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ABSTRACT

International Taxation and the Direction and Volume of Cross-Border M&As

In an international merger or acquisition, the national residences of the acquirer and the target determine to what extent the newly created multinational firm is subject to international double taxation. This paper presents evidence that the parent-subsidary structure of newly created multinational firms reflects the prospect of international double taxation. The number of acquiring firms at the national level similarly reflects international double taxation. The evidence suggests that tax policy in the form of lower tax rates or the elimination of residence-based worldwide taxation attracts additional parent companies of multinational firms. On the basis of our estimation, we simulate the impact of the elimination of worldwide taxation by the United States on parent firm selection.

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International M&A's typically result in a multinational firm consisting of a parent firm in one country and a subsidiary or a branch in another. The resulting organizational structure of the multinational firm should reflect the comparative advantage of the parent firm to own and control the other firm. Superior investor protection, firm size or superior management may constitute such a comparative advantage. Similarly, in an international setting, the tax system affects the comparative advantage of a firm to become the parent firm. The selection of the parent country generally determines whether and to what extent there will be international double taxation of the new multinational's foreign-source income. International tax conventions give the parent country the right to tax the worldwide income of its multinationals' international income. While some countries do tax the income of their multinationals on a worldwide basis, others only tax locally generated income on a territorial basis. In case there is worldwide taxation, the rate of tax applied to the foreign-source income depends on the parent country's tax rate as well as on the provision of double tax relief for taxes already paid in the foreign country. On a bilateral basis, these different aspects of the international tax system determine the rate of double taxation applied to foreign source income, if the multinational chooses to locate the parent firm in one country rather than the other.

The merger of Daimler in Germany with Chrysler in the U.S. in 1998 offers an example where the international tax system appears to have been influential. This merger resulted in a multinational firm with a parent firm (Daimler) located in Germany and a subsidiary (Chrysler) located in the U.S. According to the testimony given by Daimler-Chrysler's chief tax counsel before the U.S. Ways and Means Committee on 30 June 1999, the exemption by Germany of dividend income from abroad in contrast to the U.S. system of worldwide taxation was one of the main reasons for locating the parent firm of Daimler-Chrysler in Germany (Bogenschütz and Wright, 2000). Another interesting case is the formal merger of British Shell with Dutch Koninklijke Olie in 2005. Shell and Koninklijke Olie already joined forces in 1903, but had retained separate stock listings and separate tax residences in the U.K. and the Netherlands. After the formal merger in 2005 following criticism on its previous corporate structure, the new company became a tax resident of the Netherlands (even if the firm took the legal form of a British public limited company). Based on that decision,

the Dutch territorial tax system applies to the firm's overall income rather than the British worldwide tax system.

The purpose of this paper is to provide evidence that the international tax system systematically affects organizational structure following international M&A's. We consider M&A's involving two countries among a set of European countries, Japan and the United States in the 1985-2004 period. To do this, we collect extensive information on these countries' tax systems and particularly on their regimes of double taxation applied to foreign-source dividend income (from a subsidiary) and foreign-source direct business income (from a branch). Based on this unique tax data set, we rank countries according to the average rate of double taxation they impose on repatriated income. This ranking reveals that countries which apply territorial tax systems to foreign dividends, such as the Netherlands and Sweden, are attractive tax residences, whereas countries with worldwide tax systems, such as Japan, the United Kingdom and the United States, tend to demand a high tax price for multinational firm residence.

To examine the impact of the tax system on actual M&A's, we first construct the rate of double taxation for the two possible outcomes as to which firm becomes the parent and which firm becomes the subsidiary. We then estimate the impact of double taxation on the parent-subsidiary decision using a logit binary choice model. The impact of international double taxation is found to be highly significant and robust to changes in the sample, specification and estimation technique. Using estimated coefficients, we simulate how a change in a country's tax rate affects the proportion of M&A's which select that country as the parent country. For individual countries, the simulated impact of a change in the tax rate depends on its own system of international taxation (worldwide or territorial) as well as the tax systems of other countries involved in its international M&A's. On average, we find that an increase in the corporate tax rate by one percentage point reduces the proportion of firms taking up tax residence in a country by 0.36 percentage points. For the U.S., the impact of a one percentage point increase in its tax rate on the proportion of multinationals taking up residence in the U.S. is relatively large at 0.49 percentage points reflecting the U.S. system of worldwide

taxation. Our logit estimation of parent firm country selection can similarly be used to assess the impact of a regime switch regarding the international double taxation of income. As an interesting possibility, we specifically examine a scenario where the U.S. abolishes its system of worldwide taxation, hence ceasing to subject the foreign-source income of its multinationals to international double taxation. Such a regime switch is simulated to substantially increase the proportion of firms selecting the U.S. as the parent country following an international M&A from 52 percent to 56 percent. In 2004, this would correspond to a 9 billion U.S. dollar increase in international acquisitions by U.S. firms, which is equivalent to a 4 percent increase in American FDI.¹

In this paper, we also estimate a gravity model of the aggregate number of M&A's while distinguishing between parent and subsidiary firms. Our gravity model estimates reflect that international double taxation affects both the total number of M&A's involving a particular country and the proportion of M&A's where that country is selected to be the tax residence. In a benchmark regression, we find a semi-elasticity of the number of M&A's originating from a given country — and hence selecting that country as the parent country — with respect to the double tax rate of -1.6. Therefore, a one percentage point increase in the double tax burden for U.S. parent firms in 2004 would decrease international acquisitions by 1.7 billion U.S. dollar, which is equivalent to a 0.8 percent decrease in American FDI.

These results imply that countries should choose their method of double taxation relief consistently with respect to the desired pattern of FDI and international M&A's. The current reform proposals in the U.S. by the President's Advisory Panel on Federal Tax Reform (2005) for exempting foreign-source income of U.S. multinationals bear witness to this relationship. (On the one hand, the current system of granting foreign tax credits creates capital export neutrality, but on the other hand, it also gives an incentive to relocate the tax residence abroad by means of an M&A.)

The remainder of this paper is organized as follows. Section I reviews some related studies on international taxation, foreign direct investment (FDI) and M&A's. Section II describes the international tax system and presents our tax system data. Section III discusses the M&A

data. Section IV presents the estimation results of the logit model of parent country selection, while Section V simulates the impact of tax rate and tax regime changes on parent country selection. Section VI shows estimation results for the gravity model of the number of M&A's per parent country. Section VII offers a conclusion.

I Related studies

The value of M&A's is counted as outward FDI for the parent or acquiring country, and as inward FDI for the target country. Hence, international M&A's very much affect reported FDI figures.² The impact of taxation on FDI has been investigated by an extensive literature. These studies typically use aggregate national or bilateral FDI data and hence do not distinguish between the M&A's and other components of FDI. Among these studies, Grubert and Mutti (1991), Hines and Rice (1994), and Altshuler, Grubert, and Newlon (2001) find elasticities of the FDI stock with respect to the local tax rate between -0.1 and -2.8. Other studies using time series data, such as Hartman (1984), Boskin and Gale (1987), Newlon (1987), and Young (1988) report estimated tax elasticities of FDI of around -0.6. These studies only focus on local tax rates and ignore international double taxation.

Slemrod (1990) and Hines (1996) recognize the importance of international double taxation for inward FDI in the U.S. by distinguishing between investments from countries with and without worldwide taxation of corporate income. In the absence of worldwide taxation, the U.S. tax rate should more directly affect the overall taxation of U.S.-source income. Slemrod (1990) finds some evidence in time-series data that the U.S. tax rate affects investments from the two groups of countries differently. Hines (1996) investigates whether investments by the two groups of countries vary across U.S. states with the state-level corporate income tax rate. He finds that countries with worldwide taxation invest relatively much in U.S. states with high corporate income tax rates. These studies, however, do not take into account that international double taxation not only depends on the home country's tax system but also on its tax rate. In fact, double taxation is only likely if a multinational's home country tax rate

exceeds the U.S. tax rate. Similarly, non-resident dividend withholding taxes, which tend to contribute to international double taxation, are not accounted for in these studies.

Two recent studies examine the impact of taxation on a multinational's structure using firm-level data. First, Desai and Hines (2002) examine the role of taxation in a series of so-called inversions of U.S. multinationals. In these cases, the corporate structure is inverted in the sense that the U.S. parent becomes a subsidiary, and the earlier foreign subsidiary becomes the parent firm. These inversions serve to eliminate U.S. worldwide income taxation of all previous foreign subsidiaries. In fact, international double taxation is avoided (not counting U.S. dividend withholding taxes) if the new parent resides in a country with a territorial tax system. Desai and Hines (2002) show that inverting firms typically face low foreign tax rates to confirm that inversions yield tax benefits. Devereux and Griffith (1998) in turn examine the impact of taxation on the decisions of U.S. firms whether and how to serve the European markets. The U.S. firm can choose to establish production facilities in a European country or export to Europe. Taxation is found to affect the choice among European production locations, but not the question whether to produce in Europe at all. Devereux and Griffith (1998) use only data on multinationals headquartered in the U.S., hence taking a U.S. tax residence as given.

The positive relationship between investor protection and firm value (La Porta et al., 2002) is another motivation for international M&A's that has been stressed in the literature. For example, Rossi and Volpin (2004) report a governance motive for cross-border mergers and acquisitions. Firms in countries with strong shareholder protection tend to acquire firms in countries with poor shareholder protection. This way, firms in countries with poor shareholder protection may be able to "import" better protection, possibly resulting in a lower cost of capital. Bris and Cabolis (2002) consistently find that an industry's market value increases when firms from that industry are acquired by foreign firms coming from countries with better shareholder protection and better accounting standards. In related work, Di Giovanni (2005) estimates a gravity model of international M&A activity focusing on the size of financial markets, using the corporate tax rate as a control variable.

II The international tax system

Two firms from two countries are assumed to merge into a single multinational firm. They have to choose one of the two countries as the country where the parent firm resides. Let this country be denoted i , while the other country is denoted j . In addition, the multinational has to decide whether to operate a foreign subsidiary or a branch in country j . Both of these aspects of the multinational's organizational structure potentially have tax consequences. The parent country in principle has the right to tax the multinational's overall income on a worldwide basis, even if some countries in practice only tax a multinational's domestically generated income on a territorial basis. Hence, the choice of the parent country affects the level of double taxation of foreign income. At the same time, the choice between a subsidiary and a branch may be relevant as well, as dividends from a foreign subsidiary may be taxed differently from active business income generated by a foreign branch. In practice, most foreign establishments take the form of a subsidiary. In this section, therefore, we focus on the international tax system applicable to foreign dividend income. In Appendix A, we discuss how international flows of active business income may be taxed differently.³

Income generated in subsidiary country j is first taxed in that country at a corporate tax rate τ_j , leaving a share $1 - \tau_j$ of this income to be repatriated to the parent firm in the form of dividends. Table I gives information on top corporate tax rates for our sample of European countries, Japan and the United States in 2004. These tax rates include local corporate income taxes. The subsidiary country j in addition may apply a non-resident dividend withholding tax at a rate ω_{ij} to dividends repatriated to country i . Information on bilateral dividend withholding taxes for the countries in our sample is provided in Table II. These withholding taxes are zero in case of long-standing EU member states on account of the EU's parent-subsidiary directive, which went into effect on 1 January 1992.⁴ Overall, the subsidiary country is seen to tax the multinational's local income to be paid out as dividends at a rate $\tau_j + (1 - \tau_j)\omega_{ij}$. The corporate tax rate in parent country i is denoted τ_i . In the absence of any double tax relief by the parent country, the total two-country tax rate on the subsidiary's income will be $\tau_i + \tau_j + (1 - \tau_j)\omega_{ij}$. Let τ_{ij}^{double} be the rate of double taxation

defined as the tax rate to be paid by the multinational firm on income from country j in excess of the corporate income tax τ_j in subsidiary country j in case of immediate income repatriation.⁵ In the absence of any double tax relief, the double tax rate τ_{ij}^{double} is equal to $\tau_i + (1 - \tau_j)\omega_{ij}$.

In practice, most countries provide some form of international double tax relief. In case the parent country operates a territorial or source-based tax system, it effectively exempts foreign-source income from taxation. In this instance, the double tax rate τ_{ij}^{double} is given by $(1 - \tau_j)\omega_{ij}$. Alternatively, the parent country operates a worldwide or residence-based system. In this instance, the parent country may provide double tax relief in the form of a foreign tax credit for taxes already paid in subsidiary country j . The OECD model tax convention, which summarizes recommended practice, in fact gives countries an option between an exemption and a foreign tax credit as the only two ways to relief double taxation.⁶ The foreign tax credit reduces domestic taxes on foreign source income one-for-one with the taxes already paid abroad. A foreign tax credit can be indirect in the sense that it applies to both the underlying corporate income tax and the dividend withholding tax. Alternatively, the foreign tax is said to be direct and applies only to the withholding tax. In either case, foreign tax credits in practice are limited to prevent the domestic tax liability on foreign source income from becoming negative.

With an indirect tax credit, the multinational will effectively pay no tax in the parent country, if the overall subsidiary tax $\tau_j + (1 - \tau_j)\omega_{ij}$ exceeds the parent country tax τ_i . In this instance, the double tax rate τ_{ij}^{double} is equal to $(1 - \tau_j)\omega_{ij}$. Alternatively, the parent tax τ_i exceeds the overall subsidiary tax $\tau_j + (1 - \tau_j)\omega_{ij}$. Then the multinational pays tax in the parent country at a rate equal to the difference between the two rates, i.e. at a rate $\tau_i - [\tau_j + (1 - \tau_j)\omega_{ij}]$. The combined, two-country tax rate on subsidiary-country income now is given by the parent country tax rate τ_i , while the double tax rate τ_{ij}^{double} equals $\tau_i - \tau_j$. To summarize, with the indirect credit system the double tax rate τ_{ij}^{double} is given by $\max[\tau_i - \tau_j, (1 - \tau_j)\omega_{ij}]$. In the direct foreign tax credit case, the multinational pays no tax in the parent country if the parent tax rate τ_i is less than the tax rate $(1 - \tau_j)\omega_{ij}$. In the more common case where τ_i exceeds

$(1 - \tau_j)\omega_{ij}$, the firm instead pays tax in the parent country at a rate equal to $(1 - \tau_j)(\tau_i - \omega_{ij})$.⁷ The combined, two-country tax rate is now given by $\tau_j + (1 - \tau_j) \max[\tau_i, \omega_{ij}]$, while the double tax rate τ_{ij}^{double} equals $(1 - \tau_j) \max[\tau_i, \omega_{ij}]$.

A few countries with worldwide taxation do not provide foreign tax credits, but instead allow foreign taxes to be deducted from the multinational's taxable income. Under this deduction method, foreign taxes are essentially seen as a tax-deductible cost of doing business at par with other business costs. In this scenario, one euro of subsidiary country income is reduced to $(1 - \tau_i)(1 - \tau_j - (1 - \tau_j)\omega_{ij})$ of net-of-tax income. The combined two-country tax rate now equals $\tau_j + (1 - \tau_j)[\omega_{ij} + (1 - \omega_{ij})\tau_i]$, while the double tax rate τ_{ij}^{double} equals $(1 - \tau_j)[\omega_{ij} + (1 - \omega_{ij})\tau_i]$.

Countries tend to vary their method of double tax relief, i.e. through an exemption, credit or deduction, conditional on having concluded a tax treaty with the other country.⁸ Columns 2 and 3 of Table I show what double tax relief method countries apply to treaty non-signatory and signatory countries. The exemption method is seen to be the most common method of double tax relief on dividend income from foreign countries with and without a tax treaty, followed by foreign tax credits. Several countries, including Finland and Spain, apply a foreign tax credit to dividend income from a non-treaty country, while they exempt dividend income from a treaty country. In these instances, the existence of a tax treaty makes the method of double tax relief more generous. Among European countries, most countries have concluded bilateral tax treaties even if some Eastern European countries are still in the process of completing their treaty networks as seen in Table III. Reflecting all this information, we can represent the pattern of double tax relief granted bilaterally in Table IV.

Our sample consists of 30 countries. Thus for each country we can calculate 29 double tax rates for dividends received (from outward FDI) and dividends paid (by inward FDI) using the statutory information in Tables I through IV. Averages of these double tax rates per country provide information on whether a country is a tax-advantaged location for parent firms (with low double taxation of dividends received) and a tax-advantaged location for subsidiary firms (with low double taxation of dividends paid out). Table V ranks our 30 countries on the basis of the average double taxation of dividends received, while also providing information

on the average double taxation of dividends paid out. At the top of the table, we see that the Netherlands has an average double tax rate of dividends received of only 1.3 percent. The Netherlands has a territorial tax system and this 1.3 percent thus is wholly due to non-resident dividend withholding taxes levied by subsidiary countries. Other countries near the top of the table, such as Sweden, Finland and Denmark, similarly have a territorial tax system. An interesting case is Ireland that equally figures near the top of the list despite its system of worldwide taxation with foreign tax credits. Ireland, however, had a rather low tax rate of 12.5 percent in 2004 and as a result de facto exempts most foreign-source income. The United Kingdom, the United States and Japan also levy worldwide taxation with foreign tax credits but these countries have relatively high corporate tax rates, which explains their positions near or at the bottom of the table. On tax grounds, these countries thus are not good locales for parent companies of multinationals. From the table, we see that the average rates of double taxation of incoming and outgoing dividends bear little relationship to each other. To illustrate, Greece, the United Kingdom and the United States are well placed to receive foreign subsidiaries, even if their tax systems do not favor parent location.

Over the 1985-2004 period, many countries have changed their corporate tax systems. Corporate tax rates and non-resident dividend withholding taxes have on the whole been lowered, while some countries have altered their default methods of double tax relief. To wit, Austria, Iceland, Italy, Portugal, the Slovak Republic and Spain all switched from the credit system to the exemption system thereby lowering the average double taxation of incoming dividends. Many countries, of course, also expanded their bilateral treaty networks over the 1985-2004 period. Hence, one may expect that the ranking of countries on the basis the average double taxation of incoming and outgoing dividends has been subject to considerable change. To check this we rank countries analogously to Table V on the basis of average double tax rates over the entire 1985-2004 period in Table VI.

Comparing the two tables, we see that in most countries double taxation has decreased over time because new tax treaties provide for lower withholding tax rates on dividends to non-residents or even no withholding taxes at all. There are a few exceptions to the overall trend:

in the United Kingdom and the U.S. double taxation has increased over time; these countries have a credit system and they have not lowered their tax rates to the same extent as other countries have done. In Ireland double taxation has strongly decreased over time, because the country has lowered its tax rates drastically. In the Slovak Republic, Portugal, Italy and Iceland, double taxation has also decreased considerably over time, but for a different reason: these countries switched at some point from using foreign tax credits to exempting dividend income.⁹

III The M&A data and international double taxation

From the Thomson Financial SDC database, we select all mergers and acquisitions involving any two countries in our sample of European countries, Japan and the United States between 1985 and 2004. In an M&A, the acquiring firm becomes the parent firm of the newly created multinational firm, while the target firm becomes a foreign subsidiary or branch. The database does not provide information on this latter point. For tax purposes, the multinational is resident in the acquiring or parent country. Table VII shows the number of acquiring firms and target firms in our sample per country.¹⁰ The table also lists the value of acquired firms and target firms per country if available. From the table, we see that the ratio of acquiring firms to target firms is very low for several Eastern European countries, while Japan and the United States are examples of countries with relatively many acquiring firms.¹¹

Multinational firms are more likely to be concerned about the amounts to be paid in international double taxation than about double tax rates per se. Hence, the selection of the parent firm in an international M&A can be expected to reflect the additional tax liability that is incurred one way vs. the other. To reflect this, for each M&A we construct an effective double tax rate, denoted θ_{ij}^{double} , defined as the double tax liability as a share of worldwide pre-tax

income if firm a (from country i) takes over firm b (in country j) as follows

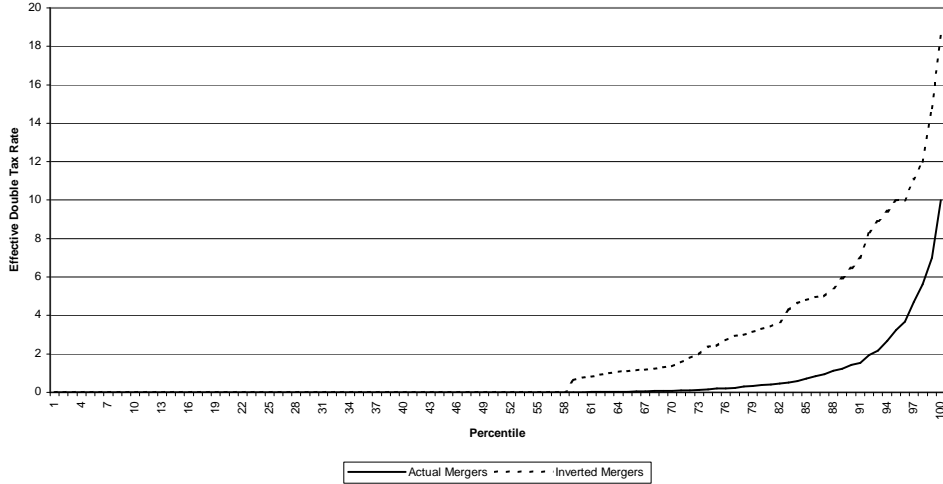
$$\theta_{ab}^{double} = \begin{cases} 0 & \text{if } PI_b \leq 0 \\ \tau_{ij}^{double} \times \frac{PI_b}{PI_a + PI_b} & \text{if } PI_b > 0, PI_a > 0 \\ \tau_{ij}^{double} & \text{if } PI_b > 0, PI_a \leq 0 \end{cases} \quad (1)$$

where PI_a and PI_b are the pre-tax incomes of the two firms, and τ_{ij}^{double} is the statutory double tax rate discussed in the previous section.¹² Straightforwardly, θ_{ba}^{double} is the corresponding double tax liability, if instead firm b takes over firm a . Expression (1) reflects that there is no double taxation if the income of the target firm is negative. Furthermore, the expression avoids inflating the tax burden beyond the statutory double tax rate if the acquiring firm's income happens to be negative.¹³

To calculate θ_{ab}^{double} , we need information on pre-tax income of both the acquiring and target firms. For 626 M&A's, this information is provided by the Thompson database. To expand our sample, we linked information from the Thompson database with corresponding information from the Compustat Global and Compustat North America databases using CUSIP company identification codes. This procedure increased the sample of international M&A's for which we can calculate two-way double tax liabilities to 917. For these M&A's, we calculate that the average double tax liability according to (1) is 0.62 percent of the merged firm's worldwide pre-tax income. This corresponds to an average absolute double tax liability of 4.4 million U.S. dollars. Interestingly, the counterfactual double tax liability rate, with the roles of parent and subsidiary firms reversed, is calculated to be 2.11 percent of worldwide pre-tax income, which corresponds to an absolute double tax liability of 15.5 million dollars. This suggests that the organizational structure of multinational firms following cross-border M&A's is indeed chosen with international double taxation in mind. Additional information on the distribution of actual double tax liability rates and their counterfactuals is provided in Figure 1, where the lower and upper lines indicate the actual and counterfactual double tax liability rates by percentile, respectively. Clearly, the figure reflects that the mean actual double tax liability rate is lower than the counterfactual. Also, the share of M&A's subject to no double taxation

is larger than in the counterfactual case.

Figure 1: **Percentiles of Effective Double Tax Rates**



IV The direction of M&A's

In this section, we provide empirical evidence on how double taxation affects the direction of an M&A given that we know that the merger takes place. For this purpose, we estimate a logit binary choice model of selecting the acquiring and target firms. Following Mitchell and Mulherin (1996), the binary choice model assumes that mergers reflect the synergies from combining two firms, while investors value the individual firms and the merger correctly.¹⁴

IV.A Estimating equation

Let $V_{ab} = x'_{ab}\beta + \varepsilon_{ab}$ be the value of the merged company when firm a acquires firm b . In this expression, x_{ab} is a vector of independent variables, including the double tax liability θ_{ab}^{double} for the case where firm a acquires firm b , while β is a vector of coefficients, and ε_{ab} is an error term with a Weibull distribution. Similarly, let $V_{ba} = x'_{ba}\beta + \varepsilon_{ba}$ be the value of the newly created firm when firm b acquires firm a . The difference in the two firm values $V_{ab} - V_{ba}$ is

given by

$$V_{ab} - V_{ba} = (x_{ab} - x_{ba})'\beta + \varepsilon_{ab} - \varepsilon_{ba} \quad (2)$$

where the error term $\varepsilon_{ab} - \varepsilon_{ba}$ follows a logistic distribution. If $V_{ab} - V_{ba} > 0$, then firm a will be the acquirer. Hence, the conditional probability of firm a taking over firm b is given by¹⁵

$$\text{Prob}(V_{ab} - V_{ba} > 0 \mid x_{ab}, x_{ba}) = \frac{\exp x'_{ab}\beta}{\exp x'_{ab}\beta + \exp x'_{ba}\beta} \quad (3)$$

The coefficients β can be estimated by way of the following logistic regression model

$$E[y_n \mid \Delta x_n] = \frac{\exp(\Delta x'_n \beta)}{1 + \exp(\Delta x'_n \beta)}, \quad (4)$$

where the dependent variable is $y_n = \begin{cases} 1 & \text{if } V_{ab} - V_{ba} > 0 \\ 0 & \text{if } V_{ab} - V_{ba} \leq 0 \end{cases}$,

$\Delta x_n = (x_{ab} - x_{ba})_n$, and n counts the mergers. Note that the name tags a and b simply serve to identify the two different parties involved in a merger. Switching these name tags for any sample subset does not affect the regression outcome.¹⁶

A main variable of interest is the differential double tax liability $\Delta\theta^{double} = \theta_{ab}^{double} - \theta_{ba}^{double}$. Next, $\Delta Size$ is defined as the difference in the two firms' assets relative to the sum of the two firms' assets (see Appendix B for variable definitions and data sources). The relative size of the two joining firms may matter, as it may be easier for the larger firm to take over the smaller one than vice versa, perhaps reflecting different access to capital markets. Next, $\Delta Liquidity$ is the differential ratio of liquid assets to total assets. The firm with the relatively more liquid assets may more easily be the acquiring firm, as this firm has relatively little need for costly external funds to finance the acquisition.¹⁷ Similarly, $\Delta Leverage$ measures the difference in the leverage ratios between the two merging firms. As indicated by Desai and Hines (2002), low leverage may signal a high cost of borrowing. If so, a lowly leveraged firm is more likely to be acquired to gain access to funds from the acquiring firm. The variable ΔROA is the differential rate of return on assets. We expect the more profitable

firm to take over the other (more inefficient) firm.¹⁸ Finally, $\Delta Investment$ is the differential ratio of investment to assets. Firms with high investment rates may have specific ownership advantages in the form of technical know-how or a superior management and hence may be more likely to be acquiring firms.¹⁹ The regressions in addition contain country fixed effects to capture country-specific effects such as the quality of physical infrastructure or the legal and regulatory regime that may affect the direction of the M&A.²⁰ Rossi and Volpin (2004), Dyck and Zingales (2004), La Porta, Lopez-de Silanes, Shleifer, and Vishny (2002) and Comment and Schwert (1995) provide empirical evidence on these effects.²¹ Table VIII reports summary statistics for the variables used in the estimation of (4) and Table IX reports their pairwise correlation coefficients.

IV.B Estimation results

Table X contains the results of regressions explaining the direction of M&A's. In regression (1), the differential double tax rate $\Delta\theta^{double}$ enters with a coefficient of -0.302 that is statistically significant. This suggests that for a merger of equals an increase in the double tax rate in one country by one percent reduces that country's probability of being the acquiring country by 7.7 percent.²² The effect of double taxation on the direction of M&A's thus is economically significant. The control variable $\Delta Size$ enters with a positive and significant coefficient to suggest that the larger firm is more likely to be the acquirer. $\Delta Liquidity$ equally obtains a positive and significant coefficient to suggest that the more liquid firm is more likely to be the acquirer, while similarly $\Delta Leverage$ enters with a positive and significant coefficient to indicate that leverage increases the likelihood of being the acquirer. The ΔROA variable turns out to be statistically insignificant.²³

Next, in regression (2) we add the $\Delta Investment$ variable as an additional control variable which reduces the sample size from 677 to 396 observations. The size of the coefficient for the differential tax liability variable $\Delta\theta^{double}$ becomes somewhat more negative at -0.493. The $\Delta Investment$ variable itself enters with a positive and significant coefficient to suggest that the firm with larger investments relative to assets is more likely to be the acquirer. In

regression (3), we return to the specification of regression (1) but now estimate it by a probit model yielding a coefficient for $\Delta\theta^{double}$ of -0.147. In terms of marginal effects this is slightly less than with the logit estimation: for a merger of equals an increase in the double tax rate by one percentage point decreases the probability of being the acquirer by 5.1 percent for the firm in question.²⁴ Regression (4) again uses the logit model but now constructs the $\Delta\theta^{double}$ variable on the assumption that the newly created multinational firm operates a foreign branch rather than a foreign subsidiary. The coefficient for the $\Delta\theta^{double}$ variable is now very similar to the one in regression (1) at -0.291.

To conclude this section, we consider the possibility that corporate tax policy may be endogenous to the direction of M&A's. To see how this may arise, we can interpret international double taxation as a user fee that a multinational has to pay for using a country as the parent country. Such a user fee may be justified by, say, a country's superior legal and accounting environment or smooth operation of its labor market. If so, increased demand for a country as a parent country may prompt the country to increase the rate of double taxation that resident parent firms have to pay on their foreign-source income. A positive response of international double taxation to the location of parent firms in a country could explain a positive bias in the estimated coefficient for the $\Delta\theta^{double}$ variable. By definition, the variable $\Delta\theta^{double}$ depends both on tax rates and on double tax relief conventions. Of these, tax rates are adjusted far more frequently. Hence, to adjust for possible endogeneity of $\Delta\theta^{double}$ to parent location decisions, we assume that tax rates may in fact be endogenous. To deal with this, we first regress the corporate tax rate on a country's debt to GDP ratio and sets of country and time fixed effects. This reflects that a high debt to GDP ratio requires high levels of taxation to service the debt. Then we take the predicted tax rate from this regression to construct the $\Delta\theta^{double}$ variable. Regression (5) in the table indicates that this predicted $\Delta\theta^{double}$ variable obtains a more negative coefficient of -0.555 to suggest that the coefficient of -0.302 in regression (1) is indeed biased upward.

V Simulation of tax system changes

As seen in previous sections, double taxation appears to affect the direction and volume of international M&A's. In this section, we consider how tax policy changes can be expected to change the pattern of international M&A's on the basis of our estimates of the benchmark logit model of section IV.B. First, we examine tax rate changes. Next, we wish to see how important double tax relief conventions are in affecting the direction of international M&A's. To get an indication, we simulate the impact of a switch by the United States from its current system of worldwide taxation with a foreign tax credit to a straight exemption.

For two reasons, it is insufficient to simply know the estimated logit parameters to see the impact of tax rate changes on the direction of M&A's. First, the link between country i 's corporate tax rate τ_i and the double tax liability variable $\Delta\theta^{double}$ varies across different observations because the latter variable also depends on partner countries' corporate tax rates τ_j , the double tax conventions between country i and the partner countries, and it reflects the pre-tax income of the two merging firms. Second, marginal effects of a change in regressors differ across observations due to the non-linearity of the logit estimator. These two factors favor a simulation of tax rate changes which takes all relevant information into account. The marginal effect on the direction of M&A's is found by using the estimates of regression (1) in Table X. Specifically, we will consider a one percentage point increase in a country's corporate tax rate.

Column (1) of Table XI gives the sample proportion of firms from country i that turn out to be the acquiring firm in an M&A. Due to the inclusion of country fixed effects, the sample proportion P_i is equal to the average of the individual predictions per merger that the firm from country i is actually the acquiring firm. The second column provides the change in the proportion of acquiring firms, denoted dP_i , following a one percentage point increase in country i 's tax rate. The third column finally gives the semi-elasticity of the proportion of acquiring firms with respect to the tax rate, denoted $\frac{dP_i}{P_i}$. In the case of Austria, the estimated values of dP_i and $\frac{dP_i}{P_i}$ are zero, as a change in Austria's tax rate does not affect the double

tax variable $\Delta\theta^{double}$ for any of the M&A's involving Austria. For all other countries, dP_i and $\frac{dP_i}{P_i}$ are estimated to be negative, as a higher tax rate discourages parent firm location in the country. For Germany, $\frac{dP_i}{P_i}$ is only slightly negative at -0.0020 as it exempts 95 percent of incoming foreign dividends and itself has a rather high tax rate (so that there is little potential for double taxation of outgoing dividends). At the other end of the spectrum, the semi-elasticity $\frac{dP_i}{P_i}$ is most negative for the United Kingdom at -1.6, while the semi-elasticity for the United States is also rather low at -0.9. Both of these countries impose worldwide taxation with foreign tax credits, which means that higher tax rates potentially increase the double taxation of the foreign source income of domestically located parent firms.

Next, we consider a potential switch by the U.S. from a foreign tax credit regime to an exemption regime. Table XII provides information on how such a regime switch is expected to affect a country's proportion of acquiring firms. The information in columns (1) through (3) relate to all M&A's a country is involved in, while columns (4) through (6) only relate to M&A's involving the United States as one of the two countries. In either case, estimated changes in probabilities of being the acquiring country are zero for 8 of our 18 non-U.S. countries, as these countries' tax rates (including withholding taxes) are higher than the U.S. tax rate so that the United States does not impose any double taxation on dividend income from these countries even under the present regime of worldwide taxation. For all other countries, the elimination of worldwide taxation eliminates some double taxation so that the probability of the United States becoming the parent country increases. The probability that Ireland provides the parent firm in an American-Irish M&A would decrease by 19.3 percentage points. For Denmark and Finland, the probability would decrease by 13.4 and 12.2 percentage points. For the U.S. itself, we estimate that the probability of a U.S. firm becoming the parent firm increases from 52 to 56 percent, if this country switches from a foreign tax credit regime to the exemption regime.

Is there pressure on the U.S. to switch from a foreign tax credit regime to an exemption regime? The American Jobs Creation Act of 2004 recently allowed repatriating profits subject to a flat tax rate of 5.25 percent until the end of 2005. In response to the lower tax rate,

foreign subsidiaries of U.S. parent firms increased their repatriations six fold from 34 billion U.S. dollars in 2004 to 217 billion U.S. dollars in 2005, which is equivalent to 1.7 percent of the American GDP.²⁵ These numbers illustrate the constraint that international double taxation puts on U.S.-headquartered multinationals and how the U.S. is trying to loosen these constraints.²⁶ The Jobs Creation Act of 2004 also contains several provisions that will decrease the international double tax burden also in the future and there exists strong lobbying pressure by the American Shareholder Association (see Clifton, 2006) and the Business Roundtable (see Gwyn, 2006) to implement fundamental changes to the U.S. tax law with respect to international taxation.²⁷ Consistent with this, the President's Advisory Panel on Federal Tax Reform (2005) recommends moving toward a territorial-based income tax system with exemption for active foreign-source business income of both foreign branches and controlled foreign subsidiaries.

VI The gravity model and the number of M&A's

The previous section analyzed the direction of individual cross-border mergers using firm-level data. In this section we switch to a macro-economic point of view by aggregating the individual cross-border mergers on a bilateral level. This allows us to examine whether the incentive to avoid double taxation has an impact on the aggregate number of in- and outward acquisitions.²⁸ The gravity model used in this section follows part of the previous trade and FDI literature.

VI.A Estimating equation

Several studies have used the gravity model to explain international investment outcomes. Specifically, Portes and Rey (2005) estimate a gravity equation for trade in financial assets, while Wei (2000), Evenett (2001) and Buch, Kleinert, and Toubal (2003) apply the gravity model to FDI flows. In a recent study, Di Giovanni (2005) estimates a gravity model of the volume of cross-border mergers and acquisitions.

In this section, we use the gravity model to estimate the impact of international double taxation on the bilateral number and value of cross-border M&A's distinguishing between inward and outward acquisitions. Bilateral M&A data of this kind reflect total M&A activity at the country-pair level as well as the chosen directions of the M&A's. In practice, there are no M&A's for some country pairs. To reflect this, we will estimate a Tobit, censored regression model of the following kind

$$MA_{ijt} \begin{cases} = 0 & \text{if } MA_{ijt}^* < 0 \\ = \exp(MA_{ijt}^*) & \text{if } MA_{ijt}^* \geq 0 \end{cases} \quad (5)$$

where MA_{ijt} is the number of M&A's at time t with i and j denoting the acquiring and target countries, and where MA_{ijt}^* is an index function given by

$$MA_{ijt}^* = \beta_0 + \beta_1 \ln GDP_{it} + \beta_2 \ln GDP_{jt} + \beta_3 \ln Dist_{ij} + \beta' x_{ijt} + \epsilon_{ijt}. \quad (6)$$

In (6), $Dist_{ij}$ is the bilateral distance, vector x_{ijt} represents additional explanatory variables, while the coefficients $\beta_0, \beta_1, \beta_2, \beta_3$, and vector β are parameters to be estimated.²⁹

The main variable of interest as part of x_{ijt} is the double tax rate τ_{ijt}^{double} . Higher double taxation imposed by county i on the foreign source income of local parent firms is expected to lead to fewer M&A's where this country is the acquiring country. Next, we include the target country tax rate τ_{jt} . We include this variable as multinational firms may be interested in making capital investments in low-tax countries, or alternatively locate their intangible assets such as patents in these countries to benefit from low taxation. A further reason for multinationals to expand into low-tax countries may be that establishments in such countries allow the multinational to transfer profits to these countries by, for instance, manipulating transfer prices.³⁰ Additional control variables are the parent and subsidiary countries' per capita GDP, denoted $(GDP/Capita)_{it}$ and $(GDP/Capita)_{jt}$.³¹ These variables, among other things, reflect wage levels in the two countries. Multinationals often locate their parent firms in rich countries, which suggests a positive effect for $(GDP/Capita)_{it}$. At the same time, multina-

tionals may wish to invest in low-wage countries to have access to cheap labor or in high-wage countries to have access to skilled labor and interesting product markets. Hence, the impact of target country per capita GDP, $(GDP/Capita)_{jt}$, can possibly have either sign. Next, parent country financial development variables such as stock market valuation over GDP, $(Stocks/GDP)_{it-1}$, and credit provided to the private sector over GDP, $(Credit/GDP)_{it-1}$, are expected to have a positive impact on acquisitions. Following Di Giovanni (2005), we lag the variables for financial depth by one period to avoid endogeneity. The mean tariff rate in the target country, $TradeTariffs_{jt}$, could equally have a positive impact on acquisitions in that country if multinationals wish to “jump” a country’s tariffs. Target country capital controls, $CapitalControls_{jt}$, can have a negative impact on acquisitions, as they may prevent foreign investors from acquiring local companies. The variables $Adjacency_{ij}$, $CommonLanguage_{ij}$ and joint membership of a $CustomsUnion_{ijt}$ are expected to have a positive impact on acquisitions. Further, $\Delta Exch.Rate_{it}$ and $\Delta Exch.Rate_{jt}$ measure the change in the acquiring country’s and target country’s real effective exchange rates (against a basket of currencies) with an increase denoting an appreciation. Appreciation in the acquiring country and depreciation in the target country possibly trigger acquisition of relatively cheap assets in the target country. Further, $LegalQuality_{jt}$ measures the quality of the legal structure and the security of property rights in the target country. We expect this variable to have a positive impact on acquisitions in the target country, as it signals some protection from expropriation and other unreasonable treatment. Finally, the regressions contain fixed effects for acquiring countries, target countries and for time.³² Tables XIII and XIV provide summary statistics on these variables and their pairwise correlations, respectively.

VI.B Estimation results

Table XV reports regressions explaining the logarithm of the bilateral number of M&A’s with countries i and j as parent and subsidiary countries, respectively. Regression (1) shows a coefficient of -0.016 for the double tax rate variable τ_{ijt}^{double} that is significant at the one percent level. This suggests that an increase in the double tax rate by 1 percentage point

reduces the number of foreign acquisitions by 1.6 percent. The target country tax rate τ_{jt} equally has a negative coefficient that is significant at the one percent level. The various control variables enter the regression largely as expected. Distance has a negative impact on the number of cross-border acquisitions. The logged GDP's in the acquiring and target countries enter with positive coefficients that are not statistically significant in this regression that includes country fixed effects. Stock market capitalization in the acquiring country has a positive and statistically significant impact on the number of acquisitions, as does the target country tariff variable. A shared border and a common language equally are positively and significantly related to the number of acquisitions.

Next, in regression (2) we include the legal quality variable.³³ The regression shows that target country legal quality is positively and significantly related to the number of acquisitions with only small changes in the estimated coefficients for the two tax variables. Regression (3) in turn includes variables indicating recent real exchange rate changes of the acquiring and target countries which are shown to be statistically insignificant without much affecting the tax variables.³⁴ Regression (4) excludes acquiring and target country fixed effects to yield that both GDP variables obtain positive and significant coefficients. Hence, in the absence of country fixed effects, economic size is useful in explaining the cross-sectional variance in the number of M&A's. However, if acquiring and target country fixed effects are part of the specification, then the two GDP variables become insignificant because the covariance between GDP and the number of M&A's over time is apparently weak. A formal hypothesis test shows that the country-fixed effects are jointly different from zero and hence should be included in the regression. Regression (5) excludes Eastern European countries from the sample with little effect on the taxation variables relative to the benchmark regression (1). Regression (6) uses a τ_{ijt}^{double} variable constructed on the assumption that the newly created multinationals have an international branch rather than subsidiary structure. Again, the estimated coefficients for the tax variables are little changed. Regression (7) replaces the number of M&A deals by the value of these deals.³⁵ The estimated coefficients for the τ_{ijt}^{double} and τ_{jt} variable are now estimated to be -0.049 and -0.071 and thus more negative than in regression (1). This suggests that deals with a larger value are relatively more affected by the tax variables than

smaller deals. Next, we present several regressions that indicate how robust the results are to replacing the Tobit model by another estimation approach. First, regression (8) is estimated by OLS using only uncensored observations with a positive number of M&A's. Disregarding censored observations should result in an attenuation of coefficients.³⁶ Indeed, the coefficient estimates are similar to those in regression (1) except that some coefficients decrease in size. Second, regression (9) applies a discrete counting model. Specifically, regression (9) assumes that the dependent variable y_n is Poisson distributed such that $\text{Prob}(Y_n = y_n) = \frac{\exp^{-\lambda_n} \lambda_n^{y_n}}{y_n!}$ for $y_n = 0, 1, 2, \dots$ with $\ln(\lambda_n) = \beta' x_n$. Again, the estimated coefficients for the two tax variables are negative and statistically significant. Regression (10) generalizes the previous one by assuming that the dependent variable is distributed according to the negative binomial distribution.³⁷ The estimated coefficients for the two tax variables are again negative and statistically significant. In fact, the similarity of all coefficient estimates to those in regression (1) show how robust the results are with respect to distributional assumptions.

As discussed in section IV.B, there is a possibility that tax policy is endogenous to the international pattern of M&A's. In fact, changes in this pattern may well prompt countries to change their tax policies to affect the number of M&A's they are involved in as acquiring or target countries. Hence, both τ_{ijt}^{double} and τ_{jt} are potentially endogenous to the number of observed M&A's. To adjust for this, we again replace the statutory tax rate by a predicted tax rate from a regression of the actual tax rate on a country's debt to GDP ratio and a set of country and time fixed effects. In regression (11), we see that the resulting τ_{ijt}^{double} variable obtains a somewhat more negative and statistically significant coefficient of -0.028, while the target country tax rate τ_{jt} is no longer statistically significant.³⁸ Regression (11) thus suggests that the international pattern of M&A's is affected by international double taxation but not by absolute national levels of taxation. This finding makes sense as an M&A is first of all a change in asset ownership and not an investment in new capital goods.

VII Conclusion

This paper has collected extensive information on the international tax system so as to be able to compute rates of double taxation of cross-border corporate income flows among a set of European countries, Japan and the United States. Corporate tax rates vary widely among these countries, as do double tax relief conventions. As a result, there is a wide dispersion of international double taxation imposed between any two countries in our sample. The location of the parent firm in international M&A's determines the level of international double taxation which may be imposed on the multinational's foreign-source income. Thus, multinationals have an incentive to locate their parent firms in countries with low double taxation of foreign-source income. Data on parent country selection following an international M&A are ideally suited to examine the impact of double taxation on the parent-subsidiary structure of multinational firms.

This paper provides evidence that international taxation greatly affects parent firm selection. Specifically, multinationals are less likely to base their parent firm in a country which imposes a relatively high double taxation on the income received from the other country. For countries with worldwide tax systems, the rate of double taxation of foreign-source income generally increases with the national corporate tax rate. Hence, a higher corporate tax rate discourages merging firms from locating the parent in the high tax country. Through simulation, we find that the proportion of mergers locating their parent firm in a given country declines by an average of 0.36 percentage points if that country increases its corporate tax rate by 1 percent. Consistently, we find that the absolute number of multinationals locating a parent firm in a country following an international M&A is sensitive to international double taxation.

These findings indicate that the elimination of double taxation at the level of an individual country or worldwide would substantially affect the international pattern of M&A's. At the individual level, a country can eliminate double taxation of its multinationals by eliminating residence-based worldwide taxation of profits. On the basis of estimation results, we simulate how a replacement of worldwide taxation by territorial taxation in the U.S. would affect

the tendency of firms to select the U.S. as the parent country in international M&A's. We find that such a switch would increase the proportion of U.S.-related international M&A's selecting the U.S. as their tax residence from 52 to 56 percent. Especially multinationals with operations in low-tax countries such as Denmark and Ireland would face greater incentives to locate the parent firm in the United States.

The evidence presented in this paper suggests that countries can compete for the establishment of headquarters of multinational firms by reducing or eliminating international double taxation imposed on resident multinationals. Some countries that host many parent firms, such as the Netherlands and Sweden, no doubt attract some of these firms on account of the low double taxation of repatriated intra-firm dividend income. Other countries with large numbers of resident multinationals, such as Japan, the United Kingdom and the United States, at present continue to impose considerable international double taxation on account of their systems of worldwide taxation and their substantial rates of corporate taxation. The recent proposals in the U.S. by the President's Advisory Panel on Federal Tax Reform (2005) with respect to international taxation aim to lower the tax price for residency in this country.

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Notes

1. The calculations with respect to international M&A's and FDI are based on the World Investment Report 2005 (United Nations Conference on Trade and Development (2005)).
2. On average, 78 percent of FDI took place in the form of international M&A's between 1988 and 2004 (UNCTAD, 2004, 2000, 1996, 1994).
3. Differences in capital gains taxation may also have an influence on the direction and the form of an international M&A. An empirical study by Ayers, Lefanowicz, and Robinson (2003) suggests that such an effect may exist, as these authors find that domestic shareholder-level capital gains taxes are associated with higher acquisition premiums for taxable acquisitions. We do not explicitly take capital gains taxes into account. There is, however, no bilateral variation in capital gains taxes. Hence, country-specific effects should be sufficient to control for their effect.
4. See Council of the European Communities (1990).
5. In practice, many countries allow some deferral of any domestic tax on foreign source income. Such deferral reduces the present value of the double tax due. For comparable deferral across parent countries, double tax rates would be reduced proportionally.
6. See OECD (2005) for the most recent version of the model tax convention.
7. Under a direct tax credit, foreign corporate income taxes are treated like deductible expenses.
8. Note that the method of double tax relief for dividends is not determined by the tax treaty itself, but in the domestic code of the dividend receiving country (although the domestic provisions are sometimes conditional on the existence of a double tax treaty). Double tax treaties generally only regulate cross-border cases of juridical double taxation (i.e., taxing the same juridical entity for the same income twice). However, taxing parent companies for dividend income is not a case of juridical double taxation — only a case of economic double taxation. See Couzin (2002), Helminen (1999), Helminen (2005) and Rohatgi (2002) for more on this subject.
9. Austria and Spain also switched to the exemption system but at a very early point in the sample period, so the difference between the current double taxation and the average over time is less obvious.
10. The data provider claims to register cross-border M&As exhaustively.
11. The large differences in the ratio of acquiring firms to target firms suggests the presence of strong country-specific effects.
12. An additional subscript t could be introduced as the tax rate can vary over time. We have suppressed the

time subscript because it may give the false impression of panel data.

13. If $PI_a < 0$, we assume the parent firm can carry any losses forward or backward so that τ_{ij} is the applicable double tax burden.
14. Alternatively, the model could also reflect stock market driven acquisitions (Shleifer and Vishny, 2003), where rational managers initiate mergers without real economic long-run gains as a reaction to investors' over- and undervaluation of firms.
15. The probability is further conditional on $[(V_{ab} \geq V_a + V_b) \vee (V_{ba} \geq V_a + V_b)]$, i.e. that the sum of the parts is worth more than the parts of the sum. We expect this condition to be independent of $\text{Prob}(V_{ab} - V_{ba} > 0)$.
16. The coefficient vector β is estimated by maximizing the joint log-likelihood, which is clearly unaffected by switching name tags a and b :

$$\log L = \sum_{n=1}^N \left[y_n \log \frac{\exp(\Delta x'_n \beta)}{1 + \exp(\Delta x'_n \beta)} + (1 - y_n) \log \frac{\exp(-\Delta x'_n \beta)}{1 + \exp(-\Delta x'_n \beta)} \right].$$

17. The “pecking order” for financing firms (i.e. preferring internal funds over external funds) is a result of asymmetric information between managers and investors as first comprehensively illustrated by Myers and Majluf (1984). A significant liquidity variable in the context of M&A's could imply that the acquiring firm's managers are better informed about target firms than outside investors.
18. *ROA* is actually a replacement for the book-to-market ratio. The model for stockmarket driven acquisitions by Shleifer and Vishny (2003) predicts that acquirers should be more overvalued than their targets. Rau and Vermaelen (1998) have found suggestive evidence that supports this hypothesis. However, simultaneously requiring pre-tax profits and stock listings for acquirers and targets reduced the sample size intolerably.
19. Firms often follow a growth strategy through a series of acquisitions. Past acquisitions are reflected in a high investment ratio increasing the probability that respective firm is the acquirer.
20. The inclusion of country fixed effects has the nice econometric property that the average predicted probability that a firm from country k is the acquirer equals the sample proportion of acquiring firms from country k .
21. Any variable — like the indicators for investor protection used in Rossi and Volpin (2004) — that does not exhibit time-series variation or non-linear variation over bilateral country relationships is completely captured by the acquiring and target country fixed effects.
22. The marginal effect of a change in the regressors on the probability that firm a is the acquiring firm is given by the expression

$$\frac{\partial E[y_n | \Delta x_n]}{\partial \Delta x_n} = \Lambda(\Delta x'_n \beta) [1 - \Lambda(\Delta x'_n \beta)] \beta,$$

where $\Lambda(\cdot)$ indicates the logistic cumulative distribution function. With a merger of equals, we have $\Delta x_n = 0$

and the marginal effect of x on the probability reduces to 0.25β .

23. The insignificance of an indicator for managerial competence is in line with Franks and Mayer (1996), who also failed to find evidence for M&A's being triggered by managerial failure.

24. Marginal effects in the probit model are given by

$$\frac{\partial E[y_n|\Delta x_n]}{\partial \Delta x_n} = \phi(\Delta x_n' \beta) \beta,$$

where $\phi(\cdot)$ indicates the standard normal density. With a merger of equals, we have $\Delta x_n = 0$ and the marginal effect of x on the probability reduces to about 0.4β .

25. See Federal Reserve Board of Governors, 2006, p. 18. Annual repatriations by U.S. multinationals have never exceeded 50 billion U.S. dollars before 2005. The counterpart to the repatriations from foreign subsidiaries are foreign earnings retained abroad. For the U.S., quarterly foreign earnings retained abroad have always been positive and since 1996 they have grown from 50 to about 150 billion U.S. dollars before plunging to -62 billion and -81 billion U.S. dollars in the last two quarters of 2005 (see Federal Reserve Board of Governors, 2006, p. 13).

26. From 1971 until 2003, there existed legislation that allowed for exemption or tax deferral for the income derived from handling US export sales. However, the legislation was aimed at exporters and not multinationals. The subsequent tax laws are known as Domestic International Sales Corporation (DISC, from 1971), Foreign Sales Corporation (FSC, from 1984), and Extraterritorial Income Exclusion Act (ETI, from 2000). All three tax laws were successfully challenged within the GATT or WTO framework as prohibited export subsidies.

27. The permanent provisions of the Jobs Creation Act 2004 are among others: reduction from nine to two foreign tax credit baskets, allocation of interest on a worldwide affiliated group basis, and an extension of the foreign tax credit carryforward to 10 years.

28. Worldwide taxation is expected to reduce the number of outward acquisitions, while withholding taxes decrease the number of inward acquisitions.

29. The marginal effect of a change in the regressor on the frequency of mergers and acquisitions is given by

$$\frac{\partial \ln E[MA_{ijt}|x_{ijt}]}{\partial x_{ijt}} = \beta \times \text{Prob}[MA_{ijt}^* \geq 0].$$

The coefficient vector β gives an upper bound of marginal effects, because $0 < \text{Prob}[MA_{ijt}^* \geq 0] < 1$. The marginal effects for country-pairs that involve two big countries will approximate this upper bound, because the probability of a positive number of acquisitions is close to one.

30. Note that multinationals with parent firms subject to worldwide taxation may have a comparative

disadvantage to invest in low-tax countries due to the relatively large double taxation. This is captured by the double tax rate variable. With some deferral of parent country taxation of foreign source income, however, profit shifting and other motives for such firms to invest in low-tax countries may be relevant.

31. All regressors except for categorical variables and tax rates enter the regression in logarithmic form.
32. The acquiring country fixed effect and the target country fixed effect are similar to the import and export country fixed effects in the empirical trade literature.
33. The legal quality variable is not part of the benchmark regression because the variable is computed differently before 1995 than thereafter. Furthermore, values between 1985, 1990 and 1995 had to be interpolated.
34. These variables are not part of the benchmark regression because they reduce the sample size and the previous literature has found no link between exchange rates and FDI or M&A's (see Di Giovanni, 2005).
35. There is a caveat using the value of M&A values as the dependent variable. Replacing the number of M&A's by the value of M&As introduces a sample bias with respect to country coverage. The data provider, Thompson, claims to have an exhaustive list of international M&A's. Using the number of M&A's thus does not introduce a sample bias. However, the deal values of an M&A are only recorded in about 40 percent of all cases, as the information is often not publicly available, and there is a strong geographical pattern in the missing data. For example, the share of acquiring companies from the U.K. would increase from 19.3 percent to 31.6 percent of all acquisitions in the sample. The share of acquiring German firms would decrease from 10.0 percent to 6.2 percent. The same holds for the pattern of target firms: Using the deal values would increase the share of target firms from the U.S. from 17.2 percent to 25.1 percent of all targets in the sample. The German share would decrease from 12.9 percent to 8.8 percent. Such a structural mismeasurement of the dependent variable by about 50 percent would result in extremely biased estimation results.
36. See Greene, 2000, p. 902.
37. One restrictive consequence of a Poisson distribution is the equality of the distribution's mean to its variance. The negative binomial distribution relaxes this restriction such that $\text{Prob}(Y_n = y_n) = \frac{\exp^{-\lambda_n} \lambda_n^{y_n}}{y_n!}$ for $y_n = 0, 1, 2, \dots$ with $\ln(\lambda_n) = \beta' x_n + \ln(u_n)$. The last term $\ln(u_i)$ represents additional sources of variance such as unobservable or omitted variables and it is distributed as $u_i \sim \text{Gamma}(1/\alpha, \alpha)$ where α is estimated jointly with the coefficients β .
38. The regression results fit the potential endogeneity. Countries that for some other reason than taxation are attractive as headquarter location (i.e., in which many M&A's originate and not many firms are taken over by foreign contenders) can keep their level of international double taxation relatively high. Correcting for this endogeneity should result in more negative coefficient estimates for the $\tau_{ijt}^{\text{double}}$ variable and less negative coefficients for the target country tax rate τ_{jt} , which is exactly the outcome of regression (11).

Table I: Tax regimes across countries in 2004

Country of Residence	Tax Rate	Dividend Taxation	
		with Tax Treaty	without Tax Treaty
	(1)	(2)	(3)
Austria	34.0	Exemption	Exemption
Belgium	34.0	Exemption ^a	Exemption ^a
Bulgaria	19.5	Credit	Credit ^b
Croatia	20.0	Exemption	Exemption
Czech Republic	28.0	Credit	Deduction
Denmark	30.0	Exemption	Exemption
Estonia	0.0	Credit	Credit
Finland	29.0	Exemption	Credit ^b
France	35.4	Exemption ^a	Exemption ^a
Germany	38.3	Exemption ^a	Exemption ^a
Greece	35.0	Credit	Credit
Hungary	17.7	Exemption	Exemption
Iceland	18.0	Exemption	Exemption
Ireland	12.5	Credit	Credit
Italy	37.3	Exemption ^a	Exemption ^a
Japan	42.0	Credit	Credit
Latvia	15.0	Exemption	Exemption
Lithuania	15.0	Exemption	Exemption
Luxembourg	30.4	Exemption	Exemption
Netherlands	34.5	Exemption	Exemption
Norway	28.0	Exemption	Exemption
Poland	19.0	Credit	Credit
Portugal	27.5	Exemption ^c	Exemption ^c
Romania	25.0	Credit	Credit
Slovak Rep	19.0	Exemption	Exemption
Spain	35.0	Exemption	Credit
Sweden	28.0	Exemption	Exemption
Switzerland	24.0	Exemption	Exemption
United Kingdom	30.0	Credit	Credit
United States	40.0	Credit	Credit

Notes: The first column lists the corporate income tax rates including average state and municipal taxes where applicable with respect to retained earnings. The second column lists the countries' method for tax relief that applies to dividend income in presence of a tax treaty. The last column provides the same information in absence of a tax treaty. The parent firm is assumed to hold a majority in the dividend-paying subsidiary such that participation exemptions take effect.

Footnotes: a: Only 95 percent of the dividend is exempted. b: Only withholding taxes are credited but not the underlying corporate income tax. c: Only dividend income from EU sources is exempted. Other dividend income is taxed. Tax credits are provided for withholding taxes.

Table II: Withholding tax rates in 2004

Source Country	No treaty	Receiving Country																														
		Aus	Bel	Bul	Cro	Cz	Den	Est	Fin	Fra	Ger	Gre	Hum	Icel	Irel	Ita	Jap	Lat	Lith	Lux	Neth	Nor	Pol	Por	Rom	Slvk	Spa	Swe	Swi	UK	USA	
Austria	25	0	0	0	10	0	15	0	0	0	0	10	25	0	0	10	25	25	0	0	5	10	0	15	10	0	0	0	0	5		
Belgium	25	0	15	5	5	0	15	0	0	0	0	10	5	0	0	5	15	5	0	0	5	5	0	5	5	0	15	0	10	0	5	
Bulgaria	15	0	10	5	10	5	15	0	5	15	10	10	15	5	10	10	15	15	5	5	15	10	10	10	10	5	10	5	10	15		
Croatia	15	0	5	5	5	5	5	5	5	15	5	5	15	5	15	5	5	5	15	0	15	5	15	5	5	15	5	5	15	15		
Czech Rep	15	10	5	10	5	15	5	5	10	5	15	5	5	5	15	10	5	5	5	0	5	5	15	10	5	5	0	5	5	5		
Denmark	28	0	0	5	5	15	5	0	0	0	0	5	0	0	0	0	5	5	0	0	0	5	0	5	0	10	15	0	0	0		
Estonia	26	15	15	26	5	15	15	5	15	5	26	15	15	26	15	0	10	15	15	0	0	15	0	15	15	26	15	15	0	15	0	
Finland	29	0	10	5	15	0	15	0	0	0	15	0	0	10	15	15	0	0	0	0	0	15	0	5	15	0	5	15	0	5	0	
France	25	0	0	5	5	10	0	5	0	0	5	5	0	0	5	5	0	0	0	0	0	5	0	5	0	10	10	0	0	0	5	
Germany	21	0	0	15	15	5	0	0	0	0	5	5	0	0	15	5	5	0	0	0	0	0	5	0	5	0	0	0	0	0	5	
Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hungary	20	10	10	10	5	5	5	5	5	10	20	5	10	20	20	5	5	10	15	5	5	10	15	5	5	5	0	10	5	5		
Iceland	15	15	5	15	5	0	5	0	5	15	15	5	5	5	5	0	0	5	5	0	0	5	10	15	5	5	0	5	5	5	5	
Ireland	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Italy	27	0	0	10	10	15	0	5	0	0	10	27	0	10	27	5	0	0	15	10	0	15	10	0	10	15	0	0	15	0	5	
Japan	20	10	10	20	10	10	10	0	10	20	10	10	20	10	20	5	5	10	20	10	10	10	20	10	10	10	10	10	10	10	10	
Latvia	10	10	5	10	5	5	5	5	5	10	10	5	5	10	10	5	5	10	10	5	5	5	5	10	10	10	10	5	5	5	5	
Lithuania	10	10	5	10	5	5	5	5	10	10	5	5	10	5	5	10	0	10	5	5	5	5	5	10	10	10	5	5	5	5	5	
Luxembourg	0 ^a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Netherlands	25	0	0	5	0	0	5	0	0	0	5	0	0	5	0	0	5	5	5	0	0	5	0	0	0	0	0	0	0	0	5	
Norway	25	0	0	15	15	5	0	5	0	0	10	0	0	5	5	5	0	0	5	0	0	5	0	10	5	0	0	5	0	5	0	15
Poland	19	10	5	10	5	5	5	5	5	19	10	5	0	10	10	5	5	5	5	5	5	5	5	15	5	5	5	5	5	5	5	
Portugal	25	0	0	10	25	15	0	15	0	0	0	15	10	0	25	10	10	0	0	10	10	10	10	15	0	10	15	0	10	0	5	
Romania	15	15	5	10	5	10	15	5	10	5	15	5	15	3	10	10	10	5	0	10	5	10	5	10	10	10	10	10	10	10	10	
Slovak Rep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Spain	15	0	0	5	15	5	0	5	0	0	5	5	0	0	10	15	5	0	0	15	5	0	15	5	0	10	5	0	10	0	10	
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Switzerland	35	0	10	5	5	0	5	0	0	5	10	5	10	15	10	5	5	0	0	5	5	10	10	5	10	10	5	10	0	5	5	
UK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
USA	0 ^b	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Notes: The "No treaty" column lists the withholding tax rates that apply to dividend payments to non-resident corporations in the absence of a tax treaty or any domestic regulation with regard to the EU Parent-Subsidiary Directive. Minimum participation exemptions are taken into account. The remaining part of the table list the applicable withholding tax rate on a bilateral basis where the source countries are listed on the left and the receiving countries on top. The table illustrates the situation on January 1st 2004.

Footnotes: a: The zero withholding tax does not apply to all types of Luxembourg corporations. For other types it is 20 percent if there are no reductions due to tax treaties. b: Withholding tax is not imposed on dividends paid to foreign corporations if the dividends are effectively connected to the conduct of a trade or business in the United States.

Table III: Existence of tax treaties in 2004

Country	Aus	Bel	Bul	Cro	Cz	Den	Est	Fin	Fra	Ger	Gre	Hun	Ice	Ire	Ita	Jap	Lat	Lith	Lux	Neth	Nor	Pol	Por	Rom	Slvk	Spa	Swe	Swi	UK	USA	
Austria	-	1971	1983	2000	1978	1961	2001	2000	1993	2000	1970	1975	1987	1987	1987	1963	1992	2001	1995	1974	1970	1976	1970	1976	1978	1978	1995	1991	2000	1993	1996
Belgium	1971	-	1988	2001	1996	1999	1991	1999	2002	1968	1982	2000	1970	1984	1991	1999	1998	1970	2001	1988	2001	1995	1996	1997	2000	1991	1978	1987	1987	1987	
Bulgaria	1983	1988	-	1997	1998	1988	1985	1987	1987	1991	1994	2000	1988	1991	2003	1992	1990	1988	1994	1995	1994	1995	1994	1999	1990	1988	1991	1987	1987	1987	
Croatia	2000	2001	1997	-	1999	1981	2002	1986	1974	1987	1996	1996	2002	1982	2000	2000	2000	2000	2000	1983	1994	1994	1996	1996	1980	1999	1999	1981	1981	1981	
Czech Rep	1978	1996	1998	1999	-	1992	1994	1994	1973	1980	1986	1993	2000	1995	1981	1977	2004	1994	1991	1996	1979	1993	1994	1993	2002	1980	1979	1995	1990	1990	1993
Denmark	1970	1999	1988	1981	1992	-	1982	1997	1957	1995	1989	1978	1996	1993	1999	1968	1993	1993	1980	1996	1997	2001	2000	1976	1982	1982	1999	1997	1997	1996	1999
Estonia	2001	1999	2002	1994	1993	-	1993	1997	1996	2002	1994	1997	1996	2002	1997	2002	1993	1997	1993	1994	2003	2003	1993	2002	1994	1998	1998	1998	1998	1998	1998
Finland	2000	1991	1985	1986	1994	1997	1993	-	1970	1979	1980	1978	1996	1992	1981	1992	1993	1993	1990	1995	1997	1994	1970	1998	1999	1990	1997	1991	1991	1989	1989
France	1993	1999	1987	1974	1973	1957	1997	1970	-	2001	1963	1980	1990	1968	1989	1997	1997	1970	1973	1999	1975	1971	1974	1973	1995	1990	1997	1987	1987	1994	1994
Germany	2000	2002	1987	1980	1995	1996	1979	2001	-	1966	1977	1971	1962	1989	1981	1997	1997	1973	1991	1991	2003	1980	2001	1980	1986	1992	2002	1970	1989	1989	
Greece	1970	1968	1991	1996	1986	1989	1980	1963	1966	-	1983	2003	1987	1991	1981	1988	1987	1999	1991	1988	1987	1999	1991	1986	2000	1961	1983	1953	1953	1953	
Hungary	1975	1982	1994	1996	1993	1995	2002	1978	1980	1977	1983	-	1995	1977	1981	2004	2004	1990	1986	1980	2000	1995	1993	1994	1984	1981	1981	1977	1979	1979	
Iceland	2000	2000	1996	1994	1996	1990	1971	2003	2003	1995	2003	-	2003	1994	1998	1999	1997	1996	1998	1999	2002	2002	1999	2002	2002	1996	1988	1991	1975	1975	
Ireland	1987	1970	2000	2002	1995	1993	1997	1992	1968	1962	2003	1995	2003	-	1971	1974	1997	1972	1969	2000	1995	1993	1999	1999	1994	1993	1980	1998	1998	1997	
Italy	1981	1984	1988	1982	1981	1999	1997	1981	1989	1989	1987	1977	1971	-	1973	1996	1981	1990	1985	1985	1980	1977	1981	1977	1980	1978	1988	1984	1984	1984	
Japan	1963	1991	1991	1977	1968	1992	1997	1981	1981	1974	1974	-	1993	1992	1993	1982	1994	1993	1993	2001	2002	1999	2003	1993	2002	1996	1988	1991	1971	1980	1973
Latvia	1999	2003	2000	1994	1993	2002	1993	1997	1997	2004	1994	1997	2004	1994	1997	1993	-	1993	1994	1993	2001	2002	1999	2003	1993	2002	1996	1988	1991	1975	
Lithuania	1998	2000	1994	1993	1993	1993	1997	1997	2004	1998	1997	1996	1993	-	1999	1993	1994	2002	2001	2001	2001	2001	2001	2001	2001	2003	1993	2002	1998	1998	
Luxembourg	1992	1970	1992	1991	1980	1990	1970	1973	1991	1990	1999	1972	1981	1993	-	1990	1983	1995	1999	1993	1991	1986	1996	1996	1996	1993	1983	1996	1996	1996	
Netherlands	2001	2001	1990	2000	1996	1996	1997	1995	1973	2004	1981	1986	1997	1969	1990	1992	1994	1996	1990	-	1990	2002	1999	1998	1998	1996	1971	1971	1966	1989	2004
Norway	1995	1988	1988	1983	1979	1997	1993	1997	1999	1991	1988	1980	1996	2000	1985	1993	1993	1993	1983	1990	-	1977	1970	1980	1979	1999	1997	1987	2000	1980	1980
Poland	1974	2001	1994	1994	1993	2001	1994	1994	1975	2003	1987	2000	1998	1995	1985	1982	1993	1994	1995	2002	1977	-	1995	1994	1994	1979	1975	1991	1976	1974	1974
Portugal	1970	1995	1995	1994	2000	2003	1970	1971	1980	1999	1995	1999	1993	1980	2001	2002	1999	1999	1999	1970	1995	-	1997	2001	1993	2002	1974	1968	1994	1994	
Romania	1976	1996	1994	1996	1993	1976	1998	1974	2001	1991	1993	1999	1977	1979	2002	2001	1993	1998	1980	1994	1997	-	1994	1979	1976	1993	1976	1976	1973	1973	
Slovak Rep	1978	1997	1999	1996	2002	1992	1999	1973	1980	1986	1994	2002	1999	1981	1978	1999	2001	1991	1996	1979	1994	2001	1994	-	1980	1979	1997	1990	1990	1993	
Spain	1995	2000	1990	1980	1999	2003	1990	1995	1966	2000	1984	2002	1994	1977	1975	2003	2003	1986	1971	1999	1979	1993	1979	1980	-	1976	1966	1994	1990	1990	
Sweden	1991	1991	1988	1980	1979	1997	1993	1997	1990	1992	1961	1981	1996	1993	1980	2000	1993	1993	1996	1991	1997	1975	2002	1976	1979	1976	-	1992	1983	1994	1994
Switzerland	2000	1978	1991	1999	1995	1997	2002	1991	1997	2002	1983	1981	1988	1980	1978	1971	2002	2002	1993	1966	1987	1991	1974	1993	1997	1966	1992	-	1993	1996	1996
UK	1993	1987	1987	1981	1990	1996	1994	1996	1987	1970	1953	1977	1991	1988	1988	1980	1996	2002	1983	1989	2000	1976	1968	1976	1968	1990	1994	1983	1993	-	2002
USA	1996	1987	1993	1999	1998	1998	1994	1989	1953	1979	1975	1997	1984	1972	1998	1998	1998	1996	2004	1980	1974	1994	1973	1993	1990	1994	1996	2002	-	-	2002

Notes: The table lists the year in which the most recent tax treaty between two countries went into force. If no date is listed, there exists no ratified tax treaty for the respective country-pair as of

2004.

Table IV: Tax regimes for subsidiaries in 2004

Country of Residence	Source Country																													
	Aut	Bel	Bul	Cro	Cze	Den	Est	Fin	Fra	Ger	Gre	Hun	Ice	Irel	Ita	Jap	Lat	Lit	Lux	Net	Nor	Pol	Por	Rom	Sil	Spa	Swe	Swi	UK	US
Austria	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Belgium	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Bulgaria	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Croatia	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Czech Republic	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Denmark	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Estonia	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Finland	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
France	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Germany	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Greece	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Hungary	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Iceland	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Ireland	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Italy	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Japan	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Latvia	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Lithuania	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Luxembourg	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Netherlands	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Norway	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Poland	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Portugal	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Romania	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Slovak Rep	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Spain	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Sweden	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Switzerland	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
United Kingdom	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
United States	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C

Notes: The letters indicate the tax regime that countries of residence (in the left column) apply to dividend income originating from fully owned subsidiaries located in the countries listed at the top: E=Exemption regime (at least 95 percent of dividend payment is exempted), C=Indirect credit regime (withholding taxes and underlying corporate income taxes are credited), W=Direct credit regime (only withholding taxes, but not the underlying corporate income tax are credited). Participation exemptions are taken into account in determining the applicable tax regime.

Table V: Country ranking of double tax rates on dividends in 2004

Country	Dividends received			Dividends paid		
	$\bar{\tau}_i^{double}$	$Core_i$	Whi_i	$\bar{\tau}_j^{double}$	$Core_j$	Whi_j
	(1)	(2)	(3)	(4)	(5)	(6)
Netherlands	1.3	0.0	1.3	1.3	0.6	0.9
Sweden	1.7	0.0	1.7	1.4	1.4	0.0
Finland	1.8	0.0	1.8	4.4	1.2	3.5
Denmark	2.1	0.0	2.1	2.9	1.1	1.8
Ireland	2.3	0.4	2.3	5.6	5.0	0.6
Luxembourg	2.8	0.0	2.8	1.0	1.0	0.0
Austria	2.9	0.0	2.9	4.1	0.6	3.8
France	3.0	1.3	1.7	2.0	0.5	1.7
Switzerland	3.0	0.0	3.0	5.8	2.8	4.1
Norway	3.3	0.0	3.3	4.1	2.0	2.6
Belgium	3.8	1.3	2.5	3.1	0.6	2.7
Italy	3.8	0.6	3.4	4.2	0.4	4.1
Germany	3.9	1.4	2.5	2.1	0.3	2.0
Spain	4.0	2.4	3.2	3.2	0.5	3.0
Croatia	4.5	0.0	4.5	8.1	4.2	6.1
Poland	4.5	1.2	4.1	6.9	3.2	5.1
Estonia	4.6	0.0	4.6	18.6	10.1	14.7
Lithuania	4.9	0.0	4.9	8.2	4.7	5.3
Hungary	5.2	0.0	5.2	9.1	3.5	6.8
Iceland	5.5	0.0	5.5	8.5	4.7	6.1
Slovak Rep	5.6	0.0	5.6	3.2	3.2	0.0
Latvia	5.9	0.0	5.9	9.0	5.4	5.7
United Kingdom	6.0	5.7	2.4	1.1	1.1	0.0
Romania	6.4	3.3	5.4	7.9	2.6	6.7
Bulgaria	6.9	3.1	5.5	9.1	3.8	7.4
Czech Republic	7.2	4.5	4.6	5.6	1.4	5.0
Portugal	7.8	5.5	4.2	5.7	1.4	4.9
Greece	9.8	9.2	4.4	0.5	0.5	0.0
United States	14.1	13.8	3.8	1.2	1.2	0.0
Japan	16.2	15.8	6.1	6.9	0.7	6.6
Total	5.2	2.3	3.7	5.2	2.3	3.7

Notes: The table is ordered in an ascending manner with respect to the average double tax rate $\bar{\tau}_i^{double}$ in the first column, which applies to foreign source dividend income repatriated to the country of residence, listed on the left, on January 1st 2004. Averages are taken across all potential source countries in the sample. Rates are reported in percentage points. Participation exemptions are taken into account in calculating the tax rates. The second and third column report the two components of the double tax. $Core_i$ is the average double tax rate when withholding taxes are neglected. Whi_i is the average double tax rate if withholding taxes were the only source of double taxation (equivalent to all countries exempting foreign source income from taxation). Note that withholding taxes apply to income after corporate taxes so that $\bar{\tau}_i^{double}$ is generally less than the sum of $Core_i$ and Whi_i . The fourth column reports $\bar{\tau}_j^{double}$, which is the average double tax rate from the point of view of source countries. The countries listed on the left-hand side now represent the respective source country and the tax rates apply to dividends *leaving* the country. The last two columns again report the two components of the double tax.

Table VI: Country ranking of double tax rates on dividends 1985-2004

Country	Dividends received			Dividends paid		
	$\bar{\tau}_i^{double}$	$Core_i$	Wht_i	$\bar{\tau}_j^{double}$	$Core_j$	Wht_j
	(1)	(2)	(3)	(4)	(5)	(6)
Netherlands	1.3	0.0	1.3	3.2	2.2	1.4
Sweden	2.0	0.2	2.0	5.7	3.6	3.3
Finland	2.2	0.0	2.2	5.6	3.1	3.6
Denmark	2.3	0.0	2.3	3.7	2.3	2.2
Luxembourg	2.5	0.0	2.5	1.8	1.8	0.0
France	3.2	1.2	2.0	3.8	2.2	2.5
Switzerland	3.2	0.0	3.2	8.4	5.2	5.2
Germany	3.3	0.5	2.7	2.8	0.4	2.5
United Kingdom	3.4	1.9	2.3	3.5	3.5	0.0
Spain	4.2	1.3	3.9	6.3	3.0	4.6
Norway	4.9	2.7	3.0	5.5	3.9	2.6
Austria	5.0	1.5	3.9	5.5	1.9	4.6
Estonia	5.0	0.1	5.0	18.6	10.6	13.9
Belgium	5.1	1.6	3.5	4.9	1.6	4.1
Hungary	5.3	0.0	5.3	8.7	5.3	5.3
Croatia	5.5	0.0	5.5	9.1	5.3	6.6
Ireland	5.6	3.8	2.7	3.3	3.1	0.3
Italy	6.5	3.7	4.4	5.3	0.9	4.9
Poland	6.7	4.4	4.4	5.2	2.0	4.2
Iceland	7.1	2.2	5.6	11.1	5.0	8.6
Latvia	7.4	0.0	7.4	9.9	6.8	5.6
Lithuania	7.6	0.0	7.6	9.5	6.3	5.5
Czech Republic	7.7	5.3	4.7	5.7	1.9	4.8
United States	7.7	6.3	3.6	2.5	2.5	0.0
Romania	7.9	4.6	6.2	7.5	2.3	6.5
Greece	9.0	6.8	4.6	1.8	1.1	1.0
Bulgaria	9.2	6.2	5.9	7.6	2.3	6.6
Slovak Rep	10.7	7.0	5.7	6.2	2.2	4.9
Japan	14.1	13.1	5.7	6.3	0.8	5.8
Portugal	14.1	13.6	4.5	6.1	1.6	5.5
Total	5.8	2.9	3.9	5.8	2.9	3.9

Notes: The table is ordered in an ascending manner with respect to the average double tax rate $\bar{\tau}_i^{double}$ in the first column, which applies to foreign source dividend income repatriated to the country of residence listed on the left. Averages are taken across all potential source countries in the sample and across time conditional on data availability in an unbalanced panel. Rates are reported in percentage points. Participation exemptions are taken into account in calculating the tax rates. The second and third column report the two components of the double tax. $Core_i$ is the average double tax rate when withholding taxes are neglected. Wht_i is the average double tax rate if withholding taxes were the only source of double taxation (equivalent to all countries exempting foreign source income from taxation). Note that withholding taxes apply to income after corporate taxes so that $\bar{\tau}_i^{double}$ is generally less than the sum of $Core_i$ and Wht_i . The fourth column reports $\bar{\tau}_j^{double}$, which is the average double tax rate from the point of view of source countries. The countries listed on the left-hand side now represent the respective source country and the tax rates apply to dividends *leaving* the country. The last two columns again report the two components of the double tax.

Table VII: Outgoing versus incoming acquisitions

Country	Number of acquiring firms	Number of target firms	Value of acquisitions (in mill US\$)	Value of target firms (in mill US\$)
	(1)	(2)	(3)	(4)
Austria	624	552	10947	19399
Belgium	940	995	63923	62269
Bulgaria	0	67	0	2857
Croatia	6	39	120	1538
Czech Republic	18	438	86	11046
Denmark	852	761	25097	27646
Estonia	23	117	89	454
Finland	787	717	51614	33970
France	2720	3563	378284	200067
Germany	3361	4372	381502	453361
Greece	114	48	7451	3377
Hungary	46	428	888	7069
Iceland	36	11	1861	369
Ireland	792	409	28207	22084
Italy	882	1610	70579	83971
Japan	1073	398	82879	41202
Latvia	7	52	6	395
Lithuania	10	88	1	1246
Luxembourg	205	127	20105	19759
Netherlands	2173	1728	203345	172100
Norway	554	639	19455	34786
Poland	27	570	403	13831
Portugal	95	298	1998	9535
Romania	6	101	6	1946
Slovak Rep	7	88	25	2851
Spain	430	1531	34698	63276
Sweden	1682	1299	96144	128616
Switzerland	1310	1105	173394	57662
United Kingdom	6479	5429	978858	583042
United States	8142	5821	535888	1108131
Total	33401	33401	3167853	3167853

Notes: This table lists the number of acquiring firms/outward acquisitions (column 1) and the number of target firms/inward acquisitions (column 2) per country. Column 3 lists the deal value of outward acquisitions and column 4 lists the deal value of inward acquisitions in millions of U.S. dollars. The sample includes all M&A's between above countries recorded in the Thomson database from 1985 until 2004. The data provider claims to cover worldwide M&A's exhaustively. The deal values of M&A's are subject to missing data and should be used with caution as footnote 35 elaborates.

Table VIII: Summary statistics (direction of M&A's)

Variable	Obs	Mean	Std. Dev.	Min	Max
y	917	1.00	0.00	1.00	1.00
$\Delta\theta^{double}$	917	-1.50	4.65	-30.00	27.50
$\Delta Size$	917	0.70	0.36	-0.99	0.99
$\Delta Liquidity$	677	-0.01	0.20	-0.91	1.55
$\Delta Leverage$	677	-0.03	0.51	-5.36	3.18
ΔROA	677	0.08	0.40	-3.23	4.09
$\Delta Investment$	396	-0.04	0.22	-1.09	0.80

Notes: The reported summary statistics describe the case where the acquiring firm is classified as firm a and the target firm is classified as firm b . The specific distribution of indices a and b over firms does not matter for the estimation results as the likelihood function remains unaffected by switching name tags a and b . The distribution of the name tags does matter for the value of summary statistics. For example, the variable means would switch signs if the indices a and b were exchanged for all firm pairs. y is a binary variable indicating if firm a acquired firm b or vice versa. $\Delta\theta^{double}$ is the double tax burden if firm a acquires firm b minus the double tax burden if firm b acquires firm a . $\Delta Size$ is the difference between total assets of firm a and firm b relative to the sum of total assets. $\Delta Liquidity$ is the difference in liquidity ratios of firm a and firm b . ΔROA is the difference in the return on assets between firm a and firm b . $\Delta Investment$ is the difference in (negative) investment cashflows over total assets between firm a and firm b . For detailed variable definitions and data sources see Appendix B.

Table IX: Correlations between variables (direction of M&A's)

	y	$\Delta\theta^{doub.}$	$\Delta Size$	$\Delta Liqu.$	$\Delta Lev.$	ΔROA	$\Delta Inv.$
y	1.00						
$\Delta\theta^{double}$	-0.29*	1.00					
$\Delta Size$	-0.89*	-0.31*	1.00				
$\Delta Liquidity$	-0.01	0.06*	-0.08*	1.00			
$\Delta Leverage$	-0.12*	-0.05*	-0.12*	-0.10*	1.00		
ΔROA	-0.11*	-0.13*	0.09*	0.01	-0.46*	1.00	
$\Delta Investment$	-0.20*	0.21*	-0.15*	0.05	-0.06	-0.17*	1.00

Notes: The table reports pairwise correlation coefficients. A star indicates a coefficient which is significantly different from zero at the five percent level. y is a binary variable indicating if firm a acquired firm b or vice versa. $\Delta\theta^{double}$ is the double tax burden if firm a acquires firm b minus the double tax burden if firm b acquires firm a . $\Delta Size$ is the difference between total assets of firm a and firm b relative to the sum of total assets. $\Delta Liquidity$ is the difference in liquidity ratios of firm a and firm b . ΔROA is the difference in the return on assets between firm a and firm b . $\Delta Investment$ is the difference in (negative) investment cashflows over total assets between firm a and firm b . For detailed variable definitions and data sources see Appendix B.

Table X: Estimation results for the direction of M&A's

	(1)	(2)	(3)	(4)	(5)
$\Delta\theta^{double}$	-0.302*** (0.065)	-0.493*** (0.148)	-0.147*** (0.034)	-0.291*** (0.065)	-0.555*** (0.195)
$\Delta Size$	5.393*** (0.491)	7.309*** (1.086)	2.744*** (0.210)	5.390*** (0.488)	5.453*** (0.540)
$\Delta Liquidity$	3.548*** (1.097)	6.834*** (2.046)	1.615*** (0.549)	3.521*** (1.091)	3.922*** (1.230)
$\Delta Leverage$	0.785** (0.387)	2.001** (0.958)	0.340 (0.209)	0.795** (0.384)	0.804* (0.426)
ΔROA	-0.340 (0.458)	0.170 (1.247)	-0.171 (0.245)	-0.307 (0.460)	1.056 (0.848)
$\Delta Investment$		5.418*** (1.704)			
N	677	396	677	677	557
Log-likelihood	-101.97	-41.45	-105.559	-102.867	-84.035

Significance levels : * : 10% ** : 5% *** : 1%

Notes: The dependent variable equals one if firm a acquires firm b and is zero if firm b acquires firm a . All regressions are logit regressions except the probit regression (3). Standard errors are listed in parentheses. Country fixed effects are not reported. Regression (4) assumes that target firms are integrated as foreign branches instead of as subsidiaries. Regression (5) is an instrumental variable regression, where corporate income tax rates are instrumented by the government debt ratios. y is a binary variable indicating if firm a acquired firm b or vice versa. $\Delta\theta^{double}$ is the double tax burden if firm a acquires firm b minus the double tax burden if firm b acquires firm a . $\Delta Size$ is the difference between total assets of firm a and firm b relative to the sum of total assets. $\Delta Liquidity$ is the difference in liquidity ratios of firm a and firm b . ΔROA is the difference in the return on assets between firm a and firm b . $\Delta Investment$ is the difference in (negative) investment cashflows over total assets between firm a and firm b . For detailed variable definitions and data sources see Appendix B.

Table XI: Simulation of tax rate increases

Country	P_i	dP_i	$\frac{dP_i}{P_i}$
Austria	0.4444	0.0000	0.0000
Belgium	0.5769	-0.0004	-0.0006
Denmark	0.5217	-0.0057	-0.0109
Finland	0.6667	-0.0055	-0.0082
France	0.5253	-0.0010	-0.0020
Germany	0.5000	-0.0001	-0.0002
Greece	0.2500	-0.0003	-0.0014
Ireland	0.6667	-0.0045	-0.0068
Italy	0.6757	-0.0006	-0.0009
Japan	0.5417	-0.0013	-0.0025
Luxembourg	0.6000	-0.0006	-0.0010
Netherlands	0.7200	-0.0033	-0.0046
Norway	0.2941	-0.0037	-0.0127
Portugal	0.5000	-0.0002	-0.0004
Spain	0.5000	-0.0001	-0.0001
Sweden	0.5556	-0.0016	-0.0029
Switzerland	0.6970	-0.0018	-0.0026
United Kingdom	0.3289	-0.0053	-0.0162
United States	0.5233	-0.0049	-0.0093
Total	0.5000	-0.0036	-0.0081

Notes: The table reports the change in the proportion of acquiring firms if a country raises its corporate tax rate by one percentage point. P_i is the original proportion of acquiring firms, dP_i is the expected change in proportion and $\frac{dP_i}{P_i}$ is the corresponding elasticity. Marginal effects are calculated using regression (1) in table X.

Table XII: Simulation of the U.S. switching to exemption system

Country	all mergers			U.S. related mergers only		
	P_i	dP_i	$\frac{dP_i}{P_i}$	P_i	dP_i	$\frac{dP_i}{P_i}$
Austria	0.4444	0.0000	0.0000			
Belgium	0.5769	0.0000	0.0000	0.9427	0.0000	0.0000
Denmark	0.5217	-0.0638	-0.1224	0.4995	-0.1335	-0.2672
Finland	0.6667	-0.0407	-0.0610	0.7299	-0.1221	-0.1673
France	0.5253	-0.0011	-0.0021	0.5225	-0.0021	-0.0040
Germany	0.5000	0.0000	0.0000	0.4198	0.0000	0.0000
Greece	0.2500	0.0000	0.0000			
Ireland	0.6667	-0.0736	-0.1104	0.4638	-0.1933	-0.4167
Italy	0.6757	0.0000	0.0000	0.7296	0.0000	0.0000
Japan	0.5417	0.0000	0.0000	0.5621	0.0000	0.0000
Luxembourg	0.6000	-0.0018	-0.0029	0.4193	-0.0029	-0.0070
Netherlands	0.7200	-0.0059	-0.0082	0.7706	-0.0103	-0.0133
Norway	0.2941	-0.0025	-0.0084	0.3844	-0.0084	-0.0217
Portugal	0.5000	0.0000	0.0000			
Spain	0.5000	0.0000	0.0000	0.6851	0.0000	0.0000
Sweden	0.5556	-0.0075	-0.0134	0.5640	-0.0210	-0.0372
Switzerland	0.6970	-0.0182	-0.0261	0.7525	-0.0462	-0.0614
United Kingdom	0.3289	-0.0386	-0.1173	0.3449	-0.0543	-0.1574
United States	0.5233	0.0366	0.0699	0.5233	0.0366	0.0699
Total	0.5000	0.0000	-0.0087	0.5000	0.0000	0.0000

Notes: The table reports the change in proportion of acquiring firms if the United States switch from applying a foreign tax credit system to exempting foreign income from taxation. P_i is the original proportion of acquiring firms, dP_i is the expected change in proportion and $\frac{dP_i}{P_i}$ is the corresponding elasticity. Austria, Greece and Portugal have no values reported on the right-hand side of the table because these countries do not have any U.S. related merger in the sample. Marginal effects are calculated using regression (1) in table X.

Table XIII: Summary statistics (gravity model)

Variable	Obs	Mean	Std. Dev.	Min	Max
MA_{ijt}	8201	3.45	13.02	0.00	364.00
τ_{ijt}^{double}	8201	5.37	6.28	0.00	43.05
τ_{jt}	8201	35.81	8.89	0.00	65.00
$Distance_{ij}$	8201	6.93	0.91	4.37	8.82
GDP_{it}	8201	12.25	1.89	8.45	16.03
GDP_{jt}	8201	12.25	1.89	8.45	16.03
$(GDP/Capita)_{it}$	8201	9.72	0.95	7.29	10.99
$(GDP/Capita)_{jt}$	8201	9.71	0.97	7.23	10.99
$(Stocks/GDP)_{it-1}$	8201	3.51	1.19	-1.82	6.31
$(Credit/GDP)_{it-1}$	8201	4.20	0.73	1.97	5.31
$TradeTariffs_{jt}$	8201	1.59	0.78	-4.09	3.10
$CapitalControls_{jt}$	8201	3.13	2.53	0.00	10.00
$LegalQuality_{jt}$	8201	7.85	1.19	4.50	9.60
$\Delta Exch.Rate_{it-1}$	7129	0.01	0.06	-0.39	0.57
$\Delta Exch.Rate_{jt-1}$	7129	0.01	0.06	-0.39	0.57
$Border_{ij}$	8201	0.10	0.30	0.00	1.00
$Com.Language_{ij}$	8201	0.05	0.22	0.00	1.00
EU_{ijt}	8201	0.27	0.45	0.00	1.00

Notes: MA_{ijt} is the number of acquisitions in country j by firms from country i in the year t . τ_{ijt}^{double} is the double tax rate that applies to dividend income repatriated from country j to country i in the year t . τ_{jt} is the corporate income tax rate in country j in the year t . $Distance_{ij}$ is the logarithm of the distance between country i 's capital and country j 's capital in miles. GDP_{it} and GDP_{jt} are the logarithms of country i 's and j 's GDP in the year t . $(GDP/Capita)_{it}$ and $(GDP/Capita)_{jt}$ are the logarithms of the per-capita-income levels of countries i and j in the year t . $(Stocks/GDP)_{it-1}$ is the logarithm of country i 's stock market capitalization relative to its GDP in the year $t-1$. $(Credit/GDP)_{it-1}$ is the logarithm of country i 's domestic credit provided to the private sector relative to its GDP in the year $t-1$. $TradeTariffs_{jt}$ is the logarithm of the average tariff on goods imported to country j in the year t . $CapitalControls_{jt}$ is an index for the number of capital controls in country j in the year t . $LegalQuality_{jt}$ is an indicator for the security of property rights and the quality of the legal structure in country j in the year t . $\Delta Exch.Rate_{it-1}$ and $\Delta Exch.Rate_{jt-1}$ are the change in the logarithm of the real exchange rate of countries i and j in the year $t-1$. $Border_{ij}$ indicates if countries i and j share a common land border. $Com.Language_{ij}$ indicates if countries i and j share a common language. EU_{ijt} indicates if countries i and j were both members of the European Union in year t . For detailed variable definitions and data sources see Appendix B.

Table XIV: Correlations between variables (gravity model)

	MA	τ^{double}	τ	$Dist$	GDP_{it}	GDP_{jt}	$\frac{GDP}{Cap}_{it}$	$\frac{GDP}{Cap}_{jt}$
MA_{ijt}	1.00							
τ_{ijt}^{double}	-0.10*	1.00						
τ_{jt}	0.02*	-0.20*	1.00					
$Distance_{ij}$	0.07*	0.19*	0.12*	1.00				
GDP_{it}	0.23*	-0.08*	-0.02*	0.25*	1.00			
GDP_{jt}	0.21*	-0.20*	0.35*	0.24*	-0.03*	1.00		
$(GDP/Capita)_{it}$	0.14*	-0.23*	-0.02*	0.14*	0.60*	-0.02*	1.00	
$(GDP/Capita)_{jt}$	0.11*	-0.15*	0.23*	0.12*	-0.02	0.63*	-0.03*	1.00
$(Stocks/GDP)_{it-1}$	0.18*	-0.18*	-0.06*	0.14*	0.43*	0.00	0.73*	0.00
$(Credit/GDP)_{it-1}$	0.15*	-0.09*	-0.02	0.18*	0.64*	-0.02*	0.81*	-0.02*
$TradeTariffs_{jt}$	-0.03*	0.01	0.30*	-0.03*	-0.01	0.17*	-0.01	-0.08*
$CapControls_{jt}$	-0.13*	0.15*	0.05*	-0.05*	0.02*	-0.49*	0.03*	-0.66*
$Border_{ij}$	0.09*	-0.10*	0.04*	-0.50*	0.04*	0.05*	0.01	0.03*
$Com.Lang_{ij}$	0.28*	-0.08*	0.03*	-0.14*	0.13*	0.14*	0.14*	0.14*
EU_{ijt}	0.11*	-0.32*	0.08*	-0.18*	0.19*	0.21*	0.24*	0.26*

	$\frac{Stocks}{GDP}$	$\frac{Credit}{GDP}$	$Tariff$	$CapCont$	$Bord.$	$Lang.$	EU
MA_{ijt}							
τ_{ijt}^{double}							
τ_{jt}							
$Distance_{ij}$							
GDP_{it}							
GDP_{jt}							
$(GDP/Capita)_{it}$							
$(GDP/Capita)_{jt}$							
$(Stocks/GDP)_{it-1}$	1.00						
$(Credit/GDP)_{it-1}$	0.71*	1.00					
$TradeTariffs_{jt}$	-0.05*	-0.01	1.00				
$CapControls_{jt}$	0.02	0.03*	0.21*	1.00			
$Border_{ij}$	-0.05*	0.01	0.03*	-0.02*	1.00		
$Com.Lang_{ij}$	0.10*	0.10*	-0.02*	-0.14*	0.36*	1.00	
EU_{ijt}	0.20*	0.14*	-0.07*	-0.29*	0.13*	0.12*	1.00

Notes: The table reports pairwise correlation coefficients. A star indicates a coefficient which is significantly different from zero at the five percent level. MA_{ijt} is the number of acquisitions in country j by firms from country i in the year t . τ_{ijt}^{double} is the double tax rate that applies to dividend income repatriated from country j to country i in the year t . τ_{jt} is the corporate income tax rate in country j in the year t . $Distance_{ij}$ is the logarithm of the distance between country i 's capital and country j 's capital in miles. GDP_{it} and GDP_{jt} are the logarithms of country i 's and j 's GDP in the year t . $(GDP/Capita)_{it}$ and $(GDP/Capita)_{jt}$ are the logarithms of the per-capita-income of countries i and j in the year t . $(Stocks/GDP)_{it-1}$ is the logarithm of country i 's stock market capitalization relative to its GDP in the year $t - 1$. $(Credit/GDP)_{it-1}$ is the logarithm of country i 's domestic credit provided to the private sector relative to its GDP in the year $t - 1$. $TradeTariffs_{jt}$ is the logarithm of the average tariff on goods imported to country j in the year t . $CapitalControls_{jt}$ is an index for the number of capital controls in country j in the year t . $LegalQuality_{jt}$ is an indicator for the security of property rights and the quality of the legal structure in country j in the year t . $\Delta Exch.Rate_{it-1}$ and $\Delta Exch.Rate_{jt-1}$ are the change in the logarithm of the real exchange rate of countries i and j in the year $t - 1$. $Border_{ij}$ indicates if countries i and j share a common land border. $Com.Language_{ij}$ indicates if countries i and j share a common language. EU_{ijt} indicates if countries i and j were both members of the European Union in year t . For detailed variable definitions and data sources see Appendix B.

Table XV: Estimation results for the gravity model of M&A's

	(1)	(2)	(3)	(4)	(5)	(6)
τ_{ijt}^{double}	-0.016*** (0.004)	-0.017*** (0.004)	-0.015*** (0.004)	-0.058*** (0.004)	-0.017*** (0.004)	-0.016*** (0.004)
τ_{jt}	-0.018*** (0.003)	-0.018*** (0.003)	-0.019*** (0.003)	-0.040*** (0.002)	-0.021*** (0.004)	-0.017*** (0.003)
$Distance_{ij}$	-0.970*** (0.037)	-0.973*** (0.037)	-0.861*** (0.038)	-0.627*** (0.025)	-0.742*** (0.043)	-0.961*** (0.036)
GDP_{it}	0.482 (0.940)	0.493 (0.940)	0.513 (0.981)	0.644*** (0.013)	1.928* (1.080)	0.673 (0.901)
GDP_{jt}	0.972 (0.852)	0.721 (0.861)	1.844** (0.932)	0.679*** (0.014)	3.848*** (1.095)	0.242 (0.833)
$(GDP/Capita)_{it}$	1.348 (1.060)	1.318 (1.060)	1.124 (1.115)	0.232*** (0.036)	-0.919 (1.245)	1.139 (1.010)
$(GDP/Capita)_{jt}$	-0.801 (0.908)	-0.513 (0.919)	-1.854* (1.017)	-0.465*** (0.026)	-4.438*** (1.233)	-0.025 (0.887)
$(Stocks/GDP)_{it-1}$	0.240*** (0.040)	0.241*** (0.040)	0.231*** (0.041)	0.514*** (0.024)	0.242*** (0.047)	0.231*** (0.039)
$(Credit/GDP)_{it-1}$	0.141** (0.061)	0.140** (0.060)	0.169*** (0.062)	-0.313*** (0.045)	0.159** (0.068)	0.167*** (0.060)
$TradeTariffs_{jt}$	0.197*** (0.057)	0.211*** (0.057)	0.196*** (0.068)	-0.109*** (0.025)	0.023 (0.096)	0.191*** (0.056)
$CapitalControls_{jt}$	-0.010 (0.011)	-0.009 (0.011)	-0.007 (0.011)	-0.034*** (0.008)	-0.002 (0.015)	-0.005 (0.011)
$Border_{ij}$	0.166*** (0.054)	0.164*** (0.054)	0.266*** (0.056)	0.386*** (0.055)	0.300*** (0.063)	0.178*** (0.054)
$Com.Language_{ij}$	0.221*** (0.053)	0.221*** (0.053)	0.207*** (0.053)	0.358*** (0.059)	0.246*** (0.053)	0.238*** (0.052)
EU_{ijt}	-0.051 (0.046)	-0.057 (0.046)	-0.074 (0.047)	-0.228*** (0.037)	0.002 (0.054)	0.005 (0.045)
$LegalQuality_{jt}$		0.089** (0.045)				
$\Delta Exch.Rate_{it-1}$			-0.099 (0.266)			
$\Delta Exch.Rate_{jt-1}$			-0.060 (0.218)			
N	8201	8201	7129	8201	4882	9099
Log-likelihood	-5174.001	-5172.001	-4888.655	-6133.386	-3839.096	-5505.493

Significance levels : * : 10% ** : 5% *** : 1%

For notes, see next page.

Notes: The dependent variable is the logarithm of the frequency of mergers and acquisitions in year t , in which the bidder comes from country i and the target comes from country j . These are Tobit regressions if not indicated otherwise. Standard errors are listed in parentheses. Coefficients for the country- and time-specific effects are not reported. Regression (4) excludes country-specific effects. Regression (5) excludes the Eastern European countries from the sample. Regression (6) assumes that target firms are integrated as foreign branches instead of as subsidiaries. MA_{ijt} is the number of acquisitions in country j by firms from country i in the year t . τ_{ijt}^{double} is the double tax rate that applies to dividend income repatriated from country j to country i in the year t . τ_{jt} is the corporate income tax rate in country j in the year t . $Distance_{ij}$ is the logarithm of the distance between country i 's capital and country j 's capital in miles. GDP_{it} and GDP_{jt} are the logarithms of country i 's and j 's GDP in the year t . $(GDP/Capita)_{it}$ and $(GDP/Capita)_{jt}$ are the logarithms of the per-capita-income of countries i and j in the year t . $(Stocks/GDP)_{it-1}$ is the logarithm of country i 's stock market capitalization relative to its GDP in the year $t - 1$. $(Credit/GDP)_{it-1}$ is the logarithm of country i 's domestic credit provided to the private sector relative to its GDP in the year $t - 1$. $TradeTariffs_{jt}$ is the logarithm of the average tariff on goods imported to country j in the year t . $CapitalControls_{jt}$ is an index for the number of capital controls in country j in the year t . $Border_{ij}$ indicates if countries i and j share a common land border. $Com.Language_{ij}$ indicates if countries i and j share a common language. EU_{ijt} indicates if countries i and j were both members of the European Union in year t . $LegalQuality_{jt}$ is an indicator for the security of property rights and the quality of the legal structure in country j in the year t . $\Delta Exch.Rate_{it-1}$ and $\Delta Exch.Rate_{jt-1}$ are the change in the logarithm of the real exchange rate of countries i and j in the year $t - 1$. For detailed definitions and data sources see Appendix B.

Table XVI: Additional estimation results for the gravity model of M&A's

	(7)	(8)	(9)	(10)	(11)
τ_{ijt}^{double}	-0.049*** (0.016)	-0.009** (0.004)	-0.018*** (0.005)	-0.025*** (0.005)	-0.028*** (0.005)
τ_{jt}	-0.071*** (0.013)	-0.010*** (0.003)	-0.016*** (0.004)	-0.024*** (0.004)	-0.004 (0.036)
$Distance_{ij}$	-2.666*** (0.152)	-0.719*** (0.038)	-0.886*** (0.051)	-1.189*** (0.048)	-0.953*** (0.037)
GDP_{it}	2.188 (3.873)	1.527 (1.057)	1.654* (0.871)	1.229 (1.043)	1.343*** (0.117)
GDP_{jt}	7.581** (3.565)	2.166** (0.987)	0.224 (1.104)	1.496 (1.015)	1.721* (0.918)
$(GDP/Capita)_{it}$	2.420 (4.440)	-0.606 (1.193)	0.594 (1.027)	1.012 (1.208)	0.574 (0.436)
$(GDP/Capita)_{jt}$	-7.719** (3.870)	-2.451** (1.042)	0.714 (1.222)	-1.002 (1.105)	-1.354 (0.974)
$(Stocks/GDP)_{it-1}$	0.617*** (0.172)	0.250*** (0.046)	0.665*** (0.074)	0.459*** (0.055)	0.268*** (0.041)
$(Credit/GDP)_{it-1}$	0.295 (0.267)	0.099 (0.062)	0.226** (0.091)	0.199** (0.080)	0.119* (0.061)
$TradeTariffs_{jt}$	0.570** (0.252)	0.124** (0.060)	0.177** (0.086)	0.225*** (0.078)	0.158*** (0.059)
$CapitalControls_{jt}$	-0.073 (0.049)	0.010 (0.011)	0.001 (0.013)	-0.012 (0.013)	-0.002 (0.012)
$Border_{ij}$	0.153 (0.234)	0.113** (0.054)	0.149** (0.058)	0.147** (0.061)	0.177*** (0.056)
$Com.Language_{ij}$	0.269 (0.217)	0.247*** (0.057)	0.610*** (0.048)	0.259*** (0.054)	0.220*** (0.054)
EU_{ijt}	-0.198 (0.197)	-0.094* (0.048)	-0.101* (0.059)	-0.123** (0.053)	-0.110** (0.048)
N	7018	3369	8201	8201	7663
Log-likelihood	-6314.95	0.656	-11809.405	-10064.145	-4895.539

Significance levels : * : 10% ** : 5% *** : 1%

Notes: The dependent variable is the logarithm of the frequency of mergers and acquisitions in year t , in which the bidder comes from country i and the the target comes from country j . These are Tobit regressions if not indicated otherwise. Standard errors are listed in parentheses. Coefficients for the country- and time-specific effects are not reported. Regression (7) uses the logarithm of the

deal values of M&A's as dependent variable. Regression (8) is an OLS regression on the uncensored observations (i.e., with a positive number of M&A's). Regression (9) is a Poisson regression using the number of M&A's as dependent variable. Regression (10) is a negative binomial regression using the number of M&A's as dependent variable. Regression (11) is an instrumental variable regression, where corporate income tax rates are instrumented by the government debt ratios. MA_{ijt} is the number of acquisitions in country j by firms from country i in the year t . τ_{ijt}^{double} is the double tax rate that applies to dividend income repatriated from country j to country i in the year t . τ_{jt} is the corporate income tax rate in country j in the year t . $Distance_{ij}$ is the logarithm of the distance between country i 's capital and country j 's capital in miles. GDP_{it} and GDP_{jt} are the logarithms of country i 's and j 's GDP in the year t . $(GDP/Capita)_{it}$ and $(GDP/Capita)_{jt}$ are the logarithms of the per-capita-income of countries i and j in the year t . $(Stocks/GDP)_{it-1}$ is the logarithm of country i 's stock market capitalization relative to its GDP in the year $t - 1$. $(Credit/GDP)_{it-1}$ is the logarithm of country i 's domestic credit provided to the private sector relative to its GDP in the year $t - 1$. $TradeTariffs_{jt}$ is the logarithm of the average tariff on goods imported to country j in the year t . $CapitalControls_{jt}$ is an index for the number of capital controls in country j in the year t . $Border_{ij}$ indicates if countries i and j share a common land border. $Com.Language_{ij}$ indicates if countries i and j share a common language. EU_{ijt} indicates if countries i and j were both members of the European Union in year t . For detailed definitions and data sources see Appendix B.

Appendix A: The international taxation of branches

Double tax relief conventions applied to foreign branch income are agreed in bilateral tax treaties. Many countries apply the same method of double tax relief in all their tax treaties. The first column in Table XVII reports the preferred method of double tax relief if this method has consistently been chosen in all new tax treaties since the year 2000. In case of inconsistencies across tax treaties, there is no preferred convention provided. The method of double tax relief, which is unilaterally applied in the absence of a tax treaty, is listed in the second column of Table XVII. Compared to Table I regarding the double taxation of dividend income, there are two main differences. First, more countries change their method of double tax relief for foreign branch income if a tax treaty is in place. Second, foreign tax credits rather than exemptions are the favorite method of double tax relief in the case of foreign branch income in the absence of a tax treaty. Only a several 'core' European countries (France, Belgium, Netherlands, Luxembourg, Germany, Switzerland, Austria, and Hungary) apply the exemption regime. Other European countries, the U.S. and Japan prefer tax credits.

Analogous to Table V, Table XIX ranks countries with respect to average double tax rates on foreign branch income in 2004. Again, countries exempting active income from foreign source tend to appear at the top of the table, while countries with high corporate income tax rates applying a foreign tax credit system are ranked at the bottom. Some countries, such as Spain and Italy, are ranked much lower in the case of branch income than in the case of dividend income. Both countries regularly exempt foreign-source dividends, whereas they only give foreign tax credits for branch income. Other countries, such as Germany, Belgium and France, advance in the ranking because they fully exempt foreign branch income — in contrast to foreign-source dividends, which are not fully exempted.

The last column in table XIX reports the average double tax rate applied to outgoing branch income in 2004. Income repatriations from countries with low tax rates are subject to relatively high double taxation given the worldwide taxation with foreign tax credits in many

other countries. When comparing the two average double tax rates for incoming and outgoing branch income, we again see that there is no strong covariation between the two. The case of Japan is illustrating: This country imposes the highest average double taxation on income branch income of all countries in the table at 13.1 percent, while the average double taxation of outgoing branch income is among the lowest rates at 0.2 percent in the table.

Table XVII: Tax regimes applied to international branch income in 2004

Country of residence	Tax rate	Branch Taxation	
		with recently concluded tax treaty	unilateral (without tax treaty)
	(1)	(2)	(3)
Austria	34.0	Exemption	Exemption
Belgium	34.0	Exemption	Deduction ^a
Bulgaria	19.5		Credit
Croatia	20.0		Credit
Czech Republic	28.0	Credit	Credit
Denmark	30.0	Credit	Credit
Estonia	0.0	Credit	Deduction
Finland	29.0	Credit	Credit
France	35.4	Exemption	Exemption
Germany	38.3	Exemption	Credit
Greece	35.0	Credit	Credit
Hungary	17.7	Exemption	Credit
Iceland	18.0		Credit
Ireland	12.5	Credit	Deduction
Italy	37.3	Credit	Credit
Japan	42.0	Credit	Credit
Latvia	15.0	Credit	Credit
Lithuania	15.0	Credit	Credit
Luxembourg	30.4	Exemption	Credit ^b
Netherlands	34.5	Exemption	Exemption
Norway	28.0		Credit
Poland	19.0	Credit	Credit
Portugal	27.5	Credit	Credit
Romania	25.0	Credit	Credit
Slovak Rep	19.0	Credit	No relief
Spain	35.0	Credit	Credit
Sweden	28.0	Credit	Credit
Switzerland	24.0	Exemption	Exemption
United Kingdom	30.0	Credit	Credit
United States	40.0	Credit	Credit

Notes: The first column lists the corporate income tax rates with respect to retained earnings including average state and municipal taxes where applicable. The second column lists resident countries' method for tax relief that applies to foreign branch income in the presence of a tax treaty. The method for tax relief in the presence of a tax treaty can vary between different treaties, so a unique applicable tax regime cannot be indicated in some cases. Hence, the second column indicates the method of tax relief for foreign branch income only if a country has consistently chosen for the same method in all tax treaties becoming effective in the year 2000 or later. The last column lists resident countries' method for tax relief that applies to foreign branch income in the absence of a tax treaty.

Footnotes: a: Belgium only charges 25 percent of the standard tax rate when the deduction regime applies in order to reduce double taxation. b: In case of excess foreign tax credits, Luxembourg allows a deduction of the excess foreign taxes as expenses.

Table XVIII: Tax regimes for foreign branches in 2004

Country of Residence	Source Country																													
	Aut	Bel	Bul	Cro	Cze	Den	Est	Fin	Fra	Ger	Gre	Hun	Ice	Irel	Ita	Jap	Lat	Lit	Lux	Net	Nor	Pol	Por	Rom	Sil	Spa	Swe	Swi	UK	US
Austria	E																													
Belgium	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Bulgaria	E	E		C	E	C	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Croatia	E	E	C		C	E	C	E	E	E	C	C	C	C	E	C	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Czech Republic	E	C	C	C	C	C	C	E	E	E	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Denmark	E	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Estonia	C	C	D	C	C	C	C	C	C	C	D	C	C	C	C	E	D	C	C	C	C	C	C	D	D	C	D	C	C	C
Finland	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
France	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Germany	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Greece	E	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Hungary	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Iceland	E	E	C	C	C	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Ireland	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Ireland	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Italy	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Japan	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Japan	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Latvia	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Lithuania	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Luxembourg	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Netherlands	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Norway	C	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Norway	C	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Poland	E	C	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Poland	E	C	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Portugal	E	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Portugal	E	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Romania	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Romania	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Slovak Rep	E	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Slovak Rep	E	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Spain	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Spain	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Sweden	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Sweden	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Switzerland	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Switzerland	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
United Kingdom	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
United Kingdom	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
United States	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C

Notes: The letters indicate the tax regime that countries of residence, listed on the left-hand side, apply in 2004 to foreign source active business income remitted by branches located in the source countries listed at the top. E=Exemption regime, C=Credit regime, D=Deduction regime, N=No relief from double taxation.

Table XIX: Country ranking with respect to double tax rates applied to international branch income

Country	Branch Income	
	Received	Paid
	$Btax_i$	$Btax_j$
France	0.0	1.4
Germany	0.0	0.1
Netherlands	0.0	1.8
Switzerland	0.0	4.6
Lithuania	0.3	7.7
Hungary	0.4	7.4
Latvia	0.5	8.0
Belgium	0.8	1.2
Croatia	1.0	6.4
Norway	1.0	2.6
Iceland	1.2	5.2
Poland	1.2	2.0
Austria	1.3	1.1
Luxembourg	1.6	1.6
Finland	1.9	2.7
United Kingdom	1.9	3.6
Bulgaria	2.0	2.9
Sweden	2.1	3.5
Spain	2.6	2.6
Denmark	2.7	1.8
Czech Republic	3.0	1.5
Estonia	3.6	14.6
Romania	4.2	2.6
Ireland	4.5	4.6
Portugal	4.6	1.7
Slovak Rep	5.0	2.2
United States	6.3	1.6
Greece	6.6	1.6
Italy	10.0	0.6
Japan	13.1	0.2
Total	2.9	2.9

Notes: The middle column reports the average double tax rate in percent that applies to income remitted by foreign branches to their parent firm's country of residence listed on the left. Averages are taken across all potential source countries and time. The table is ordered in an ascending manner with respect to this average double tax rate $Btax_i$. The last column reports the average double tax rate from the point of view of source countries. The countries listed on the left now represent the respective source country and the tax rates apply to branch income flows *leaving* the country. The average is then taken across all potential residence countries and time.

Appendix B: Variable definitions and data sources

Table XX: List of variables (Direction of M&A's)

Variable	Definition	Description
$\Delta\theta^{double}$	$\theta_{ab}^{double} - \theta_{ba}^{double}$	Difference in firms' effective double tax rates in percent if they acquire the other firm. The variable is measured in percentage points.
$\Delta Size$	$\frac{Assets_a}{Assets_a + Assets_b} - \frac{Assets_b}{Assets_a + Assets_b}$	Difference in firms' relative size. <i>Assets</i> indicates a firm's total assets in millions of U.S. dollars.
$\Delta Liquidity$	$\frac{Cash_a}{Assets_a} - \frac{Cash_b}{Assets_b}$	Difference in firms' liquidity ratios. <i>Cash</i> indicates a firm's liquid assets in millions of U.S. dollars.
$\Delta Leverage$	$\frac{Debt_a}{Assets_a} - \frac{Debt_b}{Assets_b}$	Difference in firms' leverage ratios. <i>Debt</i> indicates a firm's total liabilities in millions of U.S. dollars.
ΔROA	$\frac{Profit_a}{Assets_a} - \frac{Profit_b}{Assets_b}$	Difference in firms' profitability (ROA stands for Return on Assets). <i>Profit</i> indicates a firm's net income in millions of U.S. dollars.
$\Delta Investment$	$-\frac{Invest.Cashflow_a}{Assets_a} + \frac{Invest.Cashflow_b}{Assets_b}$	Difference in firms' investment activities. <i>Invest.Cashflow</i> indicates the net cashflow from investment activities in millions of U.S. dollars. A very negative cashflow indicates high investment activities.

Sources for financial data:

Thomson Financial, SDC Database.

Wharton Research Data Services, Compustat Global and Compustat North America.

Sources for corporate income tax rates:

Structures of the Taxation Systems in the European Union, Eurostat (2004).

Taxing Profits in a Changing World, Chennells and Griffith (1997).

KPMG Corporate Tax Rate Surveys 1998-2003, KPMG International Tax and Legal Center (2003).

Sources for tax regimes, tax treaties and withholding taxes are:

IBFD Tax Treaties Database, IBFD (2005c).

International Tax Summaries 1985-1998, Coopers & Lybrand (1998).

Corporate Taxation in Europe, IBFD (2005b).

Corporate Investment Income, IBFD (2005a).

Taxation & Investment in Central and East European Countries, IBFD (2005d).

Table XXI: List of variables (Pattern of M&A's)

Variable	Description and Source
MA_{ijt}	Frequency of cross-border mergers and acquisitions in the year t , in which the acquiring firm comes from country i and the target firm is located in country j . A transaction is registered if the bidding firm acquires the controlling stake in the target firm. Source: Thomson Financial, SDC Database.
τ_{ijt}^{double}	Double tax rate for dividend income repatriated from country j to country i in the year t . (The rate includes the burden of withholding taxes.) Sources are listed below.
τ_{jt}	Corporate income tax rate in the target country j . Sources are listed below.
$Distance_{ij}$	Distance between the capital of acquiring firms' country and the capital of target firms' country measured in miles. Source: Rose (2000).
GDP_{it}	Gross domestic product of the bidding country in constant 1995 U.S. dollars. Source: World Development Indicators 2004, Worldbank (2004).
GDP_{jt}	Gross domestic product of the target country in constant 1995 U.S. dollars. Source: World Development Indicators 2004, Worldbank (2004).
$(GDP/Capita)_{it}$	Income per capita of the acquiring country. Source: World Development Indicators 2004, Worldbank (2004).
$(GDP/Capita)_{jt}$	Income per capita of the target country. Source: World Development Indicators 2004, Worldbank (2004).
$(Stocks/GDP)_{it-1}$	Stock market capitalization over GDP of the acquiring country. Source: World Development Indicators 2004, Worldbank (2004).
$(Credit/GDP)_{it-1}$	Domestic credit to the private sector in relation to GDP of the acquiring country. The term "domestic credit to the private sector" refers to financial resources provided to the private sector, such as through loans, purchases of nonequity securities, and trade credits and other accounts receivable, that establish a claim for repayment. Source: World Development Indicators 2004, Worldbank (2004).
$TradeTariffs_{jt}$	Mean tariff rate of target country. Source: Gwartney and Lawson (2005).
$CapitalControls_{jt}$	Index of the number of capital controls in the target country based on 13 types of capital controls reported by the IMF. The original index is inverted such that a higher index corresponds to more capital controls. Source: Gwartney and Lawson (2005).
$Border_{ij}$	Dummy variable indicating if acquiring country i and target country j have a common land border. Source: Rose (2000).
$Com.Language_{ij}$	Dummy variable indicating if acquiring country i and target country j speak the same language. Source: Rose (2000).
EU_{ijt}	Dummy variable indicating if acquiring country i and target country j were both members of the European Union in year t . Source: Rose (2000).
$LegalQuality_{jt}$	Indicator for the quality of legal structure and the security of property rights in the target country. The definition of the variable was broadened in 1995. Values between 1985, 1990 and 1995 had to be interpolated. Source: Gwartney and Lawson (2005).
$\Delta Exch.Rate_{it-1}$	Change in the real effective exchange rate of the acquiring country. The exchange rate is measured with respect to a basket of other currencies. The variable is lagged by one period to avoid endogeneity. Source: Worldbank (2004).
$\Delta Exch.Rate_{jt-1}$	Change in the real effective exchange rate of the target country. The exchange rate is measured with respect to a basket of other currencies. The variable is lagged by one period to avoid endogeneity. Source: Worldbank (2004).

All variables except for tax rates and dummy variables are measured in logarithms. The calculations of double tax rates are based on following sources:

Sources for corporate income tax rates are:

Structures of the Taxation Systems in the European Union, Eurostat (2004).

Taxing Profits in a Changing World, Chennells and Griffith (1997).

KPMG Corporate Tax Rate Surveys 1998-2003, KPMG International Tax and Legal Center (2003).

Sources for tax regimes, tax treaties and withholding taxes are:

IBFD Tax Treaties Database, IBFD (2005c).

International Tax Summaries 1985-1998, Coopers & Lybrand (1998).

Corporate Taxation in Europe, IBFD (2005b).

Corporate Investment Income, IBFD (2005a).

Taxation & Investment in Central and East European Countries, IBFD (2005d).