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Title	Welcome Home to Japan: Repatriation of Foreign Profits by Japanese Multinationals
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Citation	
Issue Date	2008-03
Type	Technical Report
Text Version	
URL	http://hdl.handle.net/10086/16994
Right	

**Welcome Home to Japan: Repatriation of Foreign Profits
by Japanese Multinationals**

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March 31, 2008

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ABSTRACT

The empirical literature suggests that repatriation decisions of U.S. multinational corporations are influenced by taxes. Although the U.S. and Japan adopt the same foreign tax credit system, we have found no evidence that corporate taxes have significantly affected dividend repatriation of Japanese multinationals. Instead, we have found that almost half of Japanese foreign affiliates pay dividends and their average marginal dividend payout rate is about twenty percent. The results also suggest that the repatriation behavior varies across industries and countries. Furthermore, parent companies' financial status is found to influence the profit remittance of their foreign affiliates.

Keywords: Japanese multinationals, repatriation, foreign tax credits

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1. Introduction

The effect of corporate taxes on multinational corporations has been an animated debate in recent years. Many countries, including the United States and Japan, tax foreign incomes of their residents. The U.S. system of taxing foreign incomes has attracted a great deal of attention¹. The U.S. taxes foreign incomes of American companies, grants credits for foreign taxes paid to avoid double taxation, and permits tax deferral for the unrepatriated income. Thus, while the income of foreign subsidiaries is not taxed until repatriated as dividends, it will be levied an additional tax when remitted if the corporate tax rate of the U.S. is higher than the rate of a foreign country. Empirical findings suggest that repatriation taxes have a significant negative effect on repatriation of American multinationals. Using the IRS tax return data from 1984, Hines and Hubbard (1990) analyze the behavior of U.S. multinationals. They find that eighty-four percent of them did not pay dividends to their parent companies in 1984, and conclude that one percent decrease in the repatriation tax is associated with a 4 percent increase in dividend payout rates.² Desai, Foley, and Hines (2001) indicate that one percent lower repatriation tax rate is associated with one percent higher dividends. In a similar way to the U.S. tax system, Japanese tax system imposes repatriation taxes that vary inversely with foreign tax rates. Since Japanese corporate tax rate is higher than the U. S. rate (U.S. Department of the Treasury, Office of Tax Policy, 2007), the same problem might happen to Japanese multinationals; they may not repatriate their foreign incomes by shifting their profits to lower tax countries.

The Subpart F and the check-the-box regulations for hybrid entities are the rules by which U.S. multinationals abide when they are engaged in business activities across national borders. Joint Committee on Taxation (2005) refers to the techniques for using hybrid entities under the check-the-box rules in order to avoid the creation of Subpart F income.³ Sullivan (2006) argues that since 1998 the check-the-box rules have allowed U.S. corporations to engage in earnings stripping transactions. He shows that thirty percent of the before-tax profits of foreign affiliates were located in countries where average effective tax rates were twenty percentage points below the U.S. rate.

These behavioral responses to corporate taxes of multinational corporations have resulted in deadweight loss of taxation. Desai and Hines (2004) estimate a U.S. tax burden on foreign income in the neighborhood of \$50 billion a year. Consequently, they suggest that a movement from a credit to exemption system has a compelling logic. In the United States, economists recently discuss whether the U.S. government should adopt the exemption system for foreign income rather than the credit system. Graetz and Oosterhuis (2001) suggest that under the exemption regime simplification could be achieved and the costs of complying with U.S. international tax rules might decrease substantially for U.S. corporations. Altshuler and Grubert (2001) provide no consistent or definitive evidence that location decisions would be significantly changed if dividends were to be exempted from U.S. corporate tax. Mullins (2006) finds that there is no clear view on whether the move to the territorial basis would benefit the United States.

¹ For example, Desai and Hines (2003), Hines (2006), and Hubbard (2006) discuss international tax policy in the United States.

² Note that in their regressions, dividend payout rates are calculated as dividends over assets.

³ See also Altshuler and Grubert (2006).

The purpose of this paper is to analyze the effect of tax system on repatriation behavior of Japanese multinationals and to compare our results with the U.S. counterparts. In spite of the fact that the tax systems of the two countries have rested on the residential principle, and that their tax rates are among the highest in the world, our empirical finding is that, unlike U.S. multinationals, Japanese companies have not employed as much aggressive tax planning as U.S. companies.

This study uses the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry (hereinafter referred to as METI) and finds that almost half of the foreign affiliates of Japanese multinationals pay their dividends to Japan, and that their marginal dividend payout rate is about twenty percent on average. However, no significant effect of the repatriation taxes on the dividend repatriation has been detected. Our discoveries are rather that the repatriation decision depends on such firm-specific characteristics as the age and ownership of foreign subsidiaries; the older Japanese foreign affiliates and the higher the shareholding rates of their parent companies, the higher the rates of repatriation of profits to the home country. These are the findings of the first empirical research that analyzes the effect of taxes on dividend repatriation of Japanese multinational corporations.

The results also suggest that the repatriation behavior varies across industries and countries; the elasticity of dividends with respect to net income is higher in the electrical machinery than in the transportation equipment industry. As for regional differences, subsidiaries in Europe and North America send more dividends from their net income than in Asia. Another interesting result is that the repatriation of profits responds more strongly to the ownership than either to net income or the age of subsidiaries in Asia. Furthermore, the financial status of parent companies matters and more profits tend to be sent back to them when they are in loss, implying that dividends from foreign subsidiaries has played an important role for adjusting the income for the parent companies.

The rest of the paper is organized as follows. The next section describes the data sets used for the analysis, and presents heuristic findings of repatriation behavior of the foreign affiliates of Japanese multinational firms. The third section deals with the regression model for analyzing dividend repatriation, and the fourth section presents the results. The final section concludes the paper.

2. Japanese DIA: Sources of Data and Evidence

2-1. Data Sources

In this section, we start with an overview of Japanese direct investment abroad (DIA, hereinafter). We resort to the *Balance of Payments Statistics* published by the Bank of Japan and Japanese Ministry of Finance as the source of historical data on foreign direct investments. Figure 1 displays the outward and inward direct investment by calendar year. There is a sharp rise in outward direct investment during the late 1980s when Japanese economy was in the midst of asset inflation. However, when the bubbles burst in the early 1990s, outward direct investment decreased sharply. The figure shows that Japanese outward investment is starting to increase recent years. By contrast, inward direct investment remains at low levels, showing Japan is continuously a capital-exporting country.

[Figure 1 about here]

We need to use firm-level data when analyzing dividend repatriation behavior of multinational corporations and the data we used is the *Survey of Overseas Business Activities* compiled by METI. It covers the period from 1989 to 2003. The survey consists of two parts. One is the basic survey, which is more detailed of the two, and carried out every three years over the period, starting 1989. The other is the trend survey which is comparatively simple and carried out in every year between the basic surveys. Finance, insurance and real estate companies are excluded in this survey, because its main focus is on manufacturing industries. It enables us to investigate the relationship between foreign affiliates and their parent companies. Here, a foreign affiliate of a Japanese firm is defined as follows: (1) a foreign firm in which a Japanese firm holds ten percent or more of the equity, or (2) a firm in which more than fifty percent of the equity is held by a foreign affiliate that is itself more than fifty percent Japanese-owned.

The coverage of the data is extensive. Tables A1 and A2 in the Appendix show the scope of the data. In Table A1, we compare the *Survey of Overseas Business Activities* and the *Hojin Kigyo Tokei* [Incorporated Enterprise Statistics]. The *Hojin Kigyo Tokei* is the most basic financial statistics of Japanese corporations. Table A1 indicates that our data account for about twenty to thirty percent of all Japanese corporations.

[Table A1 in the Appendix A about here]

In Table A2, we compare the two statistics with the company samples confined to large businesses, that is, those with paid-in capital greater than or equal to one billion yen, excluding finance, insurance, and real estate companies. The table shows that the *Survey of Overseas Business Activities* now covers almost half of large companies of the *Hojin Kigyo Tokei*.

[Table A2 in the Appendix A about here]

Table B in the Appendix displays the distribution of companies by industry in 1989 and 2001. The table indicates that the manufacturing industries have the largest number of companies (about fifty and sixty percent, respectively, of all foreign affiliates and their parents), and the wholesale and retail trade has the next largest, about twenty to thirty percent of all foreign affiliates and their parents. The companies belonging to electricity, gas, heat supply, water, transportation, information and communications were originally classified into one industry, but reclassified and divided into three in 1993. Except for this reclassification and the increasing number of transportation, information and communication firms, there is no drastic change in the distribution of the companies by industry.

[Table B in the Appendix B about here]

2-2. Major Characteristics of Japanese DIA

2-2-1. Time-Series Evidence

We next turn to the major characteristics of Japanese DIA from the view point of corporate taxes. Observations in this section are made from three perspectives: time series, regional and industrial.

We start with our observation from a time-series perspective. Table 1 displays the financial status of Japanese foreign affiliates. The table shows that the number of foreign affiliates, total assets, sales, before-tax profit, taxes, and employees increased over time. In particular, before-tax profit as percentage of sales was 1 percent in 1989, and tripled to 3.2 percent in 2003. After-tax profit as percentage of sales also increased. This means that Japanese multinationals are raising higher profits on foreign turf. By contrast, effective tax rates were slightly decreased.

[Table 1 about here]

Table 2 deals with the financial status of parent companies. In contrast to their foreign affiliates, the table shows that their profits, in either before- or after-tax terms, were reduced; the before-tax rate of profit of 9.53 percent in the year 1989 was reduced to 7.28 percent in 2001, and the after-tax rate from 4.58 percent to -1.75 percent over the same period. Sales were stable over time, and the amounts of both dividends and royalties received increased significantly. Of the two modes of foreign affiliates' financial contributions to their parents, royalties played a more important role than dividends. On the other hand, the amount of remitted interest was decreasing. It would be worthwhile to note that about 18.8 percent of before-tax profit of the parents was due to the remittance of dividends and royalties of their foreign affiliates in 2001.⁴

[Table 2 about here]

Putting it all together, foreign affiliates of Japanese multinationals were earning higher profits than their parent companies, and their royalty payments and dividend repatriation became very important sources of revenue for the parents. Moreover, this trend seems to be strengthened as the DIA of Japanese companies continues to expand. Next, we investigate our data from regional and industrial perspectives.

2-2-2. Regional and Industrial Evidence

Here, we would like to sketch the regional and industrial characteristics of Japanese DIA, using the results of the latest basic survey of the year 2001. Table 3 displays the financial status of Japanese foreign affiliates by country. As for the before-tax profits, Japanese multinationals earned the largest profits from the United States in 2001; China, Thailand, Australia, and Taiwan were the second to fifth countries in the order

⁴ $(¥0.53 \text{ trillion} + ¥0.84 \text{ trillion}) / ¥7.28 \text{ trillion} \times 100 = 18.8 \%$.

of the amounts of the profits. The top three countries, the U.S., China and Thailand, had also yielded the largest after-tax profits. Much of assets of Japanese multinationals were placed in the U.S., Singapore, Netherlands, and the U.K. due to their attractive financial markets. However, as for tangible assets, namely, plant and equipment, the three most important countries are the U.S., China, and Thailand, reflecting the fact that these assets are major sources of profits for Japanese foreign affiliates. Japanese multinationals enjoyed large sales in the U.S., the U.K., Hong Kong, Singapore, Netherlands, Germany, China, and Thailand in 2001, and they employed a number of people in the three biggest countries plus Indonesia, Malaysia, Philippine; these south east Asian countries have advantages in low-wage work force.

Affiliates of Japanese multinationals in the U.S. paid a large amount of corporate tax. We calculate the effective corporate-income tax rate by first identifying only those affiliates reporting positive before-tax profit and then taking the average ratio of foreign income taxes paid to the before-tax profit. The results show that the effective tax rates in China, Hong Kong, and Saudi Arabia are around 10 percent. It is striking that the effective tax rates in Ireland, Vietnam, Panama, the UAE (United Arab Emirates) are enormously low.⁵

[Table 3 about here]

We would now like to look at the characteristics of Japanese DIA by industry. Table 4 presents the financial status of Japanese foreign affiliates by industry. In the year 2001, the industries which yielded large profits were wholesale and retail trade, transportation equipment, and chemicals. Therefore, those industries paid a large amount of tax. Two industries which achieved huge sales are the transportation equipment and the electrical machinery industries. It is interesting that the after-tax profit of the former is positive, whereas that of the latter is negative. Both of these two industries hire a large number of employees at their foreign affiliates.

[Table 4 about here]

2-3. Dividend Repatriation of Japanese Multinationals

This section examines the dividend repatriation of Japanese multinationals over the period 1989–2001. Since only limited information is reported in the trend surveys, our results here are restricted to the years when the basic surveys are available. Table 5 shows the ratio of the number of foreign affiliates with positive dividends to the total number of affiliates. We find that the ratio is increasing and 44 percent of the foreign affiliates of Japanese multinationals paid dividends to Japan in 2001. Compared with the results of American multinationals examined by Hines and Hubbard (1990), this ratio is quite high. Using the IRS tax return in 1984, they analyzed the repatriation behavior of U.S. multinationals and found that only 16 percent of them paid dividends to their parent companies. By contrast, we find that 44 percent of Japanese multinationals paid dividends to Japan.

⁵ See the Sullivan (2004) for the analysis of U.S. multinationals in the same year 2001.

[Table 5 about here]

Table 6 shows the dividend payout ratios by industry. Dividend payout ratios are calculated by first identifying those affiliates which report positive net income and then by dividing the total dividends paid to Japan by their total net income. As illustrated in Table 6, the average ratio for all industries is 27 percent in 2001. Within manufacturing industries, there are significant differences by industry. For example, the ratio is higher in the electrical machinery industry and lower in the transportation equipment industry.

[Table 6 about here]

Table 7 shows dividends paid by foreign affiliates to Japan by industry. We find that electrical machinery industry and wholesale and retail trade industry received a large number of dividends every year. We also find that the manufacturing industries account for about half of the dividends received by Japanese multinational corporations each year.

[Table 7 about here]

Table 8 and Table 9 report foreign affiliates' dividends by country of their incorporation. Table 8 shows foreign affiliates' dividend payout ratios. Corresponding yen volumes of dividends paid to Japan are reported in Table 9. Table 8 shows that dividend payout ratio varies across countries. Dividend payout ratios are notably high in Panama where multinationals own a flag of convenience ships. The results also suggest that dividend payout ratios are relatively high in European countries. By contrast, dividend payout ratios in Southeast Asia such as in Thailand and Indonesia stay low. Yet there is an exception. The table shows that dividend payout ratios in Singapore are relatively high in recent years. This partly reflects the fact that Singapore has become the first regional headquarter in the Asia-Pacific area.

[Table 8 about here]

As illustrated in Table 9, foreign affiliates in the United States paid the largest dividends to Japan every year. Those in Singapore paid the second largest amount of dividends to Japan in 1995 and 1998. This fact is an intriguing discovery because the economic size of Singapore is not so big. Japanese multinational corporations may use Singapore when they remit dividends to their home country in order to use some tax planning techniques. From around the turn of the century, dividends from China are sharply increasing.

[Table 9 about here]

2-4. Repatriation Patterns of Japanese Multinationals

Dividend remittance is not a sole method to repatriate profits to parent companies. As shown in Table 10, interest, royalties, and other payments are important as well. The table indicates these payments are increasing over a period of years. But other payments such as technical fees are distinctly decreasing. In 1989, other payments accounted for seventy-two percent of total remittance to Japan. More importantly, as shown in the table, royalties have increased as a percentage of total payments.

[Table 10 about here]

Table 11 exhibits distribution patterns by industry. Over all, Japanese multinationals repatriate more royalties than dividends in recent years. This pattern is evident in the transportation equipment industry. This is consistent with the analysis by Yamaguchi (2004). In contrast, other payments such as technical fees are more important than dividends and royalties in the electrical machinery industry.

[Table 11 about here]

3. The Regression Model

Before we present our regression model for testing the impact of taxes on dividends, a brief survey of literature should be in order. Mutti (1981) finds that repatriation decisions of U.S.-owned foreign manufacturing subsidiaries are influenced by tax incentives. Hines and Hubbard (1990) analyze a cross-section data of U.S. multinationals and find one percent decrease in the repatriation tax is associated with a four percent increase in dividend payout rates. They show that tax considerations are very important determinants of the timing of dividend repatriations. Altshuler and Grubert (2003) deal with the case where foreign affiliates invest in passive assets, which the parent can borrow against, or in related affiliates which can be used as vehicles for tax-favored repatriations. They have found that controlled foreign corporations that face high repatriation taxes make greater investments in related affiliates and send a greater share of their dividends to other foreign affiliates. Desai, Foley, and Hines (2001) also endorse the view that repatriation decisions of U.S. multinationals are influenced by taxes. They indicate that one percent lower repatriation tax rate is associated with one percent higher dividends. The implication is that multinational parent firms require steady dividend payments from the income of their foreign affiliates. They show this fact by using a panel-data set with parent fixed effects. Since our data set is cross-sectional, we add a parent dummy to control the characteristics of parent companies.

Recently, Power and Silverstein (2007) use a balanced panel of U.S. income tax returns from 1998 to 2002 and find that forty percent of U.S. corporations with foreign source income are not taxable because they are in loss. They show that about sixty percent of total dividends are repatriated by U.S. parents that are never in loss. The less the parent is in loss, the more it tends to repatriate foreign incomes. The results indicate that companies face unique incentives when they are in loss. A small

subset of firms appears to take advantage of the opportunity of being loss to repatriate substantial amount of dividends without residual U.S. tax. However, the majority of these firms appear to maximize their net operating loss deductions (NOLDs) by both avoiding repatriations and repatriating smaller amounts of foreign source dividends when they are in loss. In conclusion, parents in loss could repatriate income in forms that minimize accumulation of excess credits and maximize aversion of immediate U.S. tax. We would like to take this aspect into consideration and analyze the relationship between foreign affiliate's dividends payment and parent company's loss status.

The literature suggests that tax affects repatriation behavior significantly and it is necessary for us to add enough control variables such as age of the company and its ownership to identify the effects of taxes⁶. We estimate the following equation by both OLS and Tobit regression methods where i stands for i th foreign affiliate and ε_i is the error term. We exclude foreign affiliates whose net incomes are negative because it is impossible to pay dividends when net income is negative.

$$\begin{aligned} \text{Dividend}_i = & \alpha + \beta_1 \text{Tax}_i + \beta_2 \text{Net Income}_i + \beta_3 \text{Openness}_i + \beta_4 \text{Age}_i + \beta_5 \text{Ownership}_i \\ & + \beta_6 \text{Parent Dummy}_i (\text{or Parent in Loss}_i) + \varepsilon_i \end{aligned}$$

While the decisions relating to where and how much to invest may be influenced much by host countries' average and marginal effective tax rates, the decision about where to place the profits of foreign affiliates would be determined primarily by the differential between home and host countries' statutory tax rates. This observation is also made by Auerbach, Devereux, and Simpson (2007), and the statutory tax rates are taken from KPMG (2002) for our study.

The business profits of foreign affiliates are generally not subject to Japanese taxation until they are remitted to Japanese parent companies. When repatriations occur, they receive a credit for foreign taxes paid up to the Japanese tax rate. In theory, higher taxed foreign affiliates have higher payout rates than less taxed subsidiaries, reflecting the lower net repatriation taxes associated with receiving dividends. Therefore, affiliates in the country whose tax rates are high will pay larger dividends to Japanese parent companies, since doing so generates accompanying foreign tax credits that offset the associated Japanese tax liability. This is because Japanese corporate tax rate is relatively high compared to other countries. Thus, predicted coefficient on *Tax* rates is positive if Japanese multinationals pay attention to tax rates. We ignore foreign withholding taxes on dividends since these tax rates are usually zero, ten, or twenty percent, and do not have enough variation to change the results. The coefficient on *Net Income* presents the marginal dividend payout ratio. Needless to say, this coefficient is assumed to be positive.

A problem of preceding research is that tax rates absorb all effects stemming from the characteristics of a country if other variable representing them are not put into the regression models. We avoid this specification error by adding a control variable,

⁶ Desai, Foley, and Hines (2007) find that ownership structure affects dividend repatriation behavior.

Openness. This is a variable taken from Penn World Table 6.2.⁷, and represents a degree to which a country is open to international trade. If a host government adopts an open trade policy, Japanese multinationals would find it easier to set up their operations in that country. Thus, the expected coefficient on *Openness* is positive.

We explain other control variables which represent firm-specific characteristics. Following Julio and Ikenberry (2004), we adopt the hypothesis that mature companies, particularly those with limited growth prospects, may use dividends to reassure investors about the quality of earnings. The variable *Age* stands for the years after establishment of foreign affiliates, and the coefficient on it is considered to be positive. Since the foreign affiliate whose ownership share of Japanese shareholders is relatively high needs to repatriate more dividends to Japan, the coefficient on *Ownership* is predicted to be positive. A dummy variable, *Parent in Loss*, takes the value of 1 when its net income prior to any foreign source dividend repatriations is negative, and zero otherwise. If foreign affiliates of loss-making parent firms repatriate more dividends to Japan, the coefficient on the dummy variable is positive. Descriptive statistics for variables are summarized in Table C in the Appendix.

[Table C in the Appendix C about here]

4. Results

Our results of OLS and Tobit estimations in 1998 and 2001 are shown in Table 12. Columns 1 and 2 report the results of simple OLS regressions without parent dummies. Columns 3 and 4 report the results of OLS regressions that add parent dummies. Columns 5 and 6 report coefficients estimated with a Tobit procedure since dividend payments cannot be negative. The table also reports the elasticities of dividends.

In none of the above regressions, we have found any significant effect of corporate taxes on dividend repatriation behavior of Japanese multinational corporations. Although we expect the coefficients on tax rate to be positive, estimated coefficients on tax rate are either statistically insignificant at the 5 percent level or even negative. Unlike U.S. counterparts, Japanese foreign affiliates do not respond to tax rates.

We can see the estimated marginal dividend payout rate from the table. The variable *Net Income* is statistically significant at the one percent level in both OLS and Tobit regressions, and the marginal payout rate is about 0.20 in 2001, that is, twenty percent of net income of foreign affiliates is remitted to Japan. And the coefficients estimated by using OLS and Tobit are quite close.

Next, we examine the relationship between firm-specific characteristics and affiliates' dividend repatriation behavior. The variable *Age* is statistically significant at the 5 percent level in both OLS and Tobit regressions, meaning that older affiliates tend to repatriate more dividends than younger affiliates. The variable *Ownership* is statistically significant at the one percent level in OLS regressions. Hence, as the stake of Japanese shareholders increases, more dividends are sent to Japan. The result is not affected by the addition of parent dummy, which represents a control variable for the parents' propensity to pay or/and receive dividends. This is consistent with the

⁷ Summers and Heston (1991) explain Penn World Table.

statement by Altshuler and Newlon (1993) that the presence of parent characteristics does not affect the estimated coefficients on other variables substantially.

Table 12 also shows the results of the year 1998, which are similar to those of 2001; the dividend payout rate is 0.19, and other qualitative results of regressions are mostly the same. If we pool 2001 and 1998 data and regress with country fixed effects in place of *Openness* to control specific characteristics, we obtain the same results that country tax rates have no significant effect on dividend repatriations.

[Table 12 about here]

We next look at the determinants of repatriation behavior of foreign affiliates by region and by industry. Table 13 presents the results of estimation in 2001, and as in the preceding discoveries, tax rates of host countries here have no significant effects on dividend repatriations in any region. The table shows that the coefficient on *Net Income* is largest in Europe, second in North America, and lowest in Asia. The elasticities of dividends with respect to *Net Income* are also arrayed in the same order among the three continents.

The coefficients on other variables, *Age* and *Ownership*, are statistically significant at the one percent level in Asia. Interestingly, the results in Table 13 show that the elasticity of dividends with respect to *Ownership* is higher than the elasticity of dividends with respect to *Net Income* or *Age* in Asia. This evidence implies that, in Asia, the amount of dividend repatriation of Japanese foreign affiliates is primarily affected by shareholding ratio rather than their earnings. This is probably due to the fact that Japanese companies are engaged in more joint ventures in Asia than in North America and Europe. We find from our data set that the mean ownership ratio held by Japanese shareholders is around 65 percent in Asia, whereas the ratio is 82 percent in Europe and 85 percent in North America. There is a large variation in *Ownership* variables in Asian affiliates, which contributes to increasing the explanatory power of *Ownership* in Asian region.

Table 13 reports the results by industry in 2001. We find that the elasticity of dividends with respect to *Net Income* is higher in the electrical machinery industry than in the transportation equipment industry. We also find that the elasticity of dividends with respect to *Ownership* is higher than *Net Income* in the manufacturing industries.

[Table 13 about here]

Our last examination is concerned with the relationship between the parents' loss status and their affiliates' dividend repatriation behavior. Here we define that a company is in loss when its net income is negative prior to any foreign source dividend (Power and Silverstein, 2007). A dummy variable, *Parent in Loss*, takes the value of 1 when the parent company is in loss, and zero otherwise. If foreign affiliates of loss-making parent firms repatriate more dividends to Japan, the coefficient on the dummy variable is positive.

Table 14 indicates that the dummy variable, *Parent in Loss*, is statistically significant at the one percent level in 2001. However, it is not in 1998. This indicates that foreign affiliates of loss-making parent firms were more pressed by their parent companies to send dividends in 2001. We consider that this has much to do with the difference of parent companies' financial situations between 1998 and 2001; the aggregate net profit of parent companies in 1998 was positive in our data set, whereas it was negative in 2001. In 2001, the Japanese economy was at the nadir of recession, and the chance of Japanese companies plunging into the red was very high. In this situation, Japanese multinationals seem to have their profit-making foreign affiliates send back dividends to parent companies in Japan to avoid a liquidity shortage. This is our interpretation of the effect of parent companies' financial situation on dividend repatriation, and a similar observation has recently presented by Foley, Hartzell, Titman, and Twite (2007).

[Table 14 about here]

5. Conclusion

When taxing foreign source income, both the U.S. and Japan employ a world-wide tax principle; credits are granted to the taxes paid in foreign countries up to the amount that would have been taxed when the income is fully taxable in home countries. This paper has analyzed the effect of taxes on repatriation behavior of Japanese multinationals and compared the results between Japanese and the U.S. companies. This is the first empirical research that analyzes the effect of taxes on dividend repatriation of Japanese multinational corporations.

We have used a cross-section data of Japanese multinational corporations to investigate the repatriation of their foreign incomes. We find that almost half of them paid dividends to Japan and that the marginal dividend payout rate for all industries is about twenty percent on average.

However, no significant evidence has been found supporting the effect of corporate taxes on dividend repatriation behavior of Japanese foreign affiliates. Our empirical findings suggest that their repatriation decisions depend on such firm-specific characteristics as the age (the number of years after establishment) or the ownership (the shareholding rate of parent companies), and not on country-specific characteristics such as tax rates.

The results also suggest that dividend repatriation varies across industries and countries. In particular, the elasticity of dividends with respect to net income is higher in the electrical machinery industry than other industries including the transportation equipment industry. The results also suggest that the elasticity of dividends with respect to net income is higher in Europe and North America than in Asia. Interestingly, the results show that the elasticity of dividends with respect to ownership is higher than that to net income or age in Asia. This evidence suggests that in Asia the amount of dividend repatriation of Japanese multinationals is primarily affected by shareholding ratio rather than earnings.

Furthermore, we investigate the relationship between the parent companies' loss status and their foreign affiliates' dividend repatriation behavior. When the Japanese economy was recovering from a recession in 2001, foreign affiliates whose parent

company incurred a loss repatriated more dividends to Japan. We have suggested that a need for cash may explain this behavior.

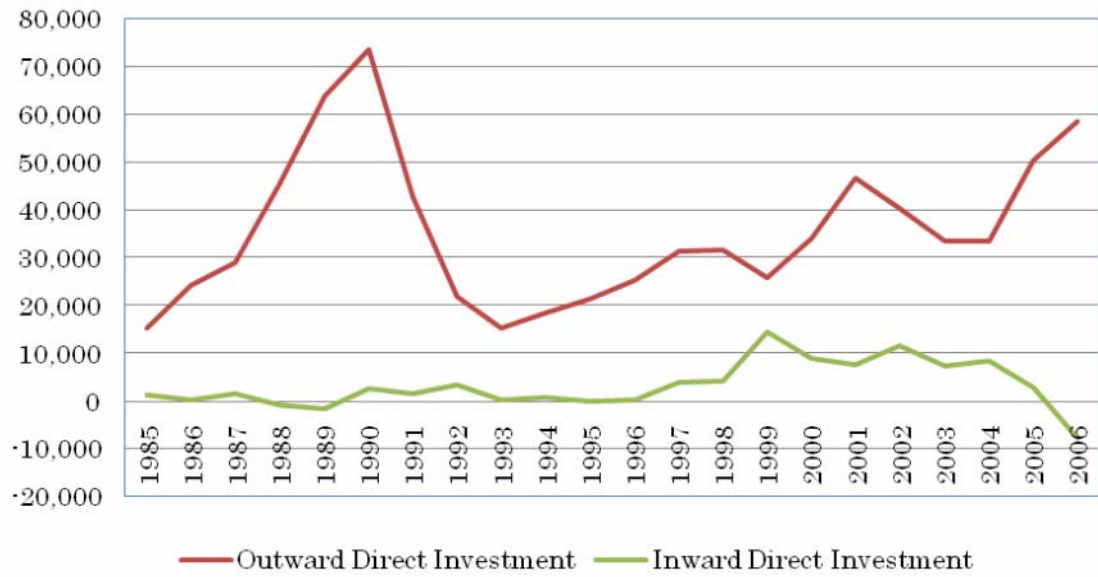
These are the summary of our study. So far, we have found no empirical evidence that corporate taxes affect dividend repatriation of Japanese multinationals. The results suggest that they are not engaged in as much aggressive tax planning as their U.S. counterparts. However, things might change. If the financial situation of parent companies in Japan is much improved, it could turn out that wide differentials between host countries' and Japanese corporate tax rates would let their foreign affiliates retain more of their profits abroad as the theory of international tax predicts. Although not touched in the paper, dividend remittance is not a sole means for sending profits from foreign affiliates to parent companies. Royalty and interest payments are other ways for this, and the amount of royalty payments has already surpassed the dividend payments. Clearly, more room is open for further study to understand the link between corporate behavior and tax policies.

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**Figure 1. Outward/ Inward Direct Investment
(100 million Yen)**



Source: *Balance of Payments Statistics* published by Bank of Japan and Japanese Ministry of Finance.

Table 1 Financial Status of Japanese Foreign Affiliates (Yen amounts in trillions)											
Year	Number of Foreign Affiliates	Total Assets	Plant and Equipment	Employees	Sales	Before-Tax Profit	After-Tax Profit	Taxes	Before-Tax Profit as Percentage of Sales*	After-Tax Profit as Percentage of Sales**	Effective Tax Rate***
		(trillion JPY)	(trillion JPY)	(thousand)	(trillion JPY)	(trillion JPY)	(trillion JPY)	(trillion JPY)	(%)	(%)	(%)
1989	6362	55.3	12.5	1132	93.2	0.90	0.45	0.42	1.0	0.5	30.5
1990	7986	-	-	1549	99.8	0.95	0.35	-	1.0	0.4	-
1991	8520	-	-	1621	88.7	0.28	-0.10	-	0.3	-0.1	-
1992	7108	53.9	12.4	1228	79.0	0.32	0.03	0.24	0.4	0.4	23.9
1993	10005	-	-	1946	91.7	0.29	-0.18	-	0.3	-0.2	-
1994	11502	-	-	2185	93.1	1.10	0.62	-	1.2	0.7	-
1995	10416	57.8	12.6	2218	95.0	1.48	0.87	0.45	1.6	0.9	25.6
1996	12657	-	-	2744	124	2.09	1.38	-	1.7	1.1	-
1997	13166	-	-	2834	128	2.01	0.78	-	1.6	0.6	-
1998	13017	89.7	20.5	2630	127	1.78	0.95	0.64	1.4	0.7	24.9
1999	13939	-	-	3160	119	2.34	1.44	-	2.0	1.2	-
2000	14991	-	-	3452	129	3.14	1.97	-	2.4	1.5	-
2001	13693	88.7	16.3	3180	135	2.27	0.83	0.73	1.7	0.6	25.9
2002	15509	-	-	3456	139	3.72	1.63	-	2.7	1.2	-
2003	15674	-	-	3782	146	4.67	3.18	-	3.2	2.2	-

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Notes: *Ordinary income ratio to net sales (%) = Ordinary income / Net sales ×100.

** Net income or loss ratio to net sales (%) = Net income or loss / Net sales ×100.

*** Effective tax rates are calculated by first identifying those affiliates report positive before-tax profit and then taking the average ratio of foreign income taxes paid to the before-tax profit weighted by before-tax profit.

Table 2 Financial Status of Japanese Parent Companies (Yen amounts in trillions)													
Year	Number of Parent Companies	Total Assets (trillion JPY)	Plant and Equipment (trillion JPY)	Employees (thousand)	Sales (trillion JPY)	Income Received from Foreign Affiliates				Before-Tax Profit (trillion JPY)	After-Tax Profit (trillion JPY)	Before-Tax Profit as Percentage of Sales* (%)	After-Tax Profit as Percentage of Sales** (%)
						Dividends Received (trillion JPY)	Interest Received (trillion JPY)	Royalties Received (trillion JPY)	Other Receipt (trillion JPY)				
1989	1361	250	44.0	2908	316	0.15	0.32	0.16	0.20	9.53	4.58	3.0	1.4
1990	1616	-	-	-	365	-	-	-	-	11.0	5.48	3.0	1.5
1991	1663	-	-	-	363	-	-	-	-	9.32	4.89	2.6	1.3
1992	1459	274	61.3	3222	327	0.24	0.15	0.30	0.10	6.15	2.62	1.9	0.8
1993	2139	-	-	-	365	-	-	-	-	-	-	-	-
1994	2431	-	-	-	354	-	-	-	-	-	-	-	-
1995	1840	301	67.6	3420	322	0.27	0.13	0.37	0.44	7.72	3.44	2.4	1.1
1996	2097	-	-	4273	340	-	-	-	-	-	-	-	-
1997	2230	-	-	4401	340	-	-	-	-	-	-	-	-
1998	2084	347	95.9	3781	321	0.43	0.08	0.72	0.11	7.52	0.79	2.3	0.2
1999	2153	-	-	3803	324	-	-	-	-	-	-	-	-
2000	2041	-	-	3839	300	-	-	-	-	-	-	-	-
2001	2093	291	80.4	3606	286	0.53	-	0.84	-	7.28	-1.75	2.5	-0.6
2002	2423	-	-	3662	314	-	-	-	-	-	-	-	-
2003	2638	-	-	3841	329	-	-	-	-	-	-	-	-

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Notes: *Ordinary income ratio to net sales (%) = Ordinary income / Net sales ×100.

** Net income or loss ratio to net sales (%) = Net income or loss / Net sales ×100.

Table 3 Financial Status of Japanese Foreign Affiliates by Country in 2001 (Yen amounts in millions)

Country	Total Assets (million JPY)	Plant and Equipment (million JPY)	Employees	Sales (million JPY)	Before-Tax Profit (million JPY)	After-Tax Profit (million JPY)	Taxes (million JPY)	Before-Tax Profit as Percentage of Sales* (%)	After-Tax Profit as Percentage of Assets** (%)	Effective Tax Rate*** (%)
US	34567197	5443132	649824	55590221	780776	224790	343319	1.4	0.6	30.4
China	3494376	1262721	536301	4231256	186175	162710	16997	4.4	4.6	10.9
Thai	2589892	884609	308593	4078426	158115	125619	25680	3.8	4.8	18.6
Australia	2196103	496473	41870	3631364	134838	98896	26681	3.7	4.5	28.0
Taiwan	1993918	478944	110577	3537691	113337	82745	23536	3.2	4.1	22.5
Hong Kong	2446769	155115	127731	7547375	97363	91376	10484	1.2	3.7	10.5
Korea	1492635	460195	57120	1858755	94275	66181	24891	5.0	4.4	26.5
Malaysia	1855300	709874	226725	3067356	93394	59545	19245	3.0	3.2	18.2
Singapore	7499528	468517	60421	6935838	90265	42122	20467	1.3	0.5	18.5
Indonesia	1750537	664512	264083	2077494	79687	51295	28210	3.8	2.9	28.9
Mexico	838308	338160	54716	1260605	75063	43571	12994	5.9	5.1	42.2
Canada	1854339	565699	33421	3882109	69143	45106	24796	1.7	2.4	38.2
Philippine	1109475	398904	132583	1619314	56648	29138	12120	3.4	2.6	21.8
Saudi Arabia	448865	291820	2295	161431	40147	34655	5214	24.8	7.7	12.9
Netherlands	6094008	710427	69727	5356107	36188	2538	30769	0.6	0.04	26.6
Spain	426455	136907	16801	898186	30583	23626	5013	3.4	5.5	27.2
Chile	384338	30107	5069	381734	24600	17740	5489	6.4	4.6	22.1
India	420485	173935	45269	630341	20459	12899	7636	3.2	3.0	28.7
UK	5738678	541595	101713	8819511	19780	-335149	24210	0.2	-5.8	25.0
Italy	386832	29195	11289	885632	19363	7861	9150	2.1	2.0	46.2
Germany	1815566	236108	43893	4300550	16961	-1733	18153	0.3	-0.09	29.0
Ireland	233530	118523	1343	79457	13498	10257	368	16.9	4.3	2.4
Venezuela	131850	59165	2702	175540	12166	9328	1312	6.9	7.0	15.4
Vietnam	247182	127700	40714	263770	11511	9203	586	4.3	3.7	5.4
Panama	1827689	236606	976	3303589	8033	6565	13	0.2	0.3	0.2
New Zealand	175875	74440	4917	249171	7089	7793	986	2.8	4.4	22.6
Iran	31635	1969	2401	149524	6471	4847	1582	4.3	15.3	24.4
Belgium	789737	66613	20364	2652895	5351	516	4123	0.2	0.06	36.5
Colombia	157952	33325	6475	129173	4622	3828	656	3.5	2.4	17.8
UAE	96950	26411	6056	263204	4561	4572	6	1.7	4.7	0.3
All Countries	88672520	16345004	3180591	135203903	2266641	830216	732550	1.6	0.9	25.8

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Notes: *Ordinary income ratio to net sales (%) = Ordinary income / Net sales × 100. **Return on asset (%) = Net income / Total assets × 100. *** Effective tax rates are calculated by first identifying those affiliates report positive before-tax profit and then taking the weighted average ratio of foreign income taxes paid to the before-tax profit weighted by before-tax profit.

Table 4 Financial Status of Japanese Foreign Affiliates by Industry in 2001 (Yen amounts in millions)

Industry	Total Assets (million JPY)	Plant and Equipment (million JPY)	Employees	Sales (million JPY)	Before-Tax Profit (million JPY)	After-Tax Profit (million JPY)	Taxes (million JPY)	Before-Tax Profit as Percentage of Sales* (%)	After-Tax Profit as Percentage of Assets** (%)	Effective Tax Rate*** (%)
Agriculture, Forestry, and Fisheries	149757	65695	14491	129624	378	-3071	1138	0.2	-2.0	21.0
Mining	2223275	638338	16377	795222	136228	105450	17741	17.1	4.7	20.8
Construction	772641	122856	19918	658194	18933	9836	4861	2.8	1.2	16.6
Manufacturing										
Food	1849774	575778	95038	2017508	125212	81690	32305	6.2	4.4	31.4
Textile	957156	402027	161641	917736	42997	24998	19632	4.6	2.6	31.7
Wood, Pulp, and Papers	817440	539594	31026	528625	9192	7025	2559	1.7	0.8	18.5
Chemicals	6036715	2122105	148173	5157078	298229	160274	119385	5.7	2.6	30.7
Petroleum and Coal	139044	62205	3686	208070	8788	6424	1343	4.2	4.6	22.8
Ceramics	997209	534863	47225	611740	36691	24247	7367	5.9	2.4	25.5
Steel	2393571	387328	47952	2373898	-85757	-120966	4419	-3.6	-5.0	18.3
Non-Ferrous Metals	1136642	552612	48344	876890	15657	614	14497	1.7	0.05	31.4
Fabricated Metal Products	377615	155643	31049	358227	12093	7262	3705	3.3	1.9	27.1
General Machinery	2580293	523563	128533	2968978	42077	-2087	29713	1.4	-0.08	22.9
Electrical Machinery	7464390	1795792	950641	20419364	1935	-190233	13425	0.00	-2.5	9.4
Transportation Equipment	14495429	3119248	682612	23612952	548761	362358	117623	2.3	2.4	26.8
Precision Instruments	671958	113135	70274	1295331	54302	36381	14411	4.1	5.4	25.6
Miscellaneous Manufacturing	1221308	405881	197011	2773142	44593	25616	17833	1.6	2.0	25.0
Electricity, Gas, Heat Supply, and Water	292365	103643	442	32661	700	1912	359	2.1	0.6	9.7
Transport	1156431	492874	48244	1627243	46751	33032	8522	2.8	2.8	22.1
Information and Communications	1604079	46475	17093	292197	-24690	-330063	3396	-8.4	-20.5	30.8
Wholesale and Retail Trade	27438951	1723917	334606	64905965	744120	461782	260550	1.1	1.6	30.1
Finance and Insurance	10287403	660404	9730	1189718	38121	22334	12945	3.2	0.2	32.6
Real Estate	656531	233089	7839	118345	8784	4010	2298	7.4	0.6	15.2
Services	2891839	959083	66733	1209493	140287	100001	21955	11.5	3.4	17.4
Others	-	-	-	-	-	-	-	-	-	-
Total of Manufacturing Industries	41143115	11289774	2643205	64087223	1154770	423603	398217	1.8	1.0	24.6
All Industries	88611816	16336148	3178678	135078201	2264382	828826	731982	1.6	0.9	25.8

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Notes: *Ordinary income ratio to net sales (%) = Ordinary income / Net sales × 100. **Return on asset (%) = Net income / Total assets × 100. *** Effective tax rates are calculated by first identifying those affiliates report positive before-tax profit and then taking the weighted average ratio of foreign income taxes paid to the before-tax profit weighted by before-tax profit.

Table 5 Ratio of Foreign Affiliates Who Paid Dividends to Japan

Year	Number of foreign affiliates with dividend information A	Number of foreign affiliates with positive dividends to Japan B	Ratio B/A
1989	3814	844	0.22
1992	2396	943	0.39
1995	5283	1621	0.31
1998	4373	1923	0.44
2001	4815	2119	0.44

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Note: Ratio = (Number of foreign affiliates with positive dividends to Japan) ÷ (Number of foreign affiliates with dividend information).

Table 6 Foreign Affiliates' Dividend Payout Ratio to Japan by Industry

Japanese Industry	1989	1992	1995	1998	2001
Agriculture, Forestry, and Fisheries	.03	.07	.05	.10	.29
Mining	.10	.54	.16	.45	.09
Construction	.36	.15	.05	.17	.15
Manufacturing					
Food	.17	.17	.33	.28	.19
Textile	.17	.29	.47	.49	.28
Wood, Pulp, and Papers	.13	.75	.15	.10	.28
Chemicals	.15	.26	.19	.18	.23
Petroleum and Coal	.05	.13	.31	.08	.13
Ceramics	.19	.28	.19	.28	.35
Steel	.12	.26	.09	.14	.29
Non-Ferrous Metals	.15	.11	.14	.30	.49
Fabricated Metal Products	.05	.11	.24	.34	.23
General Machinery	.08	.21	.17	.22	.25
Electrical Machinery	.19	.33	.25	.47	.53
Transportation Equipment	.07	.12	.14	.15	.13
Precision Instruments	.03	.48	.41	.38	.38
Miscellaneous Manufacturing	.09	.19	.11	.24	.33
Electricity, Gas, Heat Supply, and Water			.00	.00	.06
Transport	.21	.41	.33	.39	.34
Information and Communications			.00	.00	.04
Wholesale and Retail Trade	.19	.07	.24	.39	.29
Finance and Insurance	.11	.28	.15	.48	.14
Real Estate	.13	.14	.11	.17	.25
Services	.09	.21	.12	.27	.26
Others	.05	.34	.06	.33	---
Total of Manufacturing Industries	.13	.27	.20	.25	.28
All Industries	.15	.29	.20	.30	.27

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Note: Dividend payout ratios are calculated by first identifying those affiliates report positive net income and then dividing the total dividends paid to Japan by such affiliates in each industry by their total net income. Dividend payout ratio = (Total dividends paid to Japan by foreign affiliates in industry X) ÷ (Total affiliate post-tax earnings in industry X).

Table 7 Dividends Paid by Foreign Affiliates to Japan by Industry

Japanese Industry	1989	1992	1995	1998	2001
Agriculture, Forestry, and Fisheries	56	23	264	715	764
Mining	3828	11402	14392	22658	5387
Construction	2330	1758	465	1829	1750
Manufacturing					
Food	1624	1853	9980	8710	7898
Textile	1969	7619	11246	18221	4500
Wood, Pulp, and Papers	4274	17912	3234	1164	6216
Chemicals	10055	14007	23891	31385	31839
Petroleum and Coal	44	192	363	288	438
Ceramics	5059	5347	6888	13282	7410
Steel	1841	2577	3156	4223	4115
Non-Ferrous Metals	2295	1064	3816	6004	12399
Fabricated Metal Products	323	283	833	1282	1688
General Machinery	2851	3135	5310	16770	9766
Electrical Machinery	15264	27318	39852	83445	113197
Transportation Equipment	3450	8924	18027	36684	44158
Precision Instruments	393	780	4885	2659	12465
Miscellaneous Manufacturing	1174	3211	4323	5841	7512
Electricity, Gas, Heat Supply, and Water			0	0	189
Transport	688	1681	3618	6079	6185
Information and Communications			0	0	136
Wholesale and Retail Trade	37761	29352	44198	138947	139890
Finance and Insurance	2432	709	4263	8339	5462
Real Estate	594	1012	1143	2609	2330
Services	3390	1704	5983	24152	8934
Others	1112	2833	33	1024	---
Total of Manufacturing Industries	50616	94222	135804	229958	263601
All Industries	102807	144696	210163	436310	434628

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Note: All figures are in millions of yens.

Table 8 Foreign Affiliates' Dividend Payout Ratio to Japan by Country

Country of Incorporation of Affiliate	1989	1992	1995	1998	2001
All countries	.15	.29	.20	.30	.27
United States	.13	.27	.18	.25	.25
Canada	.13	.75	.10	.40	.10
Mexico	.16	.36	.13	.22	.07
Brazil	.09	.27	.22	.28	.16
Chile	.13	.17	.06	.48	.04
Panama	.31	.72	.93	.44	.93
Malaysia	.12	.25	.22	.36	.40
Singapore	.16	.41	.29	.83	.53
Thailand	.12	.15	.15	.16	.23
Indonesia	.19	---	.18	.27	.17
Philippine	.05	.32	.23	.47	.29
Hong Kong	.17	.31	.37	.58	.43
Taiwan	.21	.18	.31	.26	.31
Korea	.12	.17	.25	.26	.21
China	.25	.24	.22	.30	.28
Saudi Arabia	.16	.32	.18	.10	.27
United Kingdom	.21	.23	.20	.36	.46
France	.07	.21	.07	.62	.11
Germany	.22	.56	.28	.27	.66
Belgium	.17	.41	.44	.31	.55
Ireland	.04	.36	.27	.56	.06
Netherlands	.16	.34	.13	.53	.13
Italy	.15	.40	.39	.35	.18
Australia	.20	.32	.34	.40	.30
Egypt	.11	.13	.06	.38	.36
Liberia	.08	.70	.87	.68	.16
All others	.14	.19	.10	.13	.17

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Note: Dividend payout ratios are calculated by first identifying those affiliates report positive net income and then dividing the total dividends paid to Japan by such affiliates in each country by their total net income. Dividend payout ratio = (Total dividends paid to Japan by foreign affiliates in country X) ÷ (Total affiliate post-tax earnings in country X).

Table 9 Dividends Paid by Foreign Affiliates to Japan by Country

Country of Incorporation of Affiliate	1989	1992	1995	1998	2001
All countries	102807	144696	210163	436310	435220
United States	20515	28625	49483	165470	142793
Canada	3242	20898	1721	6032	4925
Mexico	354	216	1161	2209	1088
Brazil	3362	1862	5661	5461	7367
Chile	249	428	3661	4886	683
Panama	1499	2934	2700	2316	2209
Malaysia	2625	8995	10546	13601	30311
Singapore	7313	11184	20006	44158	36704
Thailand	4254	6178	11569	13789	25813
Indonesia	2165	---	8431	6250	6932
Philippine	422	2549	2145	6426	6570
Hong Kong	4901	9826	17707	28599	20703
Taiwan	7745	10421	13627	21174	22095
Korea	2129	1717	7130	4517	11253
China	790	1149	4522	19522	38376
Saudi Arabia	3647	2937	6605	1771	8569
United Kingdom	6192	3513	7036	15005	17994
France	334	692	2171	7320	1279
Germany	5080	5209	6737	9950	14659
Belgium	2600	3285	2648	5732	2778
Ireland	367	138	367	2112	1948
Netherlands	1914	2149	2861	12890	3734
Italy	415	1707	2905	3771	534
Australia	9041	8419	10318	16166	13386
Egypt	86	204	387	3855	325
Liberia	952	1222	2145	3305	242
All others	10614	8239	5913	10023	11950

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Note: All figures are in millions of yens.

Table 10 Payments by Foreign Affiliates to Japan

	1989	1992	1995	1998	2001
Millions of Japanese Yen					
Dividends	102807	144696	210163	436310	435220
Interest	68147	33932	68250	93459	-
Royalties	52324	110748	248977	452503	648088
Other Payments	563074	353813	537448	176477	-
Total Payments	786352	646257	1073732	1171619	1432267
Percentage of Total Payments					
Dividends	13	22	20	37	30
Interest	9	5	6	8	-
Royalties	7	17	23	39	45
Other Payments	72	55	50	15	-

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Note: We cannot observe data on interest and other payments for the year 2001.

Table 11 Distribution Patterns: Foreign Affiliates' Dividends, Interest, Royalties, and Other Payments Distributed to Japan

Japanese Industry	Dividends			Interest			Royalties			Other Payments		
	1989	1995	2001	1989	1995	2001	1989	1995	2001	1989	1995	2001
Agriculture, Forestry, and Fisheries	56	264	764	247	947	-	21	35	42	2302	2710	-
Mining	3828	14392	5387	3906	2963	-	19	184	211	279	3365	-
Construction	2330	465	1750	63	289	-	52	656	859	1628	3930	-
Manufacturing												
Food	1624	9980	7898	328	814	-	226	2371	3802	346	403	-
Textile	1969	11246	4500	1899	1825	-	818	1656	2787	197	9894	-
Wood, Pulp, and Papers	4274	3234	6216	195	804	-	0	763	1415	4460	329	-
Chemicals	10055	23891	31839	543	4670	-	1498	16939	68044	6668	17806	-
Petroleum and Coal	44	363	438	0	32	-	3	74	293	0	184	-
Ceramics	5059	6888	7410	87	540	-	1873	3587	2772	3146	67645	-
Steel	1841	3156	4115	54	867	-	115	337	801	274	7692	-
Non-Ferrous Metals	2295	3816	12399	15497	8585	-	706	1676	3742	6233	2335	-
Fabricated Metal Products	323	833	1688	593	569	-	127	519	1168	365	8292	-
General Machinery	2851	5310	9766	714	321	-	7923	15372	23869	31037	30544	-
Electrical Machinery	15264	39852	113197	1750	4080	-	24409	90497	118461	184284	243867	-
Transportation Equipment	3450	18027	44158	744	3169	-	8208	93633	384214	98786	49178	-
Precision Instruments	393	4885	12465	150	306	-	334	4005	3184	2515	1072	-
Miscellaneous Manufacturing	1174	4323	7512	979	643	-	21	6441	5810	19741	9971	-
Electricity, Gas, Heat Supply, and Water		0	189		0	-		0	0		14584	-
Transport	688	3618	6185	6493	12825	-	0	4	216	4870	9994	-
Information and Communications		0	136		0	-		61	7551		16	-
Wholesale and Retail Trade	37761	44198	139890	13359	4895	-	3275	4318	16301	190934	42106	-
Finance and Insurance	2432	4263	5462	6891	4777	-	0	230	0	60	2864	-
Real Estate	594	1143	2330	4728	3191	-	0	61	416	555	741	-
Services	3390	5983	8934	6165	11120	-	621	5500	1856	2313	7918	-
Others	1112	33	0	2762	18	-	54	58	0	2081	8	-
Total of Manufacturing Industries	50616	135804	263601	23533	27225	-	48282	237870	620362	358052	449212	-
All Industries	102807	210163	434628	68147	68250	-	52324	248977	647814	563074	537448	-

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Note: All figures are in millions of yens. We cannot observe data on interest and other payments for the year 2001.

Table 12 The Impact of Corporate Tax on Dividends

Dependent Variable: Dividends to Japan						
Year	1998	2001	1998	2001	1998	2001
Constant	-144.5952** (50.6252)	-151.3185** (68.8643)	-209.8539 (564.4784)	-3618.5460** (446.7739)	-476.7035** (106.967)	-247.6976* (105.5966)
Tax Rate	-1.1804 (1.0567)	0.9888 (1.6005)	-0.0264 (1.9632)	0.3885 (1.9429)	-3.4424 (2.0913)	-3.9186 (2.5257)
Net Income	0.1910** (0.0408)	0.2033** (0.0055)	0.1922** (0.0030)	0.2047** (0.0018)	0.1960** (0.0383)	0.2062** (0.0048)
Openness	0.1630 (0.1376)	0.1872 (0.1166)	0.2083 (0.1631)	0.1770 (0.1263)	0.2491 (0.2106)	0.2947 (0.1763)
Age	6.1234** (1.5428)	2.2875* (0.9932)	8.2753** (1.3826)	2.2883* (0.9538)	17.5602** (3.1440)	9.9759** (1.7930)
Ownership (%)	1.7201** (0.3788)	1.2045** (0.2121)	2.0109** (0.5154)	0.9757** (0.3621)	0.9162 (0.4832)	-0.5156 (0.3301)
Parent Dummies	No	No	Yes	Yes	No	No
Method	OLS	OLS	OLS	OLS	Tobit	Tobit
R-Squared	0.6359	0.7915	0.6923	0.8316		
Log-Likelihood					-12991.2	-16086.428
No. Obs	2848	3632	2848	3632	2848	3632
Elasticity of Dividends with respect to						
Net Income	0.6403**	0.7480**	0.6444**	0.7530**	0.6572**	0.7586**
Age	0.5796**	0.2839*	0.7833**	0.2840*	1.6622**	1.2380**
Ownership	1.0680**	0.8712**	1.2486**	0.7057**	0.5688	-0.3729

Note: Robust standard errors are in parentheses. *significant at 5% level, **significant at 1% level.

Table 13 The Impact of Corporate Tax on Dividends by Region or by Industry in 2001

Dependent Variable: Dividends to Japan							
Category	Asia	North America	Europe	Manufacturing	Electrical Machinery	Transportation Equipment	Wholesale and Retail Trade
Year	2001	2001	2001	2001	2001	2001	2001
Constant	-158.9556* (83.6440)	-1183.893 (1178.838)	-78.2090 (94.6500)	-57.5825 (87.6818)	-363.4711 (210.5667)	137.0912 (135.2801)	-267.4371* (93.2579)
Tax Rate	2.4284 (2.0419)	27.2984 (31.4127)	2.7006 (2.4644)	-1.1288 (2.1314)	4.0124 (4.8569)	-1.8937 (2.7193)	4.2329* (2.0596)
Net Income	0.1737** (0.0303)	0.2043** (0.0047)	0.3143* (0.1581)	0.1660** (0.0393)	0.6097** (0.1060)	0.0906** (0.0283)	0.2080** (0.0039)
Openness	0.1853 (0.1205)	-2.1099 (2.4805)	-0.4903 (0.5184)	0.2578 (0.2070)	0.6982 (0.4333)	-0.2676 (0.2193)	0.1458 (0.1524)
Age	2.2597** (0.7983)	6.2617 (4.1482)	-1.3605 (1.3595)	0.8361 (0.9080)	-0.8219 (2.4495)	-1.4581 (1.7307)	4.9715* (2.5324)
Ownership (%)	1.0590** (0.2394)	0.9923 (0.7313)	0.5849 (0.3229)	1.3452** (0.3198)	1.6920* (0.7056)	-0.0256 (0.5196)	0.9427 (0.3761)
Method	OLS	OLS	OLS	OLS	OLS	OLS	OLS
R-Squared	0.2128	0.8961	0.2842	0.2033	0.3907	0.3484	0.9242
No. Obs	2753	675	669	2189	541	422	873
Elasticity of Dividends with respect to							
Net Income	0.5291**	0.7962**	0.9053**	0.5841**	1.1404**	0.6720**	0.7223**
Age	0.3323**	0.4803	-0.2591	0.1002	-0.0521	-0.1810	0.4951*
Ownership	0.9675**	0.4296	0.7326	0.9264**	0.7019**	-0.0180	0.5494**

Note: Robust standard errors are in parentheses. *significant at 5% level, **significant at 1% level.

Table 14 The Impact of Corporate Tax on Dividends with Parent in Loss

Dependent Variable: Dividends to Japan				
	1998	2001	1998	2001
Constant	-139.9357* (68.7758)	-97.0231 (68.2916)	-391.1761** (123.2612)	-132.8527 (101.5424)
Tax Rate	-2.1292 (1.4718)	0.0308 (1.5967)	-3.0861 (2.4255)	-4.2988 (2.4002)
Net Income	0.1878** (0.1946)	0.2044** (0.0048)	0.1908** (0.0419)	0.2063** (0.0044)
Openness	0.3027 (0.1946)	0.0579 (0.1131)	0.4629 (0.2668)	0.0730 (0.1677)
Age	4.6307** (1.4226)	1.9321 (1.1007)	13.5719** (3.0923)	8.4379** (2.0048)
Ownership (%)	1.7949** (0.5038)	0.8735** (0.2040)	0.5317 (0.5403)	-0.8992** (0.3472)
Parent in Loss	46.6463 (24.3825)	37.2614** (13.7398)	62.7204 (36.8880)	57.2183** (22.1952)
Method	OLS	OLS	Tobit	Tobit
R-Squared	0.7008	0.8660		
Log-Likelihood			-9558.4353	-12134.436
No. Obs	1888	2651	1888	2651

Note: Robust standard errors are in parentheses. *significant at 5% level, **significant at 1% level.

Appendix A

Table A1 Comparison of the Two Statistics in 2001 (all industries)

		Hojin Kigyo Tokei [Incorporated Enterprise Statistics] [A]	Survey of Overseas Business Activities (Parent Companies) [B]	Ratio B / A
Subject Investigation	of	Finance and Insurance excluded	Finance, Insurance, and Real Estate excluded	
Number of Companies		23887	2093	0.09
Paid-in Capital		858397	294763	0.34
Assets		12431100	2909059	0.23
Sales		13382065	2859273	0.21
Current Profits		282469	72799	0.26

Source: Authors' calculations based on the *Hojin Kigyo Tokei* [Incorporated Enterprise Statistics] and the *Survey of Overseas Business Activities*.

Note: All figures are in 100 millions of yens.

**Table A2 Comparison of the Two Statistics in 2001
(paid-in capital \geq 1 billion yen, without finance, insurance and real estate)**

		Hojin Kigyo Tokei [Incorporated Enterprise Statistics] [E]	Survey of Overseas Business Activities (Parent Companies) [F]	Ratio F / E
Paid-in Capital		530677	282984	0.53
Assets		5598596	2773423	0.50
Sales		5052610	2711370	0.54
Current Profits		148871	69408	0.47

Source: Authors' calculations based on the *Hojin Kigyo Tokei* [Incorporated Enterprise Statistics] and the *Survey of Overseas Business Activities*.

Note: All figures are in 100 millions of yens.

Appendix B

Table B
Distribution of Japanese Multinationals by Industry

Industry	Foreign		Parents (%)	
	Affiliates (%)		1989	2001
	1989	2001	1989	2001
Agriculture, Forestry, and Fisheries	1.2	0.8	1.3	0.6
Mining	1.5	1.0	1.8	1.0
Construction	3.0	2.4	4.2	3.8
Manufacturing	41.6	51.5	62.2	66.0
Food	2.3	2.8	3.1	3.7
Textiles	2.1	3.0	2.6	5.0
Wood, Pulp, and Papers	1.2	0.8	2.6	1.1
Chemicals	4.7	7.6	7.3	8.1
Petroleum and Coal	0.1	0.3	0.9	0.7
Ceramics	1.4	1.3	2.1	2.1
Steel	1.6	1.9	1.5	1.7
Non-Ferrous Metals	1.6	1.3	1.9	2.0
Fabricated Metal Products	1.1	1.4	3.2	2.8
General Machinery	4.1	5.2	7.0	8.4
Electrical Machinery	10.5	11.7	13.2	12.0
Transportation Equipment	5.0	8.4	6.4	8.4
Precision Instruments	1.8	1.7	3.8	2.2
Miscellaneous Manufacturing	4.0	4.0	6.7	7.8
Electricity, Gas, Heat Supply, and Water	3.7	0.2	2.6	0.2
Transportation	3.7	5.3	2.6	4.6
Information and Communications	3.7	1.5	2.6	2.2
Wholesale and Retail Trade	31.4	25.9	20.3	16.2
Finance and Insurance	3.1	3.2	0.4	0.6
Real Estate	3.4	2.0	1.3	0.3
Services	6.0	6.0	4.3	4.5
Other	5.0	0.0	1.7	0.0
Total	100.0	100.0	100.0	100.0

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Notes: The companies belonging to electricity, gas, heat supply, water, transportation, information and communications were originally classified into one industry, but reclassified and divided into three in 1993.

Appendix C

Table C Descriptive Statistics

	Year	Obs	Mean	Std. Dev.	Min	Max
Dividends	2001	4815	90.38	813.64	0	47935
	1998	4373	99.77	702.58	0	37883
Tax Rate	2001	13291	32.31	6.47	15	42.1
	1998	11794	33.86	7.99	15	57
Openness	2001	13291	99.98	94.60	22.41	375.73
	1998	11794	95.79	95.27	23.04	354.23
Net Income	2001	10973	75.65	4277.0	-299480	231355
	1998	10388	91.52	2501.2	-86695	162535
Age	2001	13585	12.25	9.50	0.01	121.08
	1998	12944	10.82	9.24	0.01	97.08
Ownership	2001	13657	82.92	26.14	0	100
	1998	13012	82.55	25.77	0.1	100
Parent in Loss	2001	7491	0.4217	0.4938	0	1
	1998	7404	0.3487	0.4766	0	1

Source: Authors' calculations based on the *Survey of Overseas Business Activities* compiled by Japanese Ministry of Economy, Trade and Industry.

Note: A dummy variable, *Parent in Loss*, takes the value of 1 when the parent company is in loss, and zero otherwise.