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Abstract

The primary goal of this paper is to examine how the roles of foreign MNCs in Hawaii, and Japanese MNCs in particular, have changed over the last 2 decades. The major findings are (1) foreign MNCs are relatively large in Hawaii by U.S. standards, but not that large by international standards, (2) large increases in fixed investment by foreign MNCs were an important element of large increases in aggregate demand in the late 1980s and early 1990s and were both a cause and result of increased economic growth in this period, (3) the scale of foreign MNC activities in Hawaii has trended downwards in recent years and the decline has been much larger if measured in terms of fixed asset stocks than in terms of employment, and (4) tourism-related investments by Japanese MNCs, in particular commercial property investments, continue to dominate the activities of foreign MNCs in Hawaii, even though Japanese MNCs have apparently been selling off numerous properties in recent years.

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1. Introduction

Inward foreign direct investment (FDI) by foreign multinational corporations (MNCs) increased markedly in the late 1980s both in Hawaii and in the United States as a whole. The increase of inward FDI in the United States was very large and a major element of a worldwide increase in FDI during this period. Although there are no data on FDI in Hawaii, trends in the stock of fixed investment (the stock of gross property, plant, and equipment) and the employment of foreign MNCs in Hawaii indicate that the increase of foreign MNC activity was even larger in Hawaii than in the rest of the United States. In Hawaii, Japanese MNCs accounted for a relatively large portion of the fixed assets and employment of foreign MNCs and the increases in these measures of foreign MNC activities observed in the late 1980s and 1990s. On the other hand, after Hawaii's real estate bubble burst in the early 1990s, Hawaii experienced large decreases in fixed assets of foreign MNCs and further declines followed in the late 1990s. Japanese MNCs have been among the most prominent sellers of foreign-controlled fixed assets in the late 1990s. Preliminary data and press reports indicate that Japanese MNCs in particular continued to sell fixed assets in 2000-2001. Declines in affiliate employment of foreign MNCs, including Japanese MNCs, have been more modest than declines in fixed asset holdings, however.

The primary purpose of this paper is to examine these and related trends with a focus on ascertaining the extent to which Japanese MNCs have reduced presence in Hawaii in recent years.

The paper is organized into four sections. The first two sections analyze overall trends in foreign MNC activities (Section 2) and trends in the country and industry distributions of foreign MNC activities (Section 3), using data from the comprehensive surveys of foreign MNCs in the United States conducted by the Bureau of Economic Analysis's (BEA). The BEA data are the most comprehensive and thus provide the most reliable information available, but these data are relatively slow to appear and provide limited detail in many cases, making it useful to supplement them with data from other sources. Thus, Section 4 then examines patterns that emerge from more recent but less comprehensive data on trends in the sales and employment of a sample of large foreign MNCs. Some conclusions are then offered (Section 5).

2. An Overview of Trends in Activities of Foreign MNCs in Hawaii

As indicated above, there are no data on FDI levels or stocks in Hawaii. On a corporate balance sheet FDI comprises the annual flow of equity and loans from foreign parents or related firms that own more than 10 percent of a local affiliate. FDI is thus measure of corporate financial resources, not how those resources are used. A foreign affiliate typically gets a large portion of financial resources, both equity and loans, from local and other foreign sources. These sources are used to finance investment in fixed assets (e.g., property, plant, and equipment) and other assets (e.g., holdings in other companies, cash balances, inventories) by the foreign affiliates involved. The

only measure of investment activity by foreign MNCs in the United States that is available at the state level is a measure of fixed assets, namely the stock of gross property, plant, and equipment controlled by foreign affiliates at yearend. Taking the first difference of this measure yields an estimate of annual fixed investment by foreign MNCs that is roughly comparable estimates of total fixed investment compiled by the state in its expenditure-side accounting of gross state product.²

Trends in fixed investment, by both local firms and foreign MNCs, are important for two reasons. First, fixed investment is an important element of aggregate demand that is often highly correlated with the business cycle. Fixed investment tends to display strong cyclical behavior with large increases often being followed by large decreases, and the fluctuations in fixed investment have long been thought to be an important cause of fluctuations in aggregate demand and the business cycle. Second, fixed investment is the avenue through which an important factor of production, fixed capital, is accumulated. The accumulation of fixed capital adds to productive capacity and increases the productivity of other factors of production (e.g., labor), and can thus contribute to economic growth in the medium- to long-term. The accumulation of physical factors such as labor and capital is not generally thought to be the key supply-side determinant of economic growth, however. Rather, the accumulation of technical knowledge and human capital is generally thought to be more important in modern economic analysis and foreign MNCs are thought to contribute to

² There are important differences in these measures, however. The largest differences result from the fact that measuring fixed investments as the first differences of fixed asset stocks in MNCs include (1) changes in asset prices or asset revaluations and (2) depreciation expenditures that are not included in estimates of total gross fixed investment which are compiled on an expenditure basis.

the accumulation of these intangible factors, both directly and indirectly through spillovers to local firms (see Box: Foreign MNCs and Economic Growth).

Figure 1 shows trends in the growth rate of gross state product (GSP) in constant prices or the real economic growth rate, the ratio of total fixed investment in the state to GSP in current prices, and the ratio of fixed investment by foreign MNCs (=the change gross property, plant, and equipment stocks for foreign MNCs) to GSP, again in current prices. Although it should be emphasized the measure of fixed investment in MNCs is very different than the measure of total fixed investment (see footnote 2 above), it is important that the trends in the two ratios are remarkably similar for much of the period.³

The ratio of annual fixed investment by foreign MNCs to GSP rose rapidly in the late 1980s, increasing more than tenfold in between 1985-1986 (0.4-1.1 percent) to 1989-1990 (11.2 percent in each year) and falling more or less continually afterwards. These ratios became negative in 1995-1999 and fell to as low as -5.9 percent in 1998 before recovering some in 1999. Total fixed investment to GSP ratios also rose in the late 1980s, albeit more slowly, from 13 percent in 1985 to as high as 19-21 percent in 1988-1992, before trending downwards to 11 percent in 1997-1999. Meanwhile, the economic growth rate followed a similar trend, rising from 2.6 percent in 1985 and 3.1 percent in 1986 to 5.0 percent in 1987 and very high rates of 6.8-8.0 percent in 1988-1990, before falling to 1.0-1.6 percent in 1991-1992 and below zero in 1993-1996. In recent years, there

³ These estimates use the BEA's estimates of GSP in the denominator. State estimates tend to be somewhat smaller, suggesting somewhat higher ratios to GSP than are shown in Figure 1.

has been some recovery to 0.5 percent in 1997-1998 and 1.0 percent in 1999. Thus, while the rise and fall of fixed investment by MNCs appears to have been highly correlated with fixed investment-GSP ratios and economic growth in 1985-1995, these correlations appear to have weakened in recent years. It must also be stressed that correlation does not necessarily imply causation. Economic theory suggests mutual causation because investment decisions by foreign MNCs are likely to be affected by Hawaii's economic performance and those investment decisions in turn affect the state's economic performance (see Box: Foreign MNCs and Economic Growth).

Figures 2-3 provide some additional perspectives on the relative size of fixed investment by foreign MNCs in Hawaii and in the United States, showing the ratio of fixed investment (again measured as gross property, plant and equipment) flows and stocks to two measures of GSP, total GSP and GSP originating in the private sector for Hawaii and for the whole country. The figures highlight five important patterns. First, there were increases in fixed investment by foreign MNCs in the late 1980s and the early 1990s but the increases were much larger in Hawaii than in the country as a whole. Second, in the late 1990s, fixed investment by foreign MNCs increased markedly in the country as a whole, especially in 1998, but the reverse was true in Hawaii. Third, the stock of fixed investment by foreign MNCs is much larger in Hawaii relative to the size of the local economy than in the country as a whole. Fourth, in Hawaii, there is a relatively large gap between the size of foreign MNCs measured relative to private GSP and the size of foreign MNCs measured relative to total GSP because the public sector is relatively large in Hawaii. Fifth, the size

of fixed investment stocks relative to GSP has fallen markedly in Hawaii since 1995 but remained rather constant in the country in 1991-1997, before increasing some in 1998-1999.

The ratios in Figures 2 and 3 are not precise measures of the size of foreign MNCs relative to the local economy because they measure different things in the numerators (measures of annual flows or yearend stocks of fixed investment) and the denominators (measures of the annual flows of goods and services produced). A more precise measure of relative size is the ratio of employment in foreign MNCs to total employment or to private employment (Figure 4). This figure first reconfirms the five patterns described above with respect to Figure 1: (1) the increase in relative size of foreign MNCs in the late 1980s was relatively large in Hawaii, (2) the contrast between increase of relative size of foreign MNCs in the country but the decline of relative size in Hawaii in 1998-1999, (3) foreign MNCs are relatively large compared to the local economy in Hawaii, (4) foreign MNCs are especially large relative to the private sector in Hawaii, and (5) the relative size of foreign MNCs tended to decline in the 1990s in Hawaii while remaining largely unchanged until 1997 and then increasing some in the country as a whole.

However, there are also two important differences that emerge from comparison of Figures 2-3 and Figure 4. First, the decline in of foreign MNC activity in Hawaii in the 1990s is much smaller if measured in terms of employment. Second, the gap between the relative size of MNCs in Hawaii and the relative size of foreign MNCs in the country as a whole appears relatively small if measured

in terms of employment than if measured in terms of fixed investment stock-GSP ratios.⁴ These two differences also reflect the facts that (1) foreign MNC shares tend to be smaller and more stable when measured in terms of employment than in terms of production or capital stocks and (2) investment flows (and stocks) of foreign MNCs are often highly volatile.

There is one technicality of importance here and below. From 1997 fewer U.S. affiliates of foreign MNCs were required to respond to the BEA surveys, which are the primary source of U.S. data on foreign MNCs in the United States. Specifically, U.S. affiliates with total assets, sales, or net income greater than \$3 million were required to respond to the surveys from 1997 forward. In previous years, this threshold was much lower, only \$1 million. Thus, part of the decline in MNC fixed asset stocks and employment between 1996 and 1997 results from smaller sample sizes; for example the number of reporting affiliates in Hawaii with gross property, plant and equipment fell from 685 in 1996 to 497 in 1997 and the number of affiliates with employment fell from 469 to 407, respectively (see Appendix Table 6a). On the other hand, affiliate employment actually rose from 47,500 in 1996 to 50,200 in 1997 (Appendix Table 5a) and declines in gross property, plant and equipment was larger in 1998 and 1999 than in 1997 (see Appendix Table 1a). Thus, the effects of the change in sample appear on these trends have been rather minor in the aggregate. However, when foreign MNC activities are disaggregated by country or industry as in the following section, the effects of the change in sample may have been somewhat larger for some observations.

⁴ For example, foreign MNCS accounted for about 10-13 percent of Hawaii's private employment versus about 5-6 percent of U.S. private employment in the 1990s but ratios of fixed investment stocks to GSP were 35-56 percent in Hawaii and 12-13 percent in the country as a whole.

3. Where Do Foreign MNCs in Hawaii Come From and What Do They Do?

Foreign MNC activity in Hawaii is dominated by investment from Japan, investment in commercial property, and investment in activities related to tourism and real estate. Figure 5 shows trends in fixed investment stocks (again measured as stocks of gross property, plant, and equipment) in Japanese MNCs and how they closely mirrored trends in all foreign MNCs, accounting for 82-88 percent of the total after 1987.⁵ European MNCs (3-9 percent of the total after 1987) and other Asia-Pacific investors (3-11 percent of the total after 1987) were the next largest sources but the shares of these two groups are much smaller than Japanese shares.

Commercial property holdings were the largest component of fixed investment stocks for Japanese MNCs, accounting 68-86 percent of total after 1987 (Figure 6). In contrast, commercial property comprised only 31-56 percent for non-Japanese MNCs.⁶ In other words, commercial property of Japanese MNCs accounted for the vast majority of all fixed assets held by foreign MNCs in Hawaii. After falling from 74 percent in 1987 to 56-58 percent in 1988-1989, the ratio of commercial property in Japanese MNCs to total fixed assets of all MNCs remained rather constant at 63-67 percent in 1990-1999.

Although Japanese MNCs also account for the majority of employment by foreign MNCs,

⁵ Japanese shares are much larger in Hawaii than they were for the United States as a whole (e.g., 18-21 percent since 1991; see Appendix Tables A1 and A2).

⁶ Shares of commercial property were much lower for both Japanese and non-Japanese MNCs in the United States as whole, though Japanese MNCs held a much larger portion of their assets in the form of commercial property than did non-Japanese MNCs (e.g., 30-56 percent since 1987 versus 18-20 percent; see Appendix Tables A1 and A2).

Japanese shares of foreign MNC employment (e.g., 68-75 percent after 1987) were somewhat smaller than corresponding shares of fixed assets in foreign MNCs (Figure 7). Employment of Japanese affiliates peaked at 38,300 in 1991 and 37,500 in 1993, before trending downwards to a low of 30,600 in 1998. Employment in European MNCs was also relatively high in the early 1990s (6,100-6,500 in 1990-1992) and in recent years (6,800-7,300 in 1996-1999) but was somewhat lower in the interim. Employment in other Asian and Pacific MNCs also peaked in the early 1990s (6,300-6,500 in 1990-1991) but declined markedly to 3,400-3,500 in 1994-1997 and 1,400-1,600 in 1998-1999. Australian MNCs accounted for the largest share of this group in 1987-1996 (41-64 percent of the group total) but employment in Australian MNCs declined to zero in 1998-1999 (see Appendix Table A5a). Employment MNCs from other regions first rose in the early 1990s (from 2,800 in 1987 to 4,200-4,700 in 1991-1993), then declined some (to as low as 3,800 in 1996), before rebounding to historical high levels in 1998 (5,200). MNCs from Latin America accounted for the vast majority of employment in this group (76-95 percent of the group total, see Appendix Table A5a).

Unfortunately the industrial classifications from the annual BEA data do not allow a very clear identification of the major industries of operation for foreign MNCs in Hawaii. Moreover, the industrial classification used from 1997 forward is quite different from the classification used in previous years, which mandates caution when interpreting differences between patterns observed in recent years (1997 forward) and those of previous years.

Measures in terms of fixed assets in foreign MNCs, the real estate industry is the largest specific industry that can be identified, accounting for a little more one-fourth of the total in recent years (e.g., 27 percent in 1995-1999 and 29-31 percent in 1991, 1993-1994), down from more than one-third of total in previous years (e.g., 35 percent in 1988 and 33 percent in 1990; Figure 8). However, the non-specific category of other industries has been by far the largest since 1987, accounting for 53-58 percent of the total in 1987-1988 and 1990, and 62-66 percent of the total in 1989 and 1991-1998 before falling back to 60 percent in 1999. As will be detailed below the largest component of this category is probably hotels and motels, and the decline of this share results in large part from sales of hotels, mainly by Japanese owners. Retail trade is the largest of the goods-related industries (including manufacturing and wholesale trade) but all three of the goods-related categories are very small in terms of fixed assets.

The other industry and real estate categories are dominated by investments in commercial property (Figure 9). Commercial property usually accounted for over two thirds of all fixed assets in other industries and in real estate, this threshold being exceeded in all years except 1988-1989 for other industries and 1996 for real estate. This again reflects the importance of developing largely tourism-related properties in Hawaii. The share of commercial property was also roughly two-thirds of fixed assets or more in earlier years in retail trade (1987-1996) and wholesale trade (1987-1991), but this share fell markedly in more recent years to as low as 29 percent in wholesale trade (1997) and 52 percent in retail trade (1997). These shares increased somewhat in 1998-1999

to 42-45 percent in wholesale trade and 57-59 percent in retail trade. Ratios were much lower in manufacturing in all years, never exceeding the high of 33 percent in 1998 and ranging between 3 and 19 percent in other years.

The distribution of employment in foreign MNC across industries differs in two major respects from the distribution of fixed assets. First, the real estate category is much smaller, accounting for no more than 7 percent (in 1990) of the total after 1987 (Figure 10). Second, the retail trade category is much larger with shares of 12-19 percent after 1987, and larger shares in earlier years. The share of the other industries category also tends to be somewhat larger if measured in terms of employment, this sector's share varying between 65 and 73 percent after 1987. Manufacturing and wholesale trade are also larger if measured in terms of employment, but still rather small compared to other industries and retail trade.

As indicated above, the industry distributions in Figures 8-10 are not very informative in the case of Hawaii because the category of unidentified other industries is quite large.⁷ Every five years the BEA compiles data on foreign MNCs at the establishment or factory level, which is published in much greater industry detail. These compilations show that hotels and motels were by far the largest component of this category in 1987 and 1992 (Table 1).⁸ For example, hotels and motels accounted for 40 percent of employment, 29 percent of payroll, and 16 percent of sales in all

⁷ The annual data do show that a number of industries (e.g., petroleum, finance and insurance, and information and professional services) are small components of this item.

⁸ It is important to recognize that the existence of multi-plant firms can lead to large differences in industrial distributions in plant-level compilations such as those in Tables 1-3 and firm-level compilations such as those in Figures 1-10. For example if a real estate company owns a hotel, real estate will be larger in the firm-level compilation than in the plant-level compilation.

foreign establishments in 1992, as well as 52 percent of the employment in Japanese establishments.

Construction was also relatively large, accounting for 10 percent of all foreign employment, 16 percent of payroll, and 12 percent of sales in 1992, if subdividers and developers are excluded to avoid double counting.⁹ Finance and insurance was relatively large in terms of sales (17 percent of the foreign total), but much smaller in terms of employment and payroll.

The foreign establishment data in Table 1 are also useful because they can be matched with corresponding data from the economic censuses to calculate the share of foreign plants in Hawaii's employment in various industries with greater precision than is possible with the annual firm-level data.¹⁰ Not surprisingly these calculations show relatively large shares in the large hotel industry (Table 2). The large share in the smaller general merchandise retailing industry is also conspicuous. Shares were also high in small manufacturing sector in 1992, largely because there was one large oil manufacturing plant, which was foreign-owned at the time but was subsequently sold to U.S. buyers.

The data in Table 2 also underscore the fact that foreign shares often differ depending on the activity being measured. For example, Table 2 shows a tendency for foreign shares to be relatively high in terms of sales and payroll compared to employment. In other words, payroll per employee and sales per employee (a very poor measure of labor productivity) both tended to be higher in foreign plants. This is consistent with the notion that foreign MNCs often have relatively high

⁹ Subdividers and developers are also included in real estate.

¹⁰ Here again, it is important to recognize that the existence of multi-plant firms means these shares might be very different if firm-level data were used. However, the plant-level data allow more much more precise calculations because definitions and compilation-methods are much more consistent for foreign MNCs and all establishments when using these data.

labor productivity and/or pay relatively high wages compared to U.S. firms. One reason that foreign MNCs may have higher labor productivity is if MNCs tend to be more efficient than non-MNCs and U.S. plants tend to be predominantly non-MNCs. Differences in efficiency as well as the possible need for foreign MNCs to pay a premium to attract good workers, may also contribute to wage differentials between foreign and U.S. plants. These differentials are shown explicitly in Table 3, but they are usually not very large, perhaps reflecting that many U.S. firms are also MNCs (see Box on Foreign MNCs and Economic Growth). However, the data in Table 3 provide only a very rough comparison and more rigorous analysis would be necessary to determine whether these differentials are in some sense statistically significant.¹¹

4. More Recent Trends in Foreign MNC Activities

The BEA data presented in the previous two sections are the most comprehensive information available on foreign MNCs in Hawaii. However, these data have two drawbacks. First, they are rather slow to be published (e.g., preliminary estimates for 1999 and revised estimates for 1998 were posted on the BEA web site in early October 2001). Second, because of confidentiality requirements, it is often impossible to get detailed breakdowns of the data by industry of affiliate and country of investor.

¹¹ There are also some industries in which differentials appear to be unrealistically large (e.g., the 1124 percent differential in amusement and recreation payroll per employee in 1992). This suggests that there may be some problem with the calculations or the underlying data.

BOX: Foreign MNCs and Economic Growth in Hawaii

Foreign MNCs can affect aggregate economic activity in host economy and thus economic growth both directly through their own activities and indirectly through the effects imparted on local firms. Economic growth is often thought to be determined on the supply side of the economy in the medium- to long-run and the most important effects of foreign MNCs are thought to work through the supply side. However, foreign MNCs may also impart large demand-side effects in relatively small economies like Hawaii. For example, in Hawaii the large increase in fixed investment expenditures amounted to between 4.3 percent and 11.2 percent of GSP for 6 years between 1987 and 1992 (Figure 1). This is a very large demand-side stimulus that did not exist in previous or subsequent years and one of the reasons that economic growth increased to high levels in 1987-1990. However, causation likely runs both ways, with the increase in growth also being one reason that foreign investors decided to invest more during these years.

On the supply side, the increase in fixed asset stocks and employment in foreign MNCs both led to increased production capacity in foreign MNCs and probably contributed to increased aggregate capacity as well. It is also possible that increased production by foreign MNCs increased efficiency in Hawaii, further contributing to growth in the medium- to long-term. Compared to non-MNCs, MNCs are generally thought to possess relatively large amounts of firm-specific assets, many of which are intangible, such as technological know-how and related assets (e.g., patents, knowledge generated through R&D), marketing networks, and management know-how. If this is true, other factors of production (e.g., labor, capital) will tend to be more efficient in MNCs than in non-MNCs, and increased MNC presence can improve the efficiency of an economy if local firms are predominantly non-MNCs. The economic literature also stresses that the relative efficiency of foreign MNCs may spillover to local firms through many means, including direct contractual arrangements (e.g., technology transfer or requirements

BOX: Foreign MNCs and Economic Growth in Hawaii (continued)

included in sourcing agreements), movements of workers between MNCs and local firms, and increased competitive pressure that the entry of the foreign MNC may bring. On the other hand, there is also the danger that foreign MNCs can use their firm-specific assets to create and exercise market power, thereby creating inefficiencies in market structures. However, the ability to exercise market power is usually limited if the host market is open to trade and investment from outside as is the case in Hawaii.

In the case of Hawaii, it is impossible to unambiguously evaluate the contributions of foreign MNCs to growth in the state because of data constraints, but the data do give us a few hints. First, the data suggest that foreign MNCs are of moderate size in Hawaii and that any contribution to growth is likely to be correspondingly modest in the medium- to long-run. For example, the foreign MNC share of employment, about 8-10 percent in recent years (Figure 4), is not that large by international standards, though it is large by U.S. standards. However, as indicated above, the demand side effects of fixed investment by foreign MNCs may have been relatively large in the late 1980s and early 1990s, though it appears that local fixed investment was a larger factor. Second, at the industry level, BEA's establishment data suggest that payroll and sales per employee may be slightly higher in foreign plants than in local plants (Table 3). These observations are consistent with the view that foreign MNCs are more efficient than local plants, but far more research is necessary before one can conclude that foreign MNCs had higher sales and payroll per employee than local plants with any degree of statistical confidence. Moreover, even if one concludes that this was probably true, neither of these indicators is a very good measure of economic efficiency, and it is possible that foreign MNCs were not appear more efficient if better measures of economic efficiency (e.g., value added per worker) were used.

Fortunately, there is one alternative source, an annual survey of the largest 250 firms by Hawaii by a private magazine, *Hawaii Business*, which is both more up-to-date and provides more details on the country of investor, the industry of activity, and the actual firms involved. The major drawback of this source is that it covers only the largest firms in Hawaii ranked by sales; in recent years, the lowest ranked firms had sales somewhat over \$20 million. Thus, it is important to recognize that many of the smaller foreign MNCs are not included in these data. A second source that is of some use, especially for checking the data on Japanese MNCs in the *Hawaii Business* data, is data on Japanese affiliates abroad from the Japanese publisher Toyo Keizai (various years). However, this source appears to omit several of the largest Japanese MNCs in Hawaii and BEA estimates of Japanese affiliate employment (e.g., Figure 7) were 2-3 times larger than estimates compiled from the Toyo Keizai data.¹²

Because the data on large foreign MNCs from *Hawaii Business* yield estimates of the number of affiliates and affiliate employment, they can be directly compared with corresponding BEA estimates. By definition the sample of large foreign MNCs, between 41 and 54 firms in 1988-1999, is much smaller than the BEA sample of firms reporting employment, between 261 and 473 firms in

¹² I had originally planned to analyze the Toyo Keizai data in this section as well, but I have chosen to omit that analysis here because of the apparently poor coverage in the Toyo Keizai data. See Appendix Tables C1 and C2 for data on equity and employment in Japanese affiliates compiled from the Toyo Keizai data.

A third data set that might be useful in this context describes real estate holdings on Oahu by country of owner (State of Hawaii, Department of Business, Economic Development & Tourism, various years). However, these data indicate very different trends than the BEA data on commercial property of foreign MNCs, probably because of difference in valuation methodology and differences in coverage (e.g., the real estate holdings data cover only Oahu and include non-commercial property). Thus analysis of these data is also omitted here.

the same period (Appendix Tables A6a, B3). However, this small sample accounted for more than half of all affiliate employment as estimated by the BEA in 1983-1991 and 1996, and a little less than half of the BEA total in 1992-1995 and 1997-1999 (Figure 13). Trends in the employment of these large MNCs also very closely mirrored trends in overall affiliate employment in 1983-1990, a period during which affiliate employment grew very rapidly. Data on large MNCs indicate a large fall in 1992 and stagnation in 1993-1995, followed by fluctuations in 1996-1998 and decreases in 1999-2000. The BEA data contrast somewhat, indicating a generally steadier decline after 1991, with isolated increases in 1997 and 1999 being the exceptions.

The data on large foreign MNCs also suggest that Japanese affiliates dominate, accounting for no less than 60-64 percent of employment in large foreign MNCs in 1989-1991 and as much as 82-86 percent of this total in recent years (1997-2000, Figure 11). Thus, these data suggest large non-Japanese MNCs experienced an extremely rapid increase in employment from between 2,850 and 4,267 in 1983-1984 to between 10,136 and 11,536 in 1989-1991 and then an equally rapid decline to between 2,775 and 3,501 in 1997-2000. On the other hand, employment in large Japanese affiliates grew more slowly and fluctuated more, going from between 8,664 to 10,178 in 1983-1985 to between 16,717 and 18,091 in 1987-1995, peaking at 20,485 in 1996, and then falling back to between 16,950 and 18,534 in 1997-1999, and then to 13,847 in 2000.

Hotels accounted for the largest share of employment in these large MNCs by industry, 45-54 percent in 1983-1989, 37-40 percent in 1990-1991, 49 percent in 1992, and 54-62 percent in

1993-2000 (Figure 12). Retail trade was the second largest in most years accounting for 25-31 percent of the total in 1983-1986, 13-18 percent of the total in 1987-1998, and 20-21 percent of the total in 1999-2000. Wholesale trade was also relatively large in the mid-1980s with shares of 10-17 percent in 1983-1987 and construction and other industries was relatively large in 1988-1992 with shares of 10-23 percent, the vast majority of this being in construction itself (9-22 percent). The share of eating and drinking establishments also reached double digits in one year (10 percent in 1987) but none of the other industries listed had shares exceeding this threshold in the 1983-2000 period. Here it should be pointed out that some of the differences between the industry-wise distribution of employment in large MNCs in Figure 12 and all MNCs in Figure 10 may result from differences in classification of individual firms, but many of the differences also result from the fact that the sample in Figure 10 is more comprehensive.¹³

The share of hotels was relatively large for large Japanese MNCs, 62-68 percent in 1983-1989, 58-62 percent in 1990-1992, and 68-74 percent in 1993-2000 (Figure 13). Shares were in the 10-15 percent range for some years in wholesale trade (1983-1985), retail trade (1983-1985, 1996), and eating and drinking (1986-1989), but shares never exceeded 10 percent for any of the other industries categories listed in Figure 13.

As might be expected in a sales-based ranking, the coverage of the sample of large MNCs

¹³ It is not a simple matter to classify a large firm with interests in hotels, retail trade, and real estate, for example. In the large-firm sample, for example, most of the firms with interests in both hotels and real estate are classified under hotels and this is probably one reason for the small share of real estate in this sample (1 percent between 1986 and 1992, 0 percent in other years).

appears to be higher in terms of sales than in terms of employment. In 1992, the only year for which an overall comparison is possible, the sample of large foreign MNCs reported employment of 23,387, which was 43 percent of the 53,799 employees reported in the BEA establishment data or the 53,800 employees reported in the BEA's annual survey data.¹⁴ On the other hand, the sample of large foreign MNCs reported sales of \$4.8 billion or 66 percent of the total reported in the BEA establishment data for the year.

It is also of some interest that, while employment of large foreign MNCs tended to fall rather slowly after peaking in 1990 and then more rapidly in recent years, the reverse was true for sales of these large MNCs, which rose very rapidly from \$1.9 billion or less in 1987 and previous years to over \$7.1 billion in 1990 and then declined quickly \$4.1-\$5.1 billion in 1991-1996 and then more slowly to \$3.7-\$3.9 billion in 1997-2000 (Figure 14). As with employment, the spike in 1990 and surrounding years resulted largely from an increase in the sales of non-Japanese firms, which rose from \$0.8 billion or less in 1988 and previous years to \$5.1 billion in 1990 and then fell back to \$1.7-\$2.0 billion in 1993-1996 and \$0.7 billion or less in subsequent years. One large Australian oil manufacturer, which was eventually sold to U.S. interests, accounted for a very large portion of this trend. In contrast, sales of large Japanese MNCs tended to rise through the mid-1990s, though at a pace that slowed over time, from \$1.2 billion or less in 1983-1987 to \$1.6-\$2.0 billion in 1988-1990, \$2.1-\$2.2 billion in 1991-1993, and \$2.4-\$2.7 billion 1994-1995, before stagnating at

¹⁴ Note that these totals often differ at the state level, primarily because of differences in the timing of data reporting and compilation.

\$3.1-\$3.3 billion in 1996-2000.

The important role of the Australian oil manufacturer is further reflected in Figure 15, which shows a large increase in manufacturing sales from under \$0.2 billion in 1988 and previous years to \$4.0 billion in 1990 and then a rapid decline to \$1.2 billion in 1993-1994 and \$0.1 billion or less in 1997 and subsequent years. A similar pattern is observed in construction and other category, which is dominated by construction firms from New Zealand, Japan, and Australia, where sales rose from \$0.1 billion or less in 1987 and earlier years to a peak of \$0.9-\$1.1 billion in 1990-1991 and then fell back to \$0.1 billion or less in 1999-2000. Among non-manufacturing industries, hotels was again the largest since 1987, with sales rising from \$0.5 billion or less in 1986 and earlier years to \$0.7-\$1.0 billion in 1987-1993, \$1.1 billion in 1994-1995, and \$1.3-\$1.4 billion in 1996-1999, before declining to \$1.2 billion in 2000. Transportation and travel services was a very small industry for large foreign MNCs through 1991, with sales of \$0.1 billion or less, but sales grew very rapidly to reach \$1.1 billion in 1997, before declining somewhat to \$0.9 billion in subsequent years. Sales have also been relatively large in retail trade, which was the largest non-manufacturing industry before 1987, fluctuating in the \$0.4-\$0.5 billion range in 1983-1989 and 1991-1994, and then the \$0.6-\$0.7 range billion in 1990 and 1995-2000. Sales were also relatively large (more than 10 percent of the total) in wholesale trade in 1983-1988 and finance and insurance in 1999-2000. Thus, the distribution of sales has been much more diverse and balanced than the distribution of employment among large foreign MNCs. This finding is consistent with the pattern observed for

all MNCs in the BEA establishment data (Table 1).

The same general pattern is observed among large Japanese MNCs as well. Hotels are still the largest industry in all years but they account for much smaller shares of sales (36-55 percent, Figure 16) than of employment (58-74 percent, Figure 13). On the other hand, shares of sales were relatively large in a number of industries such as retail trade (25-35 percent in 1983-1986 and 12-19 percent in 1987-2000), transportation and travel services in recent years (18-33 percent from 1994-2000), wholesale trade in earlier years (9-17 percent in 1983-1993), finance and insurance in early 1990s (10-12 percent in 1990-1994, and construction and other industries (mainly construction, 11-15 percent in 1990-1993).

5. Conclusion

This paper has examined the existing data on foreign MNCs in Hawaii and yields several important conclusions, four of which are most conspicuous. First, foreign MNCs play a moderate role in the Hawaiian economy, which is relatively large compared to the role of foreign MNCs in the United States as a whole, but not that large by international standards. Second, large fixed investment by foreign MNCs in the late 1980s and early 1990s provided a large demand-side stimulus in the state that was both a cause and a result of increased economic growth in this period. Third, the scale of foreign MNC activities in Hawaii has trended downwards in recent years but the

decline has been much larger if measured in terms of fixed asset stocks than if measured in terms of employment. Fourth, tourism-related investments in commercial property by Japanese MNCs continue to dominate activities by foreign MNCs in Hawaii but the relative importance of Japanese MNCs and commercial property investment has shrunk somewhat in recent years as Japanese parents have sold off numerous properties in Hawaii.

These findings then raise two important questions about the future of foreign MNCs in Hawaii. First, will the withdrawal of Japanese MNCs from the Hawaiian tourism and property markets that has accelerated in recent years continue in the coming years? Second, if Japanese MNCs continue to withdraw will there be alternative sources of foreign or mainland investment to replace them? Unfortunately, the answer to these questions will not be known until Hawaii's policy makers have to deal with problems that changes in investment patterns may present the state with. However, even if the answers were known in advance, they would be of limited use to Hawaiian policy makers, because even the most rudimentary economic analysis strongly suggests that there is very little if anything that policy makers in a small open economy like Hawaii can do to influence the decisions of individual investors from abroad or the mainland without imposing large costs on the Hawaiian economy. Thus, policy should remain indifferent to the sources of investment and focus on maintaining a business environment that encourages productive investment, while providing adequate public goods such as physical and educational infrastructure, and the maintenance of the natural environment which is the basis for so much economic activity in the state.

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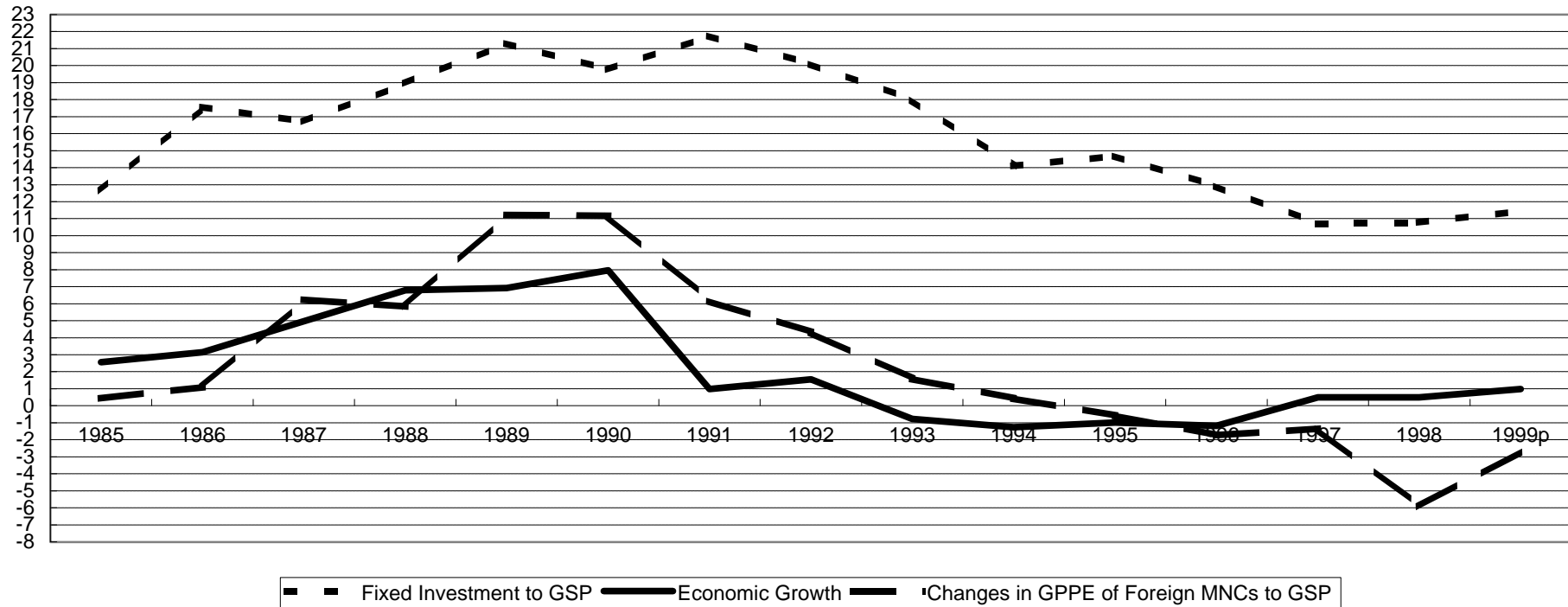
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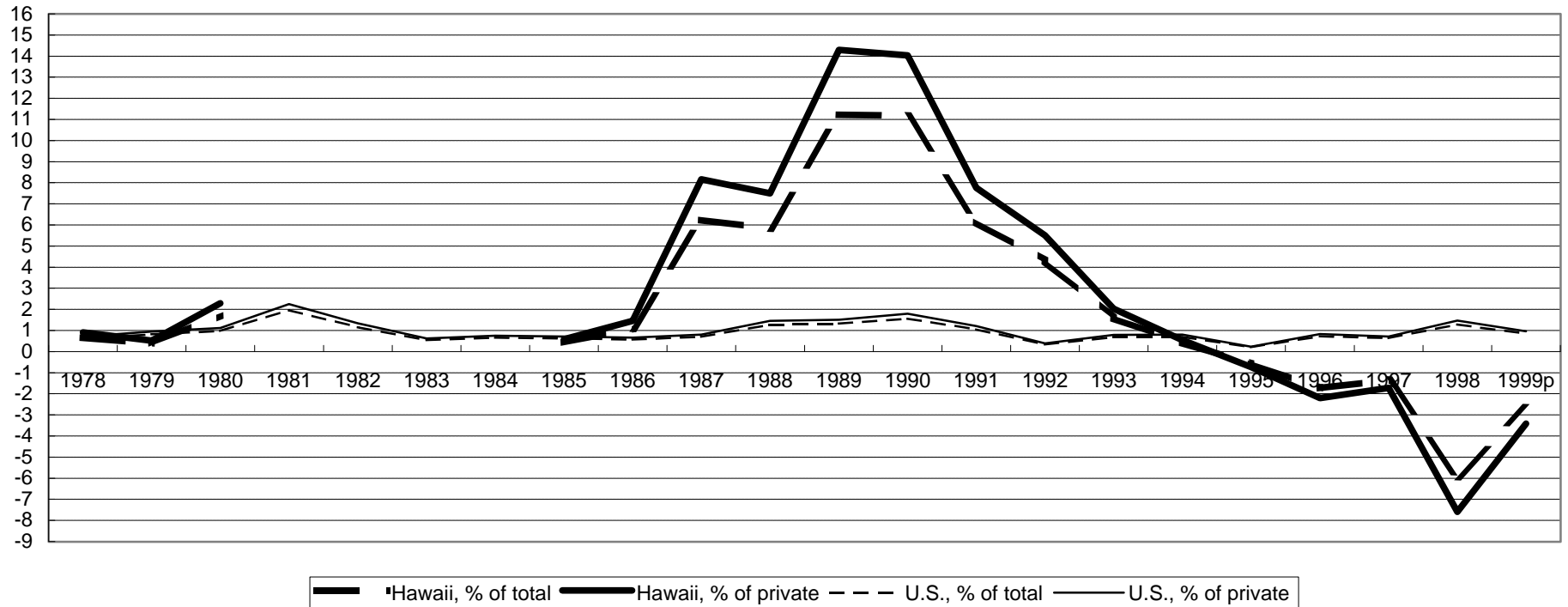
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Figure 1: Ratios of Fixed Investment and Changes in Gross Property, Plant and Equipment of Foreign MNCs to Gross Product and Economic Growth Rates in Hawaii (percent)



Notes: The BEA definition of gross state product is used in the denominators of the ratios; economic growth is the percentage change in the BEA's chain-type quantity index for gross state product; 1999 figure for GPPE is preliminary.
 Sources: State of Hawaii, Department of Business, Economic Development, and Tourism (2001); U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b, 2001).

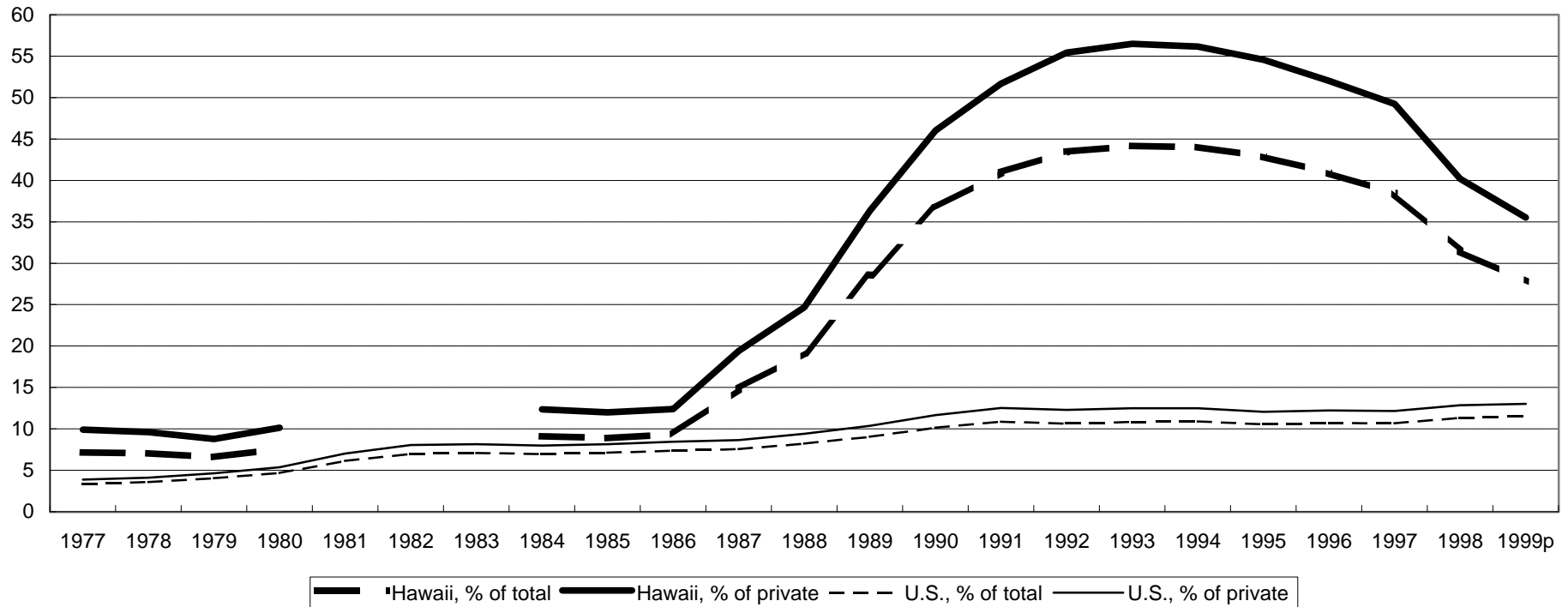
Figure 2: Ratios of Changes in Gross Property, Plant, and Equipment in Foreign MNCs to Gross Product in Hawaii and the United States (percent)



Note: 1999 figure is preliminary.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b, 2001).

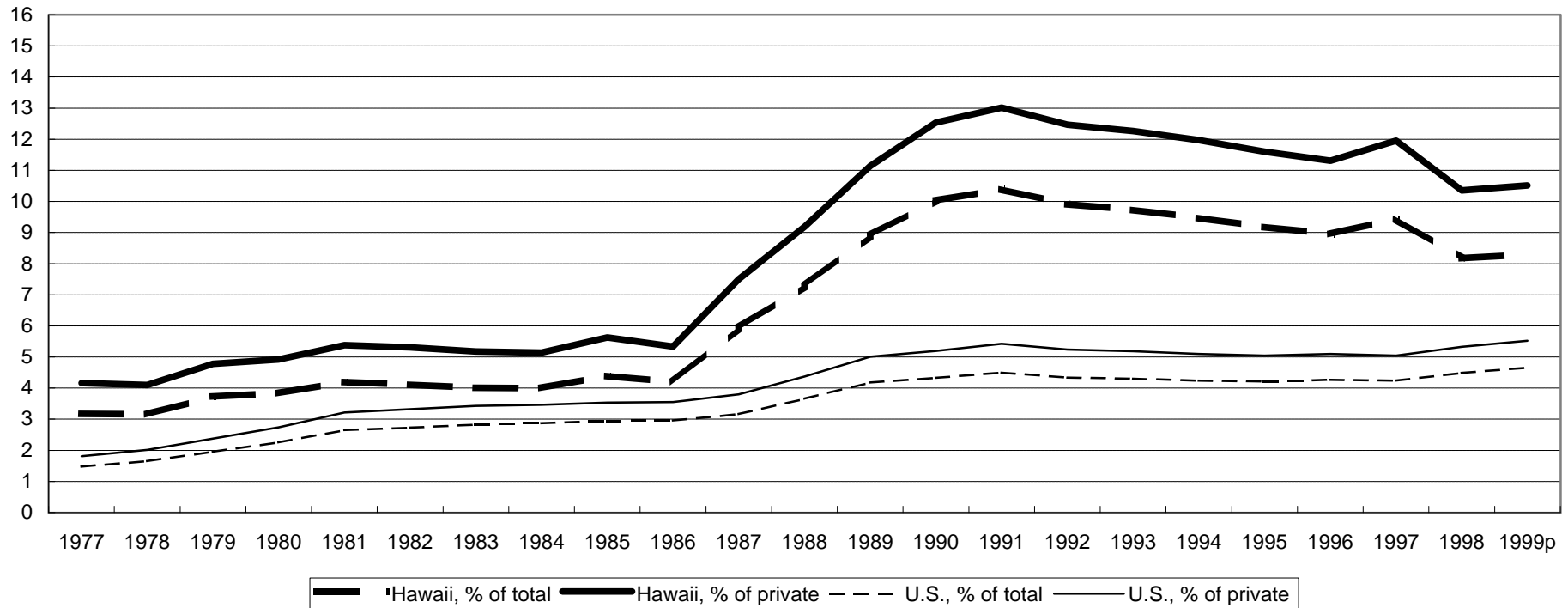
Figure 3: Ratios of Stocks of Gross Property, Plant, and Equipment in Foreign MNCs to Gross Product in Hawaii and the United States (percent)



Note: 1999 figure is preliminary.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b, 2001).

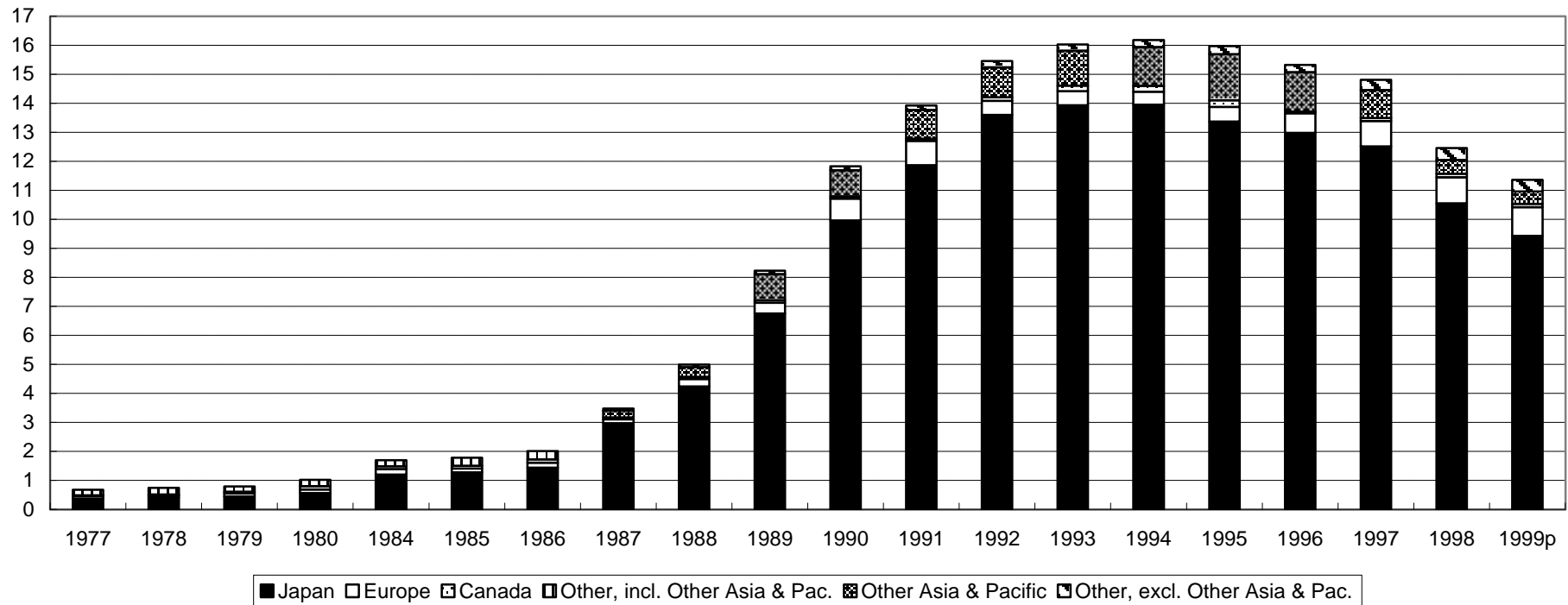
Figure 4: Ratios of Employment in Foreign MNCs to Non-agricultural Employment in Hawaii and the United States (percent)



Note: 1999 figure is preliminary.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b, 2001).

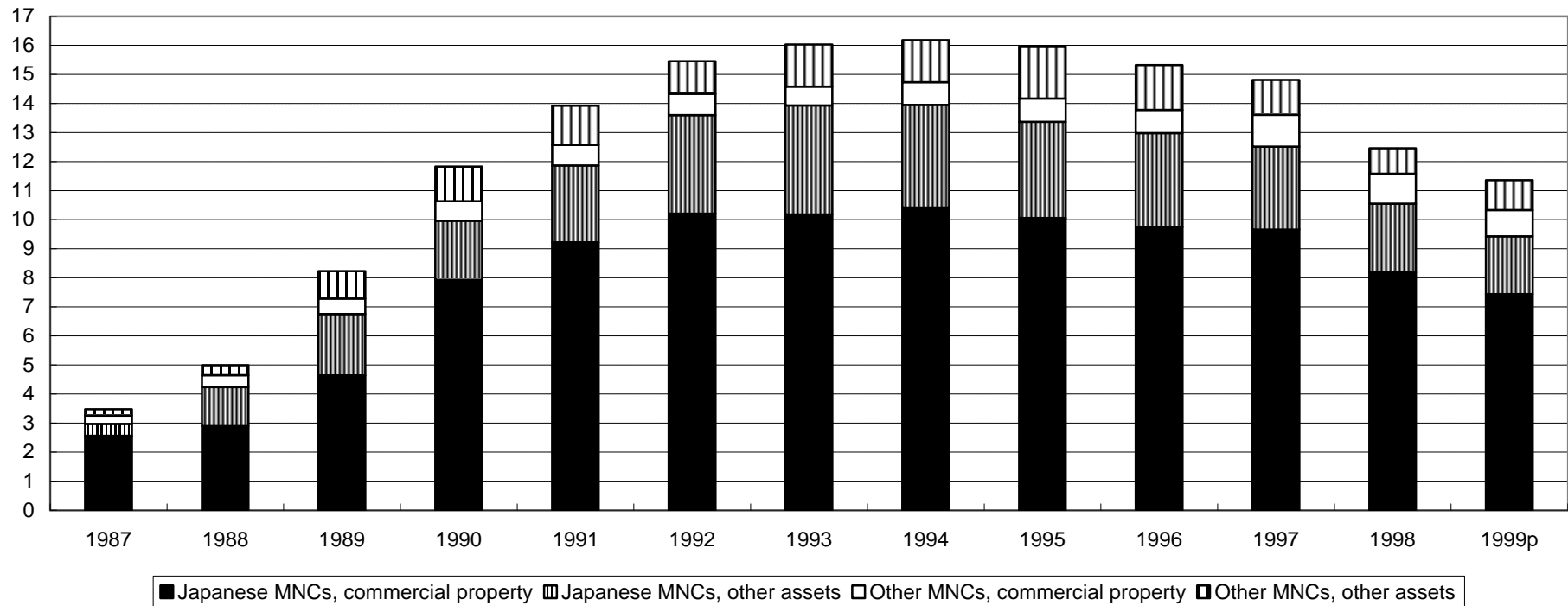
Figure 5: Yearend Stocks of Gross Property, Plant, & Equipment of Foreign MNCs in Hawaii by Country of Ultimate Beneficial Owner (US\$ billions)



Notes: 1999 figure is preliminary; for 1977-1986 it is impossible to distinguish other Asia & Pacific; for 1981-1983 data are not disclosed for some of the regions and/or countries identified above.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

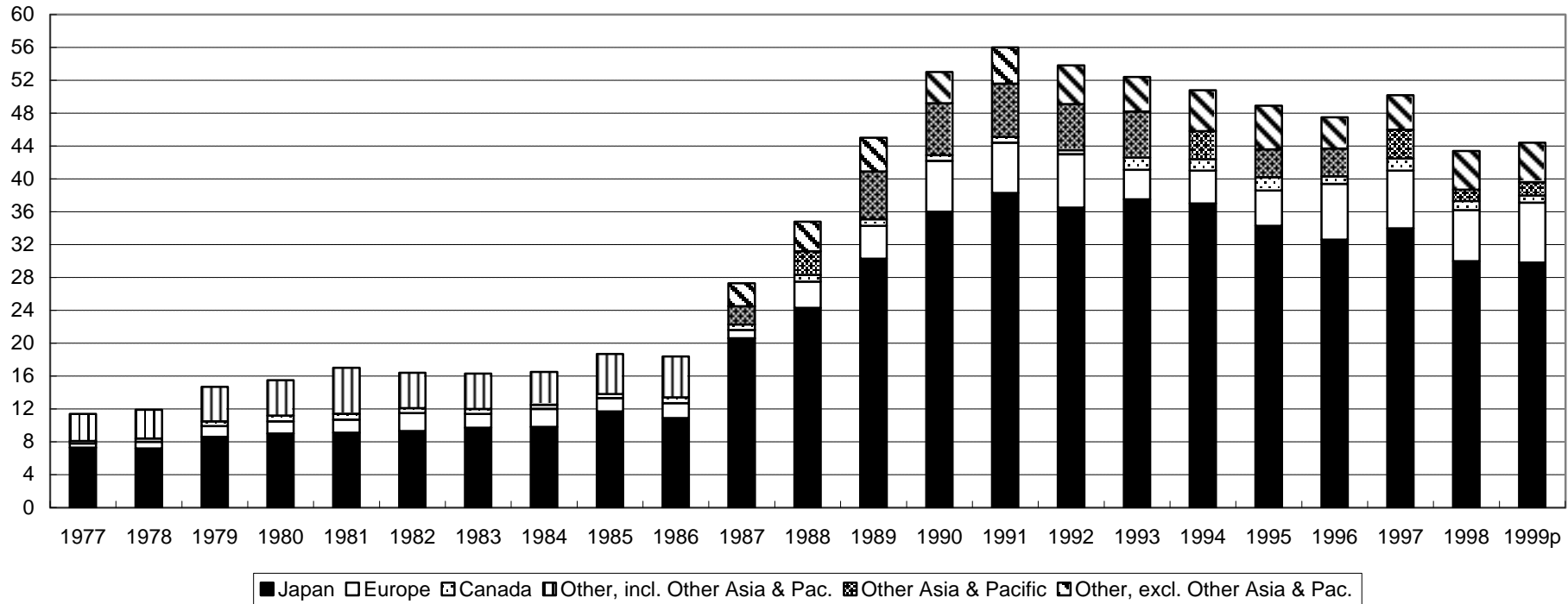
Figure 6: Yearend Stocks of Gross Property, Plant, & Equipment of Japanese and Other MNCs in Hawaii by Type of Asset (US\$ billions)



Note: 1999 figure is preliminary.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

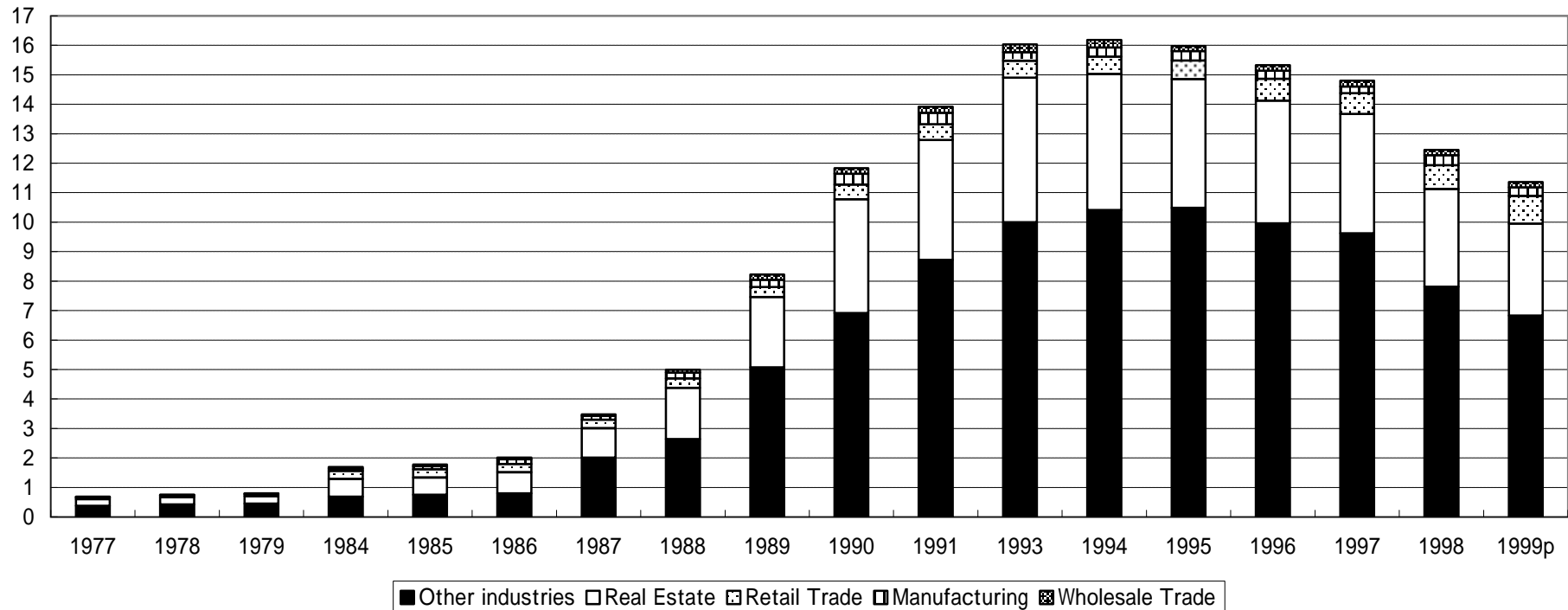
Figure 7: Employment of Foreign MNCs in Hawaii by Country of Ultimate Beneficial Owner
(thousands)



Notes: 1999 figure is preliminary; for 1977-1986 it is impossible to distinguish Other Asia & Pacific.

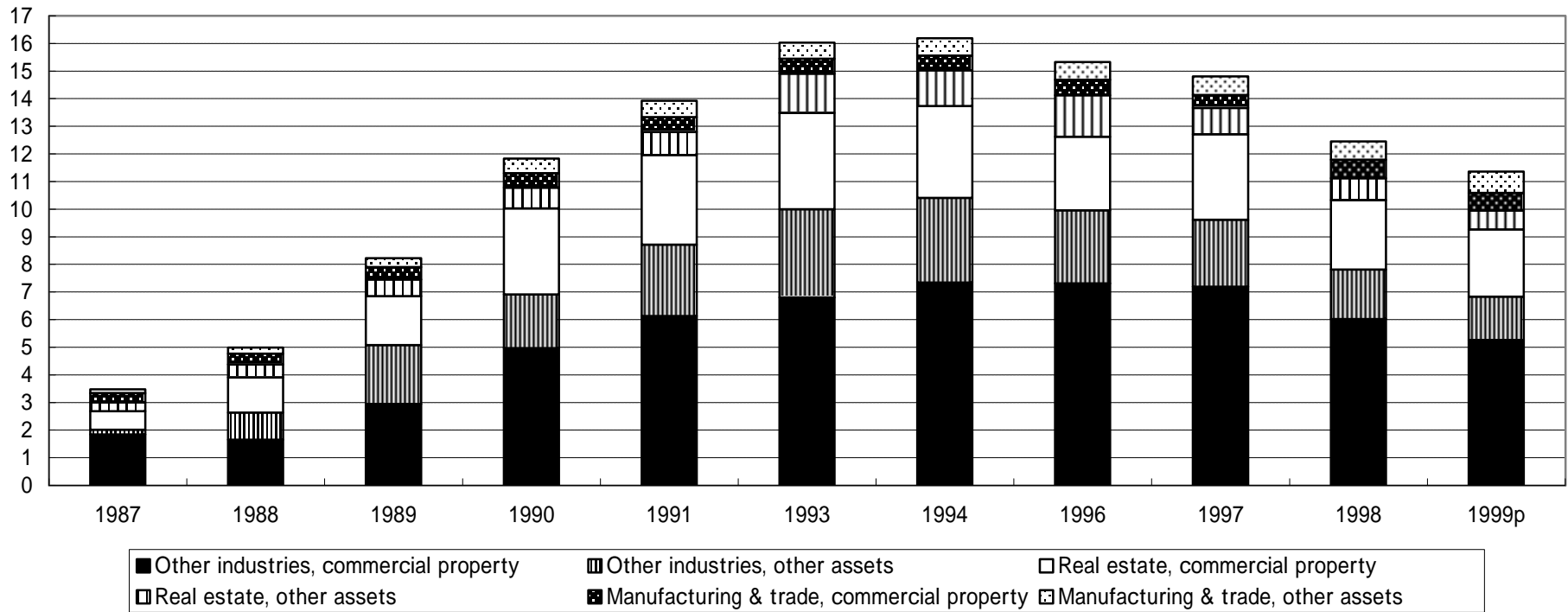
Sources: U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Figure 8: Yearend Stocks of Gross Property, Plant, & Equipment of Foreign MNCs in Hawaii by Industry of Affiliate (US\$ billions)



Notes: 1999 figure is preliminary; for 1980-1983 and 1992, data are not disclosed for some of the industries identified above; for 1977-1996, publishing is classified under manufacturing, petroleum and coal product manufacturing and rental and leasing (other than real estate) are classified under other industries, and eating and drinking is classified under retail trade; for 1997-1999, petroleum and coal product manufacturing is classified under manufacturing, rental and leasing (other than real estate) is classified under real estate, and eating and drinking and publishing are classified under other industries.
 Sources: U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

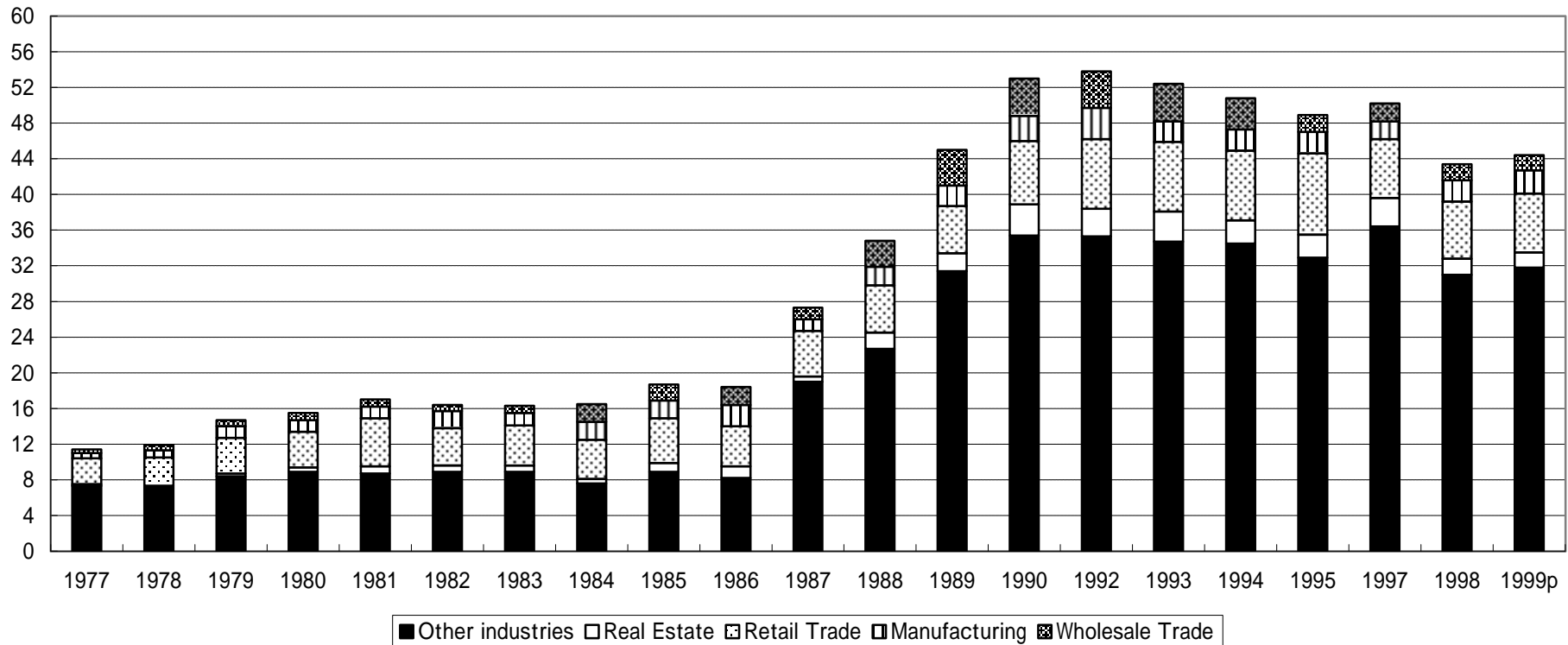
Figure 9: Yearend Stocks of Gross Property, Plant, & Equipment of Foreign Other MNCs in Hawaii by Major Industry Group and Type of Asset (US\$ billions)



Notes: 1999 figure is preliminary; for 1992 and 1995 data are not disclosed for some of the industries identified above; for 1977-1996, publishing is classified under manufacturing, petroleum and coal product manufacturing and rental and leasing (other than real estate) are classified under other industries, and eating and drinking is classified under retail trade; for 1997-1999, petroleum and coal product manufacturing is classified under manufacturing, rental and leasing (other than real estate) is classified under real estate, and eating and drinking and publishing are classified under other industries.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Figure 10: Employment of Foreign MNCs in Hawaii by Industry of Affiliate (thousands)



Notes: 1999 figure is preliminary; for 1991 and 1996 data are not disclosed for some of the industries identified above; for 1977-1996, publishing is classified under manufacturing, petroleum and coal product manufacturing and rental and leasing (other than real estate) are classified under other industries, and eating and drinking is classified under retail trade; for 1997-1999, petroleum and coal product manufacturing is classified under manufacturing, rental and leasing (other than real estate) is classified under real estate, and eating and drinking and publishing are classified under other industries.
 Sources: U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Table 1: Employment of Foreign Establishments, the Share of Foreign Establishments in Employment of All Establishments, and Employment of Japanese Establishments in Hawaii, by Industry in 1987 and 1992

Industry	Employment (number)				Payroll (US\$ thousands)		Sales (US\$ thousands)	
	All foreign establishments		Japanese establishments		All foreign establishments		All foreign establishments	
	1987	1992	1987	1992	1987	1992	1987	1992
All industries	26,220	53,799	18,281	36,829	484,714	1,308,452	n.a.	7,256,724
Manufacturing	1,000-2,499	1,644	388	505	D	55,626	D	887,971
Wholesale trade	1,107	1,702	250-499	556	29,055	52,981	331,355	795,627
Durable goods	631	1,000	100-249	364	18,708	30,392	178,909	429,268
Nondurable goods	250-499	631	100-249	100-249	D	19,737	D	366,359
Administrative, auxil.	100-249	NA	NA	NA	D	NA	NA	NA
Retail trade	7,069	12,042	3,861	5,669	85,915	200,578	872,589	1,515,684
Building materials, garden supplies	100-249	100-249	NA	NA	D	D	D	D
General merchandise	1,778	1,965	1,000-2,499	500-999	25,091	36,116	633,558	D
Food	192	1,112	100-249	1,087	2,210	16,089	17,918	118,937
Automotive dealers	166	253	NA	190	2,772	7,216	28,716	54,322
Gasoline stations	NA	293	NA	NA	NA	4,457	n.a.	70,209
Apparel, accessories	133	853	NA	244	1,267	11,862	21,492	109,525
Eating & drinking	3,018	4,933	1,000-2,499	2,247	26,615	51,394	90,894	166,737
Miscellaneous retail	821	1,256	250-499	640	8,840	22,531	51,076	160,841
Administrative, auxil.	500-999	1,169	250-499	193	D	46,334	n.a.	n.a.
Real estate, incl. sub-dividers & developers	698	2,716	250-499	2,688	12,535	70,857	NA	355,399
Other industries	14,847-16,346	35,695	D	27,411	D	928,410	D	3,702,043
Finance & insurance	1,100	1,854	NA	1,164	28,866	59,673	NA	1,199,379
Hotels, motels	9,454	21,362	5,000-8,966	19,097	144,699	384,315	541,252	1,146,814
Amusement, recreation	344	1,799	250-499	1,798	5,118	93,758	14,528	81,181
Other personal & business services	731	2,324	D	712	11,907	59,163	51,457	152,339
Transportation & public utilities	1,000-2,499	3,244	778	1,379	D	120,209	NA	235,723
Construction, excl. sub-dividers & developers	2,893-3,042	5,112	NA	3,253	D	211,292	D	886,607
ADDENDUM: Construction, incl. sub-dividers & developers	3,142	6,724	NA	5,082	102,827	217,219	677,533	1,091,450

Notes: D=not disclosed; NA=not available.

Sources: Bureau of the Census and Department of Commerce as cited in Ramstetter (1998, Table 9).

Table 2: Employment, Payroll, and Sales in Foreign MNC Establishments as Shares of Employment
Payroll, and Sales in All Establishments in Hawaii, by Industry in 1987 and 1992 (percent)

Industry	Employment shares		Payroll shares		Sales shares	
	1987	1992	1987	1992	1987	1992
All industries	7.2	13.1	7.7	NA	NA	NA
Manufacturing	D	8.0	D	10.2	D	23.4
Wholesale trade	5.5	7.2	7.0	NA	6.2	NA
Durable goods	6.2	9.0	8.0	9.3	8.1	14.0
Nondurable goods	D	5.2	D	6.6	D	7.4
Administrative, auxiliary	D	NA	D	NA	NA	NA
Retail trade	6.9	10.4	8.5	NA	10.8	NA
Building materials, garden supplies	D	D	D	D	D	D
General merchandise	20.7	19.4	26.6	26.9	50.5	NA
Food	1.5	7.5	1.4	7.2	1.1	5.7
Automotive dealers	3.5	5.1	2.7	5.2	2.4	3.6
Gasoline stations	NA	7.9	NA	8.6	NA	12.8
Apparel, accessories	1.8	9.2	1.9	10.7	3.7	11.3
Eating & drinking	6.5	10.1	7.6	10.1	6.7	9.1
Miscellaneous retail	7.8	12.2	8.5	15.3	7.0	15.8
Administrative, auxiliary	D	23.1	D	NA	NA	NA
Real estate, including subdividers & developers	5.5	18.2	5.7	20.1	NA	19.3
Other industries	D	15.1	D	D	D	D
Finance & insurance	5.3	8.1	6.3	D	D	D
Hotels, motels	30.0	52.1	33.2	50.5	34.7	51.1
Amusement, recreation	6.0	19.2	8.8	74.4	6.3	17.8
Other personal & business services	1.3	3.4	1.2	D	1.9	D
Transportation & public utilities	D	7.6	D	NA	NA	NA
Construction, excluding subdividers & developers	D	10.0	D	D	D	D
ADDENDUM: Construction, including subdividers & developers	14.5	20.2	16.9	NA	23.8	NA

Notes: D=not disclosed; NA=not available.

Sources: Bureau of the Census and Department of Commerce as cited in Ramstetter (1998, Table 9).

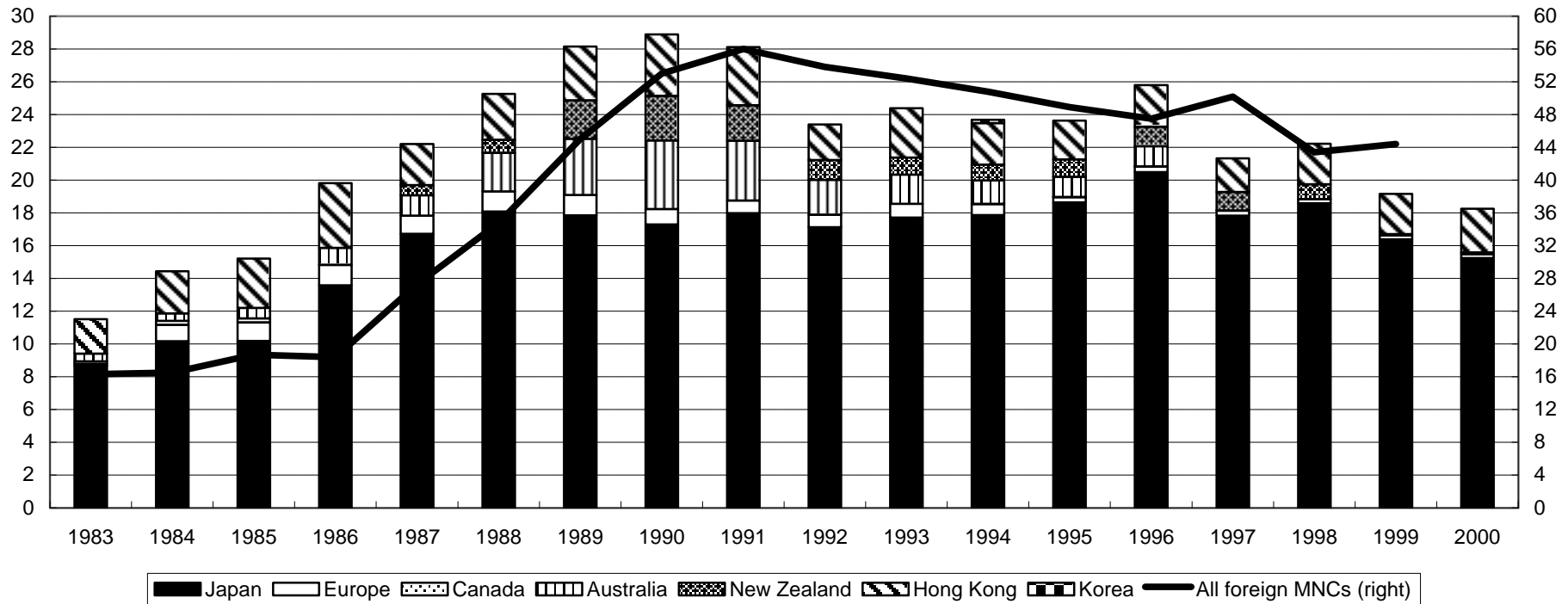
Table 3: Payroll per employee and Sales per Employee in Foreign MNC Establishments and Local Establishments in Hawaii, by Industry in 1987 and 1992 (US\$)

Industry	Payroll per Employee				Sales per Employee			
	1987		1992		1987		1992	
	Foreign	Local	Foreign	Local	Foreign	Local	Foreign	Local
All industries	18,486	17,193	24,321	NA	D	NA	134,886	NA
Manufacturing	D	D	33,836	25,943	D	D	540,128	153,183
Wholesale trade	26,247	20,295	31,129	NA	299,327	263,565	467,466	NA
Durable goods	29,648	22,536	30,392	29,222	283,532	212,629	429,268	259,745
Nondurable goods	D	D	31,279	24,100	D	D	580,601	397,782
Administrative, auxiliary	NA	NA	NA	NA	NA	NA	NA	NA
Retail trade	12,154	9,696	16,657	NA	123,439	75,560	125,866	NA
Building materials, garden supplies	D	D	D	D	D	D	D	D
General merchandise	14,112	10,165	18,380	12,069	356,332	91,173	D	D
Food	11,510	12,345	14,469	15,314	93,323	127,775	106,958	144,395
Automotive dealers	16,699	21,826	28,522	27,914	172,988	255,150	214,711	310,419
Gasoline stations	D	D	15,212	13,914	D	D	239,621	140,099
Apparel, accessories	9,526	9,016	13,906	11,714	161,594	77,092	128,400	101,694
Eating & drinking	8,819	7,454	10,418	10,487	30,117	29,156	33,800	38,122
Miscellaneous retail	10,767	9,806	17,939	13,831	62,212	69,923	128,058	94,774
Administrative, auxiliary	NA	NA	39,636	NA	NA	NA	NA	NA
Real estate, including subdividers & developers	17,958	17,292	26,089	23,053	D	D	130,854	121,857
Other industries	D	NA	26,010	NA	D	NA	103,713	NA
Finance & insurance	26,242	22,041	32,186	D	D	D	646,914	D
Hotels, motels	15,306	13,198	17,991	19,177	57,251	46,173	53,685	55,884
Amusement, recreation	14,878	9,842	52,117	4,259	42,233	40,093	45,126	49,432
Other personal & business services	16,289	18,506	25,457	D	70,393	48,958	65,550	D
Transportation & public utilities	D	D	37,056	D	D	D	72,664	D
Construction, excluding subdividers & developers	D	NA	41,333	NA	D	NA	173,436	NA
ADDENDUM: Construction, including subdividers & developers	32,727	27,291	32,305	NA	215,637	117,086	162,322	NA

Notes: D=not disclosed; NA=not available.

Sources: Bureau of the Census and Department of Commerce as cited in Ramstetter (1998, Table 9).

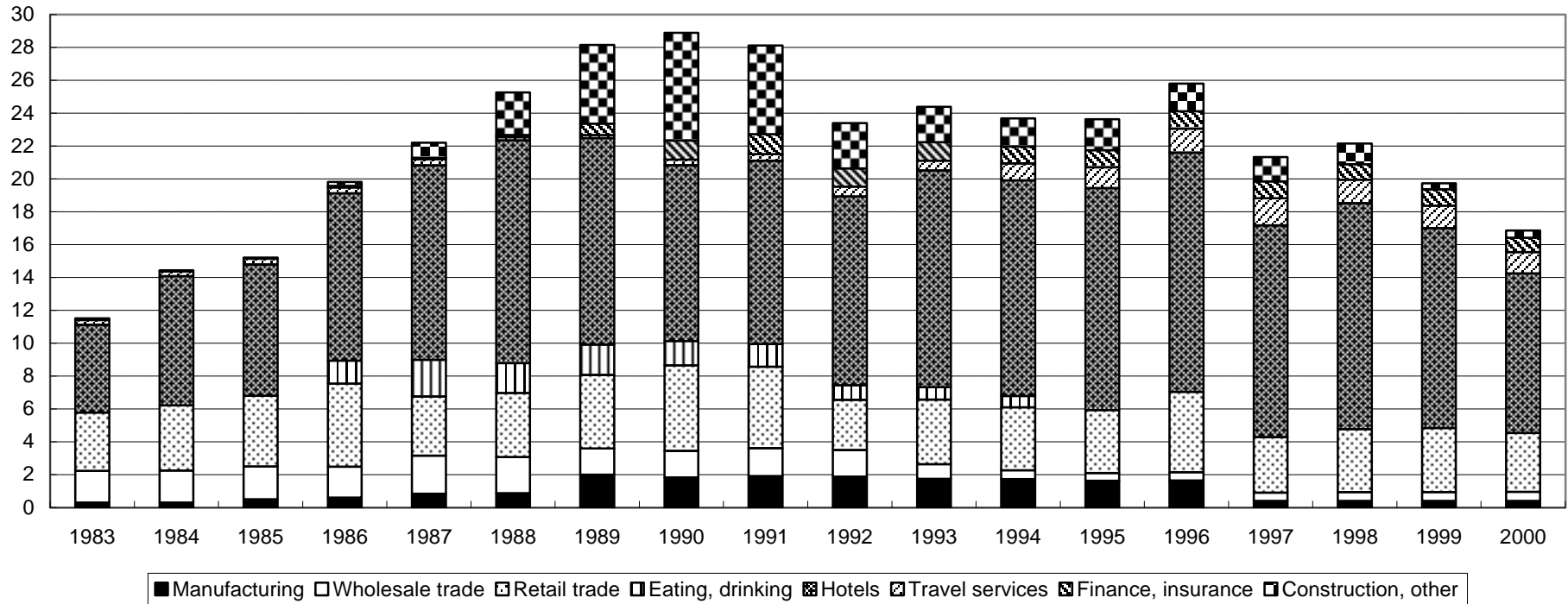
Figure 11: Employment of Sample of Large Foreign MNCs in Hawaii by Country of Owner and Employment of All Foreign MNCs in Hawaii (thousands)



Notes: 1999 figure for all MNCs is preliminary.

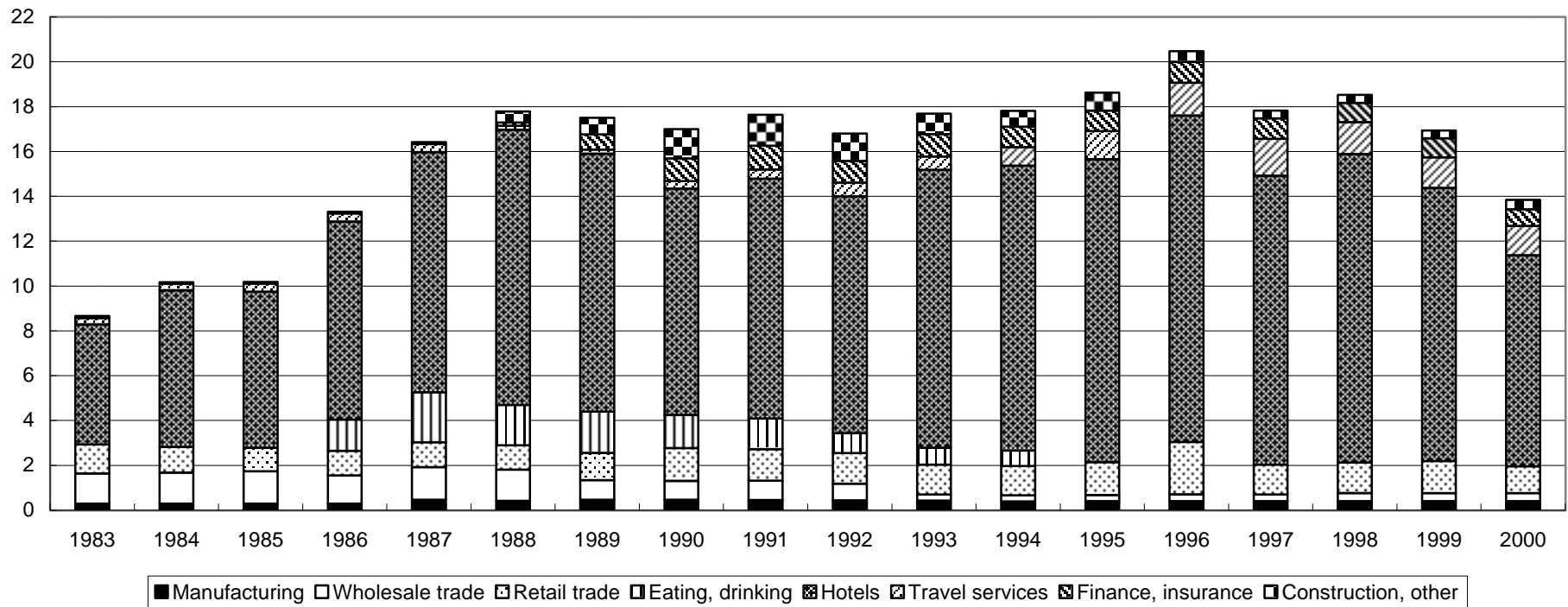
Sources: Hawaii Business (various years); U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Figure 12: Employment of a Sample of Large Foreign MNCs in Hawaii by Industry of Affiliate (thousands)



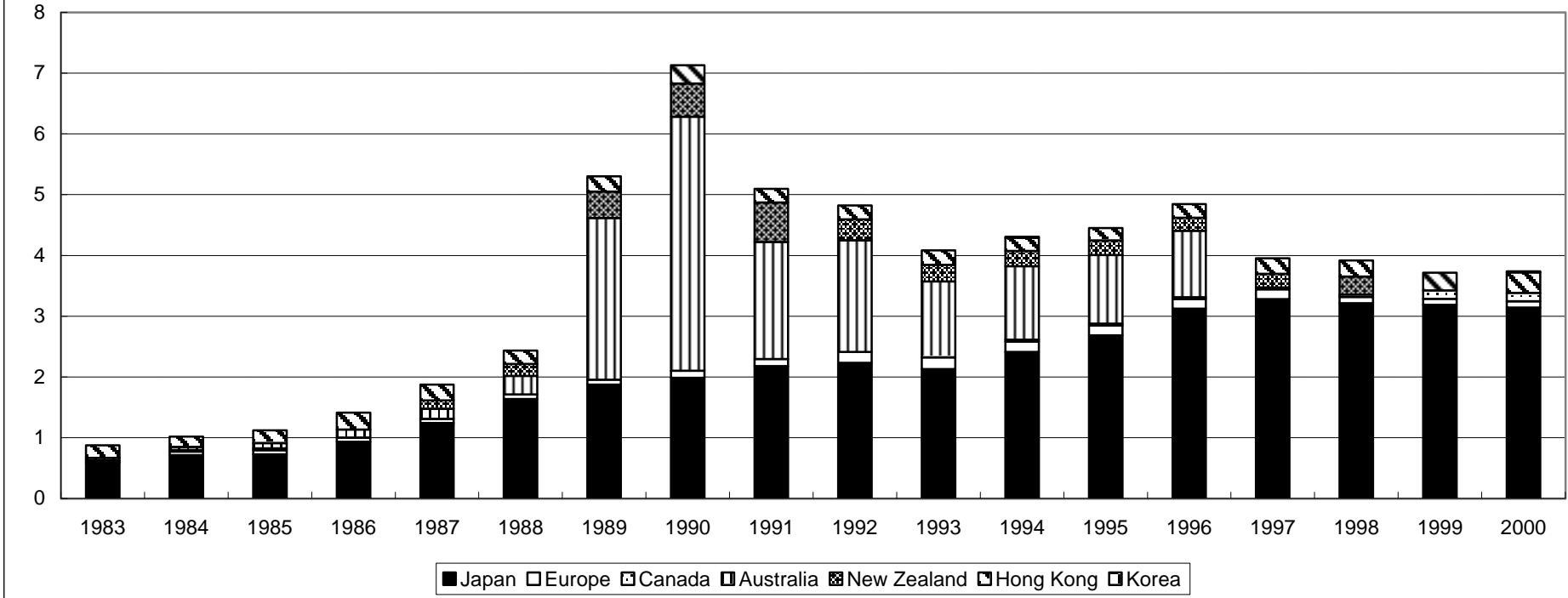
Sources: Hawaii Business (various years).

Figure 13: Employment of a Sample of Large Japanese MNCs in Hawaii by Industry of Affiliate (thousands)



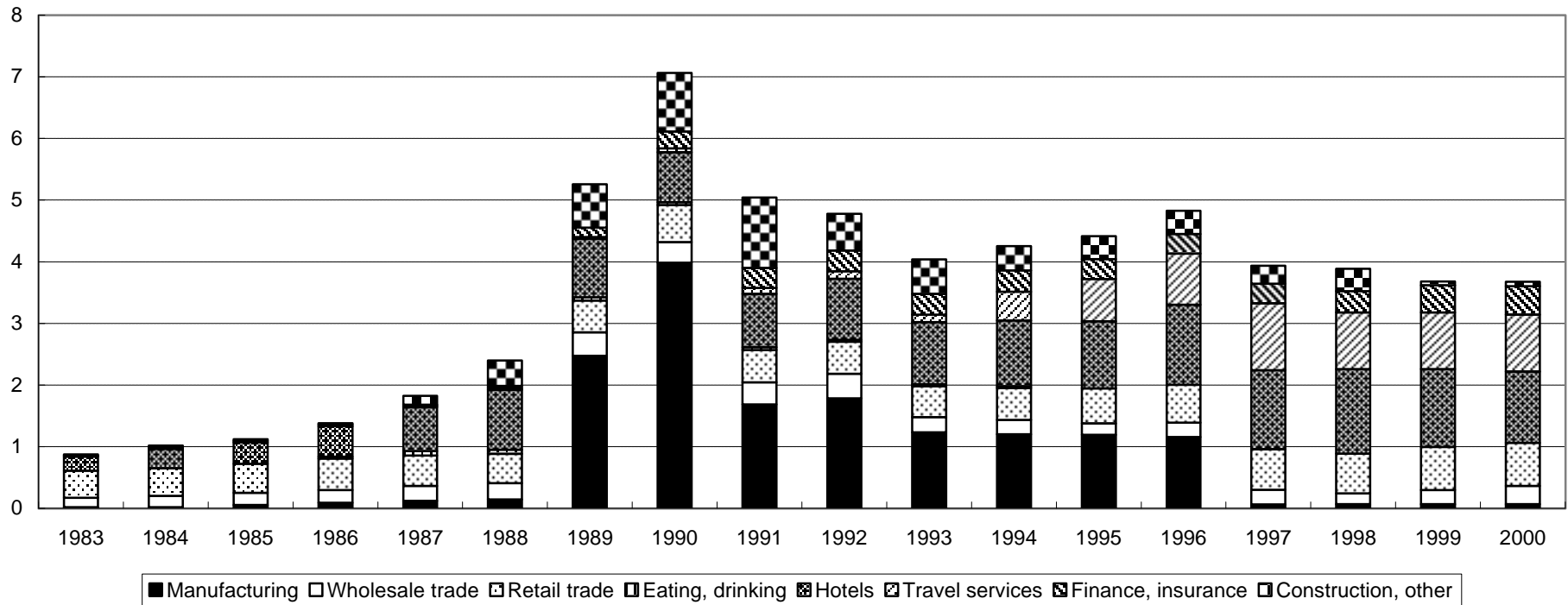
Sources: Hawaii Business (various years).

Figure 14: Sales of Sample of Large Foreign MNCs in Hawaii Country of Owner
(US\$ millions)



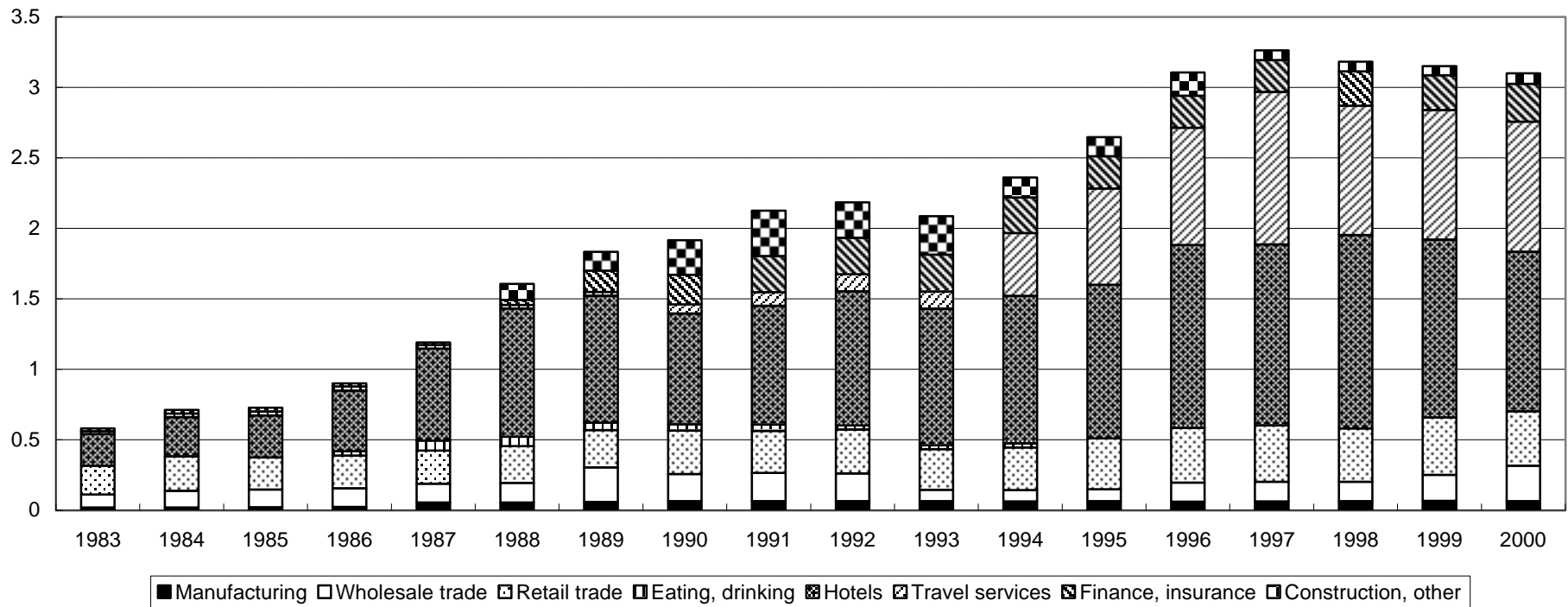
Sources: Hawaii Business (various years).

Figure 15: Sales of a Sample of Large Foreign MNCs in Hawaii by Industry of Affiliate (US\$ millions)



Sources: Hawaii Business (various years).

Figure 16: Sales of a Sample of Large Japanese MNCs in Hawaii by Industry of Affiliate (US\$ millions)



Sources: Hawaii Business (various years).

Statistical Appendix Tables

A. U.S. Data on Nonbank Affiliates of Foreign Companies in Hawaii and the United States

Appendix Table A1a: Yearend Stocks of Gross Property, Plant, and Equipment of Nonbank Affiliates in Hawaii by Country of Ultimate Beneficial Owner (US\$ millions)

Appendix Table A1b: Yearend Stocks of Gross Property, Plant, and Equipment of Nonbank Affiliates in the United States by Country of Ultimate Beneficial Owner (US\$ millions)

Appendix Table A1c: Yearend Stocks of Gross Property, Plant, and Equipment of Nonbank Affiliates in Hawaii by Industry of Affiliate (US\$ millions)

Appendix Table A1d: Yearend Stocks of Gross Property, Plant, and Equipment of Nonbank Affiliates in the United States by Country of Ultimate Beneficial Owner (first differences of stocks, US\$ millions)

Appendix Table A2a: Annual Flows of Investment in Gross Property, Plant, and Equipment of Nonbank Affiliates in Hawaii by Country of Ultimate Beneficial Owner (first differences of stocks, US\$ millions)

Appendix Table A2b: Annual Flows of Investment in Gross Property, Plant, and Equipment of Nonbank Affiliates in the United States by Country of Ultimate Beneficial Owner (first differences of stocks, US\$ millions)

Appendix Table A2c: Annual Flows of Investment in Gross Property, Plant, and Equipment of Nonbank Affiliates in Hawaii by Industry of Affiliate (first differences of yearend stocks, US\$ millions)

Appendix Table A2d: Annual Flows of Investment in Gross Property, Plant, and Equipment of Nonbank Affiliates in the United States by Industry of Affiliate (first differences of yearend stocks, US\$ millions)

Appendix Table A3a: Yearend Stocks of Commercial Property of Nonbank Affiliates in Hawaii and the United States by Country of Ultimate Beneficial Owner (US\$ millions)

Appendix Table A3b: Yearend Stocks of Commercial Property of Nonbank Affiliates in Hawaii and the United States by Industry of Affiliate (US\$ millions)

Appendix Table A4a: Annual Flows of Investment in Commercial Property of Nonbank Affiliates in Hawaii and the United States by Country of Ultimate Beneficial Owner (first differences of yearend stocks, US\$ millions)

Appendix Table A4b: Annual Investment Flows in Commercial Property of Nonbank Affiliates in Hawaii and the United States by Industry of Affiliate (first differences of yearend stocks, US\$ millions)

Appendix Table A5a: Employment of Nonbank Affiliates in Hawaii by Country of Ultimate Beneficial Owner (thousands)

Appendix Table A5b: Employment of Nonbank Affiliates in the United States by Country of Ultimate Beneficial Owner (number)

Appendix Table A5c: Employment of Nonbank Affiliates in Hawaii by Industry of Affiliate (thousands)

Appendix Table A5d: Employment of Nonbank Affiliates in the United States by Industry of Affiliate (thousands)

Table A6a: The Number of Nonbank Affiliates in Hawaii by Size Class

Table A6b: The Number of Nonbank Affiliates in the United States by Size Class

Appendix B: Data on Large Multinationals in Hawaii based on Hawaii Business' Top 250

Table B1: Number of Employees in a Sample of Large Foreign Multinationals in Hawaii by Country of Owner and Industry of Operation

Table B2: Sales of a Sample of Large Foreign Multinationals in Hawaii by Country of Owner and Industry of Operation (US\$ millions)

Table B3: The Number of Firms in a Sample of Large Foreign Multinationals in Hawaii by Country of Owner and Industry of Operation

Appendix C: Data on Japanese Multinationals in Hawaii from Toyo Keizai

Appendix Table C1: Equity Stocks in Toyo Keizai's Sample of Japanese Affiliates at Yearend

Appendix Table C2: Employment in Toyo Keizai's Sample of Japanese Affiliates at Yearend

Appendix Table A1a: Yearend Stocks of Gross Property, Plant, and Equipment of Nonbank Affiliates in Hawaii by Country of Ultimate Beneficial Owner (US\$ millions)

Year	All countries	Asia & Pacific			Canada	Europe	Latin America	Other regions ^a
		Subtotal	Japan	Australia, etc. ^a				
1977	672	NA	374	1	31	83	D	NA
1978	742	NA	407	1	37	69	3	NA
1979	789	NA	445	1	51	109	5	NA
1980	1,020	NA	565	D	115	119	18	NA
1981	D	NA	664	2	94	134	16	NA
1982	D	NA	758	D	96	213	17	NA
1983	D	NA	1,098	D	93	D	18	NA
1984	1,691	NA	1,203	D	96	187	18	NA
1985	1,777	NA	1,278	102	99	129	20	NA
1986	2,013	NA	1,442	109	113	171	32	NA
1987	3,474	3,201	2,969	125	66	134	66	7
1988	4,990	4,570	4,235	136	78	261	73	8
1989	8,224	7,660	6,757	666	88	368	97	11
1990	11,830	10,872	9,960	D	68	759	119	12
1991	13,921	12,853	11,866	736	80	837	139	12
1992	15,454	14,630	13,601	738	121	487	209	7
1993	16,030	15,137	13,935	867	183	487	217	6
1994	16,185	15,289	13,948	858	198	454	230	14
1995	15,972	14,958	13,372	D	227	507	218	62
1996	15,324	14,342	12,980	D	55	677	172	78
1997	14,805	13,478	12,516	D	108	870	222	127
1998	12,453	11,033	10,552	34	119	900	274	127
1999 ^p	11,363	9,852	9,429	35	118	988	273	132

Notes:

^a = For 1977- 1986, New Zealand and South Africa are included with Australia; for 1987- 1999, New Zealand is included in the Asia & Pacific subtotal and South Africa is included in Other regions.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A1b: Yearend Stocks of Gross Property, Plant, and Equipment of Nonbank Affiliates in the United States by Country of Ultimate Beneficial Owner (US\$ millions)

Year	All countries	Asia & Pacific			Canada	Europe	Latin America	Other regions ^a
		Subtotal	Japan	Australia, etc. ^a				
1977	66,785	NA	2,691	552	11,582	48,225	2,429	NA
1978	80,633	NA	3,484	833	14,072	57,947	2,397	NA
1979	101,209	NA	4,401	1,032	16,830	73,556	2,896	NA
1980	127,838	NA	5,287	1,268	23,141	90,283	4,094	NA
1981	187,956	NA	6,803	3,073	47,968	117,783	5,571	NA
1982	225,235	NA	8,666	3,850	57,360	137,625	6,983	NA
1983	244,012	NA	10,892	4,407	61,928	144,516	8,710	NA
1984	269,462	NA	15,508	5,667	64,824	156,865	9,669	NA
1985	295,181	NA	18,438	7,169	67,984	173,263	10,132	NA
1986	320,215	NA	22,964	10,174	72,757	178,453	11,233	NA
1987	353,278	49,735	32,950	9,750	74,118	196,200	10,440	22,785
1988	418,069	66,271	48,603	10,994	89,976	224,229	10,916	26,677
1989	489,461	98,785	70,931	17,514	99,616	252,431	14,488	24,141
1990	578,355	133,535	98,891	21,612	105,890	294,386	16,687	27,857
1991	640,140	154,138	119,231	21,055	108,255	328,001	17,884	31,862
1992	660,826	164,204	134,784	13,803	95,955	345,805	19,544	35,318
1993	705,665	174,106	143,770	13,648	103,492	368,499	21,428	38,140
1994	754,383	186,976	156,203	11,920	105,913	393,848	24,629	43,017
1995	769,491	198,582	164,716	12,210	83,683	416,193	25,341	45,692
1996	825,695	214,540	171,936	17,292	76,344	455,939	27,323	51,549
1997	877,568	238,107	187,539	18,269	83,410	476,228	26,470	53,353
1998	990,332	245,173	195,770	17,159	94,817	567,748	33,148	49,446
1999p	1,069,209	243,584	193,203	18,219	102,411	634,501	44,437	44,276

Notes:

^a = For 1977- 1986, New Zealand and South Africa are included with Australia; for 1987- 1999, New Zealand is included in the Asia & Pacific subtotal and South Africa is included in Other regions.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A1c: Yearend Stocks of Gross Property, Plant, and Equipment of Nonbank Affiliates in Hawaii by Industry of Affiliate (US\$ millions)

Year	All industries	Manufac-turing ^a	Wholesale trade	Retail trade ^b	Real estate ^c	Other industries ^{a,b,c}		
						Subtotal	Finance & insurance	Informa-tion & profes-sional services
1977	672	8	5	54	233	372	1	NA
1978	742	12	8	57	246	419	2	NA
1979	789	14	7	65	256	447	2	NA
1980	1,020	D	17	52	431	D	D	NA
1981	D	24	D	D	494	D	3	NA
1982	D	38	24	80	584	D	D	NA
1983	D	40	28	253	558	D	11	NA
1984	1,691	73	56	274	605	683	6	NA
1985	1,777	103	60	281	584	749	5	NA
1986	2,013	157	61	280	713	802	5	NA
1987	3,474	129	44	297	991	2,013	D	NA
1988	4,990	201	91	322	1,739	2,637	11	NA
1989	8,224	247	179	340	2,380	5,078	25	NA
1990	11,830	368	189	490	3,868	6,915	32	NA
1991	13,921	386	212	535	4,069	8,719	95	NA
1992	15,454	290	D	564	5,075	D	239	NA
1993	16,030	296	258	570	4,907	9,999	D	NA
1994	16,185	308	257	597	4,615	10,408	324	NA
1995	15,972	319	168	626	4,374	10,485	D	NA
1996	15,324	279	181	739	4,167	9,958	D	NA
1997	14,805	228	203	705	4,049	9,620	199	148
1998	12,453	336	184	810	3,312	7,811	76	179
1999p	11,363	299	177	939	3,113	6,835	58	240

Notes:

^a = For 1977-1996, publishing is classified under manufacturing and petroleum and coal product manufactur is classified under other industries; for 1997-1999, publishing is classified under other industries and petroleum and coal product manufacturing is classified under manufacturing.

^b = For 1977-1996, eating and drinking is included in retail trade; for 1997-1999, this industry is included in other industries.

^c = For 1977-1996, rental and leasing (other than real estate) is included in other industries; for 1997-1999 this industry is included in real estate.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A1d: Yearend Stocks of Gross Property, Plant, and Equipment of Nonbank Affiliates in the United States by Industry of Affiliate (US\$ millions)

Year	All industries	Manufacturing ^a	Wholesale trade	Retail trade ^b	Real estate ^c	Other industries ^{a,b,c}		
						Subtotal	Finance & insurance	Information & professional services
1977	66,785	24,151	3,881	1,880	6,095	30,778	420	NA
1978	80,633	29,452	4,761	2,733	7,750	35,937	755	NA
1979	101,209	37,961	5,985	3,599	10,695	42,969	890	NA
1980	127,838	46,793	7,217	5,200	16,802	51,826	1,760	NA
1981	187,956	74,230	10,832	6,290	26,277	70,327	2,096	NA
1982	225,235	84,742	13,566	7,744	34,389	84,794	2,985	NA
1983	244,012	92,445	14,036	8,590	38,541	90,400	3,478	NA
1984	269,462	101,927	15,485	9,533	42,607	99,910	3,797	NA
1985	295,181	110,529	17,304	10,646	47,658	109,044	4,628	NA
1986	320,215	114,067	20,789	13,674	52,730	118,955	7,065	NA
1987	353,278	129,620	22,192	13,503	56,472	131,491	7,627	NA
1988	418,069	153,867	26,133	18,642	63,462	155,965	8,946	NA
1989	489,461	184,393	28,963	20,775	76,079	179,251	10,281	NA
1990	578,355	223,889	37,008	22,420	86,731	208,307	13,667	NA
1991	640,140	244,951	46,041	26,557	92,125	230,466	22,826	NA
1992	660,826	268,018	53,917	23,851	94,175	220,865	26,756	NA
1993	705,665	286,380	61,073	25,497	93,874	238,841	30,184	NA
1994	754,383	303,698	69,181	25,624	92,822	263,058	32,936	NA
1995	769,491	292,456	77,839	29,419	92,056	277,721	34,365	NA
1996	825,695	303,917	88,942	32,520	92,203	308,113	35,209	NA
1997	877,568	400,182	100,507	31,769	94,385	250,725	38,563	69,322
1998	990,332	506,474	104,795	34,348	100,377	244,338	41,039	63,361
1999p	1,069,209	540,825	99,287	37,694	108,546	282,857	51,872	83,917

Notes:

^a = For 1977-1996, publishing is classified under manufacturing and petroleum and coal product manufacturing is classified under other industries; for 1997-1999, publishing is classified under other industries and petroleum and coal product manufacturing is classified under manufacturing.

^b = For 1977-1996, eating and drinking is included in retail trade; for 1997-1999, this industry is included in other industries.

^c = For 1977-1996, rental and leasing (other than real estate) is included in other industries; for 1997-1999 this industry is included in real estate.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A2a: Annual Flows of Investment in Gross Property, Plant, and Equipment of Nonbank Affiliates in Hawaii by Country of Ultimate Beneficial Owner (first differences of stocks, US\$ millions)

Year	All countries	Asia & Pacific			Canada	Europe	Latin America	Other regions ^a
		Subtotal	Japan	Australia ^a				
1978	70	NA	33	0	6	-14	D	NA
1979	47	NA	38	0	14	40	2	NA
1980	231	NA	120	D	64	10	13	NA
1981	D	NA	99	D	-21	15	-2	NA
1982	D	NA	94	D	2	79	1	NA
1983	D	NA	340	D	-3	D	1	NA
1984	D	NA	105	D	3	D	0	NA
1985	86	NA	75	D	3	-58	2	NA
1986	236	NA	164	7	14	42	12	NA
1987	1,461	NA	1,527	16	-47	-37	34	NA
1988	1,516	1,369	1,266	11	12	127	7	1
1989	3,234	3,090	2,522	530	10	107	24	3
1990	3,606	3,212	3,203	D	-20	391	22	1
1991	2,091	1,981	1,906	D	12	78	20	0
1992	1,533	1,777	1,735	2	41	-350	70	-5
1993	576	507	334	129	62	0	8	-1
1994	155	152	13	-9	15	-33	13	8
1995	-213	-331	-576	D	29	53	-12	48
1996	-648	-616	-392	D	-172	170	-46	16
1997	-519	-864	-464	D	53	193	50	49
1998	-2,352	-2,445	-1,964	D	11	30	52	0
1999p	-1,090	-1,181	-1,123	1	-1	88	-1	5

Notes:

^a = For 1977-1986, New Zealand and South Africa are included with Australia; for 1987-1999, New Zealand is included in the Asia & Pacific subtotal and South Africa is included in Other regions.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A2b: Annual Flows of Investment in Gross Property, Plant, and Equipment of Nonbank Affiliates in the United States by Country of Ultimate Beneficial Owner (first differences of stocks, US\$ millions)

Year	All countries	Asia & Pacific			Canada	Europe	Latin America	Other regions ^a
		Subtotal	Japan	Australia ^a				
1978	13,848	NA	793	281	2,490	9,722	-32	NA
1979	20,576	NA	917	199	2,758	15,609	499	NA
1980	26,629	NA	886	236	6,311	16,727	1,198	NA
1981	60,118	NA	1,516	1,805	24,827	27,500	1,477	NA
1982	37,279	NA	1,863	777	9,392	19,842	1,412	NA
1983	18,777	NA	2,226	557	4,568	6,891	1,727	NA
1984	25,450	NA	4,616	1,260	2,896	12,349	959	NA
1985	25,719	NA	2,930	1,502	3,160	16,398	463	NA
1986	25,034	NA	4,526	3,005	4,773	5,190	1,101	NA
1987	33,063	NA	9,986	-424	1,361	17,747	-793	NA
1988	64,791	16,536	15,653	1,244	15,858	28,029	476	3,892
1989	71,392	32,514	22,328	6,520	9,640	28,202	3,572	-2,536
1990	88,894	34,750	27,960	4,098	6,274	41,955	2,199	3,716
1991	61,785	20,603	20,340	-557	2,365	33,615	1,197	4,005
1992	20,686	10,066	15,553	-7,252	-12,300	17,804	1,660	3,456
1993	44,839	9,902	8,986	-155	7,537	22,694	1,884	2,822
1994	48,718	12,870	12,433	-1,728	2,421	25,349	3,201	4,877
1995	15,108	11,606	8,513	290	-22,230	22,345	712	2,675
1996	56,204	15,958	7,220	5,082	-7,339	39,746	1,982	5,857
1997	51,873	23,567	15,603	977	7,066	20,289	-853	1,804
1998	112,764	7,066	8,231	-1,110	11,407	91,520	6,678	-3,907
1999 ^p	78,877	-1,589	-2,567	1,060	7,594	66,753	11,289	-5,170

Notes:

^a = For 1977-1986, New Zealand and South Africa are included with Australia; for 1987-1999, New Zealand is included in the Asia & Pacific subtotal and South Africa is included in Other regions.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A2c: Annual Flows of Investment in Gross Property, Plant, and Equipment of Nonbank Affiliates in Hawaii by Industry of Affiliate (first differences of yearend stocks, US\$ millions)

Year	All industries	Manufacturing ^a	Wholesale trade	Retail trade ^b	Real estate ^c	Other industries ^{a,b,c}		
						Subtotal	Finance & insurance	Information & professional services
1978	70	4	3	3	13	47	1	NA
1979	47	2	-1	8	10	28	0	NA
1980	231	D	10	-13	175	D	D	NA
1981	D	D	D	D	63	D	D	NA
1982	D	14	D	D	90	D	D	NA
1983	D	2	4	173	-26	D	D	NA
1984	D	33	28	21	47	D	-5	NA
1985	86	30	4	7	-21	66	-1	NA
1986	236	54	1	-1	129	53	0	NA
1987	1,461	-28	-17	17	278	1,211	D	NA
1988	1,516	72	47	25	748	624	D	NA
1989	3,234	46	88	18	641	2,441	14	NA
1990	3,606	121	10	150	1,488	1,837	7	NA
1991	2,091	18	23	45	201	1,804	63	NA
1992	1,533	-96	D	29	1,006	D	144	NA
1993	576	6	D	6	-168	D	D	NA
1994	155	12	-1	27	-292	409	D	NA
1995	-213	11	-89	29	-241	77	D	NA
1996	-648	-40	13	113	-207	-527	D	NA
1997	-519	-51	22	-34	-118	-338	D	NA
1998	-2,352	108	-19	105	-737	-1,809	-123	76
1999p	-1,090	-37	-7	129	-199	-976	-18	58

Notes:

^a = For 1977-1996, publishing is classified under manufacturing and petroleum and coal product manufacturing is classified under other industries; for 1997-1999, publishing is classified under other industries and petroleum and coal product manufacturing is classified under manufacturing.

^b = For 1977-1996, eating and drinking is included in retail trade; for 1997-1999, this industry is included in other industries.

^c = For 1977-1996, rental and leasing (other than real estate) is included in other industries; for 1997-1999 this industry is included in real estate.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A2d: Annual Flows of Investment in Gross Property, Plant, and Equipment of Nonbank Affiliates in the United States by Industry of Affiliate (first differences of yearend stocks, US\$ millions)

Year	All industries	Manufacturing ^a	Wholesale trade	Retail trade ^b	Real estate ^c	Other industries ^{a,b,c}		
						Subtotal	Finance & insurance	Information & professional services
1978	13,848	5,301	880	853	1,655	5,159	335	NA
1979	20,576	8,509	1,224	866	2,945	7,032	135	NA
1980	26,629	8,832	1,232	1,601	6,107	8,857	870	NA
1981	60,118	27,437	3,615	1,090	9,475	18,501	336	NA
1982	37,279	10,512	2,734	1,454	8,112	14,467	889	NA
1983	18,777	7,703	470	846	4,152	5,606	493	NA
1984	25,450	9,482	1,449	943	4,066	9,510	319	NA
1985	25,719	8,602	1,819	1,113	5,051	9,134	831	NA
1986	25,034	3,538	3,485	3,028	5,072	9,911	2,437	NA
1987	33,063	15,553	1,403	-171	3,742	12,536	562	NA
1988	64,791	24,247	3,941	5,139	6,990	24,474	1,319	NA
1989	71,392	30,526	2,830	2,133	12,617	23,286	1,335	NA
1990	88,894	39,496	8,045	1,645	10,652	29,056	3,386	NA
1991	61,785	21,062	9,033	4,137	5,394	22,159	9,159	NA
1992	20,686	23,067	7,876	-2,706	2,050	-9,601	3,930	NA
1993	44,839	18,362	7,156	1,646	-301	17,976	3,428	NA
1994	48,718	17,318	8,108	127	-1,052	24,217	2,752	NA
1995	15,108	-11,242	8,658	3,795	-766	14,663	1,429	NA
1996	56,204	11,461	11,103	3,101	147	30,392	844	NA
1997	51,873	96,265	11,565	-751	2,182	-57,388	3,354	NA
1998	112,764	106,292	4,288	2,579	5,992	-6,387	2,476	-5,961
1999p	78,877	34,351	-5,508	3,346	8,169	38,519	10,833	20,556

Notes:

^a = For 1977-1996, publishing is classified under manufacturing and petroleum and coal product manufacturing is classified under other industries; for 1997-1999, publishing is classified under other industries and petroleum and coal product manufacturing is classified under manufacturing.

^b = For 1977-1996, eating and drinking is included in retail trade; for 1997-1999, this industry is included in other industries.

^c = For 1977-1996, rental and leasing (other than real estate) is included in other industries; for 1997-1999 this industry is included in real estate.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A3a: Yearend Stocks of Commercial Property of Nonbank Affiliates in Hawaii and the United States by Country of Ultimate Beneficial Owner (US\$ millions)

Year	All countries	Asia & Pacific			Canada	Europe	Latin America	Other regions
		Subtotal	Japan	Australia				
HAWAII								
1987	2,848	2,703	2,564	57	32	75	36	2
1988	3,316	3,111	2,900	55	34	96	71	4
1989	5,169	4,885	4,642	55	49	142	88	5
1990	8,599	8,131	7,924	22	31	367	D	D
1991	9,923	9,427	9,221	23	32	388	D	D
1992	10,939	10,451	10,206	23	D	275	D	D
1993	10,828	10,447	10,182	23	D	251	109	D
1994	11,210	10,805	10,421	19	D	283	D	D
1995	10,861	10,422	10,057	20	D	311	88	D
1996	10,546	10,110	9,744	27	D	314	82	D
1997	10,750	10,133	9,659	D	36	463	110	8
1998	9,213	8,536	8,186	26	5	497	168	7
1999p	8,343	7,738	7,435	26	5	428	158	14
UNITED STATES								
1987	89,919	19,596	14,096	2,101	22,509	35,339	3,385	9,090
1988	104,048	25,084	18,695	2,818	23,472	40,745	3,504	11,243
1989	124,839	36,790	30,033	2,795	27,239	44,538	4,650	11,622
1990	146,520	49,323	40,995	2,386	29,936	51,212	4,480	11,569
1991	165,759	56,355	47,828	1,966	29,657	61,442	4,672	13,633
1992	172,613	61,624	52,140	1,980	23,597	67,790	5,025	14,577
1993	173,867	61,438	52,062	1,815	22,304	70,065	5,150	14,910
1994	173,118	62,712	52,230	2,232	21,220	67,875	6,078	15,233
1995	168,393	62,025	51,421	2,423	20,181	65,402	5,828	14,957
1996	167,577	59,030	45,853	3,620	18,582	67,148	5,744	17,073
1997	170,271	60,485	47,194	4,244	21,452	68,519	5,075	14,740
1998	180,351	58,046	44,393	5,020	21,465	86,154	5,860	8,826
1999p	181,198	55,922	41,468	5,277	24,515	85,729	6,656	8,376

Notes:

D = not disclosed.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A3b: Yearend Stocks of Commercial Property of Nonbank Affiliates in Hawaii and the United States by Industry of Affiliate (US\$ millions)

Year	All industries	Manufac-turing ^a	Wholesale trade	Retail trade ^b	Real estate ^c	Other industries ^{a,b,c}		
						Subtotal	Finance & insurance	Informa-tion & profes-sional services
HAWAII								
1987	2,848	24	33	274	676	1,841	D	NA
1988	3,316	17	70	301	1,271	1,657	0	NA
1989	5,169	17	115	318	1,777	2,942	D	NA
1990	8,599	16	125	377	3,117	4,964	D	NA
1991	9,923	11	139	393	3,247	6,133	D	NA
1992	10,939	57	101	419	3,425	6,937	209	NA
1993	10,828	22	102	415	3,482	6,807	235	NA
1994	11,210	23	81	434	3,331	7,341	198	NA
1995	10,861	D	45	436	3,065	D	148	NA
1996	10,546	28	51	483	2,668	7,316	115	NA
1997	10,750	37	59	367	3,095	7,192	131	5
1998	9,213	110	82	478	2,521	6,022	0	5
1999p	8,343	33	75	536	2,436	5,263	0	9
UNITED STATES								
1987	89,919	7,683	5,850	7,578	49,760	19,048	3,342	NA
1988	104,048	9,560	5,854	10,307	56,563	21,764	3,638	NA
1989	124,839	11,256	5,902	11,424	69,080	27,177	4,371	NA
1990	146,520	8,860	7,211	13,562	80,285	36,602	4,246	NA
1991	165,759	8,963	8,234	16,171	84,862	47,529	11,046	NA
1992	172,613	9,795	9,719	14,314	86,357	52,428	12,470	NA
1993	173,867	11,386	9,381	15,202	86,005	51,893	13,483	NA
1994	173,118	11,125	8,010	15,789	84,885	53,309	13,160	NA
1995	168,393	9,528	7,637	15,508	83,751	51,969	12,177	NA
1996	167,577	8,677	8,857	16,900	80,207	52,936	10,324	NA
1997	170,271	16,464	8,196	16,879	80,108	48,624	10,288	3,582
1998	180,351	29,496	8,720	17,746	85,101	39,288	9,288	3,410
1999p	181,198	24,230	9,124	16,716	89,970	41,158	9,009	5,364

Notes:

^a = For 1987-1996, publishing is classified under manufacturing and petroleum and coal product manufactur is classified under other industries; for 1997-1999, publishing is classified under other industries and petroleum and coal product manufacturing is classified under manufacturing.

^b = For 1987-1996, eating and drinking is included in retail trade; for 1997-1999, this industry is included in other industries.

^c = For 1987-1996, rental and leasing (other than real estate) is included in other industries; for 1997-1999 this industry is included in real estate.

D = not disclosed. NA = not available. p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A4a: Annual Flows of Investment in Commercial Property of Nonbank Affiliates in Hawaii and the United States by Country of Ultimate Beneficial Owner (first differences of yearend stocks, US\$ millions)

Year	All countries	Asia & Pacific			Canada	Europe	Latin America	Other regions
		Subtotal	Japan	Australia				
HAWAII								
1988	468	408	336	-2	2	21	35	2
1989	1,853	1,774	1,742	0	15	46	17	1
1990	3,430	3,246	3,282	-33	-18	225	D	D
1991	1,324	1,296	1,297	1	1	21	D	D
1992	1,016	1,024	985	0	D	-113	D	D
1993	-111	-4	-24	0	D	-24	D	D
1994	382	358	239	-4	D	32	D	D
1995	-349	-383	-364	1	D	28	D	D
1996	-315	-312	-313	7	D	3	-6	D
1997	204	23	-85	D	D	149	28	D
1998	-1,537	-1,597	-1,473	D	-31	34	58	-1
1999p	-870	-798	-751	0	0	-69	-10	7
UNITED STATES								
1988	14,129	5,488	4,599	717	963	5,406	119	2,153
1989	20,791	11,706	11,338	-23	3,767	3,793	1,146	379
1990	21,681	12,533	10,962	-409	2,697	6,674	-170	-53
1991	19,239	7,032	6,833	-420	-279	10,230	192	2,064
1992	6,854	5,269	4,312	14	-6,060	6,348	353	944
1993	1,254	-186	-78	-165	-1,293	2,275	125	333
1994	-749	1,274	168	417	-1,084	-2,190	928	323
1995	-4,725	-687	-809	191	-1,039	-2,473	-250	-276
1996	-816	-2,995	-5,568	1,197	-1,599	1,746	-84	2,116
1997	2,694	1,455	1,341	624	2,870	1,371	-669	-2,333
1998	10,080	-2,439	-2,801	776	13	17,635	785	-5,914
1999p	847	-2,124	-2,925	257	3,050	-425	796	-450

Notes:

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A4b: Annual Investment Flows in Commercial Property of Nonbank Affiliates in Hawaii and the United States by Industry of Affiliate (first differences of yearend stocks, US\$ millions)

Year	All industries	Manufac-turing ^a	Wholesale trade	Retail trade ^b	Real estate ^c	Other industries ^{a,b,c}		
						Subtotal	Finance & insurance	Informa-tion & profes-sional services
HAWAII								
1988	468	-7	37	27	595	-184	D	NA
1989	1,853	0	45	17	506	1,285	D	NA
1990	3,430	-1	10	59	1,340	2,022	D	NA
1991	1,324	-5	14	16	130	1,169	D	NA
1992	1,016	46	-38	26	178	804	D	NA
1993	-111	-35	1	-4	57	-130	26	NA
1994	382	1	-21	19	-151	534	-37	NA
1995	-349	D	-36	2	-266	D	-50	NA
1996	-315	D	6	47	-397	D	-33	NA
1997	204	9	8	-116	427	-124	16	NA
1998	-1,537	73	23	111	-574	-1,170	-131	0
1999p	-870	-77	-7	58	-85	-759	0	4
UNITED STATES								
1988	14,129	1,877	4	2,729	6,803	2,716	296	NA
1989	20,791	1,696	48	1,117	12,517	5,413	733	NA
1990	21,681	-2,396	1,309	2,138	11,205	9,425	-125	NA
1991	19,239	103	1,023	2,609	4,577	10,927	6,800	NA
1992	6,854	832	1,485	-1,857	1,495	4,899	1,424	NA
1993	1,254	1,591	-338	888	-352	-535	1,013	NA
1994	-749	-261	-1,371	587	-1,120	1,416	-323	NA
1995	-4,725	-1,597	-373	-281	-1,134	-1,340	-983	NA
1996	-816	-851	1,220	1,392	-3,544	967	-1,853	NA
1997	2,694	7,787	-661	-21	-99	-4,312	-36	NA
1998	10,080	13,032	524	867	4,993	-9,336	-1,000	-172
1999p	847	-5,266	404	-1,030	4,869	1,870	-279	1,954

Notes:

^a = For 1988-1996, publishing is classified under manufacturing and petroleum and coal product manufactur is classified under other industries; for 1997-1999, publishing is classified under other industries and petroleum and coal product manufacturing is classified under manufacturing.

^b = For 1988-1996, eating and drinking is included in retail trade; for 1997-1999, this industry is included in other industries.

^c = For 1988-1996, rental and leasing (other than real estate) is included in other industries; for 1997-1999 this industry is included in real estate.

D = not disclosed. NA = not available. p = preliminary (1999 estimates are preliminary).

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A5a: Employment of Nonbank Affiliates in Hawaii by Country of Ultimate Beneficial Owner (thousands)

Year	All countries	Asia & Pacific			Canada	Europe	Latin America	Other regions ^a
		Subtotal	Japan	Australia ^a				
1977	11.4	NA	7.3	0.1	0.3	0.5	D	NA
1978	11.9	NA	7.2	D	0.4	0.8	D	NA
1979	14.7	NA	8.6	D	0.6	1.3	D	NA
1980	15.5	NA	9.0	D	0.7	1.5	D	NA
1981	17.0	NA	9.1	D	0.7	1.6	1.1	NA
1982	16.4	NA	9.3	0.4	0.6	2.2	D	NA
1983	16.3	NA	9.7	D	0.6	1.7	0.7	NA
1984	16.5	NA	9.8	D	0.5	2.2	0.8	NA
1985	18.7	NA	11.7	D	0.5	1.6	0.8	NA
1986	18.4	NA	10.9	1.1	0.7	1.8	2.1	NA
1987	27.3	22.8	20.6	1.4	0.7	1.0	D	D
1988	34.8	27.2	24.3	1.5	0.8	3.2	3.5	0.1
1989	45.0	36.1	30.3	2.6	0.8	4.0	3.7	0.4
1990	53.0	42.3	36.0	2.7	0.7	6.2	3.6	0.2
1991	56.0	44.8	38.3	3.2	0.7	6.1	4.0	0.4
1992	53.8	42.1	36.5	3.3	0.5	6.5	4.0	0.7
1993	52.4	43.1	37.5	3.5	1.5	3.6	4.0	0.2
1994	50.8	40.4	37.0	1.4	1.4	4.0	4.7	0.3
1995	48.9	37.7	34.3	1.7	1.6	4.3	4.6	0.7
1996	47.5	36.0	32.6	1.5	0.9	6.8	2.9	0.9
1997	50.2	37.5	34.0	1.0-2.499	1.5	7.0	2.9	1.3
1998	43.4	31.4	30.0	0.0	1.1	6.2	3.7	1.0
1999p	44.4	31.4	29.8	0.0	0.9	7.3	3.7	1.1

Notes:

^a = For 1977- 1986, New Zealand and South Africa are included with Australia; for 1987- 1999, New Zealand is included in the Asia & Pacific subtotal and South Africa is included in Other regions.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A5b: Employment of Nonbank Affiliates in the United States by Country of Ultimate Beneficial Owner (thousands)

Year	All countries	Asia & Pacific			Canada	Europe	Latin America	Other regions ^a
		Subtotal	Japan	Australia ^a				
1977	1,218.7	NA	76.2	19.6	189.3	855.6	54.5	NA
1978	1,429.9	NA	89.9	21.8	221.2	1,013.4	54.7	NA
1979	1,753.2	NA	105.9	28.1	255.5	1,266.0	60.1	NA
1980	2,033.9	NA	115.3	29.2	290.0	1,477.1	74.5	NA
1981	2,416.6	NA	138.1	49.4	437.4	1,628.4	74.7	NA
1982	2,448.1	NA	139.9	53.9	455.4	1,640.4	73.7	NA
1983	2,546.5	NA	164.1	53.7	473.5	1,658.0	96.0	NA
1984	2,714.3	NA	190.0	63.0	507.1	1,735.6	114.7	NA
1985	2,862.2	NA	212.8	73.3	527.5	1,806.0	122.1	NA
1986	2,937.9	NA	220.8	91.5	609.2	1,783.2	128.0	NA
1987	3,224.3	456.0	303.2	91.7	592.9	1,940.4	148.5	86.5
1988	3,844.2	584.4	427.1	97.6	737.9	2,301.3	119.3	101.3
1989	4,511.5	761.5	528.0	155.1	721.4	2,711.1	227.7	89.8
1990	4,734.5	890.6	629.2	166.2	739.1	2,894.6	134.5	75.7
1991	4,871.9	959.6	719.4	155.0	724.1	2,979.5	133.2	75.5
1992	4,715.4	958.4	727.6	138.3	587.5	2,894.9	129.7	144.9
1993	4,765.6	966.4	731.1	140.1	669.9	2,889.7	141.3	98.3
1994	4,840.5	923.4	744.8	70.5	661.9	2,974.0	159.1	122.1
1995	4,941.8	958.4	761.9	73.0	708.8	2,992.6	168.6	113.4
1996	5,105.0	994.7	788.8	79.6	608.9	3,196.6	146.6	158.2
1997	5,201.9	1,013.9	812.3	81.2	616.4	3,233.8	168.7	169.1
1998	5,646.1	1,032.2	837.5	83.8	665.9	3,566.6	223.2	158.2
1999 ^p	6,003.3	1,018.3	834.2	84.8	665.2	3,901.1	290.7	128.0

Notes:

^a = For 1977- 1986, New Zealand and South Africa are included with Australia; for 1987- 1999, New Zealand is included in the Asia & Pacific subtotal and South Africa is included in Other regions.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A5c: Employment of Nonbank Affiliates in Hawaii by Industry of Affiliate
(thousands)

Year	All industries	Manufac- turing ^a	Wholesale trade	Retail trade ^b	Real estate ^c	Other industries ^{a,b,c}		
						Subtotal	Finance & insurance	Informa- tion & profes- sional services
1977	11.4	0.6	0.4	2.9	0.2	7.3	0.2	NA
1978	11.9	0.8	0.6	3.2	0.2	7.1	0.2	NA
1979	14.7	1.3	0.7	4.0	0.3	8.4	0.2	NA
1980	15.5	1.3	0.8	4.0	0.5	8.9	D	NA
1981	17.0	1.3	0.8	5.4	0.8	8.7	0.4	NA
1982	16.4	1.9	0.7	4.2	0.7	8.9	D	NA
1983	16.3	1.4	0.8	4.5	0.7	8.9	0.5	NA
1984	16.5	2.0	2.0	4.4	0.5	7.6	0.5	NA
1985	18.7	2.0	1.8	5.0	1.0	8.9	0.5	NA
1986	18.4	2.4	2.0	4.5	1.3	8.2	0.4	NA
1987	27.3	1.3	1.3	5.1	0.6	19.0	1.6	NA
1988	34.8	2.1	2.9	5.3	1.8	22.7	0.6	NA
1989	45.0	2.3	4.0	5.3	2.0	31.4	1.2	NA
1990	53.0	2.8	4.2	7.1	3.5	35.4	1.2	NA
1991	56.0	2.7	4.7	D	D	D	1.3	NA
1992	53.8	3.5	4.1	7.8	3.1	35.3	D	NA
1993	52.4	2.3	4.2	7.8	3.4	34.7	1.1	NA
1994	50.8	2.4	3.5	7.8	2.6	34.5	1.1	NA
1995	48.9	2.4	1.9	9.1	2.6	32.9	0.6-1.099	NA
1996	47.5	2.2	1.5	5.0-9.999	2.2	31.601-36.6	1.0	NA
1997	50.2	2.0	2.0	6.6	3.2	36.4	1.0	0.6
1998	43.4	2.4	1.8	6.4	1.8	31.0	1.0	0.8
1999p	44.4	2.6	1.7	6.6	1.7	31.8	1.0	1.0

Notes:

^a = For 1977-1996, publishing is classified under manufacturing and petroleum and coal product manufactur is classified under other industries; for 1997-1999, publishing is classified under other industries and petroleum and coal product manufacturing is classified under manufacturing.

^b = For 1977-1996, eating and drinking is included in retail trade; for 1997-1999, this industry is included in other industries.

^c = For 1977-1996, rental and leasing (other than real estate) is included in other industries; for 1997-1999 this industry is included in real estate.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Appendix Table A5d: Employment of Nonbank Affiliates in United States by Industry of Affiliate (thousands)

Year	All industries	Manufacturing ^a	Wholesale trade	Retail trade ^b	Real estate ^c	Other industries ^{a,b,c}		
						Subtotal	Finance & insurance	Information & professional services
1977	1,218.7	685.6	153.0	142.0	8.1	230.0	42.9	NA
1978	1,429.9	804.0	171.8	171.7	10.6	271.8	48.5	NA
1979	1,753.2	1,006.1	195.9	235.8	21.8	293.6	58.6	NA
1980	2,033.9	1,105.0	217.2	304.2	19.7	387.8	D	NA
1981	2,416.6	1,300.0	254.0	344.0	28.7	489.9	86.0	NA
1982	2,448.1	1,241.6	280.1	397.7	25.7	503.0	D	NA
1983	2,546.5	1,321.5	269.5	419.8	26.6	509.1	105.1	NA
1984	2,714.3	1,381.5	287.4	457.0	27.2	561.2	104.5	NA
1985	2,862.2	1,455.2	294.6	481.5	30.8	600.1	116.4	NA
1986	2,937.9	1,411.6	308.0	561.1	32.1	625.1	130.4	NA
1987	3,224.3	1,542.6	321.9	558.7	33.9	767.2	171.3	NA
1988	3,844.2	1,828.6	364.8	678.4	36.3	936.1	200.7	NA
1989	4,511.5	2,138.6	398.7	803.9	38.1	1,132.2	206.5	NA
1990	4,734.5	2,220.7	429.9	744.7	43.3	1,295.9	187.1	NA
1991	4,871.9	2,233.6	448.3	D	D	D	210.8	NA
1992	4,715.4	2,252.0	438.2	710.9	38.0	1,276.3	D	NA
1993	4,765.6	2,241.2	450.9	740.9	38.4	1,294.2	199.7	NA
1994	4,840.5	2,309.5	438.0	712.8	28.7	1,351.5	198.0	NA
1995	4,941.8	2,281.9	460.0	764.5	26.6	1,408.8	194.4	NA
1996	5,105.0	2,291.5	490.9	811.0	26.0	1,485.6	202.1	NA
1997	5,201.9	2,258.0	509.7	683.6	39.8	1,710.8	225.1	377.2
1998	5,646.1	2,547.0	520.7	685.1	40.9	1,852.4	235.1	378.9
1999p	6,003.3	2,616.7	518.4	737.0	52.2	2,079.0	263.6	451.5

Notes:

^a = For 1977-1996, publishing is classified under manufacturing and petroleum and coal product manufacturing is classified under other industries; for 1997-1999, publishing is classified under other industries and petroleum and coal product manufacturing is classified under manufacturing.

^b = For 1977-1996, eating and drinking is included in retail trade; for 1997-1999, this industry is included in other industries.

^c = For 1977-1996, rental and leasing (other than real estate) is included in other industries; for 1997-1999 this industry is included in real estate.

D = not disclosed.

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Table A6a: The Number of Nonbank Affiliates in Hawaii by Size Class

Year	Affiliates with Gross Property, Plant, and Equipment					Affiliates with Employment				
	All firms	10-49 mil.	10-99 mil.	50 mil.+	100 mil. +	All firms	100-999	101-1,000	1,000+	1,001+
1977	125	16	NA	2	NA	131	NA	15	NA	2
1978	144	12	NA	4	NA	143	NA	17	NA	3
1979	155	19	NA	3	NA	161	NA	22	NA	3
1980	179	19	NA	4	NA	173	NA	26	NA	3
1981	191	21	NA	5	NA	179	NA	29	NA	3
1982	207	32	NA	5	NA	183	NA	27	NA	3
1983	212	30	NA	7	NA	190	NA	28	NA	3
1984	215	32	NA	7	NA	191	NA	26	NA	3
1985	223	35	NA	6	NA	192	NA	30	NA	3
1986	239	36	NA	9	NA	199	NA	28	NA	3
1987	256	NA	43	NA	8	215	28	NA	8	NA
1988	306	NA	55	NA	13	261	42	NA	8	NA
1989	377	NA	83	NA	20	306	58	NA	10	NA
1990	449	NA	105	NA	31	359	63	NA	13	NA
1991	500	NA	120	NA	33	384	67	NA	14	NA
1992	685	NA	151	NA	35	448	77	NA	14	NA
1993	690	NA	152	NA	36	459	79	NA	12	NA
1994	691	NA	153	NA	35	471	83	NA	10	NA
1995	694	NA	141	NA	34	473	84	NA	11	NA
1996	685	NA	143	NA	32	469	78	NA	11	NA
1997	497	NA	128	NA	32	407	81	NA	10	NA
1998	475	NA	112	NA	30	397	73	NA	7	NA
1999p	451	NA	112	NA	25	377	78	NA	6	NA

Notes:

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Table A6b: The Number of Nonbank Affiliates in the United States by Size Class

Year	Affiliates with Gross Property, Plant, and Equipment					Affiliates with Employment				
	All firms	10-49 mil.	10-99 mil.	50 mil.+	100 mil. +	All firms	100-999	101-1,000	1,000+	1,001+
1977	3,827	399	NA	166	NA	2,999	NA	837	NA	204
1978	4,580	488	NA	196	NA	3,410	NA	960	NA	222
1979	5,168	575	NA	247	NA	3,694	NA	1,040	NA	268
1980	6,822	738	NA	317	NA	4,419	NA	1,136	NA	317
1981	7,756	917	NA	419	NA	4,790	NA	1,251	NA	371
1982	8,499	1,055	NA	510	NA	5,121	NA	1,295	NA	373
1983	8,860	1,185	NA	572	NA	5,288	NA	1,368	NA	389
1984	9,171	1,282	NA	623	NA	5,407	NA	1,463	NA	411
1985	9,392	1,368	NA	679	NA	5,528	NA	1,523	NA	434
1986	9,656	1,436	NA	751	NA	5,716	NA	1,625	NA	452
1987	7,451	NA	1,669	NA	507	5,525	1,567	NA	526	NA
1988	7,928	NA	1,916	NA	585	5,867	1,740	NA	602	NA
1989	8,718	NA	2,287	NA	691	6,407	1,936	NA	683	NA
1990	9,517	NA	2,632	NA	816	6,959	2,120	NA	745	NA
1991	9,971	NA	2,806	NA	885	7,303	2,269	NA	750	NA
1992	10,882	NA	2,925	NA	935	8,489	2,397	NA	758	NA
1993	11,125	NA	2,965	NA	986	8,631	2,423	NA	768	NA
1994	11,333	NA	3,061	NA	1,002	8,773	2,514	NA	770	NA
1995	11,529	NA	3,103	NA	1,027	8,902	2,516	NA	781	NA
1996	11,675	NA	3,092	NA	1,080	9,030	2,509	NA	801	NA
1997	8,602	NA	2,662	NA	1,117	7,445	2,412	NA	806	NA
1998	8,436	NA	2,587	NA	1,131	7,300	2,377	NA	843	NA
1999p	8,368	NA	2,545	NA	1,167	7,211	2,307	NA	836	NA

Notes:

NA = not available.

p = preliminary (1999 estimates are preliminary)

Sources:

U.S. Department of Commerce, Bureau of Economic Analysis (various years a, various years b).

Table B1: Number of Employees in a Sample of Large Foreign Multinationals in Hawaii by Country of Owner and Industry of Operation

Country, industry	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ALL COUNTRIES-all	11,514	14,435	15,208	19,821	22,199	25,267	28,146	28,888	28,124	23,387	24,383	23,674	23,627	25,806	21,334	22,218	19,162	18,251
Manufacturing, food	300	300	300	365	540	570	538	615	660	640	635	597	630	640	410	410	410	407
Manufacturing, oil	0	0	0	0	0	0	1,129	1,215	1,250	1,250	1,120	1,128	1,000	1,000	0	0	0	0
Manufacturing, other	0	0	200	237	292	300	335	0	0	0	0	0	0	0	0	0	0	0
Wholesale trade	1,942	1,952	2,003	1,893	2,320	2,212	1,596	1,608	1,710	1,602	881	536	464	512	501	530	537	557
Retail trade, general	1,260	1,110	1,020	1,068	1,068	1,045	1,080	1,200	1,200	1,220	1,270	1,260	1,415	2,220	1,229	1,333	1,391	1,447
Retail trade, specialized	2,279	2,856	3,282	3,982	2,533	2,855	3,386	4,016	3,759	1,840	2,660	2,586	2,421	2,667	2,151	2,503	2,494	2,415
Eating, drinking	0	0	0	1,400	2,239	1,800	1,850	1,480	1,375	890	760	680	0	0	0	0	0	0
Real estate	0	0	0	266	297	300	350	300	350	330	33	48	13	10	10	10	10	11
Finance & insurance	103	72	73	76	90	143	678	1,155	1,213	1,100	1,116	1,026	1,046	1,056	1,019	940	982	877
Hotels	5,350	7,865	7,980	10,174	11,838	13,573	12,579	10,711	11,148	11,494	13,199	13,128	13,507	14,555	12,881	13,808	11,611	10,813
Travel services	0	0	0	0	0	0	0	0	65	261	255	489	926	1,130	1,313	1,080	1,042	1,011
Transport services	280	280	350	360	360	179	185	330	342	340	332	531	336	341	340	340	330	293
Construction	0	0	0	0	622	2,290	4,440	6,258	5,052	2,420	1,970	1,665	1,869	1,675	1,480	1,264	355	420
Other services	0	0	0	0	0	0	0	0	0	0	152	0	0	0	0	0	0	0
JAPAN-all	8,664	10,168	10,178	13,575	16,717	18,091	17,849	17,302	17,988	17,125	17,720	17,861	18,635	20,485	17,833	18,594	16,387	15,241
Manufacturing, food	300	300	300	295	470	420	468	465	460	440	435	397	410	410	410	410	410	407
Manufacturing, oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manufacturing, other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wholesale trade	1,342	1,382	1,433	1,253	1,455	1,392	878	840	855	747	266	266	263	298	295	354	359	362
Retail trade, general	1,260	1,110	1,020	1,068	1,068	1,045	1,080	1,200	1,200	1,220	1,270	1,260	1,415	2,220	1,229	1,333	1,391	1,447
Retail trade, specialized	29	29	32	32	33	35	120	270	207	140	60	55	57	117	94	39	37	37
Eating, drinking	0	0	0	1,400	2,239	1,800	1,850	1,480	1,375	890	760	680	0	0	0	0	0	0
Real estate	0	0	0	266	297	300	350	300	350	330	33	48	13	10	10	10	10	10
Finance & insurance	103	72	73	76	90	143	678	1,012	1,070	969	996	918	908	921	911	865	842	733
Hotels	5,350	6,995	6,970	8,825	10,705	12,277	11,500	10,097	10,687	10,568	12,398	12,712	13,507	14,555	12,881	13,808	11,611	10,521
Travel services	0	0	0	0	0	0	0	0	65	261	255	489	926	1,130	1,313	1,080	1,042	1,011
Transport services	280	280	350	360	360	179	185	330	342	340	332	331	336	341	340	340	330	293
Construction	0	0	0	0	0	500	740	1,308	1,377	1,220	915	705	800	483	350	355	355	420
Other services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B1: (continued)

Country, industry	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
OTHER COUNTRIES-all	2,850	4,267	5,030	6,246	5,482	7,176	10,297	11,586	10,136	6,262	6,663	5,813	4,992	5,321	3,501	3,624	2,775	3,010
Manufacturing, food	0	0	0	70	70	150	70	150	200	200	200	200	220	230	0	0	0	0
Manufacturing, oil	0	0	0	0	0	0	1,129	1,215	1,250	1,250	1,120	1,128	1,000	1,000	0	0	0	0
Manufacturing, other	0	0	200	237	292	300	335	0	0	0	0	0	0	0	0	0	0	0
Wholesale trade	600	570	570	640	865	820	718	768	855	855	615	270	201	214	206	176	178	195
Retail trade, general	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail trade, specialized	2,250	2,827	3,250	3,950	2,500	2,820	3,266	3,746	3,552	1,700	2,600	2,531	2,364	2,550	2,057	2,464	2,457	2,378
Eating, drinking	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Real estate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Finance & insurance	0	0	0	0	0	0	0	143	143	131	120	108	138	135	108	75	140	144
Hotels	0	870	1,010	1,349	1,133	1,296	1,079	614	461	926	801	416	0	0	0	0	0	292
Travel services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transport services	0	0	0	0	0	0	0	0	0	0	0	200	0	0	0	0	0	0
Construction	0	0	0	0	622	1,790	3,700	4,950	3,675	1,200	1,055	960	1,069	1,192	1,130	909	0	0
Other services	0	0	0	0	0	0	0	0	0	0	152	0	0	0	0	0	0	0
EUROPE-all	130	990	1,130	1,255	1,114	1,220	1,247	925	764	762	838	676	326	339	307	248	238	246
CANADA-all	150	250	250	0	0	0	0	0	0	0	0	13	13	10	7	3	80	93
OTHER ASIA & PAC.-all	2,570	3,027	3,650	4,991	4,368	5,956	9,050	10,661	9,372	5,500	5,825	5,124	4,653	4,972	3,187	3,373	2,457	2,671
AUSTRALIA-all	470	450	650	1,041	1,246	2,346	3,420	4,185	3,645	2,135	1,770	1,433	1,220	1,230	0	0	0	0
NEW ZEALAND-all	0	0	0	0	622	790	2,364	2,730	2,175	1,200	1,055	960	1,069	1,192	1,130	909	0	0
HONG KONG-all	2,100	2,577	3,000	3,950	2,500	2,820	3,266	3,746	3,552	2,165	3,000	2,531	2,364	2,550	2,057	2,464	2,457	2,670
KOREA-all	0	0	0	0	0	0	0	0	0	0	0	200	0	0	0	0	0	1

Sources: Hawaii Business (various years); State of Hawaii, Department of Business, Economic Development & Tourism (1995); Toyo Keizai (various years); author's estimates based on these sources.

Table B2: Sales of a Sample of Large Foreign Multinationals in Hawaii by Country of Owner and Industry of Operation (US\$ millions)

Country, industry	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ALL COUNTRIES-all	876	1,016	1,120	1,414	1,873	2,431	5,300	7,130	5,095	4,823	4,083	4,306	4,453	4,844	3,954	3,926	3,669	3,879
Manufacturing, food	20	20	22	39	71	78	88	86	83	84	91	87	90	83	62	66	66	66
Manufacturing, oil	0	0	0	0	0	0	2,300	3,900	1,600	1,700	1,141	1,114	1,104	1,072	0	0	0	0
Manufacturing, other	0	0	31	50	51	65	85	0	0	0	0	0	0	0	0	0	0	0
Wholesale trade	149	181	198	206	239	263	382	330	361	398	246	233	183	236	240	179	228	298
Retail trade, general	143	161	138	132	136	148	157	173	180	190	186	184	248	273	289	275	276	287
Retail trade, specialized	300	286	333	381	359	328	359	432	343	331	320	330	323	340	367	368	425	461
Eating, drinking	0	0	0	31	70	67	53	46	45	29	28	29	0	0	0	0	0	0
Real estate	0	0	0	32	51	33	43	68	52	47	44	53	37	16	19	31	36	63
Finance & insurance	21	25	27	20	18	36	150	273	323	336	334	349	324	317	319	344	440	460
Hotels	225	316	345	494	714	974	952	810	868	991	1,012	1,070	1,089	1,297	1,285	1,380	1,215	1,246
Travel services	0	0	0	0	0	0	0	0	40	69	64	377	612	763	1,015	832	827	842
Transport services	19	27	27	30	25	26	27	66	56	53	56	88	71	70	68	87	91	83
Construction	0	0	0	0	140	412	704	947	1,145	595	546	394	374	377	291	366	64	75
Other services	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0
JAPAN-all	581	712	727	931	1,240	1,638	1,875	1,984	2,178	2,232	2,130	2,413	2,683	3,122	3,281	3,221	3,141	3,283
Manufacturing, food	20	20	22	23	55	55	58	65	65	64	65	63	64	61	62	66	66	66
Manufacturing, oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manufacturing, other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wholesale trade	91	117	124	132	134	140	245	192	199	197	79	81	84	135	140	136	185	250
Retail trade, general	143	161	138	132	136	148	157	173	180	190	186	184	248	273	289	275	276	287
Retail trade, specialized	63	85	90	102	100	112	108	134	119	122	103	117	115	116	111	103	132	149
Eating, drinking	0	0	0	31	70	67	53	46	45	29	28	29	0	0	0	0	0	0
Real estate	0	0	0	32	51	33	43	68	52	47	44	53	37	16	19	31	36	44
Finance & insurance	21	25	27	20	18	36	150	210	258	258	264	252	229	227	226	244	248	268
Hotels	225	277	299	430	653	908	901	785	843	951	969	1,047	1,089	1,297	1,285	1,380	1,215	1,221
Travel services	0	0	0	0	0	0	0	0	40	69	64	377	612	763	1,015	832	827	842
Transport services	19	27	27	30	25	26	27	66	56	53	56	69	71	70	68	87	91	83
Construction	0	0	0	0	0	112	133	246	321	252	272	142	135	165	68	68	64	75
Other services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B2: (continued)

Country, industry	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
OTHER COUNTRIES-all	295	304	393	483	632	793	3,425	5,145	2,918	2,591	1,953	1,893	1,770	1,722	672	706	529	596
Manufacturing, food	0	0	0	16	17	23	30	21	18	20	26	24	26	22	0	0	0	0
Manufacturing, oil	0	0	0	0	0	0	2,300	3,900	1,600	1,700	1,141	1,114	1,104	1,072	0	0	0	0
Manufacturing, other	0	0	31	50	51	65	85	0	0	0	0	0	0	0	0	0	0	0
Wholesale trade	58	64	74	74	105	123	137	138	162	201	166	152	98	101	100	43	44	48
Retail trade, general	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail trade, specialized	237	201	243	279	259	216	251	298	224	209	217	213	208	225	256	265	293	312
Eating, drinking	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Real estate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Finance & insurance	0	0	0	0	0	0	0	64	65	78	70	97	94	91	93	100	192	191
Hotels	0	38	46	64	61	66	51	25	25	40	43	22	0	0	0	0	0	26
Travel services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transport services	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0
Construction	0	0	0	0	140	300	571	701	824	343	274	252	239	212	223	298	0	0
Other services	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0
EUROPE-all	18	57	66	69	68	75	78	116	118	181	193	171	161	160	159	106	101	101
CANADA-all	30	31	31	0	0	0	0	0	0	0	0	32	32	32	34	37	135	138
OTHER ASIA & PAC.-all	247	216	297	414	564	719	3,347	5,030	2,800	2,410	1,761	1,691	1,577	1,531	479	563	293	357
AUSTRALIA-all	40	46	85	135	166	303	2,665	4,185	1,926	1,838	1,249	1,207	1,130	1,094	0	0	0	0
NEW ZEALAND-all	0	0	0	0	140	199	431	547	651	343	274	252	239	212	223	298	0	0
HONG KONG-all	207	170	212	279	259	216	251	298	224	229	237	213	208	225	256	265	293	338
KOREA-all	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	19

Sources: Hawaii Business (various years); State of Hawaii, Department of Business, Economic Development & Tourism (1995); Toyo Keizai (various years); author's estimates based on these sources.

Table B3: The Number of Firms in a Sample of Large Foreign Multinationals in Hawaii by Country of Owner and Industry of Operation

Country, industry	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ALL COUNTRIES-all	17	21	22	29	35	41	42	42	44	45	43	46	47	54	51	48	43	43
Manufacturing, food	1	1	1	2	3	3	3	3	3	3	3	3	3	3	2	2	2	2
Manufacturing, oil	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
Manufacturing, other	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Wholesale trade	5	6	6	6	6	6	8	7	8	9	6	6	6	7	7	6	6	6
Retail trade, general	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3
Retail trade, specialized	4	4	4	4	3	3	3	4	3	3	2	2	2	3	4	3	3	3
Eating, drinking	0	0	0	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0
Real estate	0	0	0	2	2	1	1	1	1	1	1	1	1	1	1	1	1	2
Finance & insurance	1	1	1	1	1	2	3	4	4	4	4	5	5	5	5	5	6	6
Hotels	2	5	6	9	12	14	10	9	10	12	13	13	13	15	14	15	11	11
Travel services	0	0	0	0	0	0	0	0	1	2	2	4	7	9	9	7	7	6
Transport services	1	1	1	1	1	1	1	2	2	2	2	3	2	2	2	2	2	2
Construction	0	0	0	0	2	6	7	7	7	5	5	5	5	5	4	4	2	2
Other services	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
JAPAN-all	12	15	14	19	24	28	29	30	33	33	31	34	37	44	42	40	36	34
Manufacturing, food	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Manufacturing, oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manufacturing, other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wholesale trade	3	4	4	4	4	4	6	5	5	5	3	3	3	4	4	4	4	4
Retail trade, general	3	3	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3
Retail trade, specialized	1	1	1	1	1	1	1	2	2	2	1	1	1	2	2	1	1	1
Eating, drinking	0	0	0	1	2	2	2	2	2	1	1	1	0	0	0	0	0	0
Real estate	0	0	0	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Finance & insurance	1	1	1	1	1	2	3	3	3	3	3	3	3	3	3	3	3	3
Hotels	2	4	4	6	9	11	8	8	9	10	11	12	13	15	14	15	11	10
Travel services	0	0	0	0	0	0	0	0	1	2	2	4	7	9	9	7	7	6
Transport services	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2
Construction	0	0	0	0	0	2	3	3	4	3	3	3	3	3	2	2	2	2
Other services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B3 (continued)

Country, industry	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
OTHER COUNTRIES-all	5	6	8	10	11	13	13	12	11	12	12	12	10	10	9	8	7	9
Manufacturing, food	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
Manufacturing, oil	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
Manufacturing, other	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Wholesale trade	2	2	2	2	2	2	2	2	3	4	3	3	3	3	3	2	2	2
Retail trade, general	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail trade, specialized	3	3	3	3	2	2	2	2	1	1	1	1	1	1	2	2	2	2
Eating, drinking	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Real estate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Finance & insurance	0	0	0	0	0	0	0	1	1	1	1	2	2	2	2	2	3	3
Hotels	0	1	2	3	3	3	2	1	1	2	2	1	0	0	0	0	0	1
Travel services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transport services	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Construction	0	0	0	0	2	4	4	4	3	2	2	2	2	2	2	2	0	0
Other services	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
EUROPE-all	1	2	3	3	3	3	3	3	3	4	5	4	4	4	4	3	3	3
CANADA-all	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	2	2
OTHER ASIA & PAC.-all	3	3	4	7	8	10	10	9	8	8	7	7	5	5	4	4	2	4
AUSTRALIA-all	1	1	2	4	4	5	5	4	5	4	3	3	2	2	0	0	0	0
NEW ZEALAND-all	0	0	0	0	2	3	3	3	2	2	2	2	2	2	2	2	0	0
HONG KONG-all	2	2	2	3	2	2	2	2	1	2	2	1	1	1	2	2	2	3
KOREA-all	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1

Sources: Hawaii Business (various years); State of Hawaii, Department of Business, Economic Development & Tourism (1995); Toyo Keizai (various years); author's estimates based on these sources.

Appendix Table C1: Equity Stocks in Toyo Keizai's Sample of Japanese Affiliates at Yearend

Industry	1988	1990	1992	1994	1996	1998
EQUITY STOCKS AT YEAREND (US\$ millions)						
All industries	1,091	825	1,356	1,787	2,817	2,872
Manufacturing, food	11	19	46	47	48	47
Manufacturing, other	0	0	0	1	1	1
Wholesale trade	28	11	12	22	21	11
Retail trade, general	205	227	227	227	216	216
Retail trade, specialized	2	5	10	9	9	1
Eating, drinking	23	66	20	21	21	57
Real estate	200	304	450	707	700	664
Finance & insurance	33	80	92	67	156	155
Hotels	70	65	443	612	1,542	1,620
Leisure, sports	9	9	9	12	21	21
Other services	0	1	1	12	16	39
Travel services	2	5	13	14	32	9
Transport services	0	0	0	1	0	0
Construction	506	33	33	33	35	30
Primary industries	0	0	0	1	0	0
NUMBER OF AFFILIATES REPORTING POSITIVE EQUITY STOCKS						
All industries	114	138	142	138	132	117
Manufacturing, food	8	10	11	11	9	8
Manufacturing, other	1	1	1	2	2	2
Wholesale trade	17	16	17	17	14	12
Retail trade, general	3	4	4	4	3	3
Retail trade, specialized	4	6	6	5	4	2
Eating, drinking	12	10	9	8	7	5
Real estate	24	35	30	27	28	23
Finance & insurance	8	17	18	18	15	14
Hotels	12	10	14	17	18	17
Leisure, sports	1	3	3	4	2	2
Other services	3	5	4	4	7	9
Travel services	8	8	12	9	12	12
Transport services	1	2	2	3	3	3
Construction	12	11	10	8	8	5
Primary industries	0	0	1	1	0	0

Source: Toyo Keizai (various years).

Appendix Table C2: Employment in Toyo Keizai's Sample of Japanese Affiliates at Yearend

Industry	1988	1990	1992	1994	1996	1998
EMPLOYMENT (number)						
All industries	11,672	13,822	13,209	12,343	12,240	11,581
Manufacturing, food	1,045	1,090	742	803	726	753
Manufacturing, other	40	40	40	82	82	83
Wholesale trade	496	316	316	258	247	226
Retail trade, general	1,212	2,178	1,273	1,071	822	363
Retail trade, specialized	26	137	312	307	233	19
Eating, drinking	1,387	1,395	1,174	470	492	472
Real estate	325	360	378	901	869	795
Finance & insurance	681	1,629	1,426	1,375	1,528	1,193
Hotels	5,539	5,547	5,745	5,640	5,685	5,823
Leisure, sports	54	54	54	69	69	69
Other services	64	225	233	192	178	512
Travel services	231	205	865	720	908	936
Transport services	75	145	144	148	173	137
Construction	497	501	507	307	228	200
Primary industries	0	0	0	0	0	0
NUMBER OF AFFILIATES REPORTING POSITIVE EMPLOYMENT						
All industries	80	101	106	100	102	86
Manufacturing, food	9	9	9	9	8	7
Manufacturing, other	1	1	1	2	2	2
Wholesale trade	14	15	16	15	13	11
Retail trade, general	3	4	3	3	2	2
Retail trade, specialized	2	5	5	5	4	2
Eating, drinking	7	8	7	4	6	4
Real estate	13	18	19	18	19	14
Finance & insurance	5	13	11	11	10	9
Hotels	7	8	8	9	9	7
Leisure, sports	1	1	1	2	2	2
Other services	2	4	5	4	5	7
Travel services	6	5	10	8	12	12
Transport services	1	2	2	3	3	3
Construction	9	8	9	7	7	4
Primary industries	0	0	0	0	0	0

Source: Toyo Keizai (various years).