in a time series of rapidly growing level variables would be much more unexpected.

The short series that are available for China cover only 1993-1998 and this mandates caution when interpreting the results. The available data for inward FDI and MNCs in all industries in China suggest results that are very similar to the results for outward Japanese FDI and MNCs. Cumulative FDI has grown relatively rapidly and displays relatively large variation compared to fixed investment flows, employment, and exports (Table 16). Moreover, correlations among these variables are very high (Table 17). In this case, the low variation of fixed investment flows is perhaps the most unusual result.

Results for Hong Kong manufacturing come from even shorter series covering 1994-1997 and should thus be treated with great caution. However, here again, growth rates are relatively high for FDI stocks and

¹⁸Interestingly, the growth rates and variation in the two different measures of sales and in the two different estimates of employment are quite similar. This suggests that non-reporting affiliates in the MITI surveys are not that large and/or that adjustments to account for non-reporting affiliates by Fukao, Yuan, and Sakishita (1999) were not sufficient.

¹⁹Assuming that FDI estimates are reasonably accurate, the increased correlation with FDI stocks suggests that the adjustments by Fukao, Yuan, and Sakishita (1999) represent an improvement over the original MITI estimates.

relatively low for employment and sales (Table 16). In this case there is not a large difference in variation across indicators. There is a high correlation between cumulative FDI and cumulative fixed assets which is not surprising because Hong Kong's FDI estimates are partially derived from estimates of fixed assets. However, there is a very surprising negative correlation with employment, which is very high in absolute value, and correlations with sales and exports are relatively low. Correlations between annual FDI and employment, sales, and exports are relatively high, which is somewhat surprising, but it is difficult to attach much meaning to this result given the small sample.

In all industries in Taiwan for 1986-1994, value added grew slightly more rapidly than cumulative FDI in 1985-1994 but fixed asset stocks, employment, sales, and exports grew more slowly (Table 16).²⁰ Cumulative FDI, foreign equity stocks, sales, and value added all had relatively high variation compared to exports and employment, with variation in fixed asset stocks falling the middle. Correlations with cumulative FDI were very high for fixed asset stocks, sales, and exports, and moderately high for employment and value added (Table 17). Correlations with foreign equity stocks were the lowest, indicating that there may be significant measurement problems involving this variable.²¹ Here again correlations involving annual FDI were much lower.

Like Hong Kong, data for FDI and foreign MNCs in Indonesia's manufacturing is very sparse, covering only 1990 and 1992/1993-1995, and one must be careful not to attach too much meaning to results in such short series. In this case, growth and variation was highest for exports, followed by cumulative FDI and value added, and then by employment (Table 16). Growth rates and coefficients of variation were quite high for all of these variables. Correlations with cumulative FDI were extremely high (0.98 or higher) for all variables, employment, value added, and exports, reflecting the rapid increases in all variables during this period (Table 17). Correlations with annual FDI were also quite high (0.90 or higher).

For FDI and foreign MNCs in all industries in Malaysia in 1986-1995, annual growth rates of cumulative FDI (20 percent), foreign equity stocks (21 percent), fixed asset stocks (18 percent), sales (21 percent), value added (20 percent), and exports (26 percent) were all remarkably similar (Table 16). Coefficients of variation were

²⁰1995 is excluded from the sample here because of the very large increases in many economic activities of foreign MNCs which I cannot explain.

²¹I have been told by numerous Taiwanese economists and officials that they find the foreign equity numbers difficult to believe.

rather high but again very similar for all of these variables. It is thus not surprising that correlations of the cumulative FDI with these other variables are all extremely high (0.99 or 1.00 when rounded). Correlations with annual FDI are also relatively high.

In Singapore's manufacturing sector in 1986-1997, FDI equity stocks, net fixed assets, sales, value added, and exports all grew at a similar rates (21-24 percent annually) but stocks of net fixed assets grew much more quickly (41 percent annually) and employment grew much more slowly (6 percent annually, Table 16). Coefficients of variation followed a similar pattern, being lower for employment and higher for other variables. Correlations with FDI equity stocks are very high (0.96-0.97) for all of these variables except employment, but correlations with changes in FDI equity are somewhat lower (Table 17).

Finally, in Vietnam the series on foreign MNCs and FDI in all industries are still quite short, again making it necessary to exercise caution in interpretation. In this case, the growth rate of exports (123 percent annually) has been the highest., followed by cumulative FDI (41 percent), and employment (33 percent, Table 16). The coefficient of variation is also highest for exports, followed by FDI stocks, and employment. Correlations of cumulative FDI are very high for both exports and employment (Table 17) but here again correlations with annual FDI are somewhat lower.

5. Concluding Remarks

The major purpose of this paper has been to provide estimates of actual FDI flows for 11 Asian economies that are as up-to-date and comprehensive as possible, thereby facilitating more accurate analysis of the roles of FDI and MNCs in these economies. In this respect, section 2 explained trends in aggregate FDI and Section 3 described trends in FDI by region and industry. In these discussions, the paper has devoted a great deal of space to details about the sources and nature of the data presented. Unfortunately, the paper is less comprehensive and less precise than I hoped and a number of additions and improvements that can still be made. Nonetheless, it is hoped that this is a helpful step toward providing estimates that will be useful for others engaging in similar research.

A secondary purpose of the paper has been to track trends in FDI through the recent financial crisis that has affected several Asian economies. In Korea and Thailand, two of the most severely affected economies,

the crisis appears to have actually stimulated inward FDI by lowering asset prices, stimulating policy reforms, and creating financial difficulties for local firms thereby making them susceptible to take overs or buy outs. Lower asset prices and financial duress among local companies has also been a factor leading to greater FDI in Japan. In most other Asian economies as well, inward FDI flows have held up remarkably well, given the scope of the crisis. Only in Indonesia, the most severely affected Asian economy, have there been large declines in inward FDI. On the other hand, outward FDI flows from Southeast Asian economies did decline after the crisis. This is important because FDI flows among Asian countries have been a large portion of total FDI flows in the region.

Finally, the paper has tried to clarify the economic meaning of FDI flows by first describing the relationship of FDI to other items on a corporate balance sheet and then by comparing trends in FDI and other measures of MNC performance in some economies. Three major conclusions emerge from this discussion. First, trends in FDI flows or stocks are not necessarily correlated with trends in fixed investment or trends in other variables such as fixed asset stocks, employment, production, and exports in MNCs. Second, in this sample of Asian economies, many of which have experienced rapid growth in FDI and MNCs, FDI stocks have generally been rather highly correlated with trends in equity stocks, fixed asset stocks, production and exports in MNCs, even when growth rates of these variables differed over a sample period. Third, FDI flows are generally not very highly correlated with other indicators of economic activity in MNCs. These observations highlight the fact that economists and other observers must be very careful when interpreting the meaning of trends in FDI flows in particular.

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Table 1: Inward FDI Flows in Selected Asian Economies (US\$ millions)

Year. Quarter	Japan, E+L+R	China, E+L	Hong Kong-L, F+L	Hong Kong-F, various	Korea, E+L	Taiwan, E+L+R	Indo- nesia, E+L	Malay- sia, E+L	Malay- sia-E	Philip- pines- E+L+R	Singa- pore, E+L	Thai- land, E+L	Viet- nam, E+L
ANNUAL DATA (1999* excludes quarters for which data are not available)													
1980	280	na	na	na	6	166	na	934	na	-106	1,236	190	na
1981	190	na	na	na	102	151	133	1,265	na	172	1,660	291	na
1982	440	430	na	na	69	104	225	1,397	na	16	1,602	191	na
1983	410	636	na	na	69	149	292	1,261	na	105	1,134	350	na
1984	-10	1,258	na	na	110	199	222	797	na	9	1,302	401	na
1985	638	1,659	na	na	234	342	310	695	na	12	1,047	163	na
1986	226	1,875	na	na	460	326	258	489	na	127	1,710	263	na
1987	1,161	2,314	na	na	616	715	385	423	na	307	2,836	352	na
1988	-482	3,194	na	na	1,014	961	576	719	na	936	3,655	1,105	na
1989	-1,038	3,393	na	na	1,118	1,604	682	1,668	na	563	2,887	1,775	100
1990	1,777	3,487	na	na	789	1,330	1,093	2,332	na	530	5,575	2,444	120
1991	1,286	4,366	na	na	1,180	1,271	1,482	3,998	1,628	544	4,887	2,014	220
1992	2,760	11,156	na	na	728	879	1,777	5,183	1,480	228	2,204	2,113	260
1993	118	27,515	na	na	588	917	2,004	5,006	1,326	1,238	4,686	1,804	300
1994	911	33,787	na	na	809	1,375	2,109	4,342	2,957	1,591	8,550	1,366	1,048
1995	39	35,849	4,411	1,505	1,776	1,559	4,346	4,178	2,341	1,478	7,206	2,068	1,400
1996	207	40,180	9,726	2,567	2,325	1,864	6,194	5,078	3,283	1,517	7,883	2,336	1,803
1997	3,200	45,278	14,019	6,484	2,844	2,248	4,677	5,106	2,128	1,222	9,710	3,746	2,587
1998	3,268	45,582	na	2,479	5,416	222	-356	na	1,532	1,713	7,218	6,778	1,845
1999*	11,791	29,233	na	555	5,931	1,796	-1,467	na	870	618	na	4,376	1,350
QUARTERLY DATA													
1995.1	-51	na	na	na	260	231	978	na	538	316	na	539	na
1995.2	63	na	na	na	503	309	765	na	607	293	na	588	na
1995.3	-97	na	na	na	414	174	1,344	na	658	260	na	304	na
1995.4	124	na	na	na	599	845	1,259	na	538	609	na	637	na
1996.1	-64	na	na	na	405	127	1,990	na	613	531	na	810	na
1996.2	-862	na	na	na	680	574	1,024	na	546	295	na	453	na
1996.3	917	na	na	na	256	796	1,640	na	985	551	na	456	na
1996.4	216	na	na	na	985	367	1,540	na	1,139	140	na	617	na
1997.1	848	7,837	na	na	624	287	2,342	na	474	565	na	645	na
1997.2	672	12,884	na	na	791	310	1,267	na	667	214	na	842	na
1997.3	465	10,820	na	na	611	1,088	1,392	na	487	295	na	1,222	na
1997.4	1,215	13,737	na	na	819	563	-324	na	500	148	na	1,037	na
1998.1	1,207	8,596	na	na	505	104	-502	na	245	251	na	1,870	na
1998.2	376	11,854	na	na	1,168	344	367	na	287	198	na	2,608	na
1998.3	516	10,905	na	na	2,162	759	-144	na	225	222	na	1,431	na
1998.4	1,168	14,227	na	na	1,582	-985	-77	na	775	1,042	na	1,031	na
1999.1	2,545	7,340	na	na	1,407	416	-232	na	238	369	na	1,004	na
1999.2	7,541	11,226	na	na	1,819	516	-890	na	283	154	na	2,201	na
1999.3	1,148	10,667	na	na	2,705	864	-345	na	349	95	na	1,171	na
1999.4	557	na	na	na	na	na	na	na	na	na	na	na	na

Notes and Sources:

Except as noted below, data refer to FDI flows as reported in the balance of payments (BOP), consisting of equity (=E), loans (=L), and reinvested earnings (=R); note that one or more of these components is often omitted;

for Hong Kong-L, estimates appear to include some short-term loans from third parties not usually included in FDI;

for Malaysia-E, data refer to equity investment in business where the investor has an effective voice in management; na=not available;

The basic source is International Monetary Fund (1999a); other sources are as follows:

Japan, Bank of Japan (2000); estimates include R from 1996 forward, exclude R for 1980-1995;

China, Ministry of Foreign Trade and Economic Cooperation (2000); data refer to utilized FDI;

Hong Kong-L, see Table 7 for details;

Hong Kong-F: see Table 7 for details; estimates from selected host economies; data for 1999 refer to the first half of the year;

Korea, National Statistical Office (2000);

Republic of China, Central Bank of China (various years a); data from 1996 forward differ from data for previous years;

Indonesia, Bank Indonesia (1999); Malaysia, Bank Negara Malaysia (1999);

Philippines, Bangko Sentral de Pilipinas (various years, 1999); Thailand, Bank of Thailand (2000);

Vietnam, Central Institute for Economic Management (1999); Vietnam, State Bank of Viet Nam (1999);

Asian Development Bank (1999) (for Vietnam in 1989).

Table 2: Outflows of Income Paid on Inward FDI in Selected Asian Economies (US\$ millions)

Year. Quarter	Japan, no R to 95	China, no R	Hong Kong	Korea, no R	Taiwan	Indonesia, no R	Malaysia- no R	Philippines	Thailand, no R
ANNUAL DATA (1999* excludes quarters for which data are not available)									
1980	na	na	na	50	153	3,166	1,166	177	34
1981	na	na	na	79	140	3,982	1,084	187	41
1982	na	1	na	49	144	3,907	1,009	202	25
1983	na	0	na	97	169	3,624	1,258	162	31
1984	na	0	na	89	218	2,762	1,332	102	36
1985	na	14	na	116	213	2,147	1,199	144	32
1986	na	15	na	166	185	1,449	830	138	25
1987	na	2	na	134	374	1,391	1,108	189	31
1988	na	8	na	166	596	1,318	1,329	195	215
1989	na	7	na	222	991	1,794	1,630	295	329
1990	na	46	na	266	841	2,192	1,926	311	312
1991	2,065	10	na	296	805	2,318	2,275	303	56
1992	1,882	22	na	246	948	2,623	2,939	405	na
1993	1,840	231	19,850	217	928	1,583	3,222	369	na
1994	1,932	400	21,871	244	1,096	597	3,938	340	na
1995	2,544	9,953	23,002	384	1,223	718	4,144	515	na
1996	3,612	11,679	26,023	354	1,406	964	4,459	514	na
1997	3,994	15,298	30,970	405	1,527	1,341	4,388	450	na
1998	2,446	16,039	na	403	1,578	1,168	na	414	na
1999*	2,317	na	na	644	1,439	na	na	na	na
QUARTERLY DATA									
1995.1	819	na	na	74	na	na	na	na	na
1995.2	508	na	na	157	na	na	na	na	na
1995.3	803	na	na	54	na	na	na	na	na
1995.4	414	na	na	101	na	na	na	na	na
1996.1	1,219	na	na	66	153	na	na	na	na
1996.2	762	na	na	186	509	na	na	na	na
1996.3	939	na	na	8	515	na	na	na	na
1996.4	692	na	na	95	229	na	na	na	na
1997.1	1,243	na	na	137	184	na	na	na	na
1997.2	931	na	na	159	607	na	na	na	na
1997.3	1,270	na	na	75	449	na	na	na	na
1997.4	549	na	na	34	287	na	na	na	na
1998.1	886	na	na	16	236	na	na	na	na
1998.2	848	na	na	149	488	na	na	na	na
1998.3	564	na	na	134	610	na	na	na	na
1998.4	149	na	na	105	244	na	na	na	na
1999.1	1,099	na	na	162	214	na	na	na	na
1999.2	574	na	na	358	477	na	na	na	na
1999.3	467	na	na	125	748	na	na	na	na
1999.4	177	na	na	na	na	na	na	na	na

Notes and Sources:

Except as noted below, data refer to FDI income flows as reported in the balance of payments (BOP); note that reinvested earnings (=R) are excluded for Japan (1980-1995), China, Korea, Indonesia, Malaysia, Thailand; for Taiwan from 1996 forward, definitions have been changed to be consistent with International Monetary Fund (1993); na=not available.

The basic source is International Monetary Fund (various years); other sources are as follows:

Japan, Bank of Japan (2000); estimates include R from 1996 forward, exclude R for 1980-1995;

Hong Kong, Census and Statistics Department (1999); Korea, National Statistical Office (2000);

Republic of China, Central Bank of China (various years a); data from 1996 forward differ from data for previous years;

Table 3: Outward FDI Flows from Selected Asian Economies (US\$ millions)

Year. Quarter	Japan, E+L+R	China, E+L	Hong Kong-F, various	Korea, E+L	Taiwan, E+L+R	Indonesia, E+L	Malaysia, E	Philip- pines- E+L+R	Singapore, E+L	Thailand, E+L
ANNUAL DATA (1999* excludes quarters for which data are not available)										
1980	2,390	na	na	26	42	na	na	na	98	3
1981	4,900	na	na	48	60	na	na	na	-15	2
1982	4,540	44	na	151	32	na	na	na	304	2
1983	3,610	93	na	130	19	na	na	na	49	1
1984	5,960	134	na	52	72	na	na	na	92	1
1985	6,492	629	821	591	79	na	na	na	238	1
1986	14,673	450	1,214	1,227	65	na	na	na	181	1
1987	20,299	645	2,469	515	705	na	na	na	206	170
1988	35,465	850	2,722	643	4,121	na	na	na	118	24
1989	46,024	780	3,174	598	6,951	na	na	na	882	50
1990	50,497	830	2,888	1,052	5,243	na	na	na	2,034	140
1991	31,621	913	3,240	1,489	2,055	na	195	na	526	167
1992	17,386	4,000	8,757	1,162	1,967	na	305	na	1,317	147
1993	13,834	4,400	18,101	1,340	2,611	na	801	374	2,152	233
1994	18,091	2,000	20,910	2,461	2,640	609	1,268	302	4,577	493
1995	22,506	2,000	21,129	3,552	2,983	603	2,148	399	6,281	886
1996	23,446	2,114	21,931	4,670	3,843	600	3,080	182	6,274	931
1997	26,059	2,563	22,626	4,449	5,222	178	2,584	136	4,722	390
1998	24,624	na	19,575	4,799	3,794	44	1,391	160	3,108	131
1999*	22,264	na	7,454	2,389	2,808	na	987	109	na	328
QUARTERLY DATA										
1995.1	5,501	na	na	839	520	131	538	128	na	200
1995.2	6,148	na	na	837	866	151	606	101	na	166
1995.3	2,930	na	na	883	859	166	656	72	na	178
1995.4	7,927	na	na	992	738	155	539	98	na	341
1996.1	5,550	na	na	1,585	945	128	613	21	na	334
1996.2	6,397	na	na	1,076	808	151	546	79	na	207
1996.3	6,238	na	na	846	898	166	987	67	na	156
1996.4	5,261	na	na	1,163	1,192	155	1,139	15	na	235
1997.1	5,441	na	na	1,131	966	128	475	8	na	227
1997.2	7,938	na	na	1,016	1,104	25	667	18	na	430
1997.3	7,086	na	na	1,272	1,771	17	488	51	na	-286
1997.4	5,594	na	na	1,031	1,381	8	499	59	na	18
1998.1	8,037	na	na	839	947	5	222	33	na	-3
1998.2	5,936	na	na	821	1,091	13	274	42	na	6
1998.3	2,494	na	na	1,671	1,002	na	240	68	na	36
1998.4	8,157	na	na	1,468	754	na	302	17	na	91
1999.1	6,518	na	na	789	784	na	272	27	na	90
1999.2	9,127	na	na	813	908	na	355	35	na	235
1999.3	3,856	na	na	788	1,116	na	360	47	na	2
1999.4	2,763	na	na	na	na	na	na	na	na	na

Notes and Sources:

Except as noted below, data refer to FDI flows as reported in the balance of payments (BOP), consisting of equity (=E), loans (L), and reinvested earnings (=R); note that one or more of these components is often omitted; na=not available.

The basic source is International Monetary Fund (1999a); other sources are as follows:

Japan, Bank of Japan (2000); estimates include R from 1996 forward, exclude R for 1980-1995;

China, Ministry of Foreign Trade and Economic Cooperation (2000); data refer to utilized FDI;

Hong Kong-F: see Table 4c for details; estimates from selected host economies; 1999* data refer to the first half of the year;

Korea, National Statistical Office (2000);

Republic of China, Central Bank of China (various years a); data from 1996 forward differ from data for previous years;

Indonesia, Bank Indonesia (1999); Malaysia, Bank Negara Malaysia (1999);

Philippines, Bangko Sentral de Pilipinas (various years, 1999); Thailand, Bank of Thailand (2000);

Table 4: Inflows of Income on Outward FDI Earned by Selected Asian Economies (US\$ millions)

Year. Quarter	Japan, no R to 95	China, no R	Hong Kong	Korea, no R	Taiwan	Malaysia, no R	Philippines	Thailand, no R
ANNUAL DATA (1999* excludes quarters for which data are not available)								
1980	na	na	na	1,484	6	31	5	-3
1981	na	na	na	1,888	4	26	5	-17
1982	na	20	na	2,308	15	24	4	-22
1983	na	31	na	1,779	7	22	1	-16
1984	na	2	na	1,562	19	32	4	-5
1985	na	6	na	790	18	43	13	-5
1986	na	0	na	487	30	65	6	-6
1987	na	10	na	827	19	31	6	-2
1988	na	0	na	225	21	42	8	-12
1989	na	6	na	271	94	78	11	-5
1990	na	0	na	373	93	63	17	-1
1991	6,381	0	na	386	100	54	50	-1
1992	7,856	0	na	274	153	79	110	na
1993	8,273	0	10,813	284	225	127	70	na
1994	9,710	0	15,043	561	142	103	116	na
1995	9,400	1	14,583	541	174	82	342	na
1996	14,644	7	16,234	373	211	127	700	na
1997	16,121	60	24,089	379	279	84	589	na
1998	12,358	23	na	-370	364	na	303	na
1999*	6,092	na	na	-164	261	na	na	na
QUARTERLY DATA								
1995.1	2,563	na	na	103	na	na	na	na
1995.2	3,425	na	na	146	na	na	na	na
1995.3	2,008	na	na	89	na	na	na	na
1995.4	1,404	na	na	203	na	na	na	na
1996.1	3,821	na	na	57	30	na	na	na
1996.2	4,848	na	na	58	87	na	na	na
1996.3	3,413	na	na	87	23	na	na	na
1996.4	2,562	na	na	171	71	na	na	na
1997.1	4,530	na	na	99	34	na	na	na
1997.2	5,514	na	na	170	65	na	na	na
1997.3	3,341	na	na	74	83	na	na	na
1997.4	2,736	na	na	36	97	na	na	na
1998.1	4,108	na	na	74	40	na	na	na
1998.2	2,736	na	na	-49	0	na	na	na
1998.3	3,221	na	na	-83	48	na	na	na
1998.4	2,293	na	na	-312	276	na	na	na
1999.1	2,588	na	na	-168	62	na	na	na
1999.2	792	na	na	28	76	na	na	na
1999.3	2,333	na	na	-23	123	na	na	na
1999.4	378	na	na	na	na	na	na	na

Notes and Sources:

Except as noted below, data refer to FDI income flows as reported in the balance of payments (BOP); not that reinvested earnings are excluded for Japan (1980-1995), China, Korea, Indonesia, Malaysia, Singapore, Thailand, Vietnam; na=not available.

The basic source is International Monetary Fund (various years); other sources are as follows:

Japan, Bank of Japan (2000); estimates include R from 1996 forward, exclude R for 1980-1995;

Hong Kong, Census and Statistics Department (1999); Korea, National Statistical Office (2000);

Republic of China, Central Bank of China (various years a); data from 1996 forward differ from data for previous years;

Table 5: Japan's FDI Flows of FDI and FDI Income in Japan (US\$ millions)

Economy, industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
INWARD FDI FLOWS TO JAPAN													
World-Table 1	1,161	-482	-1,038	1,777	1,286	2,760	118	911	39	207	3,200	3,268	10,086
World	1,165	-485	-1,054	1,753	1,368	2,728	86	888	41	229	3,224	3,192	10,179
Asia	na	-15	91	72	13	124	248	135	322	443	720	386	136
China	na	2	0	1	-1	0	8	2	-21	1	-22	-10	1
NIEs	na	33	88	83	9	124	242	130	341	448	745	384	133
Hong Kong	na	na	na	na	na	na	na	na	217	395	341	228	-30
Korea	na	na	na	na	na	na	na	na	115	55	80	21	13
Taiwan	na	na	na	na	na	na	na	na	5	27	27	44	127
Singapore	na	na	na	na	na	na	na	na	4	-29	296	92	23
ASEAN-4	na	na	na	na	na	na	na	na	3	-12	-12	8	3
Indonesia	na	na	na	na	na	na	na	na	-3	-1	2	1	2
Malaysia	na	na	na	na	na	na	na	na	6	-11	3	2	0
Philippines	na	na	na	na	na	na	na	na	-1	-10	0	10	1
Thailand	na	na	na	na	na	na	na	na	1	10	-18	-5	0
Other Asia	na	na	na	na	na	na	na	na	-1	6	10	3	0
India	na	na	na	na	na	na	na	na	na	6	0	3	0
EU or EC	118	100	327	1,106	630	1,329	-1,105	336	85	837	1,435	502	8,003
Belgium & Luxembourg	na	na	na	na	na	na	na	na	na	-29	39	-261	41
France	na	18	-1	46	50	168	65	41	35	13	93	175	6,889
Germany	na	48	100	152	154	56	228	44	100	580	429	153	327
Italy	na	3	2	4	3	9	1	2	4	-1	-1	41	3
Netherlands	na	na	na	na	na	na	na	na	-197	-252	182	-86	295
Spain	na	na	na	na	na	na	na	na	na	1	12	0	0
United Kingdom	42	-44	142	88	246	967	71	-1	113	297	460	215	337
Canada	na	-46	1	-25	736	48	29	8	-696	-119	-82	50	76
United States	623	-599	-1,530	598	-89	817	510	380	292	-781	524	2,009	814
Australia	na	0	16	5	3	1	3	10	5	6	11	8	59
Others	na	75	41	-3	75	409	401	19	33	-157	617	238	1,090
Cen. & South America	na	na	na	na	na	na	na	na	na	-17	390	-54	762
Addendum.: W. Europe	na	na	na	na	na	na	na	na	33	714	1,636	780	8,320
JAPAN'S PAYMENTS OF INCOME ON INWARD FDI													
World-Table 2	na	na	na	na	2,065	1,882	1,840	1,932	2,544	3,612	3,994	2,446	1,673
World	na	na	na	na	na	na	na	na	2,544	3,597	3,974	2,484	1,664
Asia	na	na	na	na	na	na	na	na	57	158	221	221	45
China	na	na	na	na	na	na	na	na	1	32	21	24	35
NIEs	na	na	na	na	na	na	na	na	38	73	193	138	-3
Hong Kong	na	na	na	na	na	na	na	na	3	-2	-14	-5	9
Korea	na	na	na	na	na	na	na	na	0	10	17	13	3
Taiwan	na	na	na	na	na	na	na	na	29	50	176	79	-27
Singapore	na	na	na	na	na	na	na	na	6	15	13	51	11
ASEAN-4	na	na	na	na	na	na	na	na	18	45	0	52	8
Indonesia	na	na	na	na	na	na	na	na	2	26	-15	28	3
Malaysia	na	na	na	na	na	na	na	na	0	18	10	13	2
Philippines	na	na	na	na	na	na	na	na	1	6	3	5	2
Thailand	na	na	na	na	na	na	na	na	15	-5	2	6	3
Other Asia	na	na	na	na	na	na	na	na	0	8	7	7	5
India	na	na	na	na	na	na	na	na	na	4	2	3	6
EU or EC	na	na	na	na	na	na	na	na	366	1,003	693	736	227
Belgium & Luxembourg	na	na	na	na	na	na	na	na	na	26	8	-5	9
France	na	na	na	na	na	na	na	na	73	28	89	48	8
Germany	na	na	na	na	na	na	na	na	86	410	372	154	-14
Italy	na	na	na	na	na	na	na	na	9	2	7	13	5
Netherlands	na	na	na	na	na	na	na	na	49	231	350	315	95
Spain	na	na	na	na	na	na	na	na	na	0	2	2	3
United Kingdom	na	na	na	na	na	na	na	na	89	198	169	-86	-9
Canada	na	na	na	na	na	na	na	na	21	-58	-27	61	114
United States	na	na	na	na	na	na	na	na	1,844	2,103	2,340	952	987
Australia	na	na	na	na	na	na	na	na	1	13	13	21	3
Others	na	na	na	na	na	na	na	na	255	378	734	493	290
Cen. & South America	na	na	na	na	na	na	na	na	na	8	6	76	98
Addendum.: W. Europe	na	na	na	na	na	na	na	na	647	1,363	1,413	1,121	418

Table 5 (continued)

Economy, industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
OUTWARD FDI FLOWS FROM JAPAN													
World-Table 3	20,299	35,465	46,024	50,497	31,621	17,386	13,834	18,091	22,506	23,446	26,059	24,624	15,684
World	19,519	34,210	44,130	48,024	30,726	17,222	13,714	17,938	22,630	23,427	25,993	24,152	15,693
Asia	2,234	3,201	5,691	5,329	2,996	2,535	2,344	5,235	8,500	9,744	13,113	7,860	2,191
China	177	513	686	407	230	526	822	1,789	3,208	2,325	1,860	1,306	237
NIEs	1,671	2,071	3,427	2,640	1,000	617	293	1,614	1,766	3,030	5,235	2,309	1,504
Hong Kong	na	na	na	na	na	na	na	na	332	1,099	1,760	797	622
Korea	na	na	na	na	na	na	na	na	344	402	172	426	7
Taiwan	na	na	na	na	na	na	na	na	418	401	742	325	74
Singapore	na	na	na	na	na	na	na	na	672	1,128	2,561	760	802
ASEAN-4	na	na	na	na	na	na	na	na	3,345	3,831	4,949	3,577	199
Indonesia	na	na	na	na	na	na	na	na	956	1,498	1,567	923	52
Malaysia	na	na	na	na	na	na	na	na	376	518	996	453	-140
Philippines	na	na	na	na	na	na	na	na	1,077	477	347	516	418
Thailand	na	na	na	na	na	na	na	na	936	1,338	2,039	1,684	-131
Other Asia	na	na	na	na	na	na	na	na	182	558	1,069	668	252
India	na	na	na	na	na	na	na	na	na	266	488	453	169
EU or EC	3,594	5,793	9,746	11,027	7,974	3,370	3,168	2,843	3,211	3,220	2,575	2,178	7,799
Belgium & Luxembourg	na	na	na	na	na	na	na	na	na	-499	-624	-134	-424
France	na	520	812	1,150	586	375	376	413	478	746	-29	-506	121
Germany	na	261	518	879	879	619	536	636	448	234	272	423	158
Italy	na	72	128	224	198	164	169	87	128	74	66	-39	6
Netherlands	na	na	na	na	na	na	na	na	na	716	1,294	1,703	6,186
Spain	na	na	na	na	na	na	na	na	na	68	-115	-31	-195
United Kingdom	1,038	2,908	4,236	5,620	4,692	1,865	1,664	920	1,354	1,444	1,612	594	1,652
Canada	na	837	1,125	748	505	393	397	201	392	381	341	583	-210
United States	9,641	18,969	21,238	25,584	15,213	8,914	6,755	6,193	8,709	11,090	7,392	5,684	3,124
Australia	na	1,479	2,833	2,419	1,692	1,414	785	1,102	390	707	362	1,206	-170
Others	na	3,931	3,497	2,917	2,346	596	265	2,364	1,152	-1,714	2,209	6,641	2,959
Cen. & South America	na	na	na	na	na	na	na	na	na	-1,414	2,346	5,645	2,746
Addendum.: W. Europe	na	na	na	na	na	na	na	na	na	2,836	2,494	2,225	7,443
JAPAN'S RECEIPTS OF INCOME ON OUTWARD FDI													
World-Table 4	na	na	na	na	6,381	7,856	8,273	9,710	9,400	14,644	16,121	12,358	3,380
World	na	na	na	na	na	na	na	na	9,221	14,586	16,076	12,399	3,347
Asia	na	na	na	na	na	na	na	na	4,147	6,782	7,891	3,886	-1,024
China	na	na	na	na	na	na	na	na	164	114	112	213	67
NIEs	na	na	na	na	na	na	na	na	3,235	5,106	5,907	2,806	-220
Hong Kong	na	na	na	na	na	na	na	na	130	404	565	510	168
Korea	na	na	na	na	na	na	na	na	95	147	131	93	-24
Taiwan	na	na	na	na	na	na	na	na	2,132	2,808	2,887	1,812	302
Singapore	na	na	na	na	na	na	na	na	879	1,748	2,324	391	-666
ASEAN-4	na	na	na	na	na	na	na	na	697	1,447	1,659	745	-920
Indonesia	na	na	na	na	na	na	na	na	267	587	636	266	-494
Malaysia	na	na	na	na	na	na	na	na	157	284	304	-4	-215
Philippines	na	na	na	na	na	na	na	na	238	688	728	312	-203
Thailand	na	na	na	na	na	na	na	na	35	-111	-9	171	-8
Other Asia	na	na	na	na	na	na	na	na	51	115	213	122	49
India	na	na	na	na	na	na	na	na	na	97	171	110	39
EU or EC	na	na	na	na	na	na	na	na	801	1,224	1,451	881	780
Belgium & Luxembourg	na	na	na	na	na	na	na	na	na	223	252	260	85
France	na	na	na	na	na	na	na	na	37	-123	-176	239	73
Germany	na	na	na	na	na	na	na	na	151	249	184	150	19
Italy	na	na	na	na	na	na	na	na	11	65	74	15	18
Netherlands	na	na	na	na	na	na	na	na	234	382	685	649	497
Spain	na	na	na	na	na	na	na	na	na	40	41	39	70
United Kingdom	na	na	na	na	na	na	na	na	198	347	360	-515	-51
Canada	na	na	na	na	na	na	na	na	73	46	90	6	35
United States	na	na	na	na	na	na	na	na	2,228	3,946	3,553	4,724	2,426
Australia	na	na	na	na	na	na	na	na	277	519	409	416	-38
Others	na	na	na	na	na	na	na	na	1,694	2,069	2,682	2,487	1,167
Cen. & South America	na	na	na	na	na	na	na	na	na	1,179	1,715	1,550	526
Addendum.: W. Europe	na	na	na	na	na	na	na	na	862	1,410	1,746	1,102	893

Table 5 (continued)

Economy, industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
CHANGES IN EQUITY STOCKS OF FOREIGN AFFILIATES IN JAPAN BY SOURCE (INCLUDING LOCAL PARTNER SHARES)													
All economies	-171	2,402	-398	3,657	-2,167	369	-1,917	4,240	-1,540	762	na	na	na
United States	-581	1,770	-555	219	341	796	-1,077	1,233	-111	358	na	na	na
Asia	-5	227	-199	19	31	229	-267	68	-66	9	na	na	na
Europe	390	205	411	377	463	-640	-572	2,896	-1,724	786	na	na	na
Others	26	200	-56	3,043	-3,002	-15	-2	42	360	-391	na	na	na
CHANGES IN EQUITY STOCKS OF FOREIGN AFFILIATES IN JAPAN BY INDUSTRY (INCLUDING LOCAL PARTNER SHARES)													
All industries	-171	2,402	-398	3,657	-2,167	369	-1,917	4,240	-1,540	762	na	na	na
Manufacturing	-335	2,270	-524	3,712	-2,569	-318	-713	1,060	374	372	na	na	na
Foodstuffs	-19	5	12	35	13	-43	-61	17	-41	36	na	na	na
Chemicals	-115	571	-10	122	169	-579	-51	-40	9	-60	na	na	na
Pharmaceuticals	-184	1,233	-453	119	553	-773	-174	51	88	131	na	na	na
Oil products	-441	83	-22	28	-2	158	-33	150	-11	-149	na	na	na
Nonmetallic mineral prod.	15	17	-24	16	-41	23	-11	21	-51	-15	na	na	na
Nonferrous metals	22	190	-16	3,015	-3,045	18	12	123	-19	66	na	na	na
Metal products	-4	-7	5	92	-97	-2	3	56	-56	5	na	na	na
General machinery	-30	-29	-25	23	46	462	-534	139	-23	-7	na	na	na
Electric machinery	207	59	125	285	-359	314	-33	-31	318	-76	na	na	na
Transport machinery	33	163	-97	-35	113	68	-42	567	647	-6	na	na	na
Precision machinery	94	-26	-25	62	37	31	-107	-56	-91	12	na	na	na
Other manufacturing	88	9	6	-50	43	6	319	63	-397	433	na	na	na
Nonmanufacturing	165	131	126	-55	403	677	-1,192	3,180	-1,914	390	na	na	na
Commerce	186	24	112	154	209	497	-1,000	894	250	33	na	na	na
Services	69	183	67	-240	19	285	-371	150	-213	118	na	na	na
Other nonmanufacturing	-91	-76	-53	30	174	-105	179	2,137	-1,952	239	na	na	na
CHANGES IN EQUITY STOCKS OF JAPANESE AFFILIATES ABROAD BY SOURCE (INCLUDING LOCAL PARTNER SHARES)													
World	10,245	9,204	11,263	11,221	18,834	-3,017	43,214	24,273	-15,798	26,962	na	na	na
Asia	1,844	2,481	1,635	1,012	3,013	-825	10,063	6,822	-83	9,456	na	na	na
China	na	na	-95	75	215	545	1,248	1,873	1,755	3,981	na	na	na
Hong Kong	na	na	-117	387	17	-170	713	1,226	-1,181	274	na	na	na
Korea	na	na	3,031	-3,119	323	-711	1,402	739	125	-400	na	na	na
Singapore	na	na	-86	366	1,313	-1,150	846	1,601	-405	737	na	na	na
Taiwan	na	na	-337	977	290	-413	929	1,307	-851	1,097	na	na	na
Indonesia	na	na	-262	375	-152	503	974	512	165	815	na	na	na
Malaysia	na	na	-20	883	471	581	313	539	104	320	na	na	na
Philippines	na	na	-28	246	38	98	1,886	-1,404	86	523	na	na	na
Thailand	na	na	-275	620	563	-230	1,733	57	-229	1,670	na	na	na
Vietnam	na	na	na	na	na	na	1	31	453	-36	na	na	na
India	na	na	na	na	na	na	6	94	-63	175	na	na	na
Europe	-1,815	370	981	6,583	2,924	-203	5,944	1,391	1,524	10,923	na	na	na
Belgium	na	na	30	199	52	66	626	-144	284	-21	na	na	na
France	na	na	-54	453	962	-715	510	743	556	-661	na	na	na
Germany	na	na	186	731	390	-248	1,597	-622	415	200	na	na	na
Italy	na	na	-68	157	132	-62	13	40	22	182	na	na	na
Netherlands	na	na	532	1,063	222	251	563	1,040	758	8,025	na	na	na
Spain	na	na	-27	299	150	-128	483	-439	1	288	na	na	na
Switzerland	na	na	5	60	-40	3	19	211	-166	5	na	na	na
United Kingdom	na	na	329	3,294	1,138	-4	2,274	-481	412	2,856	na	na	na
North America	7,003	6,725	9,989	2,283	11,242	-5,795	28,737	-3,923	-11,254	13,167	na	na	na
Canada	na	na	4,439	-3,407	678	-1,699	-109	1,788	-1,193	1,288	na	na	na
United States	6,222	5,853	5,542	5,698	10,556	-4,134	28,340	-13,943	-1,638	12,159	na	na	na
Oceania	963	426	-101	1,557	582	-1,344	-210	12,306	-9,932	1,440	na	na	na
Australia	na	na	-102	1,552	493	-1,219	na	na	774	1,300	na	na	na
New Zealand	na	na	12	-16	91	-120	na	na	-10,670	116	na	na	na
Africa	61	-133	-16	146	-97	21	325	-310	72	101	na	na	na
Middle East	677	-74	-653	-23	-5	18	-348	640	-27	-97	na	na	na
Cen.&South America	1,512	-591	-573	-337	1,175	5,112	-1,299	7,347	3,903	-8,027	na	na	na
Argentina	na	na	-2	209	181	31	-791	39	31	88	na	na	na
Brazil	na	na	15	-705	871	876	-396	9,623	-6,758	2,030	na	na	na
Mexico	na	na	-586	159	123	4,205	-2,605	-1,280	132	172	na	na	na

Table 5 (continued)

Economy, industry	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
CHANGES IN EQUITY STOCKS OF JAPANESE AFFILIATES ABROAD BY INDUSTRY (INCLUDING LOCAL PARTNER SHARES)													
All industries	10,245	9,204	11,263	11,221	18,834	-3,017	43,214	24,273	-15,798	26,962	na	na	na
Agriculture, fisheries, etc.	52	22	-86	81	151	-256	319	140	-26	325	na	na	na
Mining	-338	472	119	-266	38	508	-466	1,762	-958	-30	na	na	na
Construction	121	177	4,692	-4,699	115	182	827	1,055	1,041	605	na	na	na
Manufacturing	8,181	5,756	-719	9,537	6,208	-711	30,304	17,550	-17,037	17,820	na	na	na
Foodstuffs	351	260	-49	177	-8	155	757	2,112	-1,733	1,082	na	na	na
Textiles	87	62	-391	327	31	54	971	406	207	839	na	na	na
Lumber, paper, pulp	667	415	-427	680	1,515	-2,055	-51	1,143	-103	314	na	na	na
Chemicals	996	614	-987	1,366	1,639	-31	216	5,442	-347	1,946	na	na	na
Steel	248	9	-235	900	-357	1,318	-1,448	3,386	1,095	373	na	na	na
Nonferrous metals	919	660	129	-217	-455	475	295	6,735	-5,900	1,345	na	na	na
General machinery	-214	536	-453	1,649	-535	-333	1,683	489	-65	2,236	na	na	na
Electric machinery	3,014	-38	2,966	1,337	1,588	-1,311	2,801	4,282	12	3,903	na	na	na
Transport machinery	1,625	1,808	-388	2,020	2,063	1,378	23,769	-19,768	757	4,233	na	na	na
Precision machinery	-99	998	-709	170	-65	-330	349	843	63	33	na	na	na
Oil, coal products	2	206	-275	242	-152	233	-193	-5	-89	73	na	na	na
Other manufacturing	586	225	98	885	946	-263	1,154	12,486	-10,933	1,442	na	na	na
Commerce	-1,570	1,773	2,251	581	5,338	-125	6,052	-555	-4,312	4,122	na	na	na
Services	408	157	670	1,844	4,267	1,388	-597	12,652	6,714	-5,489	na	na	na
Others	3,392	848	4,336	4,143	2,717	-4,002	6,773	-8,331	-1,221	9,609	na	na	na

Notes: For FDI and FDI income, 1987-1994 data exclude reinvested earnings and Asia excludes Vietnam and other unlisted communist states; very little data are available before 1987; 1999* refers to the first half of the year; na=not available or not disclosed.

For all data on equity stocks, data refer to fiscal years ending 31 March of the following calendar year.

For data on equity stocks of foreign affiliates in Japan, data for 1987-1991 refer to affiliates with foreign ownership shares exceeding 50 percent while data for 1992-1996 refer to affiliates with foreign ownership shares exceeding 33 percent; the original data in yen are first differenced and then converted to US\$ using the average of quarterly exchange rates for the fiscal year.

For data on equity stocks of Japanese affiliates abroad, the original stock data in yen are first converted to US\$ using rates given in the source because firms were instructed to use these rates when reporting the data.

Sources: Japan, Bank of Japan (2000, various years); Japan, Ministry of International Trade and Industry (1998, various years a, various years b, various years c); International Monetary Fund (1999a); Tables 1, 3.

Table 6: Inward FDI in China by Economy of Origin and by Industry of Investment (US\$ millions)

Source, industry	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
BY SOURCE ECONOMY														
All Countries	1,875	2,314	3,194	3,393	3,487	4,366	11,008	27,515	33,767	37,521	41,726	45,257	45,463	18,504
Japan	201	220	515	356	503	533	710	1,324	2,075	3,108	3,679	4,326	3,400	1,611
Korea	na	na	na	na	na	na	119	374	723	1,043	1,358	2,142	1,803	636
Hong Kong & Macao	1,132	1,598	2,095	2,078	1,913	2,487	7,709	17,861	20,175	20,500	21,258	21,027	18,930	7,551
Hong Kong	na	na	na	na	na	na	7,507	17,275	19,665	20,060	20,677	20,632	18,508	7,411
Macao	na	na	na	na	na	na	202	587	509	440	580	395	422	140
Taiwan	na	na	na	na	222	466	1,051	3,139	3,391	3,162	3,475	3,289	2,915	1,232
Indonesia	0	na	0	1	1	2	20	66	116	112	94	80	69	64
Malaysia	0	0	1	0	1	2	25	91	201	259	460	382	340	74
Philippines	1	4	4	2	2	6	16	123	140	106	56	156	179	54
Singapore	13	22	28	84	50	58	122	490	1,180	1,851	2,244	2,606	3,404	1,334
Thailand	9	11	6	13	7	20	83	233	235	288	323	194	205	61
Vietnam	na	na	na	na	na	na	9	12	18	28	1	2	14	17
Kuwait	0	0	3	0	24	0	7	84	76	29	3	28	1	1
Austria	0	1	0	1	1	0	0	11	10	19	17	75	21	10
Belgium	9	8	4	0	8	0	4	26	32	54	45	33	28	27
Denmark	1	2	20	8	10	0	12	4	2	35	29	17	63	64
Finland	6	na	10	11	2	0	0	1	1	5	7	5	39	38
France	42	16	23	5	21	10	45	141	192	287	424	475	715	312
Germany	19	3	15	81	64	161	89	56	259	386	518	993	737	386
Italy	23	16	31	30	4	28	21	100	206	263	167	215	275	81
Netherlands	2	0	21	18	16	7	28	84	111	114	125	414	719	216
Norway	na	2	32	19	2	6	5	1	2	2	27	6	26	14
Russia	na	na	na	na	na	na	16	41	36	23	20	18	19	8
Spain	0	0	na	2	7	1	2	10	10	26	21	39	54	10
Switzerland	2	0	6	9	1	12	29	41	71	64	188	216	229	102
Sweden	0	2	na	3	0	1	2	15	24	14	57	43	133	95
United Kingdom	27	5	34	28	13	35	38	221	689	914	1,301	1,858	1,175	425
Australia	60	5	4	44	25	15	35	110	188	233	194	314	272	84
New Zealand	1	5	0	0	9	1	3	9	9	21	22	53	27	9
Samoa & W. Samoa	0	0	0	0	0	0	na	1	24	63	66	184	127	91
Canada	0	10	6	17	8	11	58	137	216	257	338	344	317	124
United States	315	263	236	284	456	323	511	2,063	2,491	3,083	3,443	3,239	3,898	2,009
Bermuda	na	na	na	na	na	na	0	19	51	109	86	105	114	59
Bahamas	na	na	na	na	na	na	0	1	4	0	16	5	81	16
Cayman Islands	na	na	na	na	na	na	na	na	6	12	53	158	324	197
Panama	na	na	na	na	na	na	8	15	18	16	15	75	70	28
Virgin Islands	na	na	na	na	na	na	4	14	128	304	538	1,717	4,031	1,250
Mauritius	na	na	na	na	na	na	0	0	1	1	0	46	101	96
Others	9	122	100	298	115	181	225	599	654	729	1,060	379	608	121
BY INDUSTRY OF INVESTMENT														
All industries	na	na	na	na	na	na	na	na	na	na	na	45,257	45,463	18,504
Agriculture, etc.	na	na	na	na	na	na	na	na	na	na	na	628	624	286
Mining	na	na	na	na	na	na	na	na	na	na	na	940	578	330
Manufacturing	na	na	na	na	na	na	na	na	na	na	na	28,120	25,582	10,982
Textiles	na	na	na	na	na	na	na	na	na	na	na	1,859	1,528	545
Chemicals	na	na	na	na	na	na	na	na	na	na	na	1,444	1,966	804
Pharmaceuticals	na	na	na	na	na	na	na	na	na	na	na	756	365	327
Ordinary mach., etc.	na	na	na	na	na	na	na	na	na	na	na	1,774	1,472	762
Elec. & telecom equip.	na	na	na	na	na	na	na	na	na	na	na	2,659	2,432	1,278
Other manufacturing	na	na	na	na	na	na	na	na	na	na	na	19,629	17,820	7,266
Electricity, gas, water	na	na	na	na	na	na	na	na	na	na	na	2,072	3,103	1,519
Construction	na	na	na	na	na	na	na	na	na	na	na	1,438	2,064	344
Transportation, etc.	na	na	na	na	na	na	na	na	na	na	na	1,655	1,645	763
Trade, catering	na	na	na	na	na	na	na	na	na	na	na	1,402	1,181	453
Finance, insurance	na	na	na	na	na	na	na	na	na	na	na	0	40	62
Real estate manag.	na	na	na	na	na	na	na	na	na	na	na	5,169	6,410	2,458
Social services	na	na	na	na	na	na	na	na	na	na	na	1,988	2,963	940
Other industries	na	na	na	na	na	na	na	na	na	na	na	1,845	1,272	366

Note: 1999 data refer to the first half of the year; na=not available.

Sources: China, State Statistical Bureau (1999, various years a, various years b);

China, Ministry of Foreign Trade and Economic Cooperation (various years).

Table 7: Estimates of FDI to and from Hong Kong (US\$ millions)

Industry or Economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
INWARD FDI STOCKS BY INDUSTRY AT YEAREND, HONG KONG DATA (TOTAL INVESTMENT AT HISTORICAL COST)															
All industries	na	na	na	na	na	na	na	na	na	66,444	70,855	80,581	94,601	na	na
Manufacturing	na	na	na	na	na	na	na	na	na	5,116	5,856	6,196	6,536	na	na
Non-manufacturing	na	na	na	na	na	na	na	na	na	61,328	64,999	74,386	88,064	na	na
Trade	na	na	na	na	na	na	na	na	na	8,043	9,452	12,503	16,468	na	na
Communication	na	na	na	na	na	na	na	na	na	2,194	2,466	3,668	4,417	na	na
Finance	na	na	na	na	na	na	na	na	na	28,025	28,684	31,684	34,655	na	na
Insurance	na	na	na	na	na	na	na	na	na	3,332	3,177	3,332	2,816	na	na
Holding companies	na	na	na	na	na	na	na	na	na	14,333	15,923	18,419	23,534	na	na
Others	na	na	na	na	na	na	na	na	na	5,400	5,296	4,779	6,174	na	na
INWARD FDI FLOWS BY INDUSTRY, HONG KONG DATA (FIRST DIFFERENCES OF FDI STOCKS)															
All industries	na	na	na	na	na	na	na	na	na	na	4,411	9,726	14,019	na	na
Manufacturing	na	na	na	na	na	na	na	na	na	na	740	339	341	na	na
Non-manufacturing	na	na	na	na	na	na	na	na	na	na	3,671	9,387	13,678	na	na
Trade	na	na	na	na	na	na	na	na	na	na	1,409	3,051	3,965	na	na
Communication	na	na	na	na	na	na	na	na	na	na	271	1,202	749	na	na
Finance	na	na	na	na	na	na	na	na	na	na	659	3,000	2,971	na	na
Insurance	na	na	na	na	na	na	na	na	na	na	-155	155	-517	na	na
Holding companies	na	na	na	na	na	na	na	na	na	na	1,590	2,495	5,115	na	na
Others	na	na	na	na	na	na	na	na	na	na	-103	-517	1,395	na	na
INWARD FDI STOCKS BY SOURCE AT YEAREND, HONG KONG DATA (TOTAL INVESTMENT AT HISTORICAL COST)															
All countries	na	na	na	na	na	na	na	na	na	66,444	70,855	80,581	94,601	na	na
Japan	na	na	na	na	na	na	na	na	na	11,225	11,307	12,196	12,639	na	na
China	na	na	na	na	na	na	na	na	na	12,398	13,892	14,755	18,388	na	na
Singapore	na	na	na	na	na	na	na	na	na	1,235	1,339	1,385	2,005	na	na
Netherlands	na	na	na	na	na	na	na	na	na	1,187	1,415	2,543	3,541	na	na
United Kingdom	na	na	na	na	na	na	na	na	na	18,964	19,226	21,791	23,802	na	na
United States	na	na	na	na	na	na	na	na	na	8,315	9,255	14,318	16,620	na	na
Others	na	na	na	na	na	na	na	na	na	13,120	14,421	13,594	17,606	na	na
INWARD FDI FLOWS BY SOURCE, HONG KONG DATA (FIRST DIFFERENCES OF FDI STOCKS)															
All countries	na	na	na	na	na	na	na	na	na	na	4,411	9,726	14,019	na	na
Japan	na	na	na	na	na	na	na	na	na	na	82	889	443	na	na
China	na	na	na	na	na	na	na	na	na	na	1,494	863	3,634	na	na
Singapore	na	na	na	na	na	na	na	na	na	na	104	46	620	na	na
Netherlands	na	na	na	na	na	na	na	na	na	na	229	1,128	998	na	na
United Kingdom	na	na	na	na	na	na	na	na	na	na	262	2,565	2,011	na	na
United States	na	na	na	na	na	na	na	na	na	na	940	5,063	2,302	na	na
Others	na	na	na	na	na	na	na	na	na	na	1,301	-828	4,012	na	na
INWARD FDI FLOWS, INVESTING COUNTRY DATA															
All countries	na	na	na	na	na	na	na	na	na	na	1,505	2,567	6,484	2,479	555
Japan-E+L+R	na	na	na	na	na	na	na	na	na	na	332	1,099	1,760	797	622
Malaysia-E	na	na	na	na	na	na	13	39	110	245	148	137	123	62	4
Singapore-E+L	32	17	20	3	149	46	59	419	493	715	335	-518	631	na	na
Thailand-E+L	0	1	98	0	1	39	53	11	46	68	60	159	4	50	15
U.S.A., E+L+R	69	786	371	412	465	352	474	1,914	1,366	1,979	631	1,690	3,965	1,571	-85
OUTWARD FDI FLOWS, RECIPIENT ECONOMY DATA															
Total	821	1,214	2,469	2,722	3,174	2,888	3,240	8,757	18,101	20,910	21,129	21,931	22,626	19,575	7,454
Japan, E+L+R	na	na	na	na	na	na	na	na	na	na	225	392	341	228	-30
China, E+L	931	1,294	1,762	2,365	2,281	2,063	2,579	7,706	17,445	19,823	20,185	20,852	21,551	18,557	7,411
Malaysia, E	na	na	na	na	na	na	138	172	105	405	136	114	124	25	28
Philippines, E	28	-15	11	7	16	15	33	38	22	49	236	76	60	21	13
Singapore, E+L	-164	-142	209	151	267	276	-13	133	184	-89	203	225	na	na	na
Thailand, E+L	24	36	31	110	222	275	453	573	193	318	279	215	472	460	102
U.S.A., E+L+R	2	41	456	88	388	259	50	135	152	404	-134	58	77	284	-71

Notes: 1999* data refer to the first half of the year; na=not available. Stocks for 1997 are translated at the end of year exchange rate; flows for all years are calculated as the first differences of stocks translated at annual average rates; stocks for 1994-1996 are then estimated by subtracting flows for these years from the 1994 stock estimate; In Hong Kong data, FDI stocks are defined as the stock of net assets attributable to FDI less long-term loans from third parties; it thus appears to include some short-term loans from third parties not usually included in FDI.

Sources: Hong Kong, Census and Statistics Department (1999); Hong Kong, Industry Department (1999); Philippines, Bangko Sentral de Pilipinas (1999); Thailand, Bank of Thailand (2000); United States, Bureau of Economic Analysis (1999); International Monetary Fund (1999a); Tables 5, 6, 8, 10, 11, 12, 13.

Table 8: Korea's Outward Direct Investment by Region and Industry of Investment (US\$ millions)

Industry or Economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
INWARD FDI, BOP ESTIMATES (c.f., TABLE 1)															
Total	234	460	616	1,014	1,118	789	1,180	728	588	809	1,776	2,325	2,844	5,416	7,521
INWARD FDI ARRIVALS BY SOURCE ECONOMY															
All economies	236	477	626	894	812	895	1,175	803	728	991	na	na	na	na	na
Japan	69	267	374	443	399	362	204	174	157	345	na	na	na	na	na
Hong Kong	7	8	42	19	13	19	6	9	6	13	na	na	na	na	na
United States	120	171	102	234	244	269	262	268	303	223	na	na	na	na	na
France	3	1	5	29	11	18	42	50	44	54	na	na	na	na	na
Germany	7	5	7	30	43	80	102	67	55	48	na	na	na	na	na
Netherlands	0	3	28	40	17	19	426	71	58	91	na	na	na	na	na
Switzerland	7	6	30	33	35	29	22	68	9	6	na	na	na	na	na
United Kingdom	12	11	5	13	17	37	58	13	61	22	na	na	na	na	na
Others	9	13	33	52	34	63	56	84	33	189	na	na	na	na	na
INWARD FDI ARRIVALS BY INDUSTRY															
All industries	236	477	626	894	812	895	1,175	803	728	991	na	na	na	na	na
Agriculture, etc.	0	3	1	11	2	5	0	0	0	0	na	na	na	na	na
Manufacturing	168	242	375	558	504	596	941	605	492	351	na	na	na	na	na
Food	4	19	39	27	38	31	15	109	14	5	na	na	na	na	na
Textiles & apparel	0	6	10	15	15	7	18	14	13	1	na	na	na	na	na
Chemicals	21	15	46	88	121	145	180	229	245	109	na	na	na	na	na
Pharmaceuticals	8	18	25	46	13	32	56	31	13	31	na	na	na	na	na
Petroleum	0	0	12	0	0	37	395	2	21	5	na	na	na	na	na
Metals	3	2	7	14	12	4	3	23	3	na	na	na	na	na	na
Electric machinery	38	40	157	221	110	88	108	57	26	37	na	na	na	na	na
Nonel. & transp. mach.	85	129	250	259	171	221	135	81	107	100	na	na	na	na	na
Nonelectric machinery	6	17	213	215	67	84	112	47	24	na	na	na	na	na	na
Transportation mach.	79	112	37	44	105	137	23	34	83	na	na	na	na	na	na
Misc. manufacturing	8	13	-171	-113	24	30	31	60	49	63	na	na	na	na	na
Construction	20	0	9	0	0	0	2	0	0	na	na	na	na	na	na
Trade	14	2	0	1	1	1	5	11	5	25	na	na	na	na	na
Hotels	10	218	213	215	177	65	36	9	52	206	na	na	na	na	na
Finance & insurance	20	6	17	86	49	157	72	46	33	211	na	na	na	na	na
Other industries	4	7	10	24	79	72	118	133	146	198	na	na	na	na	na
ESTIMATES OF TOTAL OUTWARD FDI FLOWS															
BOP estimates, Table 2	591	1,227	515	643	598	1,052	1,489	1,162	1,340	2,461	3,552	4,670	4,449	4,799	3,540
Total Invested	113	183	410	216	570	959	1,115	1,219	1,262	2,299	3,070	4,233	3,217	3,776	na
Net Invested	64	158	320	156	392	813	1,027	1,098	1,016	2,029	2,759	3,580	2,982	3,522	na
OUTWARD FDI (TOTAL INVESTED) BY REGION (from NSO web site, revised January 2000)															
All regions	113	183	410	216	570	959	1,115	1,219	1,262	2,300	3,072	4,248	3,230	3,893	2,194
Southeast Asia	18	4	132	45	130	297	428	520	486	1,081	1,653	1,641	1,504	1,549	880
North America	27	81	189	96	283	438	459	391	390	567	547	1,587	739	910	916
Latin America	3	3	4	14	55	67	42	37	44	49	120	256	259	207	123
Europe	39	6	7	15	19	64	90	144	190	428	644	661	461	1,022	232
Middle East	10	80	71	41	32	40	59	75	86	38	32	26	69	6	1
Africa	0	0	1	1	8	27	18	29	31	114	42	12	109	84	17
Oceania	16	9	6	3	42	26	20	23	35	22	35	65	89	114	26
OUTWARD FDI (TOTAL INVESTED) BY INDUSTRY (from 1999 Yearbook)															
All industries	113	183	410	216	570	959	1,115	1,219	1,262	2,299	3,070	4,233	3,217	3,776	na
Mining	71	83	219	65	76	152	123	150	145	112	75	222	212	95	na
Forestry	3	0	0	0	34	6	0	2	5	1	3	7	10	4	na
Fishery	2	4	2	14	39	28	14	26	8	9	12	4	3	9	na
Manufacturing	21	77	156	85	278	482	603	652	549	1,486	1,989	2,232	1,426	1,735	na
Construction	2	2	3	6	13	5	13	1	20	64	80	86	77	86	na
Transp. & storage	0	0	1	1	2	2	9	10	6	11	36	15	76	18	na
Trade	11	12	20	39	62	230	228	303	402	492	295	945	438	1,516	na
Others	3	5	9	5	66	55	124	76	128	124	579	722	974	314	na

Note: 1999 data refer to the first 11 months of the year; na=not available.

Sources: Korea, Bank of Korea (various years); Korea, National Statistical Office (2000); Korea Federation of Banks (various years); Korea Foreign Trade Association (1994); Korea, Ministry of Finance (1995); Tables 1, 3.

Table 9: Changes in Foreign Contributions to Paid up Capital Stocks in Foreign Firms in Taiwan by Source Economy (US\$ millions)

Type, source economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
BALANCE OF PAYMENTS TOTAL, from Table 1											
Total equity, loans, & reinvested earnings	342	326	715	961	1,604	1,330	1,271	879	917	1,375	1,559
BY SOURCE ECONOMY, REVISED SERIES											
All sources	-1,466	568	666	-317	1,335	818	1,114	11,930	-8,361	-1,154	40,118
Overseas Chinese	-75	392	-200	-109	-29	107	-89	248	277	-603	121
Non-Overseas Chinese	-1,390	176	867	-208	1,363	711	1,203	11,683	-8,637	-552	39,996
BY SOURCE ECONOMY, NON-REVISED SERIES											
All sources	-105	277	259	577	1,594	52,684	-50,876	11,918	-8,361	-1,154	40,118
Overseas Chinese	-84	59	-136	144	230	5,764	-5,718	202	277	-603	121
United States	na	na	na	na	69	37	-9	-52	251	-205	33
Hong Kong	-14	47	-88	-3	156	211	-222	-101	44	17	176
Japan	-22	2	-10	3	50	-22	3	-23	3	16	17
Singapore	na	na	na	na	-3	11	-10	1	0	5	-5
Not classified	-48	10	-39	73	-42	5,526	-5,480	378	-21	-435	-100
Non-Overseas Chinese	-20	218	395	433	1,364	46,921	-45,158	11,716	-8,637	-552	39,996
United States	-27	40	115	-55	345	33,868	-33,709	111	176	-161	31,453
Hong Kong	na	na	na	na	47	-41	182	113	44	106	1,002
Japan	-54	150	210	38	94	10,816	-9,158	10,601	-9,777	269	195
Europe	21	0	15	25	321	1,762	-1,541	76	1,355	-1,243	6,298
Not classified	39	27	55	161	557	516	-933	816	-434	478	1,048
BY INDUSTRY OF INVESTMENT, REVISED SERIES											
All industries	-1,466	568	666	-317	1,335	818	1,114	11,930	-8,361	-1,154	40,118
Primary	-3	-2	0	3	-3	2	9	4	6	4	-9
Agriculture, etc.	0	0	0	0	0	0	7	-6	-1	6	-6
Fisheries, etc.	-3	-2	0	3	-3	2	2	11	1	-13	-2
Mining	0	0	0	0	0	0	0	0	6	11	-2
Selected manufacturing	-1,518	522	610	-488	1,049	454	816	10,485	-9,326	-95	1,132
Food, beverages, tobacco	-3	-11	-1	70	-20	46	43	29	-56	90	18
Textiles	3	12	-3	21	29	-30	0	19	44	-85	-34
Garments	-1	18	-12	-11	-3	4	1	-5	-7	17	47
Wood, furniture	1	-2	-2	2	0	-2	7	-2	-11	5	2
Paper	-33	39	-22	-20	-1	17	0	2	26	29	-18
Leather, fur	1	-1	-2	4	-1	2	1	-4	2	5	-11
Rubber, plastics	-5	19	14	-27	83	50	-47	-12	128	-122	164
Chemicals, oil	-24	301	56	-63	63	234	131	-36	-293	174	26
Nonmetallic minerals	-29	34	-59	50	54	-45	91	-59	-35	127	14
Basic metals	41	-25	62	23	62	103	40	2,465	-2,206	42	13
Nonelectric & transport machinery	-1,472	54	448	-340	455	-367	282	-148	1,433	-1,315	680
Electric machinery	3	83	131	-198	329	442	267	8,236	-8,352	938	231
Selected non-manufacturing	57	38	59	168	253	362	238	1,405	787	-1,091	32,687
Construction	0	-1	0	1	6	4	13	0	-5	-1	1
Trade	0	1	1	42	33	30	178	173	153	64	451
Finance	22	-23	44	-6	113	182	-24	1,025	136	-936	824
Transportation	7	51	2	41	45	20	-115	168	167	-6	346
Services	28	10	12	90	55	127	186	38	336	-212	31,066
Other industries	-2	10	-3	0	36	1	51	37	172	27	6,308

Note: na=not available; changes in (first differences of) stocks are translated into US\$ using period average exchange rates.

Source: Republic of China, Investment Commission (various years), Republic of China, Central Bank of China (various years b); Table 1.

Table 10: Realized FDI Inflows in Indonesia by Industry and Source Economy (US\$ millions)

Industry	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
ANNUAL FDI FLOWS FROM BALANCE OF PAYMENTS, from Table 1												
Total equity & loans	310	258	385	576	682	1,093	1,482	1,777	2,004	2,109	4,346	6,194
ANNUAL IMPLEMENTED FDI FLOWS BY INDUSTRY												
All industries	599	490	723	824	335	738	na	na	2,893	6,954	6,822	8,520
Agriculture, forestry, & fishery	7	4	18	7	5	11	na	na	31	98	149	94
Mining	31	265	122	226	83	220	na	na	1,290	740	576	528
Manufacturing	469	180	504	546	176	296	na	na	895	4,429	4,787	5,760
Food	159	5	23	75	25	25	na	na	47	148	248	273
Textiles (& leather)	17	5	15	12	24	24	na	na	144	342	424	750
Wood & products	12	0	3	14	8	18	na	na	13	36	127	25
Paper & products	4	23	0	0	43	0	na	na	81	193	328	2,027
Chemicals & pharmaceuticals	60	12	81	199	55	168	na	na	392	1,481	2,261	1,304
Non-metallic minerals	8	2	5	50	2	9	na	na	21	457	157	24
Basic metals	47	120	339	160	1	1	na	na	57	175	345	280
Metal products	160	14	39	29	16	49	na	na	104	1,577	802	1,049
Other manufacturing	1	0	0	7	1	3	na	na	34	20	96	29
Construction	2	5	67	10	22	5	na	na	10	15	12	8
Trade	0	0	0	0	0	1	na	na	0	272	66	-248
Hotels	9	7	0	33	25	134	na	na	53	177	145	87
Transportation	1	0	0	0	0	0	na	na	2	11	1,131	-664
Housing	na	na	na	na	na	na	na	na	33	211	232	173
Office buildings	na	na	na	na	na	na	na	na	-579	1,056	-646	1,972
Other industries	80	28	13	2	24	72	na	na	886	217	370	809
CUMULATIVE IMPLEMENTED FDI FLOWS FROM 1967 FORWARD BY INDUSTRY												
All industries	6,382	6,872	7,595	8,419	8,754	9,492	na	20,599	23,493	30,446	37,269	45,789
Agriculture, forestry, & fishery	657	661	679	687	691	702	na	843	874	972	1,121	1,215
Mining	763	1,028	1,149	1,375	1,458	1,678	na	3,072	4,362	5,102	5,678	6,206
Manufacturing	4,299	4,480	4,984	5,530	5,706	6,003	na	13,943	14,838	19,267	24,054	29,815
Food	382	387	411	485	511	535	na	898	946	1,094	1,342	1,615
Textiles (& leather)	1,120	1,125	1,140	1,152	1,176	1,199	na	1,749	1,893	2,235	2,659	3,409
Wood & products	97	97	100	114	122	140	na	343	357	393	519	544
Paper & products	63	86	86	86	129	129	na	1,082	1,163	1,356	1,684	3,712
Chemicals & pharmaceuticals	929	941	1,022	1,221	1,276	1,444	na	3,269	3,661	5,142	7,403	8,707
Non-metallic minerals	449	451	456	506	508	517	na	654	675	1,132	1,289	1,313
Basic metals	417	537	875	1,035	1,036	1,037	na	3,406	3,463	3,638	3,982	4,262
Metal products	807	821	860	890	906	955	na	2,495	2,599	4,177	4,979	6,028
Other manufacturing	36	36	36	43	44	47	na	47	81	101	197	226
Construction	62	67	134	144	166	171	na	470	480	495	507	515
Trade	14	14	14	14	14	14	na	na	0	272	338	90
Hotels	115	122	122	156	180	314	na	638	691	868	1,012	1,099
Transportation	16	16	16	16	16	16	na	92	94	106	1,237	573
Housing	na	na	na	na	na	na	na	137	169	381	612	786
Office buildings	na	na	na	na	na	0	na	677	97	1,154	508	2,480
Other industries	455	483	496	498	522	595	na	728	1,614	1,831	2,201	3,011

Table 10 (continued)

Source economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
CUMULATIVE IMPLEMENTED FDI FLOWS FROM 1967 FORWARD BY SOURCE ECONOMY												
All economies	na	na	na	na	na	na	na	20,599	na	30,446	37,269	45,789
Japan	na	na	na	na	na	na	na	6,900	na	9,584	10,414	13,177
China	na	na	na	na	na	na	na	1	na	2	68	68
Hongkong	na	na	na	na	na	na	na	2,584	na	3,173	3,478	4,179
Korea	na	na	na	na	na	na	na	626	na	943	1,195	1,682
Taiwan	na	na	na	na	na	na	na	616	na	804	971	1,324
Malaysia	na	na	na	na	na	na	na	39	na	56	181	248
Philippines	na	na	na	na	na	na	na	17	na	20	29	10
Singapore	na	na	na	na	na	na	na	738	na	1,961	2,734	4,019
Thailand	na	na	na	na	na	na	na	86	na	81	82	82
Brunei Darussalam	na	na	na	na	na	na	na	6	na	11	11	17
India	na	na	na	na	na	na	na	33	na	44	82	93
Pakistan	na	na	na	na	na	na	na	0	na	0	1	0
Austria	na	na	na	na	na	na	na	5	na	5	5	6
Belgium	na	na	na	na	na	na	na	125	na	170	326	206
Czechoslovakia	na	na	na	na	na	na	na	1	na	1	1	1
Denmark	na	na	na	na	na	na	na	73	na	74	75	85
Finland	na	na	na	na	na	na	na	3	na	4	5	6
France	na	na	na	na	na	na	na	332	na	348	478	504
Germany	na	na	na	na	na	na	na	439	na	706	1,058	924
Ireland	na	na	na	na	na	na	na	8	na	8	8	8
Italy	na	na	na	na	na	na	na	2	na	3	29	32
Luxembourg	na	na	na	na	na	na	na	1,294	na	1,294	1,436	788
Netherlands	na	na	na	na	na	na	na	592	na	1,489	1,787	2,023
Norway	na	na	na	na	na	na	na	27	na	32	45	45
Spain	na	na	na	na	na	na	na	19	na	61	61	61
Sweden	na	na	na	na	na	na	na	10	na	11	11	15
Switzerland	na	na	na	na	na	na	na	105	na	170	272	301
United Kingdom	na	na	na	na	na	na	na	488	na	1,349	1,816	2,356
Bahamas	na	na	na	na	na	na	na	12	na	12	12	14
Canada	na	na	na	na	na	na	na	16	na	22	22	115
U.S.A.	na	na	na	na	na	na	na	1,706	na	2,920	3,730	4,426
Australia	na	na	na	na	na	na	na	538	na	1,374	1,677	1,905
New Zealand	na	na	na	na	na	na	na	10	na	11	11	23
Panama	na	na	na	na	na	na	na	153	na	185	198	211
Liberia	na	na	na	na	na	na	na	29	na	30	30	31
Nigeria	na	na	na	na	na	na	na	1	na	1	1	1
Jordan	na	na	na	na	na	na	na	0	na	0	1	1
UAE	na	na	na	na	na	na	na	0	na	1	0	1
Others & joint sources	na	na	na	na	na	na	na	2,967	na	3,483	4,929	6,803
Other Country	na	na	na	na	na	na	na	61	na	36	94	na
Joint Country	na	na	na	na	na	na	na	2,906	na	3,447	4,835	na

Note: For annual flows by industry, 1985-1990 and 1994 are BKPM estimates; for cumulative flows by industry 1992 and 1994-1996 are BKPM estimates; data for other years are estimated from available flow and stock data; all estimates exclude FDI in oil and gas as well as in banking.

Sources: Indonesia, Bank Indonesia (1988); Indonesia, Ministry of Industry and Trade (1997); Indonesia, Investment Coordinating Board (various years).

**Table 11: Foreign Equity Investment Inflows in Malaysia by Industry and Source or Destination
(US\$ millions)**

Industry, economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
BALANCE OF PAYMENTS TOTAL, from Table 1															
Total equity & loans	695	489	423	719	1,668	2,332	3,998	5,183	5,006	4,342	4,178	5,078	5,106	na	na
CHANGES IN FOREIGN CONTRIBUTIONS TO EQUITY STOCKS IN FOREIGN-OWNED LIMITED COMPANIES BY INDUSTRY															
All industries	85	-38	42	243	751	768	859	1,239	1,028	1,541	1,108	na	na	na	na
Agriculture	20	-2	10	1	6	-6	-26	4	-16	-18	65	na	na	na	na
Mining	2	-6	-1	0	-3	0	-1	0	0	1	0	na	na	na	na
Manufacturing	29	40	86	153	374	626	710	1,263	814	758	789	na	na	na	na
Construction	1	-2	-7	22	8	-28	5	-3	64	0	53	na	na	na	na
Wholesale trade	0	-8	1	9	62	30	57	53	8	46	17	na	na	na	na
Retail trade	0	-2	0	4	1	13	5	1	18	-3	-3	na	na	na	na
Banking & Finance	25	-58	-81	41	261	120	91	-88	135	718	218	na	na	na	na
Other	7	-1	36	12	41	13	18	8	6	37	-31	na	na	na	na
FDI EQUITY INFLOWS BY SOURCE ECONOMY															
All countries	na	na	na	na	na	na	1,630	1,478	1,326	2,960	2,336	3,283	2,115	1,514	870
Japan	na	na	na	na	na	na	600	290	228	391	532	329	392	272	146
China	na	na	na	na	na	na	1	5	11	17	11	9	28	5	1
Hong Kong	na	na	na	na	na	na	138	172	105	405	136	114	123	62	42
Korea	na	na	na	na	na	na	42	20	11	2	75	36	46	1	2
Taiwan	na	na	na	na	na	na	222	172	179	147	182	142	60	55	14
Indonesia	na	na	na	na	na	na	5	11	7	11	22	18	50	9	2
Philippines	na	na	na	na	na	na	na	1	na	6	36	6	1	0	1
Singapore	na	na	na	na	na	na	235	358	298	932	508	567	653	179	154
Thailand	na	na	na	na	na	na	4	4	10	24	3	3	6	10	13
Vietnam	na	na	na	na	na	na	0	0	0	2	0	0	0	2	0
Brunei Darussalam	na	na	na	na	na	na	5	3	3	8	7	31	28	6	3
Cambodia	na	na	na	na	na	na	0	na	0	0	na	0	na	na	0
Laos	na	na	na	na	na	na	na	na	0	0	0	0	0	0	0
Myanmar	na	na	na	na	na	na	0	0	0	0	0	0	0	0	0
Australia	na	na	na	na	na	na	39	13	17	19	34	61	56	16	6
Canada	na	na	na	na	na	na	1	3	0	42	21	10	26	9	3
New Zealand	na	na	na	na	na	na	1	7	2	1	1	3	0	0	0
United States	na	na	na	na	na	na	96	184	206	381	508	387	400	227	286
France	na	na	na	na	na	na	5	9	13	13	23	14	25	5	4
Germany	na	na	na	na	na	na	19	54	19	84	35	604	28	25	93
Italy	na	na	na	na	na	na	24	7	28	11	1	21	0	26	0
Netherlands	na	na	na	na	na	na	19	11	64	68	70	91	12	38	4
Switzerland	na	na	na	na	na	na	7	25	9	8	13	242	26	19	1
United Kingdom	na	na	na	na	na	na	145	84	53	368	85	174	56	469	18
Other Europe	na	na	na	na	na	na	3	37	33	9	6	39	30	11	15
Africa	na	na	na	na	na	na	0	0	0	0	2	0	2	1	0
South Asia	na	na	na	na	na	na	1	0	1	3	1	6	2	0	1
West Asia	na	na	na	na	na	na	1	3	1	4	2	2	2	3	4
Central & South America	na	na	na	na	na	na	9	4	23	0	0	0	0	0	0
Labuan IOFC	na	na	na	na	na	na	0	0	na	0	7	346	44	41	41
Others	na	na	na	na	na	na	8	3	4	2	15	29	17	23	16

Table 11 (continued)

Destination Economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
FDI EQUITY OUTFLOWS BY ECONOMY OF DESTINATION															
All countries	na	na	na	na	na	na	196	304	800	1,254	2,154	3,078	2,545	1,395	868
Japan	na	na	na	na	na	na	7	14	7	11	31	236	43	11	18
China	na	na	na	na	na	na	3	8	42	69	123	183	104	16	30
Hong Kong	na	na	na	na	na	na	13	39	110	245	148	137	124	25	17
Korea	na	na	na	na	na	na	0	na	na	0	na	2	6	1	3
Taiwan	na	na	na	na	na	na	16	4	10	5	13	41	32	17	0
Indonesia	na	na	na	na	na	na	0	3	2	29	93	131	194	25	13
Philippines	na	na	na	na	na	na	0	2	2	64	245	112	53	11	14
Singapore	na	na	na	na	na	na	93	65	221	259	645	524	394	209	77
Thailand	na	na	na	na	na	na	2	7	2	13	31	37	38	127	5
Vietnam	na	na	na	na	na	na	0	5	3	23	38	44	39	14	16
Brunei Darussalam	na	na	na	na	na	na	0	na	na	0	na	0	2	2	0
Cambodia	na	na	na	na	na	na	0	2	2	1	6	22	12	21	0
Laos	na	na	na	na	na	na	na	na	0	0	5	na	1	1	0
Myanmar	na	na	na	na	na	na	0	0	1	1	na	7	2	11	15
Australia	na	na	na	na	na	na	9	27	38	165	190	108	115	16	13
Canada	na	na	na	na	na	na	1	3	1	16	38	13	21	7	0
New Zealand	na	na	na	na	na	na	na	1	2	1	4	11	14	2	0
United States	na	na	na	na	na	na	11	62	227	127	145	423	381	380	73
France	na	na	na	na	na	na	na	1	1	4	6	36	31	52	219
Germany	na	na	na	na	na	na	0	1	1	2	1	7	12	3	2
Italy	na	na	na	na	na	na	0	0	0	3	0	2	2	7	2
Netherlands	na	na	na	na	na	na	na	2	10	65	19	6	2	1	0
Switzerland	na	na	na	na	na	na	1	18	3	17	35	23	48	3	0
United Kingdom	na	na	na	na	na	na	16	13	35	57	143	246	516	126	43
Other Europe	na	na	na	na	na	na	3	2	0	13	16	29	15	8	10
Mauritius	na	na	na	na	na	na	1	5	1	17	6	6	6	54	171
South Africa	na	na	na	na	na	na	0	0	0	10	17	460	36	10	4
Sudan	na	na	na	na	na	na	0	0	0	0	0	7	76	na	0
Other Africa	na	na	na	na	na	na	0	7	1	1	11	6	10	8	2
Bermuda	na	na	na	na	na	na	3	1	0	0	0	9	0	0	0
Cayman Islands	na	na	na	na	na	na	na	na	3	1	71	0	0	0	0
Other C&S America	na	na	na	na	na	na	0	2	0	2	9	12	12	0	0
South Asia	na	na	na	na	na	na	0	1	3	18	11	35	21	10	29
West Asia	na	na	na	na	na	na	0	0	0	1	5	3	17	2	6
Labuan IOFC	na	na	na	na	na	na	4	4	5	0	46	97	87	103	27
Others	na	na	na	na	na	na	9	5	64	16	6	65	79	110	59

Note: 1999* refers to the first three quarters of the year; na=not available; changes in (first differences of) stocks are translated into US\$ using period average exchange rates.

Sources: Malaysia, Bank Negara Malaysia (1999); Malaysia, Department of Statistics (various years); International Monetary Fund (1999a); Table 1.

Table 12: FDI Equity Inflows in the Philippines by Source Economy and by Industry (US\$ millions)

Industry/Economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
BALANCE OF PAYMENTS TOTAL, from Table 1															
Total equity & loans	12	127	307	936	563	530	544	228	1,238	1,591	1,478	1,517	1,222	1,713	618
FDI EQUITY BY SOURCE ECONOMY															
All countries	247	108	96	64	203	196	415	328	378	882	815	1,281	1,053	885	1,432
U.S.A.	155	91	68	29	69	53	75	56	36	76	56	293	117	243	84
Japan	31	10	6	17	52	54	189	154	46	70	244	471	331	150	53
Hong Kong	28	-15	11	7	16	15	33	38	22	49	236	76	60	21	16
Netherlands	10	7	5	1	17	3	4	5	14	548	30	53	41	85	235
U.K.	6	12	1	1	3	9	15	2	153	34	53	63	18	13	4
Switzerland	5	3	0	0	5	7	8	8	15	1	0	7	10	4	769
Australia	0	1	1	0	13	8	1	3	1	5	19	3	12	4	24
Canada	1	0	1	0	1	3	1	1	0	2	1	1	1	1	0
France	0	0	0	0	0	1	1	5	1	3	6	11	3	14	1
Nauru	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0
Germany	1	1	0	1	0	2	5	8	8	2	16	28	73	42	19
Sweden	1	0	0	0	0	7	5	1	1	0	0	0	6	0	0
Panama	1	0	0	0	1	2	0	0	1	1	0	0	0	24	0
Austria	1	0	0	0	0	0	9	0	0	0	0	0	0	0	0
Singapore	2	-5	0	1	4	6	9	8	9	60	75	20	67	51	35
Denmark	0	1	0	2	1	1	1	0	2	1	0	0	2	0	1
Luxembourg	0	1	0	0	0	0	1	1	8	0	0	0	1	0	30
Malaysia	2	0	0	1	0	0	0	0	2	0	27	18	11	1	25
Bahamas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Hebrides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bermuda	0	0	0	2	0	0	1	0	3	3	2	0	33	8	0
Korea	0	0	0	0	1	8	36	13	4	6	8	29	18	12	7
Taiwan	0	0	0	1	15	8	6	3	4	2	7	47	20	51	8
British V. Islands	0	0	0	0	0	0	1	4	30	3	10	106	176	54	2
Other	3	0	3	1	4	9	14	15	19	17	21	55	53	105	119
P.R. China	na	na	na	na	na	na	na	na	na	na	na	na	na	72	95
A.D.B.	na	na	na	na	na	na	na	na	na	na	na	na	na	3	0
FDI EQUITY BY INDUSTRY OF INVESTMENT															
All industries	247	108	96	64	203	196	415	328	378	882	815	1,281	1,053	885	1,432
Agriculture	16	0	1	1	0	6	1	0	0	0	0	1	0	0	1
Mining	60	48	35	10	42	30	31	12	2	40	42	3	3	161	27
Petroleum & gas	59	48	16	1	31	13	1	0	0	37	23	1	0	19	9
Copper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iron ore	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nickel	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
Other mining	1	0	18	9	11	16	29	12	2	3	19	2	3	143	18
Manufacturing	139	25	48	27	108	109	299	182	256	681	338	478	172	245	880
Food	61	0	5	2	8	16	9	22	18	12	11	19	14	31	719
Textiles	3	2	2	4	8	9	15	17	6	4	13	2	3	2	4
Chemicals	27	28	19	9	20	16	45	29	35	32	36	53	25	43	10
Petroleum & coal	2	2	1	0	0	0	13	0	129	561	44	0	0	13	0
Basic metals	0	34	0	0	1	2	14	7	4	8	23	62	13	35	28
Metal products	0	2	0	0	0	13	1	2	15	2	6	0	0	0	*
Transportation machinery	24	0	3	0	5	8	22	40	13	6	53	36	23	7	21
Other manufacturing	22	-44	17	13	66	45	181	66	36	56	152	305	94	115	97
Construction	0	0	0	0	0	0	2	5	1	2	2	45	243	6	2
Commerce	3	0	2	10	28	20	22	18	11	7	94	85	78	162	133
Wholesale	5	0	1	6	4	12	5	6	6	3	28	32	29	126	74
Retail	-2	0	1	3	13	0	0	0	0	0	30	0	0	-2	*
Real Estate	1	0	0	1	11	8	17	12	5	4	36	53	49	38	59
Banks & other finance	14	31	6	2	17	25	31	37	49	34	90	513	226	193	240
Banks	6	30	5	1	6	8	12	11	1	6	43	343	113	109	21
Other financial institutions	8	1	1	1	11	17	19	25	48	28	47	170	114	84	219
Services	12	3	3	14	6	5	30	70	10	67	30	35	33	12	9
Public utilities	2	1	3	0	2	1	1	5	49	51	219	121	298	68	116
Others	na	na	na	na	na	na	na	na	na	na	na	na	na	37	25

Note: For 1999, data refer to the first three quarters of the year, metal products are included in basic metals, and retail trade is included in wholesale trade.

Sources: Philippines Bangko Sentral de Pilipinas (1999, various years); Table 1.

Table 13: Changes in Foreign Direct Equity Investment Stocks for Singapore by Source or Destination and by Industry (US\$ million)

Economy, industry	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
INWARD FLOWS, BALANCE OF PAYMENTS TOTAL, from Table 1														
Total equity & loans	1,302	1,047	1,710	2,836	3,655	2,887	5,575	4,887	2,204	4,686	8,550	7,206	7,883	9,710
CHANGES IN FDI EQUITY STOCKS IN SINGAPORE BY ECONOMY OF ORIGIN														
All countries	1,115	322	1,078	2,490	2,908	2,699	4,837	2,739	1,288	3,779	7,750	6,817	6,906	12,207
Japan	318	170	225	439	950	993	1,234	611	901	176	1,529	821	1,534	764
China	na	na	na	-1	3	4	-27	10	21	69	-64	148	78	63
Hong Kong	36	-164	-142	209	151	267	276	-13	133	184	-89	203	186	-269
Korea	na	na	na	-7	-24	18	-19	50	-90	-7	147	98	-182	22
Taiwan	5	1	2	16	17	21	25	16	66	89	145	143	78	542
Brunei	4	-9	-2	-3	5	-1	-6	-13	27	-1	63	13	0	-26
Indonesia	-3	-6	9	18	-38	31	48	-89	-19	68	265	150	60	147
Malaysia	67	-126	-186	-40	111	116	201	-2	70	150	294	432	245	530
Philippines	-2	-1	2	-4	2	-5	77	-1	-4	11	120	4	-157	-5
Thailand	-2	1	-3	3	0	4	201	40	19	269	-31	-72	15	-72
Vietnam	na	na	na	na	na	na	na	na	na	na	na	0	0	0
Other Asia	-2	33	-48	16	27	-1	-13	41	-48	100	133	-115	7	122
U.K.	-35	-96	6	18	134	-35	434	875	-79	90	295	35	245	-47
Netherlands	40	71	150	174	241	400	731	158	-164	-14	90	143	1,790	-4,506
Germany	21	25	70	23	41	30	-9	59	29	23	181	388	52	-131
Other EC	43	-3	23	-14	29	71	235	135	460	330	776	533	157	6,157
Switzerland	102	97	89	91	120	93	32	100	123	442	1,575	955	1,090	1,196
Other Europe	-13	-26	72	101	3	91	-24	45	-30	34	52	-337	155	91
U.S.A.	83	365	415	518	-140	340	141	544	71	993	524	1,553	1,080	3,303
Australia	59	10	222	254	885	-126	-68	-38	35	114	100	-106	59	29
Other	393	-20	128	680	391	387	1,369	213	-233	659	1,646	1,828	414	4,296
CHANGES IN FDI EQUITY STOCKS IN SINGAPORE BY INDUSTRY OF INVESTMENT														
All industries	1,115	322	1,078	2,490	2,908	2,699	4,837	2,739	1,288	3,779	7,750	6,817	6,906	12,207
Agriculture	1	-3	-21	6	-1	4	40	-20	33	-62	-1	0	8	4
Mining	-9	-7	-5	-1	-2	4	3	2	20	3	2	-3	-7	-4
Manufacturing	435	255	416	1,126	621	1,010	1,090	520	-383	1,476	3,093	2,458	1,784	3,907
Construction	40	44	24	-51	86	180	-55	86	-87	-80	87	252	29	110
Commerce	1	-62	-86	166	363	433	1,001	1,184	-385	730	1,537	167	810	1,174
Transport & comm.	-50	-168	28	91	176	197	178	83	98	272	369	84	342	416
Financial&business serv.	695	313	719	1,151	1,659	855	2,567	879	1,992	1,446	2,074	4,544	3,875	6,616
Social&personal services	3	-49	3	2	6	16	14	5	1	-7	-65	20	65	-17

Table 13 (continued)

Economy, industry	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
OUTWARD FLOWS, BALANCE OF PAYMENTS TOTAL, from Table 3														
Total equity & loans	92	238	181	206	118	882	2,034	526	1,317	2,152	4,577	6,281	6,274	4,722
CHANGES IN TOTAL FDI STOCKS ABROAD BY ECONOMY OF INVESTMENT														
All countries	na	na	na	na	na	na	na	na	na	na	na	5,551	6,593	10,172
Japan	na	na	na	na	na	na	na	na	na	na	na	36	-8	54
China	na	na	na	na	na	na	na	na	na	na	na	897	2,444	1,715
Hong Kong	na	na	na	na	na	na	na	na	na	na	na	-273	-209	1,046
Taiwan	na	na	na	na	na	na	na	na	na	na	na	34	-2	59
Brunei	na	na	na	na	na	na	na	na	na	na	na	-26	-2	-11
Indonesia	na	na	na	na	na	na	na	na	na	na	na	1,179	-83	1,218
Malaysia	na	na	na	na	na	na	na	na	na	na	na	1,082	-89	-416
Philippines	na	na	na	na	na	na	na	na	na	na	na	127	269	-47
Thailand	na	na	na	na	na	na	na	na	na	na	na	126	227	-238
Vietnam	na	na	na	na	na	na	na	na	na	na	na	141	235	202
Other Asia	na	na	na	na	na	na	na	na	na	na	na	189	489	192
U.K.	na	na	na	na	na	na	na	na	na	na	na	1,023	1,223	1,790
Netherlands	na	na	na	na	na	na	na	na	na	na	na	-41	994	-114
Other Europe	na	na	na	na	na	na	na	na	na	na	na	153	54	99
U.S.A.	na	na	na	na	na	na	na	na	na	na	na	147	-4	225
Australia	na	na	na	na	na	na	na	na	na	na	na	87	230	32
New Zealand	na	na	na	na	na	na	na	na	na	na	na	-39	-472	-46
Other	na	na	na	na	na	na	na	na	na	na	na	707	1,295	4,412
CHANGES IN TOTAL FDI STOCKS ABROAD BY INDUSTRY OF INVESTMENT														
All industries	na	na	na	na	na	na	na	na	na	na	na	5,551	6,593	10,172
Manufacturing	na	na	na	na	na	na	na	na	na	na	na	1,917	84	1,109
Construction	na	na	na	na	na	na	na	na	na	na	na	46	37	-2
Commerce	na	na	na	na	na	na	na	na	na	na	na	324	482	260
Transport & storage	na	na	na	na	na	na	na	na	na	na	na	-138	467	258
Financial	na	na	na	na	na	na	na	na	na	na	na	2,646	4,020	7,388
Real Estate	na	na	na	na	na	na	na	na	na	na	na	597	744	587
Business services	na	na	na	na	na	na	na	na	na	na	na	106	698	557
Others	na	na	na	na	na	na	na	na	na	na	na	52	62	15

Table 13 (continued)

Industry/Economy	Narrow Definition							Broad Definition						
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
CHANGES IN FDI EQUITY STOCKS ABROAD BY ECONOMY OF INVESTMENT														
All countries	78	-65	156	173	16	1,177	1,205	904	1,570	2,165	5,581	5,009	3,800	7,604
Japan	0	2	0	5	0	6	21	13	1	21	41	149	-18	100
China	0	26	17	4	-11	15	17	-11	38	100	713	644	1,871	1,141
Hong Kong	16	32	17	20	3	149	46	59	419	603	598	106	-288	631
Taiwan	1	3	2	-6	14	48	28	-120	38	3	92	24	-5	40
Brunei	19	2	-1	2	2	5	1	2	12	2	-9	-29	-8	-6
Indonesia	6	4	1	-4	1	11	9	25	37	117	968	1,024	-268	1,076
Malaysia	22	-108	6	11	11	202	132	192	488	458	1,207	568	-255	-465
Philippines	0	2	0	-4	4	16	4	-5	10	77	99	98	216	-51
Thailand	1	5	4	7	0	50	35	35	6	-12	187	96	120	-210
Vietnam	na	na	na	na	na	na	na	na	na	43	37	119	175	202
Other Asia	3	-6	6	0	4	37	39	37	59	-7	-86	131	265	192
U.K.	0	1	16	-16	0	33	40	13	18	6	373	1,061	1,077	1,222
Netherlands	-1	1	1	72	-27	-103	392	-62	-15	-36	-10	2	-6	-9
Other Europe	7	7	18	35	-1	71	-99	224	48	73	63	96	51	134
U.S.A.	3	5	0	2	19	95	21	356	175	102	-48	251	169	219
Australia	5	20	-1	20	-26	85	101	23	41	-162	409	82	63	16
New Zealand	na	na	na	na	na	na	-16	17	-34	100	381	-78	-427	-54
Other	-4	-60	69	26	23	31	435	110	227	677	566	665	1,068	3,426
CHANGES IN FDI EQUITY STOCKS ABROAD BY INDUSTRY OF INVESTMENT														
All industries	na	na	na	na	na	na	na	904	1,570	2,165	5,581	5,009	3,800	7,604
Manufacturing	na	na	na	na	na	na	na	293	527	528	1,590	1,681	-278	625
Construction	na	na	na	na	na	na	na	2	36	43	24	60	-13	-16
Commerce	na	na	na	na	na	na	na	59	222	62	479	345	222	140
Transport & storage	na	na	na	na	na	na	na	-59	28	20	374	-22	230	492
Financial	na	na	na	na	na	na	na	780	678	1,219	2,455	2,486	3,701	5,453
Real Estate	na	na	na	na	na	na	na	-205	64	205	454	385	315	330
Business services	na	na	na	na	na	na	na	54	-6	106	156	56	-388	593
Others	na	na	na	na	na	na	na	-19	22	-18	49	19	11	-14

Note: na=not available.

Sources: Singapore, Department of Statistics (various years a, various years c, various years d); International Monetary Fund (1999a), Tables 1, 3.

Table 14: FDI Flows to and from Thailand by Source or Destination Economy and Industry of Investment (US\$ millions)

Industry, economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
FDI IN THAILAND, BALANCE OF PAYMENTS TOTAL, from Table 1															
Total equity & loans	163	263	352	1,105	1,775	2,444	2,014	2,113	1,804	1,366	2,068	2,336	3,746	6,778	4,376
INWARD FDI FLOWS (EQUITY & LOANS) BY SOURCE ECONOMY (excluding some banking)															
All sources	164	263	352	1,106	1,778	2,529	2,014	2,114	1,730	1,322	2,002	2,268	3,752	4,794	2,823
Japan	56	116	127	578	730	1,092	611	342	305	123	556	523	1,351	1,528	436
China	4	1	2	8	5	4	2	-4	7	-1	2	4	-9	4	-5
Hong Kong	24	36	31	110	222	275	453	573	193	318	279	215	472	460	223
Korea	0	0	1	12	10	19	12	10	15	13	12	25	29	90	7
Taiwan	6	5	27	124	197	280	108	87	49	82	97	138	146	76	105
ASEAN	-40	14	21	65	107	261	258	284	60	196	160	308	340	557	748
Indonesia	0	0	0	1	0	3	3	7	7	8	12	10	7	3	1
Malaysia	1	0	0	2	2	18	1	5	-8	2	11	21	12	17	12
Philippines	0	0	0	0	0	0	0	0	0	2	1	2	8	8	0
Singapore	-41	15	21	62	105	240	254	266	61	184	136	275	314	530	735
EU	16	19	37	89	149	165	155	272	241	105	152	164	342	832	801
Belgium	0	2	-1	4	4	18	28	5	-6	0	-101	56	-3	32	-49
France	5	3	5	11	15	27	49	66	79	39	72	30	-1	215	323
Germany	6	6	17	25	32	45	33	24	25	30	38	42	67	92	102
Netherlands	-2	-2	3	11	63	25	29	27	30	-25	87	-40	141	308	254
UK	4	10	13	35	9	44	10	127	161	44	55	57	118	135	143
Switzerland	3	10	31	22	48	29	48	31	11	27	16	52	126	57	71
Australia	-3	6	1	2	4	5	71	7	8	11	25	34	122	50	-7
Canada	1	1	0	2	7	4	6	4	6	5	-2	1	2	3	2
USA	88	49	71	126	203	241	232	464	286	155	260	429	824	913	435
Others	8	4	4	-32	96	156	58	45	549	289	446	375	7	222	7
INWARD FDI FLOWS (EQUITY & LOANS) BY INDUSTRY OF INVESTMENT															
All industries	162	263	352	1,106	1,778	2,529	2,014	2,114	1,730	1,322	2,002	2,268	3,752	4,794	2,823
Agriculture	3	8	11	12	23	30	23	-6	13	-6	9	2	1	0	2
Mining & quarrying	19	9	7	19	22	45	81	123	125	52	57	19	21	59	-47
Manufacturing	50	81	185	639	850	1,212	934	365	451	512	566	708	1,860	2,019	1,262
Food & sugar	14	11	17	42	76	63	60	51	38	43	39	45	222	72	96
Textiles	2	3	39	44	27	69	45	58	-9	35	38	49	48	90	23
Chemicals	18	18	34	42	110	169	151	64	202	33	94	183	193	213	132
Petroleum products	0	0	-1	30	-46	118	-15	-273	191	31	-161	-250	14	308	10
Construction materials	1	0	0	1	3	0	6	15	4	5	25	3	-13	-2	19
Metal & non metallic	-5	-1	14	84	107	113	86	67	95	45	92	112	211	323	182
Mach. & transport eq.	1	-1	6	25	43	97	90	43	62	12	144	108	410	658	382
Electrical appliances	10	23	44	250	345	417	352	233	142	59	233	241	588	248	397
Others	7	26	31	121	186	165	159	109	-274	248	62	216	186	110	21
Construction	58	47	52	73	153	129	130	572	152	70	36	70	184	149	-85
Trade	40	68	33	153	265	505	303	279	219	340	446	544	1,082	827	829
Financial institutions	-46	19	17	102	111	177	267	258	65	7	26	72	119	502	223
Real estate	19	5	16	56	277	329	142	382	695	472	853	752	111	494	75
Services	20	25	29	44	62	80	65	85	18	56	88	125	290	293	440
Others	0	0	0	7	15	22	69	56	-9	-180	-79	-25	85	450	124

Table 14 (continued)

Industry, economy	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*
BALANCE OF PAYMENTS TOTAL, from Table 2															
Total equity & loans	1	1	170	24	50	140	167	147	233	493	886	931	390	131	328
OUTWARD FDI EQUITY FLOWS BY DESTINATION ECONOMY															
All sources	1	1	168	24	50	140	168	136	281	406	781	790	395	103	100
Japan	0	0	0	0	0	0	2	0	3	4	1	0	1	1	2
China	0	0	1	0	0	0	0	19	26	65	75	96	32	15	11
Hong Kong	0	1	98	0	1	39	53	11	48	68	60	159	4	50	15
Taiwan	0	0	0	0	0	0	2	0	1	2	1	1	6	0	3
ASEAN	0	0	29	22	10	4	31	23	67	86	181	120	127	-30	14
Brunei	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indonesia	0	0	0	20	0	0	1	0	6	18	29	33	15	-2	0
Malaysia	0	0	0	0	1	1	3	3	10	1	2	2	4	0	0
Philippines	0	0	0	0	0	0	0	0	26	32	145	73	10	7	1
Singapore	0	0	29	1	9	3	27	20	25	36	5	12	98	-36	13
Indochina	0	0	0	0	1	0	3	16	18	26	64	147	70	22	11
Cambodia	0	0	0	0	0	0	2	10	3	11	9	31	17	1	3
Laos	0	0	0	0	1	0	0	5	11	5	6	56	1	2	0
Myanmar	0	0	0	0	0	0	0	0	2	5	19	8	8	2	2
Vietnam	0	0	0	0	0	0	1	1	2	5	30	53	43	16	6
EU	0	0	0	0	0	12	16	11	12	13	151	34	-35	-8	17
Denmark	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0
Germany	0	0	0	0	0	0	2	2	1	6	104	1	-32	3	0
Netherlands	0	0	0	0	0	10	0	0	-1	0	0	0	0	0	0
UK	0	0	0	0	0	2	1	1	11	7	35	33	-1	-12	16
Australia	0	0	0	0	0	0	6	1	3	4	9	10	6	2	0
Bermuda	0	0	0	0	0	0	5	1	0	8	3	21	65	0	0
Canada	0	0	0	0	0	0	0	1	0	0	3	0	0	4	0
USA	1	0	40	2	38	83	47	32	41	68	139	76	56	14	-12
Others	0	0	0	0	0	0	3	20	61	62	94	126	61	33	40
OUTWARD FDI EQUITY FLOWS BY INDUSTRY OF INVESTMENT															
All industries	1	1	168	24	50	140	168	136	281	406	781	790	395	103	100
Agriculture	0	0	0	0	0	0	0	0	1	19	6	3	-1	4	4
Mining & quarrying	0	0	0	0	0	0	0	1	1	6	5	6	1	0	0
Manufacturing	0	1	1	2	39	123	67	49	102	113	216	304	199	65	32
Food & sugar	0	0	2	0	32	44	8	11	23	9	30	27	46	9	2
Textiles	0	0	0	1	7	1	10	15	2	6	12	10	2	2	0
Chemicals	0	0	0	0	0	3	2	1	4	3	15	14	84	7	10
Petroleum products	0	0	0	0	0	0	0	0	0	1	2	2	0	0	0
Metal & non metallic	0	0	0	0	0	2	2	0	0	2	1	39	37	2	0
Construction materials	0	1	0	0	0	2	33	14	37	22	52	53	8	23	14
Mach. & transport eq.	0	0	0	0	0	0	0	0	15	7	3	17	10	0	1
Electrical appliances	0	0	0	0	0	70	4	5	16	52	62	143	7	9	2
Others	0	0	0	0	0	2	8	3	4	13	40	-1	6	13	2
Construction	0	0	0	0	0	0	0	0	19	16	14	0	-37	1	0
Trade	1	0	1	1	1	3	10	17	3	39	22	26	45	21	27
Financial institutions	0	0	167	21	0	8	27	18	15	47	69	27	1	-8	0
Real estate	0	0	0	0	0	5	6	9	30	55	143	40	12	-9	-1
Services	0	0	0	0	9	0	16	13	57	78	177	233	119	4	16
Others	0	0	0	0	0	0	41	-1	53	34	128	151	55	26	22

Source: Thailand, Bank of Thailand (2000, various years); International Monetary Fund (1999a); Tables 1, 3.

Table 15: Disbursements of FDI in Vietnam by Industry of Investment, 1988-1998 (US\$ millions)

Industry	1989	1990	1991	1988-1991	1992	1993	1994	1995	1996	1997	1998	1999
ESTIMATES OF AGGREGATE FDI DISBURSEMENTS												
CIEM & State Bank Estiamtes	na	120	220	na	260	300	1,048	1,400	1,803	2,587	1,845	1,350
United Nations Development Programme	na	na	206	na	380	1,112	1,936	2,672	2,607	3,250	1,960	1,520
Asian Development Bank	100	120	220	na	260	300	1,048	1,780	1,803	2,100	1,735	na
International Monetary Fund-BOP, gross	na	na	na	na	na	936	1,627	2,276	1,813	2,074	800	na
International Monetary Fund-BOP, net	na	na	na	na	na	936	1,627	2,268	1,758	1,900	428	na
DISBURSEMENTS OF GROSS FDI BY INDUSTRY, IMF ESTIMATES (1991 refers to 1988-1991)												
All industries	na	na	na	168	316	922	1,636	2,260	1,963	2,074	800	na
Agriculture, forestry, fisheries	na	na	na	14	12	32	37	121	75	285	41	na
Oil & gas	na	na	na	69	73	375	617	582	301	1	50	na
Food industries	na	na	na	3	15	144	126	171	65	108	80	na
Light industries	na	na	na	10	10	45	149	232	324	365	123	na
Heavy industries	na	na	na	17	20	74	306	296	331	422	102	na
EPZ industries	na	na	na	0	3	3	9	39	123	75	25	na
Construction	na	na	na	0	6	44	38	113	274	151	250	na
Transportation & communication	na	na	na	29	19	27	49	159	81	77	15	na
Hotels & tourism	na	na	na	19	43	83	209	254	219	297	73	na
Offices, apartments	na	na	na	9	10	30	70	180	146	126	40	na
Services	na	na	na	-3	104	66	26	115	23	167	2	na

Note: CIEM=Central Institute for Economic Management; na=not available.

Source: Asian Development Bank (1999); International Monetary Fund, (1999b); United Nations Development Programme (2000);

Vietnam, Central Institute for Economic Management (1999); Vietnam, State Bank of Viet Nam (1999);

Table 16: Comparisons of Trends in FDI and Other Indicators of Economic Activity in MNCs
(US\$ billions except for employment which is in thousand employees)

Sample, indicator	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Growth (%)	Coeff. of Var.
Japan, foreign MNCs in Japan, all industries, growth & variation for 1986-1996, fiscal years beginning 1 April															
Cumulative FDI-a	2.5	2.9	2.6	2.4	3.5	5.7	8.6	7.6	8.5	8.6	9.7	13.3	17.9	14.71	0.52
-first diff.=annual FDI	0.4	0.5	-0.3	-0.3	1.1	2.2	2.9	-1.0	0.9	0.0	1.1	3.6	4.6	9.79	1.61
Equity stocks-b	7.6	7.4	9.8	9.4	13.1	10.9	10.9	9.0	13.2	11.7	12.4	na	na	5.03	0.19
-first diff.=annual equity	0.7	-0.2	2.4	-0.4	3.7	-2.2	0.4	-1.9	4.2	-1.5	0.8	na	na	0.96	3.98
Employment-b	144.2	167.6	183.1	186.1	197.3	207.2	195.7	172.2	226.5	225.1	230.4	na	na	4.80	0.14
Sales-b	64.4	76.7	102.1	108.1	123.6	132.1	128.7	120.0	166.2	193.9	167.1	na	na	10.00	0.31
Exports-b	7.1	7.4	12.1	9.4	13.5	14.3	14.5	14.1	20.1	23.9	21.4	na	na	11.63	0.39
Japan, all home MNCs abroad, all industries, growth & variation for 1986-1996 (1987-1996 for annual equity), data refer to fiscal years beginning 1 April															
Cumulative FDI-a	45.2	70.0	107.0	158.3	205.4	230.0	247.3	262.2	280.7	303.3	326.6	355.3	378.4	21.86	0.47
-first diff.=annual FDI	15.5	24.8	37.0	51.3	47.1	24.6	17.2	14.9	18.6	22.6	23.3	28.7	23.1	4.19	0.47
Equity stocks, MITI-c	30.3	40.6	49.8	61.0	72.3	91.1	88.1	131.3	155.6	139.8	166.7	na	na	18.58	0.51
-first diff.=annual equity	na	10.2	9.2	11.3	11.2	18.8	-3.0	43.2	24.3	-15.8	27.0	na	na	11.35	1.19
Employment, MITI-c	961.8	1,168	1,326	1,157	1,550	1,621	1,404	1,947	2,194	2,328	2,745	na	na	11.06	0.34
Employment, Fukao-c	1,336	1,577	1,822	2,068	2,283	2,531	2,628	2,852	3,047	3,293	3,466	na	na	10.00	0.29
Sales, MITI-c	262.9	378.9	534.0	675.4	689.3	658.7	623.8	825.0	914.2	1,008	1,138	na	na	15.78	0.37
Sales, Fukao-c	323.1	450.7	632.8	837.7	833.0	826.6	844.2	1,004	1,097	1,261	1,294	na	na	14.89	0.36
China, all foreign MNCs in China, all industries, growth & variation for 1993-1998															
Cumulative FDI-a	5.5	7.8	11.0	14.4	17.9	22.3	33.4	61.0	94.7	130.6	170.8	216.0	261.6	33.83	0.48
-first diff.=annual FDI	1.9	2.3	3.2	3.4	3.5	4.4	11.2	27.5	33.8	35.8	40.2	45.3	45.6	10.62	0.18
Fixed investment flows	na	na	na	na	na	na	na	13.6	22.1	26.7	32.6	34.9	35.9	21.43	0.31
Employment	124.8	211.7	306.0	470.1	659.4	1,649	2,213	2,882	3,997	5,028	5,270	5,652	5,642	14.38	0.23
Exports	na	na	na	na	na	na	17.4	25.2	34.7	46.9	61.5	74.9	81.0	26.25	0.41
Hong Kong, majority-foreign MNCs in Hong Kong, growth & variation for 1994-1997 (1995-1997 for annual FDI)															
FDI stock	na	na	na	na	na	na	na	na	5.1	5.9	6.2	6.5	na	8.51	0.10
-first diff.=annual FDI-d	na	na	na	na	na	na	na	na	na	0.7	0.3	0.3	na	-32.16	0.49
Cumulative fixed assets	1.4	1.4	1.9	2.3	2.6	2.7	3.1	3.6	4.0	4.6	4.8	4.9	na	7.11	0.09
-first diff.=annual fix.inv.	na	0.1	0.5	0.4	0.3	0.1	0.4	0.5	0.4	0.6	0.2	0.2	na	-24.25	0.61
Employment	101.5	103.3	108.1	100.3	90.3	80.7	72.1	66.3	67.5	65.5	61.5	60.0	na	-3.87	0.05
Sales	5.7	6.9	9.9	8.5	9.4	11.0	11.7	12.5	13.9	17.0	16.3	15.3	na	3.28	0.09
Exports	3.8	4.8	6.5	5.4	5.9	7.0	7.0	7.2	8.0	10.7	9.8	9.7	na	6.64	0.12
Taiwan, all foreign MNCs in Taiwan, all industries, growth & variation for 1986-1994															
Cumulative FDI-a	1.4	2.2	3.1	4.7	6.0	7.3	8.2	9.1	10.5	12.0	13.9	16.2	16.4	28.21	0.55
-first diff.=annual FDI	0.3	0.7	1.0	1.6	1.3	1.3	0.9	0.9	1.4	1.6	1.9	2.2	0.2	19.71	0.38
Foreign equity stocks	1.2	1.9	1.6	2.9	3.7	4.8	16.8	8.4	7.2	47.4	na	na	na	25.03	0.92
-first diff.=annual equity	0.6	0.7	-0.3	1.3	0.8	1.1	11.9	-8.4	-1.2	40.1	na	na	na	na	7.04
Fixed asset stocks	7.0	7.4	8.7	11.2	16.2	17.2	20.9	21.2	21.7	83.4	na	na	na	15.22	0.42
-first diff.=annual fix.inv.	2.5	0.4	1.3	2.5	5.0	1.0	3.7	0.3	0.5	61.7	na	na	na	-17.29	0.86
Employment	298.1	306.3	282.8	291.6	342.5	387.6	394.6	348.5	373.2	1,004	na	na	na	2.85	0.13
Sales	13.2	18.9	24.5	33.3	35.7	44.4	63.5	64.5	68.5	93.8	na	na	na	22.84	0.51
Value added	5.4	8.1	13.9	18.5	21.9	13.7	17.6	42.3	42.3	66.3	na	na	na	29.49	0.66
Exports	7.1	9.7	10.7	11.2	12.9	14.4	17.0	14.5	17.5	23.0	na	na	na	11.95	0.27
Indonesia, majority-foreign MNCs in Indonesia, growth & variation for 1990-1995 (1990 & 1992-1995 for cumulative FDI variation and 1990 & 1993-1995 for annual FDI variation)															
Cumulative FDI-a	4.5	5.0	5.5	5.7	6.0	na	13.9	14.8	19.3	24.1	29.8	na	na	32.00	0.43
-first diff.=annual FDI	0.2	0.5	0.5	0.2	0.3	na	na	0.9	4.4	4.8	5.8	na	na	74.46	0.90
Employment	120.1	121.3	122.3	129.0	191.7	263.1	361.3	425.4	514.6	569.4	na	na	na	24.32	0.37
Value added	1.7	1.6	1.5	2.5	3.0	3.2	4.8	5.5	7.6	9.5	na	na	na	26.08	0.45
Exports	na	na	na	na	1.4	2.0	4.1	3.8	5.5	7.4	na	na	na	40.04	0.56

Table 16 (continued)

Indicator	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Growth	Coeff. of Var.
Malaysia, majority-foreign MNCs in Malaysia, all industries, growth & variation for 1986-1995															
Cumulative FDI-a	6.84	7.26	7.98	9.65	11.98	15.98	21.16	26.17	30.51	34.69	39.77	44.87	na	19.77	0.60
-first diff.=annual FDI	0.49	0.42	0.72	1.67	2.33	4.00	5.18	5.01	4.34	4.18	5.08	5.11	na	26.92	0.68
Foreign equity stocks	1.63	1.67	1.92	2.67	3.44	4.30	5.53	6.56	8.10	9.21	na	na	na	21.21	0.61
-first diff.=annual equity	-0.04	0.04	0.24	0.75	0.77	0.86	1.24	1.03	1.54	1.11	na	na	na	na	0.69
Fixed asset stocks	5.31	5.98	6.61	7.64	9.48	12.11	14.30	17.39	19.99	22.82	na	na	na	17.58	0.51
-first diff.=annual fix.inv.	-0.09	0.66	0.63	1.04	1.84	2.63	2.19	3.09	2.59	2.83	na	na	na	na	0.63
Sales	12.30	14.38	16.89	20.70	26.31	31.74	39.09	44.34	53.69	68.62	na	na	na	21.04	0.57
Value added	4.16	4.98	5.28	6.25	7.68	9.12	11.92	13.77	17.23	21.16	na	na	na	19.80	0.56
Exports	4.77	6.15	7.64	9.56	11.68	15.43	19.23	22.55	29.71	37.39	na	na	na	25.71	0.66
Singapore, foreign MNCs in Singapore, manufacturing, growth & variation for 1986-1997															
FDI equity stocks	6.5	7.7	8.3	9.3	10.4	10.9	10.5	12.0	15.1	17.5	19.3	23.2	na	23.54	0.41
-first diff.=annual FDI eq.	0.4	1.1	0.6	1.0	1.1	0.5	-0.4	1.5	3.1	2.5	1.8	3.9	na	45.23	0.85
Cumulative net fixed assets	4.4	4.8	5.2	6.4	7.0	7.1	7.7	8.5	9.1	10.2	10.0	14.8	na	22.39	0.36
-first diff.=annual net.inv.	0.1	0.4	0.5	1.2	0.6	0.1	0.6	0.9	0.6	1.0	-0.1	4.7	na	96.15	1.47
Employment	139.3	160.5	193.4	201.9	209.8	208.1	203.6	195.9	201.3	203.0	197.4	192.6	na	5.55	0.11
Sales	27.5	34.7	42.4	48.5	54.8	56.3	57.7	65.6	75.6	86.8	91.2	96.2	na	23.21	0.36
Value added	8.6	10.5	12.8	14.5	15.8	16.9	17.5	20.0	22.1	25.0	26.2	27.6	na	21.57	0.34
Exports	20.6	26.3	32.6	36.5	40.8	39.1	39.6	45.2	52.1	59.3	62.8	66.1	na	21.42	0.33
Vietnam, foreign MNCs in Vietnam, all industries, growth & variation for 1994-1997															
Cumulative FDI-a	na	na	0.10	0.22	0.44	0.70	1.00	2.05	3.45	5.25	7.84	9.68	11.03	41.09	0.42
-first diff.=annual FDI	na	na	0.10	0.12	0.22	0.26	0.30	1.05	1.40	1.80	2.59	1.85	1.35	9.64	0.26
Value added	na	na	na	na	na	na	na	na	1.04	1.31	1.82	2.50	2.75	33.88	0.39
Exports	na	na	na	na	na	na	na	na	0.16	0.44	0.79	1.79	na	123.14	0.90

Notes:

Growth is the compound annual growth rate and the coefficient of variation is the ratio of the standard deviation to the mean for each series.

In general, changes in (first differences of) stocks are translated into U.S. dollars at annual average exchange rates.

In general, stock variables are first translated into U.S. dollars at end of year exchange rates for the most recent observation and past values are then calculated by subtracting changes in (first differences of) the stocks that are translated into U.S. dollars at period average exchange rates.

The exception is for equity stocks of Japanese MNCs abroad which are calculated as described in Table 5.

a-Cumulative FDI is calculated from 1980 forward except in Vietnam where it is from 1988 forward.

b-Data are adjusted to account for the fact that original data for 1985-1990 cover only majority-owned firms whereas data for 1991-1996 cover firms with more than 33% foreign ownership; figures for 1985-1990 are multiplied by the ratio of that indicator for firms with more than 33% foreign ownership to that indicator for majority-foreign firms in 1991. Ratios are 1.039 for equity stocks, 1.063 for employment, 1.065 for sales, and 1.034 for exports.

c-MITI estimates are from original MITI publications but there is a large variation in coverage rates across years and variables;

Fukao estimates are compilations after interpolating and extrapolating missing replies (Fukao, Yuan, and Sakishita 1999).

d-Estimates appear to include some short-term loans from third parties not usually included in FDI.

Sources:

Tables 1, 3, 5, 6, 9, 10, 11, 13;

Japan, Bank of Japan (various years); Japan, Ministry of International Trade and Industry (1998, various years a, various years b, various years c);

Fukao, Yuan, and Sakishita (1999);

China, State Statistical Bureau (1999, various years b),

Hong Kong, Industry Department (various years a, various years b);

Republic of China, Central Bank of China (various years b); Republic of China, Investment Commission (various years);

Indonesia, Biro Pusat Statistik (various years);

Malaysia Department of Statistics (various years);

Singapore, Department of Statistics (various years a, various years b, various years d).

Vietnam, General Statistical Office

Table 17: Correlation Coefficients between Cumulative FDI, Annual FDI, and Other Indicators of Economic Activity in MNCs

Sample, indicator	Correlation with Cumulative FDI-a	Correlation with Annual FDI
Japan, foreign MNCs in Japan, all industries, 1986-1996, fiscal years beginning 1 April		
Equity stocks-b	0.58	0.39
-first diff.=annual equity	-0.12	0.11
Employment-b	0.72	0.33
Sales-b	0.82	0.17
Exports-b	0.86	0.14
Japan, all home MNCs abroad, all industries, 1986-1996 (except annual equity), data refer to fiscal years beginning 1 April		
Equity stocks, MITI-c	0.94	-0.36
-first diff.=annual equity (1987-1996)	0.13	-0.19
Employment, MITI-c	0.89	-0.30
Employment, Fukao-c	0.99	-0.27
Sales, MITI-c	0.94	-0.07
Sales, Fukao-c	0.96	-0.08
China, all foreign MNCs in China, all industries, 1993-1998		
Fixed investment	0.94	0.98
Employment	0.90	0.95
Exports	0.99	0.99
Hong Kong, majority-foreign MNCs in Hong Kong, 1994-1997 for cumulative FDI, 1995-1997 for annual FDI		
Cumulative fixed assets	0.99	-0.88
-first diff.=annual fix.inv.	-0.54	1.00
Employment	-0.96	0.96
Sales	0.53	0.79
Exports	0.65	0.99
Taiwan, all foreign MNCs in Taiwan, all industries, 1986-1994		
Foreign equity stocks	0.70	0.05
-first diff.=annual equity	-0.06	-0.04
Fixed asset stocks	0.98	0.41
-first diff.=annual fix.inv.	-0.10	0.12
Employment	0.82	0.23
Sales	0.98	0.40
Value added	0.84	0.43
Exports	0.95	0.50
Indonesia, majority-foreign MNCs in Indonesia, 1990 & 1992-1995 for cumulative FDI, 1990 & 1993-1995 for annual FDI		
Employment	0.99	0.95
Value added	0.98	0.91
Exports	0.99	0.90
Malaysia, majority-foreign MNCs in Malaysia, all industries, 1986-1995		
Foreign equity stocks	1.00	0.85
-first diff.=annual equity	0.84	0.91
Fixed asset stocks	1.00	0.85
-first diff.=annual fix.inv.	0.86	0.93
Sales	0.99	0.82
Value added	0.99	0.80
Exports	0.99	0.79
Singapore, foreign MNCs in Singapore, manufacturing, 1986-1997		
Cumulative net fixed assets	0.97	0.80
-first diff.=annual net.inv.	0.62	0.67
Employment	0.39	0.17
Sales	0.97	0.75
Value added	0.96	0.74
Exports	0.97	0.76
Vietnam, foreign MNCs in Vietnam, all industries, 1994-1997		
Value added	0.98	0.43
Exports	0.94	0.28

Note: a-FDI stocks for Hong Kong and FDI equity stocks for Singapore; see Table 16 for further explanation of the data and data sources.