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The Effect of Foreign Dividend Exemption on Profit Repatriation through Dividends, Royalties, and Interest: Evidence from Japan*

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Abstract

Multinational corporations repatriate foreign profits through dividends, royalties, and interest paid by foreign affiliates to their parent firms. International tax rules influence the decisions on profit repatriation, including the choice of repatriation method for these payments. In 2009, Japan introduced a foreign dividend exemption system (or so-called territorial tax system) that exempted dividends received by Japanese firms from their foreign affiliates from home-country taxation. This paper examines the effects of this tax reform on profit repatriation through dividends, royalties, and interest. Under the foreign dividend exemption system, Japanese multinationals can save the tax costs of profit repatriation by repatriating dividends from foreign affiliates located in countries that impose low withholding tax rates on dividends. We find that, in response to the 2009 tax reform, Japanese-owned foreign affiliates subject to lower withholding tax rates on dividends increased dividend payouts, reduced royalties, and did not change interest payments to their parent companies. Overall, these affiliates increased total payments to their parents. These results suggest that affiliates partly switched their means of profit repatriation from royalties to dividends with the enactment of the foreign dividend exemption system.

Keywords: International taxation; Multinational corporations; Profit repatriation; Foreign dividend exemption; Worldwide tax system; Territorial tax system

JEL classification: H25; H26; F23

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1 Introduction

Multinational corporations repatriate foreign earnings through related party transactions. The most common methods of profit repatriation are dividends, royalties, interest, and technical and service fees paid by foreign affiliates to their parent companies. Importantly, the tax burdens on foreign income repatriated through these payments differ depending on the tax system of the multinational's home country. Thus, international tax rules concerning how to tax repatriated foreign income could influence decisions on profit repatriation, including the total amounts of profits repatriated and the choice of repatriation methods among dividends, royalties, interest, and other payments. However, the existing literature on profit repatriation focuses exclusively on dividend repatriation, and little is known about the effect of international taxation on the other repatriation methods such as royalties and interest.

In the past, Japan taxed foreign income earned by its multinational corporations upon repatriation (i.e., when a parent company received dividends, royalties, interest, and other payments from their foreign affiliates). To mitigate international double taxation, Japanese multinationals were able to claim foreign tax credits for taxes paid to foreign governments for which to offset their Japanese tax liabilities, referred to as a foreign tax credit system or worldwide tax system (because the worldwide income including foreign income is taxed). The Japanese government was particularly concerned that under this worldwide tax system, Japanese multinationals retained large amounts of earnings in foreign countries and were not returning them to Japan to avoid any additional taxation. With the aim of removing the tax distortions on profit repatriation and stimulating dividend repatriations, Japan introduced a foreign dividend exemption system in 2009 that exempted dividends received by Japanese parent firms from their foreign affiliates from home-country taxation. This tax reform effectively shifted the Japanese international tax system from the worldwide tax system to a so-called territorial tax system that exempts foreign income from home-country taxation. The UK and the US, which had also employed worldwide tax systems, similarly adopted territorial tax regimes in 2009 and 2018, respectively, by exempting repatriated foreign earnings from taxation.¹

In this paper, we examine the effects of introducing the foreign dividend exemption system on profit repatriation by Japanese multinationals through dividends, royalties, and interest. Using a unique survey conducted by the Ministry of Economy, Trade, and Industry of Japan

¹Among the 34 OECD members, all countries save Chile, Ireland, Israel, South Korea, Mexico, and the US had adopted territorial tax systems by 2012 (PwC, 2013). Subsequently, the US implemented its territorial tax regime in 2018 under the Tax Cut and Jobs Act (TCJA) of 2017. Dharmapala (2018) and Clausing (2019) describe the various provisions of this tax reform and assess their possible consequences on the activities of US multinationals.

(the *Survey on Overseas Business Activities*), which contains the financial and operational characteristics of foreign affiliates owned by Japanese multinationals, we construct panel data on Japanese-owned foreign affiliates from 2007 to 2013. The notable feature of our dataset is that it includes information on dividends, royalties, and the total amount of profits remitted by each affiliate to its parent company in Japan. Typically, foreign affiliates pay royalties for the use of the intangible assets (patents, brands, and know-how) of their parents. For their part, dividends and royalty payments are the main vehicles for the profit repatriation of Japanese multinationals with 45.8% of total payments by foreign affiliates to their parents being remitted by dividends, 34.8% by royalties, and the remaining 19.5% by interest and other payments. We particularly investigate how the enactment of the foreign dividend exemption system influenced the choice of repatriation methods among dividends, royalties, and interest.

The tax costs of dividend repatriations (i.e., the tax burdens on repatriated dividends in Japan) changed with the enactment of the foreign dividend exemption depending on the location of the Japanese-owned foreign affiliates. First, under the foreign dividend exemption system, while repatriated dividends are exempt from the Japanese corporate taxation, Japanese multinationals can no longer claim tax credits for withholding taxes on dividends imposed by the host countries where foreign affiliates are located.² Therefore, withholding taxes on dividends represent the additional tax costs of repatriating dividends under the new system. Second, under the previous worldwide tax system (or foreign tax credit system), the tax costs of dividend repatriations were larger for affiliates located in countries with lower corporate income tax rates. More concretely, dividend repatriations from foreign affiliates located in low tax countries generated fewer foreign tax credits and, thus, triggered larger tax liabilities in Japan.

Because the foreign dividend exemption removed the Japanese tax liabilities on repatriated dividends, foreign affiliates in countries with lower dividend withholding and corporate tax rates faced larger reductions in the tax costs of dividend repatriations. Therefore, we hypothesize that in terms of minimizing repatriation tax costs, dividends became a more attractive method of profit repatriation relative to royalties and interest for foreign affiliates subject to low dividend withholding tax rates and/or low corporate tax rates under the foreign dividend exemption system. We test this hypothesis by investigating whether these foreign affiliates increased dividends and substituted dividends for royalties and interest as alternative means of profit repatriation after the tax reform.

²When parent firms receive dividends, royalties, and interest from their foreign affiliates, the host countries, being the source countries of affiliate income, impose withholding taxes on dividends, royalties, and interest.

Only a few studies examine the effects of the adoption of territorial tax regimes by Japan and the UK in 2009 on dividend payments by foreign affiliates.³ Egger et al. (2015) analyze the effect of the 2009 UK tax reform on dividend repatriation and find that UK-owned foreign affiliates, particularly those located in countries with low corporate tax rates, significantly increased their dividend payouts in 2009 compared with those owned by non-UK multinationals. Hasegawa and Kiyota (2017) examine the 2009 Japanese tax reform and find that Japanese-owned foreign affiliates with a large stock of retained earnings strongly responded to the tax reform by increasing dividend payments. They also find that foreign affiliates located in countries that impose lower withholding tax rates on dividends increased dividend payouts after the tax reform because the withholding taxes are additional costs of dividend repatriations under the foreign dividend exemption system. However, these studies do not consider the effect of tax reform on other methods of profit repatriation such as royalty and interest payments.

Other studies of the effects of taxation on profit repatriation have focused on dividends paid by foreign affiliates (Desai et al., 2001; Desai et al., 2007). The exception is Grubert (1998), which uses the corporate tax returns for 1990 and analyzes the profit repatriation behavior of US-owned foreign affiliates through dividends, royalties, and interest.⁴ Grubert (1998) finds that foreign affiliates pay larger dividends when the withholding tax rates imposed on royalties by the host countries are higher.⁵ This suggests that dividends and royalties are substitutes as means of profit repatriation. However, Grubert (1998) does not consider the consequences of international tax system changes on profit repatriation behavior.

To our knowledge, no previous study examines the impact of foreign dividend exemption on methods of profit repatriation other than dividends. We address this gap in the extant literature by providing the first evidence concerning the effects of foreign dividend exemption (the adoption of a territorial tax system) on dividends, royalties, and interest paid by Japanese-owned foreign affiliates to their parents. Considering the importance of royalties as an alternative method of profit repatriation, it is crucial for the proper evaluation of the

³Motivated by the 2009 tax reforms in Japan and the UK, recent studies examine the effects of adoption of a territorial tax regime on various business activities, including firm value (Bradley et al., 2018), cross-border mergers and acquisitions (Feld et al., 2016), foreign investment (Liu, 2020), domestic investment, employment, and payouts (Arena and Kutner, 2015), profit shifting (Hasegawa, 2019; Langenmayr and Liu, 2019; Liu et al., 2020), and foreign cash holdings (Xing, 2018).

⁴As an earlier study, Hines (1995) analyzes the effect of host country taxation on the royalty payments of US-owned foreign affiliates to their parents in 1989. However, for reasons of confidentiality, they aggregate royalty payments at the host country level.

⁵Mutti and Grubert (2009) also analyze the dividends and royalty payments by US-owned foreign subsidiaries using the corporate tax returns for 1996 and 2002. However, the focus of their analysis is on tax avoidance (taking advantage of the check-the-box rules) instead of profit repatriation.

impact of foreign dividend exemption on profit repatriation to examine its effects on royalties and interest as well as dividends. We investigate how Japanese-owned foreign affiliates changed these payments following the 2009 tax reform. In particular, we examine whether foreign affiliates subject to low withholding tax rates on dividends and/or low corporate tax rates switched their method of profit repatriation from royalties and interest to dividends with the enactment of the foreign dividend exemption system.

We find that Japanese-owned foreign affiliates located in countries imposing lower withholding tax rates on dividends significantly increased dividends and reduced royalty payments to their parents after the tax reform. This suggests that because the tax costs of dividend repatriations are less with a lower withholding tax rate under the foreign dividend exemption system, foreign affiliates subject to low dividend withholding tax rates substituted dividends for royalties as a means of profit repatriation. However, these affiliates also increased the total payments to the parents, implying that dividends only partly replaced royalties. We do not find any substitution between dividends and interest, likely because interest and other payments are not the primary repatriation means for Japanese multinationals, certainly when compared with dividends and royalties.

We also expected that foreign affiliates in countries with low corporate tax rates also substituted dividends for royalties or interest after the tax reform. Although we find some evidence that foreign affiliates in low tax countries increased dividends in response to the tax reform, these affiliates did not reduce either royalty or interest payments to their parents. The existing literature shows that multinational foreign direct investment (FDI), such as the location of foreign affiliates and cross-border mergers and acquisitions (M&As) are influenced by host country corporate tax rates, but not the withholding tax rates on dividends (Barrios et al., 2012; Feld et al., 2016). These studies argue that multinationals save on withholding taxes by repatriating dividends through foreign affiliates located in other countries that set a lower withholding tax rate on dividends (so-called conduit companies) and that the location where FDI takes place and the country from which the parent company repatriate dividends may differ. Therefore, withholding taxes on dividends have only a limited impact on FDI. In line with this argument, our result implies that profit repatriation is more sensitive to the withholding tax rates on dividends than to the corporate tax rates of the host countries.

Our findings have important implications for understanding the impact of international taxation on multinational business activity. First, we show that foreign affiliates subject to low withholding tax rates on dividends changed their means of profit repatriation from royalties to dividends in response to tax reform. This suggests that the switch of the international tax system from worldwide to territorial taxation (or the foreign dividend exemption system) affects not only the amount of repatriated profits, but also the method of profit repatriation.

Second, we demonstrate that profit repatriation is more responsive to withholding tax rates on dividends than to corporate tax rates. Together, the results from this paper and the previous literature (Barrios et al., 2012; Feld et al., 2016) imply that while host country corporate tax rates matter for FDI decisions by multinationals, the withholding tax rates on dividends matter when they repatriate the returns on FDI to the home country.

The remainder of the paper is organized as follows. Section 2 describes the Japanese international tax system and the foreign dividend exemption system enacted under the 2009 tax reform. Section 3 explains the tax costs of repatriating foreign income through dividends, royalties, and interest before and after the implementation of the tax reform, and hypothesizes the expected effects of foreign dividend exemption on these methods. Section 4 describes the data used in our empirical analysis and Section 5 explains the estimation methodology used to test the hypotheses. Section 6 presents the results concerning the effect of the tax reform on dividends, royalties, and interest and Section 7 examines the impact of the tax reform on the total payments to Japanese parents. Section 8 conducts robustness checks of the results obtained in Sections 6 and 7 using alternative specifications. Section 9 concludes.

2 Japan's International Tax System and the Foreign Dividend Exemption System Enacted in 2009

Under the worldwide tax system in place prior to 2009, Japan taxed foreign income earned by Japanese multinationals upon repatriation (i.e., when Japanese companies received payments from their foreign affiliates). However, to alleviate international double taxation, companies were able to claim foreign tax credits for corporate income taxes and withholding taxes on dividends, royalties, and interest paid to foreign governments, and to use these to offset their Japanese tax liabilities. Multinationals could use foreign tax credits up to their Japanese tax liabilities: if the Japanese company's foreign tax credits exceeded its Japanese tax liability, it would be completely offset by the foreign tax credits and the remaining foreign tax credits could be used to reduce the Japanese tax liabilities over the following three years. At the time, the Japanese government was concerned that Japanese multinationals tended to retain the profits of their foreign affiliates abroad instead of repatriating them to avoid additional taxation in Japan. Japanese parents had a strong incentive to do so because the corporate tax rate of Japan was high (about 40%) compared with most other countries and certainly the highest among the 34 OECD member countries. In line with this concern, the stock of retained earnings of Japanese-owned foreign affiliates sharply increased after 2001 (METI,

2008).

To remove the tax distortions on profit repatriation decisions, Japan introduced a foreign dividend exemption system under tax reform in fiscal year 2009. Japan's foreign dividend exemption system now permits Japanese resident corporations to exempt 95% of the dividends received from their foreign affiliates from home-country taxation in accounting years starting on or after April 1st, 2009.⁶ To be eligible for foreign dividend exemption, a Japanese parent must hold at least 25% of the ownership shares of its foreign affiliate.⁷ The remaining 5% of the dividends are added to the income of Japanese firms and taxed by the Japanese government.⁸ The foreign dividend exemption system essentially removes the Japanese tax liabilities on dividends previously borne by Japanese multinationals under the earlier worldwide tax system (save the taxation on 5% of dividends). For its part, the Japanese government expected the dividend exemption system to 1) remove the tax distortions on profit repatriation and stimulate dividend repatriations, 2) increase domestic investment and employment funded by repatriated dividends, and 3) simplify the tax system to adjust international double taxation.⁹

Host countries impose withholding taxes on dividends, royalties, and interest paid to nonresident investors. Under the worldwide tax system, multinationals could claim foreign tax credits for these withholding tax payments. However, under the foreign dividend exemption system, multinationals can no longer claim tax credits for foreign taxes associated with repatriated dividends (i.e., corporate income taxes and withholding taxes on dividends imposed by host countries), and the dividend withholding taxes are not deductible from the taxable income of their Japanese parents. Therefore, as shown clearly in the next section, Japanese multinationals incur withholding taxes on dividends, which are additional tax costs of repatriating dividends after the 2009 tax reform.

Finally, we note that as the name implies, the foreign dividend exemption applies only to the dividends paid by foreign affiliates under the new exemption system. The tax treatments of other types of foreign earnings, including the profits of foreign branches, foreign capital

⁶In Japan, the fiscal years run from April 1st to March 31st.

⁷This ownership condition must have been satisfied to claim foreign tax credits prior to 2009. However, the 25% minimum shareholding requirement can be reduced by bilateral tax treaties between Japan and several countries. For example, the minimum shareholding requirement is set in the tax treaties at 10% for foreign affiliates in Australia, Brazil, Kazakhstan, and the US, and 15% for France.

⁸This provision assumes that the costs of earning dividends for parent firms (such as interest payments on debt to finance investment in foreign affiliates) amounts to 5% of repatriated dividends. These costs should have been deducted from taxable income when parent firms invested in foreign affiliates, and thus would not be deducted again when repatriating foreign income.

⁹Under the worldwide tax system, to determine the amounts of foreign tax credits, multinationals needed to prepare documents that proved foreign tax payments, which was cumbersome. This is not necessary under the foreign dividend exemption system and, thus, is expected to reduce tax compliance costs.

gains, royalties, and interest received from foreign affiliates, were unchanged by this tax reform. For example, royalties and interest received from foreign affiliates remained taxed in Japan, while granting foreign tax credits for the withholding taxes imposed on these payments. Therefore, the Japanese corporate tax system is still far from a “pure” territorial tax system exempting all types of foreign income.¹⁰

3 Tax Costs of Profit Repatriation through Dividends, Royalties, and Interest

In this section, we calculate the tax costs of profit repatriation through dividends, royalties, and interest (i.e., the tax burdens on foreign income repatriated to Japan) before and after the tax reform in 2009. We particularly explain how the 2009 tax reform changed the tax costs of dividend repatriations relative to those of other payment methods, and this establishes the hypotheses for our empirical analysis concerning the effects of foreign dividend exemption on dividends, royalties, and interest paid by Japanese-owned foreign affiliates.

Consider a foreign affiliate i located in host country c and owned by Japanese parent j . Let Y_{ijct} denote the pretax profit of affiliate i in year t . The corporate income tax rates of country c and Japan are denoted as τ_{ct} and τ_{Ht} , respectively. The withholding tax rates imposed by country c on dividends, royalties, and interest paid by affiliate i to Japanese parent j are denoted as w_{ct}^D , w_{ct}^R , and w_{ct}^I , respectively.

Suppose affiliate i earns one dollar of profit and remits this to parent j in Japan through dividends, royalties, or interest. We calculate the total tax payment for the one dollar of profit in country c and Japan, which we refer to as the tax costs of profit repatriation (including the corporate tax payment in country c). We show how the tax costs of profit repatriation differ among these three repatriation methods and how the tax costs of dividend repatriations changed with the introduction of the foreign dividend exemption system relative to those of royalties and interest. First, consider the tax costs of dividend repatriation. Affiliate i pays the corporate tax of τ_{ct} and remits the after-tax profit of $(1 - \tau_{ct})$ to parent j through dividends. When receiving the dividends, parent j pays the withholding tax of $w_{ct}^D(1 - \tau_{ct})$ to country c . Then, the total tax payment to country c is $[\tau_{ct} + w_{ct}^D(1 - \tau_{ct})]$.

Under the worldwide tax system (that prevailed in Japan before April 2009), when parent j receives the dividends, the Japanese government imposes the corporate tax on the pretax income of one dollar earned in country c . Thus, parent j owes a Japanese tax liability on the

¹⁰Clausing (2015) points out that no major countries employ either pure territorial or pure worldwide tax systems (that immediately taxes worldwide income including foreign income) and that, accordingly, all actual tax systems lie on the spectrum between these two extremes.

foreign income of τ_{Ht} , but can claim foreign tax credits for the taxes paid to country c for the amount of $[\tau_{ct} + w_{ct}^D(1 - \tau_{ct})]$. If $\tau_{Ht} \geq \tau_{ct} + w_{ct}^D(1 - \tau_{ct})$ holds, the Japanese tax liability is greater than or equal to the foreign tax liability. Then, the net Japanese tax liability equals $[\tau_{Ht} - \tau_{ct} - w_{ct}^D(1 - \tau_{ct})]$.

The total tax payment for the dollar of foreign profit is the sum of the taxes paid to country c and to Japan, which is calculated as follows.

$$[\tau_{ct} + w_{ct}^D(1 - \tau_{ct})] + [\tau_{Ht} - \tau_{ct} - w_{ct}^D(1 - \tau_{ct})] = \tau_{Ht}.$$

This equation shows that, under the condition that the Japanese corporate tax rate is higher than or equal to the total foreign tax rate $[\tau_{ct} + w_{ct}^D(1 - \tau_{ct})]$, the total tax rate on foreign profits equals the Japanese corporate tax rate, and does not depend on the foreign tax rates (τ_{ct} and w_{ct}^D).

By contrast, if $\tau_{Ht} < \tau_{ct} + w_{ct}^D(1 - \tau_{ct})$ holds, parent j earns foreign tax credits that are greater than the Japanese tax liability, able to be used up to the Japanese tax liability. The parent company can then completely offset the tax liability in Japan with the foreign tax credits and carry forward any remaining credits for future use. Therefore, the total tax payment for the dollar of foreign profit is the same as the amount of taxes paid to country c , $[\tau_{ct} + w_{ct}^D(1 - \tau_{ct})]$.

In sum, we express the tax costs of repatriating one dollar of pretax profit through dividends under the worldwide tax system as follows.

$$Tax\ Cost_{ijct}^D = \begin{cases} \tau_{Ht} & \text{if } \tau_{Ht} \geq \tau_{ct} + w_{ct}^D(1 - \tau_{ct}) \\ \tau_{ct} + w_{ct}^D(1 - \tau_{ct}) & \text{if } \tau_{Ht} < \tau_{ct} + w_{ct}^D(1 - \tau_{ct}) \end{cases} \quad (1)$$

Note that because Japan's corporate tax rate was quite high around the time of the tax reform, the Japanese tax liabilities would invariably exceed the tax payments to foreign governments for most Japanese multinationals.¹¹ Therefore, we develop our hypotheses assuming that $\tau_{Ht} \geq \tau_{ct} + w_{ct}^D(1 - \tau_{ct})$ holds.¹²

¹¹In our data, $\tau_{Ht} \geq \tau_{ct} + w_{ct}^D(1 - \tau_{ct})$ holds for 89% of affiliate-year observations in 2007 and 2008 when using the statutory corporate tax rates as a measure of τ_{ct} and for 91% of affiliate-year observations in 2007 and 2008 when using the country-level average tax rates (defined in Section 8).

¹²If the parent company experiences losses in its domestic operations, the repatriated foreign income would be offset by the loss and be exempt from taxation in Japan, or only a part of the repatriated income might be taxed. In this case, it is more likely that the tax rate imposed by Japan on the repatriated income is lower than τ_{Ht} and, as a result, $\tau_{Ht} \geq \tau_{ct} + w_{ct}^D(1 - \tau_{ct})$ may not hold. However, in our data, only 11% of affiliate-year observations identify parent firms with a loss. Therefore, we assume throughout this section that the Japanese corporate tax rate on repatriated earnings is high enough that this condition holds. Moreover, in our empirical analysis, the inclusion or exclusion of foreign affiliates owned by loss-making parents in the sample does not affect the results.

The tax costs of dividend repatriations presented in equation (1) consist of the corporate tax on the one-dollar profit imposed by the host country (τ_{ct}) and the additional taxes upon repatriation. By subtracting τ_{ct} from the right-hand side of equation (1), the additional tax liability in Japan upon repatriation can be written as follows.

$$\begin{cases} \tau_{Ht} - \tau_{ct} & \text{if } \tau_{Ht} \geq \tau_{ct} + w_{ct}^D(1 - \tau_{ct}) \\ w_{ct}^D(1 - \tau_{ct}) & \text{if } \tau_{Ht} < \tau_{ct} + w_{ct}^D(1 - \tau_{ct}) \end{cases} \quad (2)$$

This expression implies that, under the worldwide tax system, repatriating dividends from low corporate tax countries is costly. In particular, as long as $\tau_{Ht} \geq \tau_{ct} + w_{ct}^D(1 - \tau_{ct})$ holds, the additional tax costs of repatriating dividends is proportional to the tax differential between Japan and the host country ($\tau_{Ht} - \tau_{ct}$). In this section, we assume that the parent company owns only one foreign affiliate and repatriates all after-tax profit of the foreign affiliate to Japan. However, if we allow the multinational to decide whether to reinvest the after-tax profit in the host country or repatriate it to Japan, or whether to repatriate foreign earnings from multiple affiliates located in different countries, the multinational should have less incentive to repatriate profits from foreign affiliates in low tax countries.

Under the Japanese foreign dividend exemption system enacted in April 2009, only 5% of repatriated dividends are taxed by the Japanese government, while parent j can no longer claim foreign tax credits for taxes paid to country c . Then, the tax liability in Japan is $0.05(1 - \tau_{ct})\tau_{Ht}$. The foreign tax payment is the same as before, $[\tau_{ct} + w_{ct}^D(1 - \tau_{ct})]$. Thus, the tax cost of repatriating one dollar of pretax profit through dividends after the 2009 tax reform is

$$Tax\ Cost_{ijct}^D = [\tau_{ct} + w_{ct}^D(1 - \tau_{ct})] + 0.05(1 - \tau_{ct})\tau_{Ht}. \quad (3)$$

This equation shows that under the foreign dividend exemption system, the total tax rate on a dollar of foreign income depends on the corporate tax rate (τ_{ct}) and the dividend withholding tax rate (w_{ct}^D) of the host country. More precisely, a lower withholding tax rate on dividends and a lower corporate tax rate of the host country yields lower tax costs of dividend repatriation.

For most Japanese multinationals, the tax costs of repatriating one dollar of pretax profit from a foreign affiliate changed from τ_{Ht} in equation (1) to equation (3) with the introduction of the foreign dividend exemption system. The comparison of the tax costs under both tax systems indicates the two channels through which the tax reform changed the tax costs of dividend repatriations. First, the reduction in tax costs is larger for foreign affiliates located in countries with lower withholding tax rates on dividends. Intuitively, withholding taxes on dividends are additional costs of repatriating dividends under the foreign dividend exemption

system because foreign tax credits no longer apply to the withholding tax payments. Thus, the tax reform reduces the repatriation tax costs further for foreign affiliates located in countries with lower withholding tax rates.

Second, the reduction in tax costs is larger for foreign affiliates located in countries with lower corporate tax rates. Under the worldwide tax system, and as discussed, repatriating dividends from lower tax countries were more costly because the additional taxation in Japan was larger with fewer foreign tax credits available. The foreign dividend exemption system removed the additional tax liabilities in Japan and yielded larger reductions in the tax costs of dividend repatriations for foreign affiliates located in countries with lower corporate tax rates. Therefore, we expect that foreign affiliates subject to lower withholding tax rates on dividends or lower corporate tax rates would respond strongly to the tax reform by increasing dividend payments to their parents.

Now let us turn to the tax costs of profit repatriation through royalties and interest. Suppose affiliate i earns an additional dollar of earnings and pays it to parent j as royalties or interest. In general, royalties and interest are deductible from taxable income. Thus, the dollar of royalties or interest would reduce the taxable income by one dollar, and the affiliate owes no corporate tax in country c . When parent j receives the dollar of royalties or interest, it pays the withholding tax imposed on royalties (w_{ct}^R) or interest (w_{ct}^I). The 2009 tax reform did not change the tax treatment of royalties and interest Japanese parents receive from their foreign affiliates. The Japanese government imposes the corporate tax on the dollar of royalty or interest income. Then, the Japanese tax liability is τ_{Ht} . Parent j can then claim foreign tax credits for the withholding tax payment and apply these up to the Japanese tax liability.

If the Japanese tax liability is larger than or equal to the withholding tax payment for royalties (i.e., if $\tau_{Ht} \geq w_{ct}^R$ holds), the net tax liability in Japan is $(\tau_{Ht} - w_{ct}^R)$, while the foreign tax payment is only the withholding tax on the dollar of royalties (w_{ct}^R). Then, the total tax payment for the dollar of royalties is τ_{Ht} . By contrast, if the Japanese tax liability is smaller than the withholding tax payment for royalties (i.e., if $\tau_{Ht} < w_{ct}^R$), parent j can completely offset its Japanese tax liability with foreign tax credits. Then, the total tax payment for the dollar of royalties is equal to the foreign tax payment of w_{ct}^R .

In sum, we express the tax costs of repatriating a dollar of royalties as follows.

$$Tax\ Cost_{ijct}^R = \begin{cases} \tau_{Ht} & \text{if } \tau_{Ht} \geq w_{ct}^R \\ w_{ct}^R & \text{if } \tau_{Ht} < w_{ct}^R \end{cases} \quad (4)$$

Similarly, we can write the tax costs of repatriating a dollar of interest as

$$Tax\ Cost_{ijct}^I = \begin{cases} \tau_{Ht} & \text{if } \tau_{Ht} \geq w_{ct}^I \\ w_{ct}^I & \text{if } \tau_{Ht} < w_{ct}^I. \end{cases} \quad (5)$$

Importantly, the 2009 tax reform did not change the repatriation costs of royalties and interest. Note that $\tau_{Ht} \geq w_{ct}^R$ and $\tau_{Ht} \geq w_{ct}^I$ normally hold because the Japanese corporate tax rate is high (around 40%), whereas withholding tax rates are lower (at most 34% for royalties and 40% for interest in our data). Thus, the tax costs of royalties and interest are generally τ_{Ht} .¹³

The enactment of the foreign dividend exemption system decreased the tax cost of profit repatriation through dividends for foreign affiliates subject to low withholding tax rates on dividends or low corporate tax rates, whereas the tax costs of royalties and interest were unchanged. For example, suppose that the corporate tax rates of Japan and the host country are 40% and 20%, respectively (i.e., $\tau_{Ht} = 0.4$ and $\tau_{ct} = 0.2$) and that the withholding tax rates on dividends, royalties, and interest are 10% (i.e., $w_{ct}^D = w_{ct}^R = w_{ct}^I = 0.1$). From equations (4) and (5), the tax costs of profit repatriation through royalties and interest are 0.4 both before and after the 2009 tax reform. From equations (1) and (3), the tax cost of profit repatriation through dividends decrease from 0.4 under the worldwide tax system to 0.296 under the foreign dividend exemption system. If the corporate tax rate falls from 20% to 10% and the withholding tax rate on dividends from 10% to 5% in the host country, the tax costs of dividend repatriation further decrease to 0.163 under the foreign dividend exemption system, whereas those under the worldwide tax system are the same as before.

Under the worldwide tax system in place until fiscal year 2008, the tax costs of profit repatriation are identical regardless of whether the affiliate remits foreign profits in the form of dividends, royalties, or interest. However, under the foreign dividend exemption system in operation from fiscal year 2009, if foreign affiliates are located in countries that impose low withholding tax rates on dividends or with low corporate tax rates, they can remit profits to their parents at lower cost by paying dividends than by paying royalties or interest. Therefore, these affiliates may change their method of profit repatriation from dividends to royalties or interest to save on tax costs.

In summary, we hypothesize the effect of foreign dividend exemption on dividends, royalties, and interest as follows.

Hypothesis 1: The lower the withholding tax rate on dividends in the host country, the

¹³For the same reason as discussed in footnote 12, the Japanese corporate tax rate applied to the repatriated earnings might be zero or lower than the statutory tax rate τ_{Ht} for foreign affiliates owned by loss-making parents.

more foreign affiliates will increase dividends and decrease royalty or interest payments to their Japanese parents after the 2009 tax reform.

Hypothesis 2: The lower the corporate tax rate in the host country, the more foreign affiliates will increase dividends and decrease royalty or interest payments to their Japanese parents after the 2009 tax reform.

Because dividends and royalties are the main means of profit repatriation for Japanese multinationals, we expect that the substitution between dividends and royalties will be stronger than that between dividends and interest. In our empirical analysis, we test these hypotheses and examine to what extent dividends substitute for royalties and interest with the enactment of the foreign dividend exemption system.

4 Data

We employ the micro database of the annual survey conducted by the Ministry of Economy, Trade and Industry of Japan (METI), the *Survey on Overseas Business Activities* for our analysis. This survey targets all Japanese firms (except those in the finance, insurance, and real estate industries) that own foreign affiliates at the end of the fiscal year (March 31). A foreign affiliate of a Japanese company is defined as a subsidiary located in a foreign country in which a Japanese company has invested capital of 10% or more. The survey provides panel data on the financial and operating characteristics of Japanese-owned foreign affiliates from 2006 to 2013.

The notable feature of this survey is that it collects information on the amounts of dividends and royalties paid by each foreign affiliate to its Japanese parent. The information on the total payment from the affiliate to its Japanese parent is also available in the survey, where the total payment is the sum of dividends, royalties, interest, and other payments (such as technical and service fees) remitted by the affiliate to the Japanese parent. The survey started to collect information on these payments every year from 2007.¹⁴ Thus, we set the initial year of the data period at 2007 and use the 2006 survey to create lagged variables for 2007.

The coverage of the foreign affiliates include up to second-tier subsidiaries (i.e., foreign sub-subsidiaries).¹⁵ We exclude second-tier subsidiaries from the sample because a second-tier subsidiary does not usually remit dividends and other types of payment directly to

¹⁴Prior to 2007, the survey collected these information only every three years, e.g., for 2001 and 2004.

¹⁵The survey defines a sub-subsidiary as a company in which a subsidiary funded more than 50% by a Japanese company has invested capital of more than 50%.

its Japanese owner unless owned jointly by the Japanese owner and its first-tier foreign subsidiaries.

There are many missing values on dividends, royalties, and the total payments to the parent in this data. This is because if an affiliate pays nothing (or no dividend or royalty), some respondents (parent firms) left these items blank on the survey form. These blank items appear as missing values in our data. Another reason is that when METI assembles the survey results, they record zero values as missing values for some items and for some years. For example, in the 2007 survey data, all zero values for total payments to the parent appear as missing values, whereas zero values for dividends and royalties appear as zeros. Moreover, the way to indicate zeros on the survey form changed in the surveys from 2009 onward. In general, if the respondents indicate zeros on the form, they are recorded as missing values from 2009.¹⁶ As a result, the number of missing values for dividends, royalties, and the total payment surged from 2010 onwards.¹⁷ The problem is that we cannot determine whether the missing values are in fact zero payments. Considering that we know that a substantial number of zero values transformed to missing values, we replace all the missing values for dividends, royalties, and the total payments with zeros. However, we confirm that our main results are qualitatively unchanged even if we do not replace these missing values with zeros.

The data do not contain information on interest paid by an affiliate to the Japanese parent, which is another means of profit repatriation used by multinationals. However, because we have information on the total payment to the parent, we can calculate the amount of interest and other payments by subtracting the sum of dividend and royalty payments from the total payment, and use this as a proxy for interest payments in our empirical analysis.¹⁸

To take account of the parent company's financial situations that could affect the repatriation behavior, we use an additional annual survey conducted by the METI, the *Basic Survey of Japanese Business Structure and Activities*. This survey covers all Japanese firms with 50 or more employees whose paid-up capital or investment fund is at least 30 million yen. The survey provides the panel data that contain the unconsolidated financial and operating

¹⁶More precisely, the respondents were instructed to fill in the special character “-” to indicate a zero value for each item and zero if the amount was less than one million JPY but greater than zero. In the process of assembling the survey results, the special character transformed to missing values.

¹⁷We cannot identify a clear increase in missing values in the 2009 survey as many respondents seemed to overlook the change of the rule to indicate zeros because the instruction did not appear on the 2009 survey form.

¹⁸The instructions on the survey form explain that the total payment includes dividends, royalties, interest, and technical guidance fees. Thus, it is reasonable to use this proxy measure for interest payments, assuming that interest payments are the main means of profit repatriation next to dividends and royalties. However, we recognize that our proxy measure reflects not only interest but also other payments such as technical guidance fees.

characteristics of Japanese parent firms from 2006 to 2013.

We merge these two survey datasets using the unique ID numbers provided for Japanese parents to construct affiliate-level panel data containing information on each affiliate and its parent company from 2007 to 2013. We then collect information on corporate income tax rates and withholding tax rates on dividends, royalties, and interest of host countries for each year from Ernst & Young’s World Corporate Tax Guide, documents released by Japan’s National Tax Agency that summarize the revisions and conclusions of tax treaties between Japan and its partner countries (“Summary of the Revision of Withholding Taxes”), and documents released by the Japan External Trade Organization (“Comparative Survey of Investment-Related Costs”). If the withholding tax rates of the host countries fall for large shareholders of foreign affiliates under the provisions of bilateral tax treaties, we use the reduced tax rates in our analysis. To take account of the macroeconomic characteristics of the host countries, we obtain information on GDP per capita, annual real GDP growth rates, total population, unemployment rates, and foreign exchange rates from the World Bank’s World Development Indicators.

We drop from the sample foreign affiliates that lack information on the corporate tax rate, the withholding tax rates on dividends, royalty, and interest, or the macroeconomic characteristics of the host country because they are used in all empirical specifications. As a result, 117,509 affiliate-year observations from 28,624 affiliates remain in the sample. Table 1 presents summary statistics of the variables used in our empirical analysis, and Table 2 details the definitions of these variables.¹⁹ The subscripts i, j, c, t under the variables indicate the affiliate, its parent, and the country where the affiliate is located, and the year of observation, respectively. To mitigate the influence of outliers, we winsorize the affiliate- and parent-level ratio variables at the bottom and top 1%.²⁰ The medians of dividends, royalties, interest, and total payments are all zero because 20.5% of affiliates pay dividends, 18.3% royalties, 10.6% interest, and 37% either dividends, royalties, interest, or other fees (i.e., $\text{Total Payment}_{ijct} > 0$). The ratios of dividends, royalties, and interest to the total payments are denoted as $(\text{Dividend}/\text{Total Payment})_{ijct}$, $(\text{Royalty}/\text{Total Payment})_{ijct}$, and $(\text{Interest}/\text{Total Payment})_{ijct}$, respectively. The mean values of these variables indicate

¹⁹We exclude four affiliate-year observations from Zimbabwe (two affiliates in 2007 and 2008) because the exchange rate of local currency per yen (normalized to one in 2006) for Zimbabwe takes an extremely large value of 45,972,944 in 2008 and, thus, severely distorts the mean value of the exchange rates for the entire sample. However, including those four observations does not affect our results.

²⁰We do not winsorize the ratios of dividends, royalties, and interest to total payments, denoted as $(\text{Dividend}/\text{Total Payment})_{ijct}$, $(\text{Royalty}/\text{Total Payment})_{ijct}$, and $(\text{Interest}/\text{Total Payment})_{ijct}$, respectively. By definition, the sum of dividends and royalties should be smaller than or equal to the total payment. If the former exceeds the latter by some error, we drop the observation from the sample. Therefore, these ratio variables take values between zero and one for all observations (without winsorization).

that, on average, 45.8% of affiliate profits remitted to parents is paid through dividends, 34.8% through royalties, and the remaining 19.5% through interest (including other types of payments). This suggests that dividends and royalties are the main means of profit repatriation for Japanese multinationals.

Table 3 presents the number of Japanese-owned foreign affiliates in each country from 2007 to 2013. For the table, we select 41 countries where there are no less than 100 affiliate-year observations in total. The table shows that China and the US host a large number of foreign affiliates owned by Japanese multinationals. Other than these, Japanese multinationals locate many affiliates in Asian countries such as Hong Kong, Indonesia, Korea, Malaysia, Singapore, Taiwan, and Thailand. A substantial number of affiliates are also located in Australia, Germany, India, Netherlands, Panama, the UK, and Vietnam.

5 Estimation Methodology

We test the hypotheses established in Section 3, using the affiliate-level panel data from 2007 to 2013. In the spirit of Grubert (1998) and Hasegawa and Kiyota (2017), we estimate the following regression equation:

$$\begin{aligned}
Y_{ijct} = & \alpha_0 + \alpha_1\tau_{ct} + \alpha_2w_{ct}^D + \alpha_3w_{ct}^R + \alpha_4w_{ct}^I \\
& + \beta_1DE_t \times \tau_{ct} + \beta_2DE_t \times w_{ct}^D + \beta_3DE_t \times w_{ct}^R + \beta_4DE_t \times w_{ct}^I \\
& + \gamma X_{ijct} + \lambda_t + \mu_i + u_{ijct},
\end{aligned} \tag{6}$$

where the subscripts i, j, c, t are the indexes for the affiliate, its Japanese parent, the country where the affiliate is located, and the year, respectively. The dependent variable Y_{ijct} is either dividends, royalties, interest, or the total amount paid by affiliate i to parent j in year t . To examine the effect of the tax reform on the different aspects of profit repatriation, we specify the dependent variables in various forms. First, we use the ratios of dividends, royalties, and interest scaled by total payments as dependent variables: $(\text{Dividend/Total Payment})_{ijct}$, $(\text{Royalty/Total Payment})_{ijct}$, and $(\text{Interest/Total Payment})_{ijct}$. These variables capture, given the total amount paid to the parent (i.e., $\text{Total Payment}_{ijct} > 0$), how intensively affiliate i uses dividends, royalties, and interest as a means of profit repatriation. Next, to measure the levels of profit repatriation by these payment methods, we specify dividends, royalties, and interest scaled by sales as dependent variables: $(\text{Dividend/Sales})_{ijct}$, $(\text{Royalty/Sales})_{ijct}$, and $(\text{Interest/Sales})_{ijct}$.

On the right-hand side of the equation, τ_{ct} is the statutory corporate tax rate of country c in year t . w_{ct}^D , w_{ct}^R , and w_{ct}^I are the withholding tax rates that country c imposes on dividends,

royalties, and interest in year t , respectively. The dummy variable DE_t takes a value of one if $t \geq 2009$ and otherwise zero. The vector of control variables X_{ijct} includes various control variables at the affiliate-, parent-, and country-levels that could influence the repatriation behavior of foreign affiliates. Host country control variables include the exchange rate of local currency per Japanese yen (normalized to one in 2006), the annual GDP growth rate, GDP per capita, population, and the unemployment rate. The exchange rate controls for the incentive to earn foreign exchange gains upon repatriation. The GDP growth rate controls for investment opportunities in the host country, while GDP per capita, population, and the unemployment rate control for market size and the macroeconomic conditions of the host country.

As affiliate-level control variables, in some specifications we use the annual sales growth rate to control for affiliate-specific investment opportunities, and the natural logarithm of sales to control for affiliate size. As parent-level control variables, we include lagged net profitability (i.e., the ratio of after-tax profit to total assets in year $t - 1$) and lagged leverage (i.e., the ratio of total debt to total assets in year $t - 1$) to control for the demands for internal funds. The year fixed effects denoted by λ_t are included in all specifications to control for yearly shocks that uniformly affect all affiliates. The affiliate fixed effects denoted as μ_i are included whenever possible to control for time-invariant and affiliate-specific factors that influence the profit repatriation behavior of Japanese-owned foreign affiliates.

The key parameters of interest are the estimated coefficients on the interaction terms between DE_t and the tax variables related to the costs of dividend repatriations, $DE_t \times \tau_{ct}$ and $DE_t \times w_{ct}^D$. The coefficients on these interaction terms should capture how the patterns of profit repatriation through dividends, royalties, and interest have changed depending on the withholding tax rates on dividends and corporate tax rates of host countries, in response to the 2009 tax reform. As predicted by Hypothesis 1, if foreign affiliates located in countries with low withholding tax rates on dividends increased dividend payouts and reduced royalty and interest payments with the enactment of the foreign dividend exemption system in 2009, the coefficient on $DE_t \times w_{ct}^D$ will be negative ($\beta_2 < 0$) when the dependent variable is dividend payments and positive ($\beta_2 > 0$) when the dependent variable is royalty or interest payments. Similarly, as predicted by Hypothesis 2, if foreign affiliates in countries with low corporate tax rates increased dividends and reduced royalty and interest payments after the 2009 tax reform, the coefficient on $DE_t \times \tau_{ct}$ will be negative ($\beta_1 < 0$) when the dependent variable is dividend payments and positive ($\beta_1 > 0$) when the dependent variable is royalty or interest payments. We focus on estimating and interpreting these coefficients in various specifications in the following section.

Note that this estimation method can be interpreted as the difference-in-differences es-

timation in which the dividend withholding tax rate (w_{ct}^D) and the corporate tax rate (τ_{ct}) of the host country reflect the intensity of treatment implemented by the tax reform. Foreign affiliates subject to low withholding tax rates on dividends or low corporate tax rates would experience large reductions in the tax costs of remitting dividends to their parents. Therefore, we classify these affiliates as a treatment group that are expected to increase dividends while reducing royalties and/or interest payments after the tax reform, compared with foreign affiliates in the control group (those subject to high withholding tax rates on dividends or high corporate tax rates).

The host country's corporate tax rates (τ_{ct}) and withholding tax rates ($w_{ct}^D, w_{ct}^R, w_{ct}^I$) are included as independent variables to capture the responsiveness of affiliate dividends, royalties, and interest to these tax rates under the worldwide tax system before 2009. As shown by equation (2), repatriating dividends from low corporate tax countries was relatively costly under the worldwide tax system. Thus, we expect the coefficient on τ_{ct} to be positive when the dependent variable is dividend payments ($\alpha_1 > 0$). The withholding tax rates appear in the tax costs in equations (1), (4), and (5) if the Japanese tax liability is smaller than the foreign tax liability (or, if the Japanese parent is in loss), which would be a relatively rare case for Japanese multinationals. Therefore, we expect the coefficients on the withholding tax rates on dividends, royalties, and interest to be either negative or insignificant when the dependent variables are dividend, royalty, and interest payments, respectively.

The interaction terms of $DE_t \times w_{ct}^R$ and $DE_t \times w_{ct}^I$ are not directly related to our hypotheses, but are included to account for the possible changes in the response of profit repatriation to the withholding tax rates on royalties and interest after the tax reform. As shown by equations (4) and (5), if the Japanese tax liability is smaller than the withholding tax liability, the withholding tax rate affects the tax costs of remitting royalties or interest. Thus, it might be possible that higher withholding tax rates on royalties and interest induce foreign affiliates to remit profits by dividends instead of royalties and interest under the foreign dividend exemption system.

As for the estimation procedures, we estimate the regression equation using ordinary least squares (OLS) with affiliate fixed effects. The fixed effects OLS estimation uses the within-affiliate variations in the dependent and independent variables over time to identify the treatment effect of the tax reform and, thus, is an appropriate procedure to analyze the change in the repatriation patterns after the tax reform. As an alternative procedure, we estimate the equation using the Tobit model because the outcome variables take a value of zero for many observations. In the Tobit specifications, and in place of affiliate fixed effects, we include industry dummy variables identifying the two-digit industry classification to which the affiliate belongs, and country dummy variables indicating the host country

where the affiliate is located.²¹ In fixed effects OLS specifications, we cluster standard errors by affiliate to account for serial correlation in the error term.

6 Effect of Foreign Dividend Exemption on Dividends, Royalties, and Interest

6.1 Choice of Method of Profit Repatriation among Dividends, Royalties, and Interest

First, we analyze the effect of the foreign dividend exemption on the choice of the method of profit repatriation. To do so, we estimate equation (6) using the ratios of dividends, royalties, and interest to total payments to the parent as dependent variables, which are denoted as $(\text{Dividend}/\text{Total Payment})_{ijct}$, $(\text{Royalty}/\text{Total Payment})_{ijct}$, and $(\text{Interest}/\text{Total Payment})_{ijct}$, respectively. These variables measure how intensively an affiliate uses dividends, royalties, and interest as means of remitting profits to its parent. Table 4 presents the estimation results. The dependent variables are dividends, royalties, and interest scaled by total payments in columns (1)–(2), (3)–(4), and (5)–(6), respectively. Affiliate and parent characteristics are excluded in columns (1), (3), and (5), and are included in columns (2), (4), and (6).²² In all specifications, we estimate the equation by OLS including affiliate and year fixed effects.

In the dividend equation in columns (1) and (2), the coefficient on $DE_t \times w_{ct}^D$ is negative and statistically significant at the 10% level, while in the royalty equation in columns (3) and (4), the coefficient is positive and statistically significant at the 1% and 5% level, respectively. This is consistent with Hypothesis 1. The estimated coefficients of -0.21 and 0.30 in columns (2) and (4), respectively, indicate that if the withholding tax rate on dividends imposed by the host country was one percentage point lower, a foreign affiliate would increase dividends by 0.21% of the total payment and reduce royalties by 0.3% of the total payment after the 2009 tax reform.²³ This suggests that foreign affiliates subject to low withholding tax rates on

²¹When using Tobit estimation, we do not include affiliate fixed effects because in a nonlinear model this would result in the incidental parameters problem, which makes the estimators inconsistent (Greene, 2007). Instead, we use industry and country fixed effects to control for time-invariant factors specific to industries and host countries, respectively.

²²The number of observations decreases from 43,493 to 30,298 when including affiliate and parent characteristics as control variables. Because our panel data is unbalanced, some observations lack the previous year's information and so we are unable to define the annual sales growth rate. Moreover, some observations lack the financial characteristics of parent firms because the identification information on their parent firms in the two METI surveys does not successfully match. These observations are dropped from the regression sample when including affiliate and parent control variables.

²³Comparing the magnitude of the two estimates, the decrease in royalty payments associated with lower dividend withholding tax rates is larger than the increase in dividends. This is because, as shown in the

dividends substituted dividends for royalties with the implementation of the foreign dividend exemption system. In the interest equation in columns (5) and (6), the coefficient on the interaction term is small and not significantly different from zero, which is inconsistent with Hypothesis 1. We interpret this as meaning that dividends and royalties are close substitutes as a means of profit repatriation for Japanese multinationals, whereas dividends and interest are not.

The estimated coefficient on $DE_t \times \tau_{ct}$ is not statistically different from zero in any specifications from columns (1)–(6), and the positive coefficient on the interaction term in the dividend equation in columns (1)–(2) is not consistent with Hypothesis 2. Thus, we find no evidence that foreign affiliates in countries with low corporate tax rates substituted dividends for royalties or interest by using dividends more intensively as means of profit repatriation under the foreign dividend exemption system. We discuss the interpretation of this result in the next subsection.

6.2 Total Payments through Dividends, Royalties, and Interest

Next, we analyze the effect of foreign dividend exemption on the total payments by foreign affiliates through dividends, royalties, and interest. To account for affiliate size, we estimate equation (6) using dividends, royalties, and interest scaled by sales as dependent variables, which are denoted as $(\text{Dividend}/\text{Sales})_{ijct}$, $(\text{Royalty}/\text{Sales})_{ijct}$, and $(\text{Interest}/\text{Sales})_{ijct}$, respectively. Table 5 presents the estimation results. In columns (1)–(2), (3)–(4), and (5)–(6), the dependent variables are dividends, royalties, and interest scaled by sales, respectively. We estimate the equation using fixed effects OLS in columns (1), (3), and (5) and by the Tobit procedure in columns (2), (4), and (6). All specifications include affiliate and parent control variables. Note that the sample size is larger than that in Table 4 because foreign affiliates that remit no payments to their parents (those with $\text{Total Payment}_{ijct} = 0$) are included in the sample.

In the dividend equation in columns (1) and (2), the coefficient on $DE_t \times w_{ct}^D$ is negative and statistically significant at the 1% level in column (1). As predicted by Hypothesis 1, this suggests that foreign affiliates located in countries with low withholding tax rates on dividends increased dividend payments after the tax reform. The OLS estimate of -0.022 in column (1) indicates that if the withholding tax rate on dividends of the host country was one percentage point lower, a foreign affiliate increased dividends by 0.022% of sales after the tax reform. In the royalty equation in columns (3) and (4), the coefficient on this interaction term is positive as predicted by Hypothesis 1, but small and statistically

next section, the total payment (the denominator of the dependent variables) is affected by the tax reform and negatively associated with the interaction term of $DE_t \times w_{ct}^D$.

insignificant. Therefore, we cannot identify significant substitution between dividends and royalties through dividend withholding tax rates. As found in the previous subsection, the coefficient in the interest equation in columns (5) and (6) is negative and statistically insignificant, which is inconsistent with Hypothesis 1, but would imply that dividends and interest are not close substitutes as means of repatriation.

When we specified the ratios of dividends and royalties to total payment as the dependent variables in the previous section, only foreign affiliates making payments to their parents (i.e., those with $\text{Total Payment}_{ijct} > 0$) are included in the regression sample. These affiliates may have a stronger incentive to choose a repatriation method which achieves lower repatriation costs and, thus, we found the results consistent with Hypothesis 1. To confirm this, we estimate equation (6) using the same specifications as in Table 5 but include only foreign affiliates with $\text{Total Payment}_{ijct} > 0$ in the sample.

Table 6 provides the estimation results. The coefficients on $DE_t \times w_{ct}^D$ in the royalty equation are now more statistically significant and larger in magnitude, being 0.0041 in column (3) and 0.014 in column (4), than those in Table 3, and 0.0007 in column (3) and 0.0077 in column (4). The coefficient on this interaction term is negative in the dividend equation and statistically significant in column (1). These results imply that foreign affiliates that make some payments to their parents substituted dividends partly for royalties when they faced low withholding tax rates on dividends after the tax reform. Note that the Tobit coefficients in the table indicate the marginal effects on the latent variable. In column (4), the marginal effect of $DE_t \times w_{ct}^D$ on (observed) dividends is calculated as 0.005, which indicates that, when the withholding tax rate on dividends of the host country is one percentage point lower, a foreign affiliate reduced royalties by 0.005% of sales after the tax reform.

As for the coefficient on $DE_t \times \tau_{ct}$, we cannot find a pattern consistent with Hypothesis 2. In Table 5, the OLS estimate in column (1) is negative and marginally statistically significant in the dividend equation. This is consistent with the prediction of Hypothesis 2 that foreign affiliates in low tax countries increased dividends after the tax reform. The estimate of 0.013 indicates that when the corporate tax rate was one percentage point lower in the host country, a foreign affiliate increased dividends by 0.013% of sales after the tax reform. Conversely, the coefficient is small and statistically insignificant in the royalty and interest equations in columns (3)–(6). The results are qualitatively unchanged when including only foreign affiliates that make some payments to their parents in the sample in Table 6, although the estimate of -0.024 in column (1) is statistically significant and larger in size compared with -0.013 in Table 5. Therefore, we find some evidence that foreign affiliates subject to low corporate tax rates increased dividends after the tax reform. However, we fail to find evidence that these affiliates substituted dividends for royalties and/or interest as means of

profit repatriation.

We have so far scaled the outcome variables by sales to consider affiliate size. However, there may be some concern that the fluctuations of sales cause the over or undervaluation of the outcome variables and affects the magnitude of the estimated coefficients.²⁴ To explore this issue, we estimate equation (6) using the natural logarithms of one plus dividends, royalties, and interest as dependent variables, which are denoted as $\text{Log}(\text{Dividend}_{ijct}+1)$, $\text{Log}(\text{Royalty}_{ijct}+1)$, and $\text{Log}(\text{Interest}_{ijct}+1)$, respectively.

Table 7 presents the estimation results. The dependent variables are $\text{Log}(\text{Dividend}_{ijct}+1)$ in columns (1) and (2), $\text{Log}(\text{Royalty}_{ijct}+1)$ in columns (3) and (4), and $\text{Log}(\text{Interest}_{ijct}+1)$ in columns (5) and (6). All specifications include the natural logarithm of affiliate sales ($\text{Log of Sales}_{ijct}$) in addition to country control variables and year dummies, and are estimated by the fixed effects OLS. We exclude affiliate and parent characteristics in columns (1), (3), and (5) and include these in columns (2), (4), and (6). The results are similar to those in Table 3. As predicted by Hypothesis 1, the coefficient on $DE_t \times w_{ct}^D$ is negative and statistically significant in the dividend equation in columns (1) and (2), whereas it is statistically significantly positive in the royalty equation in columns (3) and (4). The estimated coefficients in columns (2) and (4) suggest that when the withholding tax rate on dividends was one percentage point lower in the host country, a foreign affiliate increased dividends by approximately 1% while decreasing royalties by 0.53% after the tax reform. However, the coefficient is negative and small in size in the interest equation in columns (5) and (6). Therefore, we confirm the substitution between dividends and royalties through dividend withholding tax rates, but not between dividends and interest.

The coefficient on $DE_t \times \tau_{ct}$ is negative in the dividend equation and statistically significant at the 5% level in column (2). The estimate suggests that when the corporate tax rate of the host county was one percentage point lower, a foreign affiliate increased dividends by 0.71% after the tax reform. In the royalty and interest equation in columns (3)–(6), however, the coefficient is small and statistically insignificant. Similar to the results in Tables 5 and 6, these results suggest that dividend repatriations increased from foreign affiliates subject to low corporate tax rates after the 2009 tax reform, though these affiliates did not decrease royalty or interest payments to increase dividends.

Taken together, the results of Tables 4–7 show that foreign affiliates changed the behavior of profit repatriation through dividends and royalties depending on the withholding tax rates on dividends, as predicted by Hypothesis 1. However, the response of profit repatriation to corporate tax rates is weaker than that to withholding tax rates, and it is contrary to our

²⁴An alternative and appropriate scaling variable may be total assets. However, our data do not contain the requisite balance sheets of foreign affiliates. Thus, the information on total assets is not available.

prediction for Hypothesis 2. Barrios et al. (2012) and Feld et al. (2016) find that the corporate tax rates of host countries significantly affect FDI by multinationals (location of foreign affiliates and cross-border M&As), but that the dividend withholding tax rates do not.

These studies argue that multinationals save withholding taxes by repatriating dividends through foreign affiliates located in other countries that set a lower withholding tax rate on dividends (so-called conduit companies), and that the location where FDI takes place and the country from which dividends are repatriated could be different. Therefore, the withholding tax rates of host countries have a limited impact on FDI decisions. In line with their argument, our results imply that repatriation behavior is more responsive to withholding tax rates on dividends than to corporate tax rates. This suggests that while multinationals care about the corporate tax rates of host countries when deciding the location of FDI, they care more about the withholding tax rates on dividends when repatriating the returns to FDI.

7 Effect of Foreign Dividend Exemption on Total Payments to Parents

In the previous section, we found that foreign affiliates located in countries that impose low withholding tax rates on dividends increased dividend payouts and decreased, though to a lesser extent, royalty payments after the tax reform. This suggests that these affiliates substituted dividends partly for royalties and increased the total amount of profits remitted to their Japanese parents. To examine more directly the total effect of foreign dividend exemption on profit repatriation, we now analyze the total payments from foreign affiliates to their parents. We estimate equation (6) using the total payment to the Japanese parent as dependent variables. As we did in Tables 4–7, we define the dependent variables as total payments scaled by sales: $(\text{Total Payment}/\text{Sales})_{ijct}$, and the natural logarithm of the total payments plus one: $\text{Log}(\text{Total Payment}_{ijct}+1)$.

Table 8 presents the regression results, where the dependent variable is total payment scaled by sales in columns (1)–(4) and the natural logarithm of the total payment plus one in columns (5) and (6). We exclude affiliate and parent characteristics from the set of control variables in columns (1), (3), and (5) and include them in columns (2), (4), and (6). We estimate the equation using fixed effects OLS in columns (1), (2), (5), and (6) and Tobit specifications in columns (3) and (4). In all specifications, the coefficient on $DE_t \times w_{ct}^D$ is negative and, except for column (4), statistically significant at the 5% level. This suggests

that affiliates located in countries with low withholding tax rates on dividends paid larger amounts in total to their parents after the implementation of the foreign dividend exemption system in 2009.

This result is consistent with our finding in the previous section that foreign affiliates that were subject to lower withholding tax rates on dividends in the host countries increased dividend payout by partly reducing royalty payments to their Japanese parents after the tax reform. The negative and significant coefficient on $DE_t \times w_{ct}^D$ implies that, when the withholding tax rate on dividends is low in the host country, a foreign affiliate increased total payments to its parent with the introduction of the foreign dividend exemption system. The estimated -0.024 coefficient in column (2) indicates that when the withholding tax rate on dividends is one percentage point lower, a foreign affiliate increased total payments to its Japanese parent by 0.024% of sales after the tax reform. Our results in the previous section imply that this increase in total payments resulted from an increase in dividend repatriations. Indeed, when we estimate the equation using dividends scaled by sales as the dependent variable in column (1) of Table 5, the coefficient on $DE_t \times w_{ct}^D$ is -0.022 and almost the same size as the estimated -0.024 coefficient in column (2) of Table 8.²⁵

When using $\text{Log}(\text{Total Payment}_{ijct}+1)$ as the dependent variable in columns (5) and (6), the estimated -0.73 coefficient on $DE_t \times w_{ct}^D$ in column (6) suggests that when the withholding tax rate on dividends is one percentage point lower, a foreign affiliate increased total payments to the parent by approximately 0.73% after the tax reform. Note that when we estimate the same specification using $\text{Log}(\text{Dividend}_{ijct}+1)$ and $\text{Log}(\text{Royalty}_{ijct}+1)$ in columns (4) and (6) of Table 7, the coefficients are -1.02 and 0.53 , respectively. These estimates confirm that total payments increased from foreign affiliates subject to lower withholding tax rates on dividends and that these affiliates partly substituted dividends for royalties.

In the previous section, we found some evidence that foreign affiliates located in countries with lower corporate tax rates increased dividends as predicted by Hypothesis 2. In Table 8, the coefficient on $DE_t \times \tau_{ct}$ is negative in all specifications and statistically significant for the specifications in columns (3) and (6). This result confirms that foreign affiliates in countries with low corporate tax rates increased profits remitted in the form of dividends after the tax reform. However, the lack of statistical significance indicates that the response of profit repatriation to corporate tax rates is weaker than that to the withholding tax rates on dividends.

²⁵Recall that when we scaled dividend and royalty payments by affiliate sales in Table 5, we did not find significant substitution between dividends and royalties through withholding tax rates on dividends after the tax reform (unless we focus on foreign affiliates with positive payments in Table 6).

8 Robustness Checks using Average Corporate Tax Rates

In previous sections, we found evidence about the effect of foreign dividend exemption depending on dividend withholding tax rates, as predicted by Hypothesis 1. However, we could not obtain clear evidence about the effect of this tax reform depending on corporate tax rates, as predicted by Hypothesis 2. We found in some specifications in Tables 5–8 that foreign affiliates in countries with low corporate tax rates increased dividends as expected. However, these affiliates did not reduce either royalty or interest payments to pay higher dividends. As discussed in Subsection 6-2, the weak response of foreign affiliates in low tax countries possibly implies that the profit repatriation behavior is more responsive to withholding tax rates on dividends than corporate tax rates, whereas the decisions on FDI are more responsive to corporate tax rates than to dividend withholding tax rates, as shown in the existing literature (Barrios et al., 2012; Feld et al., 2016).

Another possibility is that statutory corporate income tax rates (τ_{ct}) do not correctly reflect the actual tax burden in host countries, and, thus, the interaction term of $DE_t \times \tau_{ct}$ failed to capture the response of foreign affiliates with low tax burdens to the tax reform. This might be the case if the host countries provide favorable tax treatments for foreign investors and/or for firms. To explore this further, we confirm the robustness of our results using average corporate tax rates, which use information on corporate tax payments by foreign affiliates. Following Desai et al. (2001) and Deai et al. (2007), we define the country-level average corporate tax rates as follows. First, we calculate the average tax rate for each affiliate in each year as the ratio of the corporate tax payment to pretax profit using the sample of affiliate observations with nonnegative corporate tax payments and pretax profits. Next, we define the country-level average tax rate for each country in each year, which is denoted as $Avg Tax_{ct}$, as the median value of the affiliate average tax rates for affiliates located in country c in year t .²⁶ Table 1 indicates that the mean and median of $Avg Tax_{ct}$ are 0.23 and 0.24, respectively, whereas those of the statutory tax rates (τ_{ct}) are 0.27 and 0.25, respectively.

We then estimate equation (6) by replacing τ_{ct} and $DE_t \times \tau_{ct}$ with $Avg Tax_{ct}$ and $DE_t \times AvgTax_{ct}$, respectively. Table 9 reports the results of a number of regressions with the specifications used in Tables 4–8. All specifications from columns (1)–(11) include the full set of control variables (country, affiliate, and parent characteristics) and employ fixed effects OLS. The dependent variables are the ratios of dividends, royalties, and interest to total payments in columns (1)–(3), respectively. The results are qualitatively the same as those

²⁶We avoid directly using the affiliate average tax rates as a measure of corporate tax burdens in the host countries because these may be endogenous to the investment and repatriation behavior of foreign affiliates.

in Table 4. As expected from Hypothesis 1, the coefficient on $DE_t \times w_{ct}^D$ is statistically significantly negative in the dividend equation and positive in the royalty equation. However, the coefficient on $DE_t \times Avg Tax_{ct}$ is small and insignificant in all of the dividend, royalty, and interest equations.

The dependent variables are dividend, royalty, interest, and total payment scaled by sales in columns (4)–(7), respectively, and the logarithms of dividend, royalty, interest, and total payment (plus one) in columns (8)–(11), respectively. The results are qualitatively the same as those in Tables 5, 7, and 8. The coefficient on $DE_t \times w_{ct}^D$ is statistically significantly negative in columns (1), (4), and (8) for the dividend equation and positive in columns (2) and (9) for the royalty equation, as predicted by Hypothesis 1. In the equation for the total payment in columns (7) and (11), the coefficient on $DE_t \times w_{ct}^D$ is negative and statistically significant. These results confirm that foreign affiliates in countries with low withholding tax rates on dividends increased dividend payouts and the total payments to their parents while reducing royalty payments after the tax reform in 2009.

In contrast, the coefficient on $DE_t \times Avg Tax_{ct}$ is negative and statistically significant at the 1% level in columns (4) and (8) for the dividend equation, as predicted by Hypothesis 2. However, in the royalty equation in columns (5) and (9), the sign of the coefficient is negative (but insignificant), which is opposite to the sign predicted by Hypothesis 2. These results suggest that foreign affiliates subject to low average corporate tax rates increased dividends, but did not reduce royalty payments after the tax reform. Moreover, in columns (4) and (8), the estimated coefficients on $DE_t \times Avg Tax_{ct}$ (−0.011 and −0.67, respectively) are smaller in size than those on $DE_t \times w_{ct}^D$ (−0.02 and −0.98, respectively). This supports our argument that dividend repatriations are more sensitive to withholding tax rates than to corporate tax rates. Taken together, when using the average corporate tax rates as an alternative measure of the corporate tax burden, our findings in the previous sections are unchanged.

9 Conclusion

The design of the international tax system regarding how to tax foreign income influences the behavior of profit repatriation by multinational corporations. The previous literature has exclusively focused on the effect of international taxation on dividend repatriations and relatively little on other repatriation methods such as royalty and interest payments. In 2009, Japan introduced the foreign dividend exemption system, which exempts dividends remitted by foreign affiliates to their Japanese parents from home-country taxation. This tax reform shifted Japan’s then worldwide tax system to a territorial tax system that exempted foreign

source income from home-country taxation. This paper examines the effect of enacting the foreign dividend exemption system on profit repatriation through dividends, royalties, and interest, and demonstrates that the international tax reform affects the choice of the means of profit repatriation among these payments.

Under the foreign dividend exemption system, the lower the withholding tax rate on dividends or the corporate tax rate of the host country, the lower the tax costs of dividend repatriation. We find that, in accordance with the change in the tax costs caused by the 2009 tax reform, Japanese-owned foreign affiliates located in countries that imposed low withholding tax rates on dividends increased dividend payouts and the total payments to their parents while reducing royalty payments. This suggests that these affiliates partly switched their means of repatriation from royalties to dividends. We also found some evidence that foreign affiliates located in countries with low corporate tax rates increased dividends, even though they did not change royalty or interest payments.

Our findings provide valuable implications for the literature and the ongoing policy debate on international taxation. Relatively recently, several countries, including Japan, but also the UK and the US, have switched their international tax regimes to territorial taxation by exempting active income of foreign affiliates (such as dividends) from home-country taxation. The results of this paper suggest that territorial tax reforms influence not only dividend repatriations by multinationals directly, but also indirectly through other repatriation methods such as royalties and interest. They also shed light on the importance of paying attention to repatriation means other than dividends. In particular, considering the rapid growth of FDI in intangible assets, the substitution between dividends and royalties under the foreign dividend exemption system is noteworthy for better understanding the repatriation behavior of multinationals.

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Table 1: Summary Statistics

	Mean	SD	Median	Count
Dividend _{ijct} (million yen)	80.1	1,398	0	117,509
Royalty _{ijct} (million yen)	43	1,465	0	117,509
Interest _{ijct} (million yen)	12	866	0	117,509
Total Payment _{ijct} (million yen)	135	2,420	0	117,509
(Dividend/Total Payment) _{ijct}	.458	.456	.357	43,493
(Royalty/Total Payment) _{ijct}	.348	.427	0	43,493
(Interest/Total Payment) _{ijct}	.195	.374	0	43,493
(Dividend/Sales) _{ijct}	.0103	.0337	0	97,374
(Royalty/Sales) _{ijct}	.00407	.0108	0	97,374
(Interest/Sales) _{ijct}	.00228	.0111	0	97,374
(Total Payment/Sales) _{ijct}	.0197	.0527	0	97,374
Log(Dividend _{ijct} +1)	.825	1.81	0	117,509
Log(Royalty _{ijct} +1)	.651	1.56	0	117,509
Log(Interest _{ijct} +1)	.272	.937	0	117,509
Log(Total Payment _{ijct} +1)	1.39	2.14	0	117,509
Sales _{ijct} (million yen)	10,547	78,116	1,014	101,917
Log of Sales _{ijct}	7.02	2.09	7.04	97,374
Sales Growth Rate _{ijct}	.254	1.07	.06	80,126
Parent Net Profitability _{ijc(t-1)}	.016	.0467	.0187	75,875
Parent Leverage _{ijc(t-1)}	.566	.215	.587	75,983
Statutory Corporate Tax Rate (τ_{ct})	.271	.0686	.25	117,509
Withholding Tax Rate on Dividends (w_{ct}^D)	.0688	.0638	.1	117,509
Withholding Tax Rate on Royalties (w_{ct}^R)	.0909	.0557	.1	117,509
Withholding Tax Rate on Interest (w_{ct}^I)	.1	.0487	.1	117,509
Average Corporate Tax Rate (<i>Avg Tax</i> _{ct})	.23	.0829	.24	117,386
Annual GDP Growth Rate (%)	4.99	4.1	5.24	117,509
Exchange Rate per JPY (= 1 in 2006)	1.23	3.11	1.15	117,509
Log of GDP per Capita (US dollar)	9.39	1.17	9.11	117,509
Log of Total Population	18.6	1.93	18.3	117,509
Unemployment Rate (%)	4.85	2.54	4.57	117,509

Notes: Subscripts i , j , c , and t indicate the foreign affiliate, its parent firm in Japan, the country where the affiliate is located, and the year, respectively. See Table 2 for the variable definitions. The following variables are winsorized at the highest and lowest 1%: (Dividend/Sales)_{ijct}, (Royalty/Sales)_{ijct}, (Interest/Sales)_{ijct}, (Total Payment/Sales)_{ijct}, Sales Growth Rate_{ijct}, Parent Net Profitability_{ijc(t-1)}, and Parent Leverage_{ijc(t-1)}.

Table 2: Variable Definitions

Variable	Definition
Dividend _{<i>ijct</i>} (million yen)	Dividends paid by affiliate <i>i</i> to parent <i>j</i> (in million yen)
Royalty _{<i>ijct</i>} (million yen)	Royalties paid by affiliate <i>i</i> to parent <i>j</i> (in million yen)
Interest _{<i>ijct</i>} (million yen)	Interest and other payments from affiliate <i>i</i> to parent <i>j</i> (in million yen): Total Payment _{<i>ijct</i>} – Dividend _{<i>ijct</i>} – Royalty _{<i>ijct</i>}
Total Payment _{<i>ijct</i>} (million yen)	Total payment from affiliate <i>i</i> to parent <i>j</i> (in million yen)
(Dividend/Total Payment) _{<i>ijct</i>}	Affiliate <i>i</i> 's dividend payment scaled by total payment
(Royalty/Total Payment) _{<i>ijct</i>}	Affiliate <i>i</i> 's royalty payment scaled by total payment
(Interest/Total Payment) _{<i>ijct</i>}	Affiliate <i>i</i> 's interest payment scaled by total payment
(Dividend/Sales) _{<i>ijct</i>}	Affiliate <i>i</i> 's dividend payment scaled by sales
(Royalty/Sales) _{<i>ijct</i>}	Affiliate <i>i</i> 's royalty payment scaled by sales
(Interest/Sales) _{<i>ijct</i>}	Affiliate <i>i</i> 's interest payment scaled by sales
(Total Payment/Sales) _{<i>ijct</i>}	Affiliate <i>i</i> 's total payment scaled by sales
Log(Dividend _{<i>ijct</i>} +1)	Natural logarithm of affiliate <i>i</i> 's dividend payment plus one
Log(Royalty _{<i>ijct</i>} +1)	Natural logarithm of affiliate <i>i</i> 's royalty payment plus one
Log(Interest _{<i>ijct</i>} +1)	Natural logarithm of affiliate <i>i</i> 's interest payment plus one
Log(Total Payment _{<i>ijct</i>} +1)	Natural logarithm of affiliate <i>i</i> 's total payment plus one
Sales _{<i>ijct</i>} (million yen)	Affiliate <i>i</i> 's operating revenues excluding nonoperating income (in million yen)
Log of Sales _{<i>ijct</i>} (million yen)	Natural logarithm of affiliate <i>i</i> 's sales
Sales Growth Rate _{<i>ijct</i>}	Annual sales growth rate of subsidiary <i>i</i> : (Sales _{<i>ijct</i>} – Sales _{<i>ijc(t-1)</i>})/Sales _{<i>ijc(t-1)</i>}
Parent Net Profitability _{<i>ijc(t-1)</i>}	Parent <i>j</i> 's lagged net profit scaled by lagged total assets
Parent Leverage _{<i>ijc(t-1)</i>}	Parent <i>j</i> 's lagged total debt (total fixed and current liabilities) scaled by lagged total assets
Statutory Corporate Tax Rate (τ_{ct})	Statutory corporate income tax rate of country <i>c</i>
Withholding Tax Rate on Dividends (w_{ct}^D)	Withholding tax rate on dividends imposed by country <i>c</i>
Withholding Tax Rate on Royalties (w_{ct}^R)	Withholding tax rate on royalties imposed by country <i>c</i>
Withholding Tax Rate on Interest (w_{ct}^I)	Withholding tax rate on interest imposed by country <i>c</i>
Average Corporate Tax Rate (<i>Avg Tax</i> _{<i>ct</i>})	Average corporate tax rate of country <i>c</i> : Median affiliate-level average tax rate in each country and year, where the affiliate-level average tax rate is the corporate tax payment divided by the pretax profit for each affiliate and year.
Annual GDP Growth Rate (%)	Annual real GDP growth rate of country <i>c</i>
Exchange Rate per JPY (= 1 in 2006)	Local currency per Japanese yen normalized to one in 2006
Log of GDP per Capita (US dollar)	Natural logarithm of GDP per capita of country <i>c</i>
Log of Total Population	Natural logarithm of total population of country <i>c</i>
Unemployment Rate (%)	Unemployment rate of country <i>c</i>

Notes: Subscripts *i*, *j*, *c*, and *t* indicate the foreign affiliate, its parent firm in Japan, the country where the affiliate is located, and the year, respectively.

Table 3: **Number of Foreign Affiliates in Each Country**

Country	2007	2008	2009	2010	2011	2012	2013	Total
Argentina	24	25	26	24	23	23	23	168
Australia	262	267	284	304	303	323	338	2,081
Austria	15	15	17	17	14	14	14	106
Belgium	76	78	75	80	73	75	71	528
Brazil	166	161	175	196	201	228	252	1,379
Canada	150	141	142	145	141	162	167	1,048
Chile	35	34	37	35	37	43	46	267
China	3,387	3,814	4,132	4,252	4,449	5,924	6,013	31,971
Czech Republic	43	47	43	46	44	53	47	323
France	152	162	155	162	149	170	172	1,122
Germany	362	367	388	372	374	422	419	2,704
Hong Kong	843	886	964	916	939	1,185	1,205	6,938
Hungary	26	27	32	28	31	28	27	199
India	177	212	225	261	315	379	413	1,982
Indonesia	527	526	543	543	589	739	818	4,285
Ireland	20	19	19	15	17	17	17	124
Italy	76	68	74	71	84	92	87	552
Malaysia	496	518	529	512	532	606	616	3,809
Mexico	84	91	95	106	111	146	170	803
Netherlands	230	240	242	252	260	269	262	1,755
New Zealand	41	45	50	50	50	48	46	330
Panama	270	262	279	307	285	441	426	2,270
Peru	14	17	14	16	16	20	21	118
Philippines	342	355	356	352	361	436	429	2,631
Poland	30	31	34	33	35	36	36	235
Russia	42	49	52	55	63	80	89	430
Saudi Arabia	19	23	25	25	25	31	34	182
Singapore	788	802	810	821	836	938	978	5,973
South Africa	29	32	32	32	36	40	44	245
South Korea	519	525	557	580	617	756	800	4,354
Spain	52	52	55	53	54	54	58	378
Sweden	21	24	24	26	23	21	18	157
Switzerland	33	30	32	33	34	31	34	227
Taiwan	685	697	709	730	727	822	877	5,247
Thailand	1,152	1,235	1,322	1,346	1,366	1,704	1,839	9,964
Turkey	19	16	15	17	16	17	27	127
UAE	31	40	41	42	46	56	57	313
United Kingdom	432	424	434	427	429	456	465	3,067
United States	1,904	1,927	2,009	1,974	2,002	2,293	2,286	14,395
Venezuela	18	20	20	20	17	18	20	133
Vietnam	248	301	342	361	402	554	626	2,834

Notes: This table details the number of foreign affiliates in each country from 2007 to 2013 where there are no less than 100 affiliate-year observations in total.

Table 4: Regressions of Dividends, Royalties, and Interest Scaled by Total Payments

	$\left(\frac{\text{Dividend}}{\text{Total Payment}}\right)_{ijct}$		$\left(\frac{\text{Royalty}}{\text{Total Payment}}\right)_{ijct}$		$\left(\frac{\text{Interest}}{\text{Total Payment}}\right)_{ijct}$	
	(1)	(2)	(3)	(4)	(5)	(6)
τ_{ct}	0.2385**	0.3973***	-0.1504	-0.2538**	-0.0881	-0.1435
	(0.0984)	(0.1224)	(0.0999)	(0.1213)	(0.0864)	(0.1004)
$DE_t \times \tau_{ct}$	-0.0233	-0.0103	0.0461	0.0217	-0.0227	-0.0114
	(0.0798)	(0.0954)	(0.0755)	(0.0909)	(0.0636)	(0.0734)
w_{ct}^D	-0.0692	-0.0415	-0.0318	0.0362	0.1012	0.0055
	(0.1661)	(0.1950)	(0.1442)	(0.1650)	(0.1366)	(0.1428)
$DE_t \times w_{ct}^D$	-0.1578*	-0.2051*	0.2216**	0.2995***	-0.0638	-0.0946
	(0.0956)	(0.1126)	(0.0890)	(0.1062)	(0.0738)	(0.0824)
w_{ct}^R	-0.1255	-0.2225	0.0586	0.2268	0.0668	-0.0044
	(0.1733)	(0.2082)	(0.1785)	(0.2116)	(0.1335)	(0.1323)
$DE_t \times w_{ct}^R$	-0.1510	-0.1586	-0.0533	-0.0965	0.2042	0.2551*
	(0.1676)	(0.1933)	(0.1547)	(0.1865)	(0.1281)	(0.1403)
w_{ct}^I	-0.0097	0.0013	-0.0587	-0.0226	0.0685	0.0215
	(0.3202)	(0.3726)	(0.3056)	(0.3801)	(0.1862)	(0.1703)
$DE_t \times w_{ct}^I$	0.1750	0.2319	-0.1254	-0.1827	-0.0497	-0.0495
	(0.1325)	(0.1516)	(0.1230)	(0.1426)	(0.1081)	(0.1175)
Log of Sales $_{ijct}$		0.0244***		-0.0061		-0.0184***
		(0.0068)		(0.0060)		(0.0064)
Sales Growth Rate $_{ijct}$		-0.0150***		0.0022		0.0129***
		(0.0026)		(0.0025)		(0.0027)
Parent Net Profitability $_{ijc(t-1)}$		0.0105		-0.0034		-0.0071
		(0.0480)		(0.0492)		(0.0426)
Parent Leverage $_{ijc(t-1)}$		0.0421		-0.0620*		0.0198
		(0.0353)		(0.0375)		(0.0269)
Country Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Affiliate Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	43,493	30,298	43,493	30,298	43,493	30,298
Within R-squared	0.0045	0.0074	0.0025	0.0040	0.0058	0.0076

Notes: The dependent variables are dividends scaled by total payments in columns (1) and (2), royalties scaled by total payments in columns (3) and (4), and interest scaled by total payments in columns (5) and (6). τ_{ct} is the statutory corporate tax rate of the host country. w_{ct}^D , w_{ct}^R , and w_{ct}^I are the withholding tax rates on dividends, royalties, and interest imposed by the host country, respectively. DE_t is a dummy variable equal to one if $t \geq 2009$ and otherwise zero. See Table 2 for the definitions of all other variables. Country control variables include the annual GDP growth rate, exchange rate of local currency per Japanese yen (normalized to one in 2006), log of GDP per capita, and log of total population of the host country. Standard errors clustered by affiliate in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Table 5: Regressions of Dividends, Royalties, and Interest Scaled by Sales

	$\left(\frac{\text{Dividend}}{\text{Sales}}\right)_{ijct}$		$\left(\frac{\text{Royalty}}{\text{Sales}}\right)_{ijct}$		$\left(\frac{\text{Interest}}{\text{Sales}}\right)_{ijct}$	
	(1)	(2)	(3)	(4)	(5)	(6)
τ_{ct}	0.0058 (0.0082)	0.0217 (0.0300)	-0.0017 (0.0017)	0.0141 (0.0104)	0.0003 (0.0022)	-0.0033 (0.0160)
$DE_t \times \tau_{ct}$	-0.0133** (0.0059)	-0.0004 (0.0203)	0.0008 (0.0011)	-0.0044 (0.0074)	0.0001 (0.0014)	-0.0013 (0.0109)
w_{ct}^D	-0.0313* (0.0161)	-0.1590*** (0.0412)	-0.0045** (0.0023)	-0.0408** (0.0166)	-0.0062** (0.0027)	-0.0271 (0.0219)
$DE_t \times w_{ct}^D$	-0.0222*** (0.0069)	-0.0269 (0.0250)	0.0007 (0.0014)	0.0077 (0.0088)	-0.0016 (0.0017)	-0.0229* (0.0137)
w_{ct}^R	-0.0012 (0.0146)	-0.0090 (0.0461)	0.0040 (0.0028)	0.0117 (0.0149)	-0.0013 (0.0034)	-0.0006 (0.0234)
$DE_t \times w_{ct}^R$	-0.0107 (0.0106)	-0.0401 (0.0399)	0.0007 (0.0022)	-0.0055 (0.0140)	0.0051* (0.0029)	0.0437** (0.0221)
w_{ct}^I	-0.0187* (0.0103)	0.0209 (0.0580)	-0.0091*** (0.0025)	-0.0300 (0.0195)	0.0017 (0.0031)	0.0041 (0.0346)
$DE_t \times w_{ct}^I$	0.0222** (0.0091)	0.0333 (0.0330)	-0.0009 (0.0017)	-0.0022 (0.0124)	-0.0035* (0.0020)	-0.0334* (0.0187)
Sales Growth Rate $_{ijct}$	-0.0012*** (0.0001)	-0.0123*** (0.0006)	-0.0002*** (0.0000)	-0.0012*** (0.0002)	-0.0000 (0.0000)	0.0007*** (0.0002)
Parent Net Profitability $_{ijc(t-1)}$	-0.0030 (0.0044)	0.0256** (0.0101)	-0.0003 (0.0008)	-0.0264*** (0.0033)	-0.0002 (0.0010)	-0.0394*** (0.0051)
Parent Leverage $_{ijc(t-1)}$	0.0032 (0.0029)	-0.0331*** (0.0021)	-0.0010 (0.0006)	-0.0122*** (0.0007)	-0.0012 (0.0007)	-0.0056*** (0.0011)
Country Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Affiliate Fixed Effects	Yes	No	Yes	No	Yes	No
Country & Industry Dummies	No	Yes	No	Yes	No	Yes
OLS or Tobit	OLS	Tobit	OLS	Tobit	OLS	Tobit
Observations	63,493	63,493	63,493	63,493	63,493	63,493
Within R-squared	0.0050		0.0020		0.0014	

Notes: The dependent variables are dividends scaled by sales in columns (1) and (2), royalties scaled by sales in columns (3) and (4), and interest scaled by sales in columns (5) and (6). τ_{ct} is the statutory corporate tax rate of the host country. w_{ct}^D , w_{ct}^R , and w_{ct}^I are the withholding tax rates on dividends, royalties, and interest imposed by the host country, respectively. DE_t is a dummy variable equal to one if $t \geq 2009$ and otherwise zero. See Table 2 for the definitions of all other variables. Country control variables include the annual GDP growth rate, exchange rate of local currency per Japanese yen (normalized to one in 2006), log of GDP per capita, and log of total population of the host country. Standard errors in parentheses and clustered by affiliate in the OLS specifications. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Table 6: Regressions of Dividends, Royalties, and Interest Scaled by Sales Using the Sample of Foreign Affiliates Making Payments to Their Parents

	$\left(\frac{\text{Dividend}}{\text{Sales}}\right)_{ijct}$		$\left(\frac{\text{Royalty}}{\text{Sales}}\right)_{ijct}$		$\left(\frac{\text{Interest}}{\text{Sales}}\right)_{ijct}$	
	(1)	(2)	(3)	(4)	(5)	(6)
τ_{ct}	0.0224 (0.0146)	0.0125 (0.0297)	-0.0028 (0.0031)	0.0061 (0.0097)	-0.0023 (0.0043)	-0.0201 (0.0158)
$DE_t \times \tau_{ct}$	-0.0241** (0.0114)	0.0074 (0.0205)	0.0019 (0.0023)	0.0007 (0.0070)	0.0003 (0.0031)	0.0047 (0.0110)
w_{ct}^D	-0.0611** (0.0286)	-0.1227*** (0.0426)	-0.0069 (0.0053)	-0.0343** (0.0158)	-0.0103* (0.0054)	0.0105 (0.0229)
$DE_t \times w_{ct}^D$	-0.0245* (0.0127)	-0.0090 (0.0252)	0.0041 (0.0029)	0.0138* (0.0084)	-0.0031 (0.0036)	-0.0133 (0.0137)
w_{ct}^R	0.0005 (0.0259)	0.0064 (0.0458)	0.0032 (0.0049)	0.0100 (0.0142)	-0.0028 (0.0072)	0.0042 (0.0238)
$DE_t \times w_{ct}^R$	-0.0359* (0.0204)	-0.0469 (0.0407)	-0.0001 (0.0050)	-0.0040 (0.0134)	0.0105 (0.0067)	0.0425* (0.0221)
w_{ct}^I	-0.0271 (0.0233)	0.0332 (0.0600)	-0.0147*** (0.0051)	-0.0286 (0.0193)	0.0064 (0.0082)	-0.0238 (0.0352)
$DE_t \times w_{ct}^I$	0.0304* (0.0170)	0.0279 (0.0339)	-0.0032 (0.0038)	-0.0087 (0.0118)	-0.0066 (0.0045)	-0.0236 (0.0188)
Sales Growth Rate $_{ijct}$	-0.0034*** (0.0004)	-0.0113*** (0.0006)	-0.0004*** (0.0001)	-0.0001 (0.0002)	-0.0002 (0.0001)	0.0025*** (0.0002)
Parent Net Profitability $_{ijc(t-1)}$	-0.0009 (0.0064)	0.0755*** (0.0099)	-0.0005 (0.0015)	-0.0100*** (0.0031)	0.0006 (0.0016)	-0.0211*** (0.0050)
Parent Leverage $_{ijc(t-1)}$	0.0052 (0.0043)	-0.0181*** (0.0022)	-0.0013 (0.0012)	-0.0071*** (0.0007)	-0.0001 (0.0012)	0.0008 (0.0011)
Country Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Affiliate Fixed Effects	Yes	No	Yes	No	Yes	No
Country & Industry Dummies	No	Yes	No	Yes	No	Yes
OLS or Tobit	OLS	Tobit	OLS	Tobit	OLS	Tobit
Observations	30,298	30,298	30,298	30,298	30,298	30,298
Within R-squared	0.0126		0.0054		0.0026	

Notes: The dependent variables are dividends scaled by sales in columns (1) and (2), royalties scaled by sales in columns (3) and (4), and interest scaled by sales in columns (5) and (6). τ_{ct} is the statutory corporate tax rate of the host country. w_{ct}^D , w_{ct}^R , and w_{ct}^I are the withholding tax rates on dividends, royalties, and interest imposed by the host country, respectively. DE_t is a dummy variable equal to one if $t \geq 2009$ and otherwise zero. See Table 2 for the definitions of all other variables. Country control variables include the annual GDP growth rate, exchange rate of local currency per Japanese yen (normalized to one in 2006), log of GDP per capita, and log of total population of the host country. Standard errors in parentheses and clustered by affiliate in the OLS specifications. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Table 7: Regressions of the Natural Logarithm of Dividends, Royalties, and Interest

	Log(Dividend _{ijct} +1)		Log(Royalty _{ijct} +1)		Log(Interest _{ijct} +1)	
	(1)	(2)	(3)	(4)	(5)	(6)
Log of Sales _{ijct}	0.1385*** (0.0096)	0.1978*** (0.0178)	0.1254*** (0.0068)	0.1546*** (0.0113)	0.0612*** (0.0063)	0.0578*** (0.0107)
τ_{ct}	0.3238 (0.3354)	0.6720 (0.4516)	-0.5578*** (0.1940)	-0.6685*** (0.2522)	-0.1727 (0.1991)	-0.2035 (0.2657)
$DE_t \times \tau_{ct}$	-0.4247 (0.2734)	-0.7135** (0.3545)	0.0626 (0.1384)	-0.0178 (0.1726)	-0.0029 (0.1492)	-0.0882 (0.1949)
w_{ct}^D	-1.1844* (0.6315)	-1.4044* (0.7785)	-0.5241 (0.3385)	-0.6135 (0.4292)	-0.3446 (0.2934)	-0.3861 (0.3342)
$DE_t \times w_{ct}^D$	-0.9042*** (0.3090)	-1.0215*** (0.3953)	0.4107** (0.1692)	0.5341*** (0.2037)	-0.0906 (0.1694)	-0.1911 (0.2092)
w_{ct}^R	0.1150 (0.6296)	-0.2107 (0.8074)	0.7300** (0.3075)	0.9483** (0.3813)	0.0190 (0.2775)	-0.1205 (0.3623)
$DE_t \times w_{ct}^R$	-0.7544 (0.5456)	-1.2066* (0.6708)	0.0511 (0.2753)	-0.3916 (0.3327)	0.6043** (0.2932)	0.5462 (0.3620)
w_{ct}^I	-0.9220 (0.9559)	-1.9123* (1.1304)	-0.9167* (0.4858)	-1.4295** (0.5965)	0.1717 (0.3183)	-0.1578 (0.3711)
$DE_t \times w_{ct}^I$	1.2582*** (0.4494)	1.6678*** (0.5467)	-0.2961 (0.2150)	-0.0583 (0.2644)	-0.4247* (0.2324)	-0.2631 (0.2812)
Sales Growth Rate _{ijct}		-0.0514*** (0.0064)		-0.0214*** (0.0041)		-0.0030 (0.0036)
Parent Net Profitability _{ijc(t-1)}		0.3447* (0.1914)		0.2778** (0.1097)		0.1686 (0.1077)
Parent Leverage _{ijc(t-1)}		0.3148** (0.1550)		-0.0735 (0.0855)		0.0041 (0.0838)
Country Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Affiliate Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	97,374	63,493	97,374	63,493	97,374	63,493
Within R-squared	0.0111	0.0134	0.0157	0.0170	0.0049	0.0041

Notes: The dependent variables are the natural logarithms of one plus dividends in columns (1) and (2), royalties in columns (3) and (4), interest in columns (5) and (6). τ_{ct} is the statutory corporate tax rate of the host country. w_{ct}^D , w_{ct}^R , and w_{ct}^I are the withholding tax rates on dividends, royalties, and interest imposed by the host country, respectively. DE_t is a dummy variable equal to one if $t \geq 2009$ and otherwise zero. See Table 2 for the definitions of all other variables. Country control variables include the annual GDP growth rate, exchange rate of local currency per Japanese yen (normalized to one in 2006), log of GDP per capita, and log of total population of the host country. Standard errors clustered by affiliate in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Table 8: Regressions of Total Payments from Foreign Affiliates to Their Japanese Parents

	$\left(\frac{\text{Total Payment}}{\text{Sales}}\right)_{ijct}$				Log(Total Payment _{ijct} +1)	
	(1)	(2)	(3)	(4)	(5)	(6)
τ_{ct}	0.0065 (0.0095)	-0.0001 (0.0114)	0.0475** (0.0236)	0.0289 (0.0265)	-0.3243 (0.3215)	-0.0940 (0.4165)
$DE_t \times \tau_{ct}$	-0.0092 (0.0070)	-0.0065 (0.0084)	-0.0353** (0.0163)	-0.0138 (0.0179)	-0.3315 (0.2643)	-0.7084** (0.3353)
w_{ct}^D	-0.0454** (0.0195)	-0.0597*** (0.0222)	-0.1205*** (0.0336)	-0.1669*** (0.0363)	-1.5293** (0.6288)	-1.7592** (0.7731)
$DE_t \times w_{ct}^D$	-0.0208** (0.0084)	-0.0236** (0.0095)	-0.0501** (0.0201)	-0.0346 (0.0222)	-0.5874** (0.2890)	-0.7318** (0.3569)
w_{ct}^R	0.0020 (0.0141)	0.0122 (0.0197)	0.0002 (0.0352)	0.0219 (0.0392)	0.7520 (0.5461)	0.5525 (0.6464)
$DE_t \times w_{ct}^R$	0.0069 (0.0135)	-0.0079 (0.0152)	0.0051 (0.0322)	0.0094 (0.0348)	-0.2280 (0.5210)	-0.8871 (0.6219)
w_{ct}^I	-0.0072 (0.0151)	-0.0235 (0.0154)	0.0518 (0.0479)	0.0623 (0.0502)	-1.1274 (0.8008)	-2.6419*** (0.8662)
$DE_t \times w_{ct}^I$	0.0086 (0.0115)	0.0118 (0.0126)	-0.0080 (0.0273)	-0.0222 (0.0293)	0.6751 (0.4356)	1.4031*** (0.5054)
Sales Growth Rate _{ijct}		-0.0018*** (0.0002)		-0.0058*** (0.0004)		-0.0560*** (0.0065)
Parent Net Profitability _{ijc(t-1)}		-0.0088 (0.0064)		-0.0555*** (0.0086)		0.2017 (0.1816)
Parent Leverage _{ijc(t-1)}		0.0013 (0.0040)		-0.0356*** (0.0019)		-0.0889 (0.1363)
Log of Sales _{ijct}					0.2523*** (0.0108)	0.3019*** (0.0189)
Country Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Affiliate Fixed Effects	Yes	Yes	No	No	Yes	Yes
Country & Industry Dummies	No	No	Yes	Yes	No	No
OLS or Tobit	OLS	OLS	Tobit	Tobit	OLS	OLS
Observations	97,374	63,493	97,371	63,493	97,374	63,493
Within R-squared	0.0016	0.0043			0.0223	0.0239

Notes: The dependent variables are total payments scaled by sales in columns (1) to (4) and the natural logarithm of total payments plus one in columns (5) and (6). τ_{ct} is the statutory corporate tax rate of the host country. w_{ct}^D , w_{ct}^R , and w_{ct}^I are the withholding tax rates on dividends, royalties, and interest imposed by the host country, respectively. DE_t is a dummy variable equal to one if $t \geq 2009$ and otherwise zero. See Table 2 for the definitions of all other variables. Country control variables include the annual GDP growth rate, exchange rate of local currency per Japanese yen (normalized to one in 2006), log of GDP per capita, and log of total population of the host country. Standard errors in parentheses and clustered by affiliate in the OLS specifications. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.

Table 9: Regressions of Dividends, Royalties, Interest, and Total Payments Using the Average Corporate Tax Rate

	Dividend Total Pay	Royalty Total Pay	Interest Total Pay	Dividend Sales	Royalty Sales	Interest Sales	Total Pay Sales	Log of Dividend+1	Log of Royalty+1	Log of Interest+1	Log of Total Pay+1
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
$Avg Tax_{ct}$	0.0815 (0.0838)	0.0613 (0.0910)	-0.1427** (0.0709)	-0.0033 (0.0049)	0.0036*** (0.0014)	-0.0040** (0.0019)	-0.0103 (0.0076)	0.1698 (0.2886)	0.3912** (0.1796)	-0.2343 (0.1846)	0.2738 (0.2607)
$DE_t \times Avg Tax_{ct}$	0.0170 (0.0685)	-0.0217 (0.0658)	0.0046 (0.0532)	-0.0112*** (0.0042)	-0.0015 (0.0009)	0.0041** (0.0017)	0.0014 (0.0073)	-0.6681*** (0.2462)	-0.2522* (0.1294)	0.1684 (0.1524)	-0.6114*** (0.2352)
w_{ct}^D	0.0910 (0.1898)	-0.0909 (0.1603)	0.0001 (0.1423)	-0.0336** (0.0161)	-0.0059*** (0.0020)	-0.0055** (0.0027)	-0.0603*** (0.0222)	-1.4976* (0.7737)	-0.8753** (0.4071)	-0.4166 (0.3374)	-2.0612*** (0.7682)
$DE_t \times w_{ct}^D$	-0.2654** (0.1143)	0.3329*** (0.1100)	-0.0677 (0.0858)	-0.0203*** (0.0069)	0.0012 (0.0014)	-0.0026 (0.0017)	-0.0238** (0.0093)	-0.9795** (0.3966)	0.6512*** (0.2115)	-0.2202 (0.2099)	-0.6425* (0.3572)
w_{ct}^R	-0.2330 (0.2128)	0.2142 (0.2171)	0.0188 (0.1319)	0.0030 (0.0147)	0.0035 (0.0028)	-0.0008 (0.0034)	0.0156 (0.0198)	-0.0633 (0.8164)	0.9027** (0.3816)	-0.0717 (0.3623)	0.6781 (0.6513)
$DE_t \times w_{ct}^R$	-0.1264 (0.1729)	-0.1353 (0.1717)	0.2616* (0.1351)	-0.0083 (0.0099)	-0.0012 (0.0021)	0.0083*** (0.0029)	-0.0017 (0.0145)	-1.0889* (0.6068)	-0.5605* (0.3176)	0.7730** (0.3353)	-0.6988 (0.5650)
w_{ct}^I	0.0289 (0.3704)	-0.0793 (0.3751)	0.0506 (0.1691)	-0.0141 (0.0101)	-0.0106*** (0.0024)	0.0025 (0.0032)	-0.0197 (0.0155)	-1.6927 (1.1121)	-1.5488*** (0.5866)	-0.0770 (0.3745)	-2.4719*** (0.8573)
$DE_t \times w_{ct}^I$	0.2404* (0.1392)	-0.1414 (0.1307)	-0.0991 (0.1156)	0.0179** (0.0086)	0.0012 (0.0016)	-0.0065*** (0.0024)	0.0041 (0.0129)	1.5621*** (0.5109)	0.1424 (0.2569)	-0.4776* (0.2822)	1.2815*** (0.4844)
Country Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Affiliate Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	30,288	30,288	30,288	63,465	63,465	63,465	63,465	63,465	63,465	63,465	63,465
Within R-squared	0.0065	0.0036	0.0077	0.0051	0.0023	0.0017	0.0043	0.0135	0.0169	0.0042	0.0239

Notes: In columns (1)–(3), the dependent variables are dividends, royalties, and interest scaled by total payments, respectively. In columns (4)–(7), the dependent variables are dividends, royalties, interest and total payments scaled by sales, respectively. In columns (8)–(11), the dependent variables are the natural logarithms of one plus dividends, royalties, interest, and total payments, respectively. $Avg Tax_{ct}$ is the average corporate tax rate of the host country, defined as the median of the affiliate-level average tax rates (corporate tax payment/pre-tax profit) in each country and year. w_{ct}^D , w_{ct}^R , and w_{ct}^I are the withholding tax rates on dividends, royalties, and interest imposed by the host country, respectively. DE_t is a dummy variable equal to one if $t \geq 2009$ and otherwise zero. See Table 2 for the definitions of all other variables. Country control variables include the annual GDP growth rate, exchange rate of local currency per Japanese yen (normalized to one in 2006), log of GDP per capita, and log of total population of the host country. Firm control variables include the affiliate sales growth rate, lagged parent net profitability, and lagged parent leverage. The natural logarithm of affiliate sales included as an additional firm control variable in columns (1)–(3) and (8)–(11). Standard errors clustered by affiliate in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively.