

Internet Appendix to “International Taxation and the Direction and Volume of Cross-border M&As”*

This appendix provides further information on the international tax regime facing subsidiaries. In addition, it provides information on the international tax regime in the case of foreign branches. Finally, it discusses the IV estimations reported in Tables VI and IX in detail.

A. Tax Regime in the Case of Foreign Subsidiaries

Information on bilateral dividend withholding taxes for the countries in our sample in the case of foreign subsidiaries is provided in Table IA.I. These withholding taxes are zero in the case of long-standing EU member states on account of the EU’s parent-subsidiary directive that went into effect on January 1, 1992. Table IA.II indicates whether there is a tax treaty in force between any two countries. 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. Reflecting this information, we can represent the pattern of double taxation relief granted bilaterally in Table IA.III.

Multinationals generally are able to defer parent country taxes in the case their foreign-source income is not immediately repatriated. Some countries, however, deny the deferral of parent country taxation under certain conditions, even in the case where foreign-source income is not repatriated. For these countries, the conditions under which deferral is not available are summarized in Table IA.IV. As seen in the table, for each country one or more sets of several conditions are listed. Non-deferral applies if all of the conditions in a particular set of conditions are satisfied. In the case of Japan, for instance, a Japanese parent firm with more than a 5% ownership of a foreign subsidiary cannot obtain deferral if the foreign tax rate is less than 25% and the foreign-source income is mainly passive.

B. Tax Regime in the Case of Foreign Branches

Double tax relief conventions applied to foreign branch income are agreed upon in bilateral tax treaties. Many countries apply the same method of double tax relief in all their tax treaties. The first column in Table IA.V 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 the case of inconsistencies across tax treaties, there is no preferred convention provided. The method of double tax relief that is unilaterally applied in the absence of a tax treaty

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is listed in the second column of Table IA.V. 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 several “core” European countries (Austria, Belgium, France, Germany, Hungary, Luxembourg, the Netherlands, and Switzerland) apply the exemption regime. Other European countries, Japan, and the U.S. prefer tax credits. The method of double tax relief for international branch income on a bilateral basis is provided in Table IA.VI.

Analogous to Table III, Table IA.VII ranks countries with respect to average double tax rates on foreign branch income in 2004. Countries exempting active income from foreign sources 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 Italy and Spain, 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 Belgium, France, and Germany, 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 IA.VII reports the average double tax rate applied to outgoing branch income in 2004. 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 illustrates this. The country imposes the highest average double taxation on incoming branch income of all countries in the table at 15.8%, while the average double taxation of outgoing branch income is among the lowest rates at 0.0% in the table.

C. Discussion of Instrumental Variable Regressions in Tables VI and IX

Fiscal policy is a slow process in comparison to firms’ decision making in international mergers and acquisitions. Corporate income tax levels are not changed very frequently and the method of relief for double taxation is changed even less frequently. Therefore, we have assumed so far that the double tax variable $\Delta\theta_t^{double}$ is pre-determined. In this section, we assume to the contrary that this variable is endogenous. An instrumental variable approach is therefore warranted.

It appears untoward to instrument the complete set of explanatory variables. Instead, we instrument only the tax variable of interest and all explanatory variables that must be endogenous once we assume the tax variable of interest is endogenous. For example, if we assume the double tax variable $\Delta\theta_t^{double}$ to be endogenous, then $\Delta Taxrate_t$ is endogenous as well, because countries tend to affect double tax rates by changing their corporate income tax rates. Lagged values of the endogenous variable provide natural instruments (Greene (2008), p. 319). One- and two-year lags are chosen to overidentify the model in order to be able to test the exclusion restrictions and orthogonality conditions.

The IV estimator is basically a system of equations regression. For instance, there are three equations implicit in regression (10) of Table VI corresponding to the dependent variable y and the two endogenous explanatory variables $\Delta\theta_t^{double}$ and $\Delta Taxrate_t$. We use Newey’s (1987) minimum χ^2 estimator, which is asymptotically efficient relative to many conventional

two-stage probit estimators.

The second-stage results have already been presented in regression (10) of Table VI. The first-stage results are now presented in Table IA.VIII. The instruments seem to be good predictors of the endogenous explanatory variables. Furthermore, the instruments should be orthogonal to the error term in the probit equation and the instruments' exclusion from the probit specification should be valid. The IV estimator is overidentified as there are four orthogonality conditions instead of two, which would just identify the model. This enables testing the validity of the instruments. Under the joint null hypothesis of correct model specification and valid orthogonality conditions, Newey's minimum distance function follows a χ^2 distribution with two degrees of freedom. With a test statistic of 3.11 and a p -value of 0.21, the null hypothesis cannot be rejected.

As a byproduct of Newey's minimum χ^2 estimator, the two-step IV estimator by Rivers and Vuong (1988) is calculated, which allows us to test if the explanatory variables $\Delta\theta_t^{double}$ and $\Delta Taxrate_t$ are indeed endogenous. The fitted errors from the first-stage regressions must be included as explanatory variables in the second-stage probit regression. Under the null hypothesis of $\Delta\theta_t^{double}$ and $\Delta Taxrate_t$ being exogenous, the coefficients of the fitted errors are zero, which can be evaluated by a Wald test. With a test statistic of 0.79 and a p -value of 0.67, the null hypothesis cannot be rejected. $\Delta\theta_t^{double}$ and $\Delta Taxrate_t$ may very well be exogenous, which is in line with the reasoning at the beginning of this section. Then the standard regression results are more efficient than the IV regression results.

A similar analysis of endogeneity is carried out for the gravity model of M&As. Again, we instrument the variable of interest, τ_{ijt}^{double} , and the control variables τ_{it} and τ_{jt} , which are most probably endogenous as well, once the variable of interest is assumed to be endogenous. As before, one- and two-year lagged values are chosen as instruments for the endogenous variables and Newey's (1987) minimum χ^2 estimator is applied.

The second-stage results have already been reported in regression (9) of Table IX. The first-stage results are now reported in Table IA.IX. The chosen instruments predict the endogenous explanatory variables well. The IV estimator is overidentified as there are six orthogonality conditions instead of the minimum of three that are necessary to identify the model. Under the joint null hypothesis of correct model specification and valid orthogonality conditions, Newey's minimum distance function follows a χ^2 distribution with three degrees of freedom. With a test statistic of 6.08 and a p -value of 0.11, the null hypothesis cannot be rejected. Under the null hypothesis of τ_{ijt}^{double} , τ_{it} , and τ_{jt} being exogenous, the first-stage regression fitted errors have no effect in the second-stage Tobit regression. With a Wald test statistic of 0.53 and a p -value of 0.91, τ_{ijt}^{double} , τ_{it} , and τ_{jt} are probably exogenous and the standard regression results should be preferred.

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Rivers, Douglas, and Quang H. Vuong, 1988, Limited information estimators and exogeneity tests for simultaneous probit models, *Journal of Econometrics* 39, 347–366.

Table IA.I
Withholding Tax Rates in 2004

The “No treaty” column provides 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 gives the applicable withholding tax rate on a bilateral basis, where the source countries are listed on the left and the receiving countries at the top. The table contains data for January 1, 2004. Footnotes: a: the zero withholding tax does not apply to all types of Luxembourg corporations. For some types it is 20% if there are no reductions due to tax treaties; and 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.

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

Table IA.II
Existence of Tax Treaties in 2004

The table provides the year in which the most recent tax treaty (or related protocol) between two countries was concluded. If no date is listed, there exists no ratified tax treaty for the respective country-pair as of 2004.

Country	Aus	Bel	Bul	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	1970	2001	2000	1993	2000	1970	1975	1987	1981	1963	1992	2001	1995	1974	1970	1976	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			
Bulgaria	1983	1988	-	1997	1998	1988	1985	1987	1987	1991	1994	2000	1988	1991	2003	1992	1988	1994	1995	1994	1999	1990	1988	1991	1990	1988	1991	1987				
Croatia	2000	2001	1997	-	1999	1981	2002	1986	1974	1987	1996	1996	2002	1982	2000	2000	2000	2000	2000	1983	1994	1996	1996	1996	1996	1980	1999	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	1993		
Denmark	1970	1999	1988	1981	1992	-	1993	1997	1957	1995	1989	1995	1996	1993	1999	1968	1993	1993	1980	1996	1997	2001	2000	1976	1992	1999	1997	1997	1996	1999		
Estonia	2001	1999	2002	1994	1993	-	1993	1997	1996	2002	1994	1997	1997	2002	1993	1997	1993	1994	2003	2003	1993	2002	1994	1998	2003	1993	2002	1994	1998			
Finland	2000	1991	1985	1986	1994	1997	1993	-	1970	1979	1980	1978	1996	1992	1981	1992	1993	1990	1995	1997	1994	1970	1998	1999	1990	1997	1991	1996	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	1994			
Germany	2000	2002	1987	1987	1980	1995	1996	1979	2001	-	1966	1977	1971	1962	1989	1981	1997	1997	1973	2004	1991	2003	1980	2001	1980	1966	1992	2002	1970	1989		
Greece	1970	1968	1991	1996	1986	1989	1980	1963	1966	-	1983	2003	1987	1991	1981	1988	1987	1999	1991	1986	2000	1961	1983	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			
Iceland	2000	1970	2000	2002	1995	1993	1997	1992	1968	1962	2003	1995	2003	-	2003	1994	1998	1999	1997	1996	1998	1999	2002	2002	1996	1988	1991	1975				
Ireland	1987	1970	2000	2002	1995	1993	1997	1992	1968	1962	2003	1995	2003	-	1971	1974	1997	1997	1972	1969	2000	1995	1993	1999	1999	1994	1993	1980	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				
Japan	1963	1991	1991	1977	1968	1992	1997	1981	1981	1974	1973	-	1993	1992	1993	1982	1993	1992	1993	1982	1979	1978	1975	2000	1971	1980	1972					
Latvia	1999	2003	2000	2004	1993	2002	1993	1997	1997	2004	1994	1997	2004	1994	1997	1993	1993	1993	2001	2002	1999	2003	1993	2002	1996	1998						
Lithuania	1998	2000	1994	1993	1993	1993	1997	1997	1997	1997	1997	1997	2004	1998	1997	1996	1993	-	1993	1999	1993	1994	2002	2001	2001	2003	1993	2002	2002	1998		
Luxembourg	1992	1970	1992	1991	1980	1990	1970	1973	1991	1990	1999	1972	1981	1993	1993	-	1990	1983	1995	1999	1993	1991	1986	1996	1993	1983	1996					
Netherlands	2001	2001	1990	2000	1996	1996	1997	1995	1973	2004	1981	1986	1997	1969	1990	1992	1994	1999	1990	-	1990	2002	1999	1998	1996	1971	1991	1966	1989	2004		
Norway	1995	1988	1988	1983	1979	1997	1993	1997	1999	1991	1988	1980	1996	2000	1985	1993	1993	1983	1990	-	1977	1970	1980	1979	1999	1997	1987	2000	1980			
Poland	1974	2001	1994	1994	2001	1994	1975	2003	1987	2000	1998	1995	1999	1993	1980	1993	1994	1995	2002	1977	-	1995	1994	1994	1979	1975	1991	1976	1974			
Portugal	1970	1995	1995	1994	2000	2003	1970	1971	1980	1999	1995	1999	1993	1980	2001	2002	1999	1999	1970	1995	-	1997	2001	1993	2002	1974	1968	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	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	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			
Sweden	1991	1991	1988	1980	1979	1997	1993	1997	1990	1992	1961	1981	1996	1983	1980	1993	1993	1996	1991	1997	1975	2002	1976	1979	1976	-	1992	1983	1994			
Switzerland	2000	1978	1991	1999	1995	1997	2002	1991	1997	2002	1983	1981	1988	1980	1978	1971	2002	2002	1993	1996	1987	1991	1974	1993	1997	1966	1992	-	1993	1996		
UK	1993	1987	1987	1981	1990	1996	1994	1996	1987	1970	1953	1977	1991	1998	1988	1980	1996	2002	1983	1989	2000	1976	1968	1976	1990	1994	1983	1993	-	2002		
USA	1996	1987	1993	1999	1998	1989	1994	1989	1953	1979	1975	1997	1984	1972	1998	1998	1996	2004	1980	1974	1994	1973	1993	1990	1994	1996	2002	-				

Table IA.III
Tax Regimes for Subsidiaries in 2004

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% of dividend payment is exempted), C=Indirect credit regime (withholding taxes and underlying corporate income taxes are credited), and 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.

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	Slk	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
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
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
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 Republic	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 Republic	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
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
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

Table IA.IV
Conditions for Non-deferral in 2004

Countries with worldwide taxation generally tax foreign-source income upon repatriation. In the absence of repatriation, firms are not able to defer parent country taxation under the conditions listed in the table. Specifically, there is non-deferral of the tax base listed in the last column if all the conditions listed in a particular set for a particular country are satisfied. Column (1) lists conditions relating to the subsidiary's corporate income tax rate. Below a certain threshold, often defined in relation to the parent country's tax rate, the condition is satisfied. Column (2) lists the share that a parent firm must hold in a foreign subsidiary before non-deferral is potentially triggered. Columns (3) to (5) list additional conditions as follows. "blacklist": the subsidiary country is on a blacklist defined by the parent country's tax code; "non-EU subsidiary": the subsidiary country is not an EU member; "not on white list": the subsidiary country is not on a white list defined by the parent country's tax code; "financial company": the subsidiary is a financial company; "mainly passive income": the subsidiary's income is mainly passive income; "mainly income OOR": the subsidiary's income is mainly generated out of residence, i.e., in countries other than the subsidiary's country of residence; "> 25% profit OOR": more than 25% of the subsidiary's profits are generated out of residence; "> 10% op. income OOR": more than 10% of the subsidiary's operating income is generated out of residence; "< 90% profit distribution": less than 90% of the subsidiary's profits are distributed to shareholders; and "< 35% publicly listed": less than 35% of the subsidiary's shares are publicly listed. The last column contains the tax base, which is subject to parent country taxation in the case of non-deferral: "pass. inc.": passive income; "15% firm value": 15% of the subsidiary's value; and "OOR (services)": income derived from services out of residence, i.e., in countries other than the subsidiary's country of residence. For the purpose of constructing deferral dummy variables, conditions relating to type of income and company, profit distribution, and public listing are assumed to be satisfied if they cannot be explicitly checked in the data.

Home country	Conditions					Nondeferred tax base
	(1) Subsidiary tax rate	(2) Share ownership	(3) Additional condition	(4) Additional condition	(5) Additional condition	
Japan, set 1	< 25%	> 5%	mainly passive income			profit
Japan, set 2	< 25%	> 5%	mainly income OOR			profit
Portugal, set 1		> 10%	> 25% profit OOR	blacklist		profit
Portugal, set 2	< 60% of home tax	> 10%	> 25% profit OOR			profit
Portugal, set 3		> 10%	financial company	blacklist		profit
Portugal, set 4	< 60% of home tax	> 10%	financial company			profit
Spain, set 1	< 75% of home tax	> 50%	non-EU subsidiary			max[pass. inc., profit]
Spain, set 2		> 50%	blacklist			min[profit, 15% firm value]
U.K., set 1	< 75% of home tax	> 25%	not on white list	< 90% profit distr.	< 35% publ. listed	pass. inc.
U.K., set 2	< 75% of home tax	> 25%	> 10% op. income OOR	< 90% profit distr.	< 35% publ. listed	pass. inc.
U.K., set 3		> 25%	blacklist	< 90% profit distr.	< 35% publ. listed	pass. inc.
U.S., set 1	< 90% of home tax	> 10%				pass. inc. and OOR (services)

Table IA.V

Tax Regimes Applied to International Branch Income in 2004

The first column presents the method for tax relief that applies to foreign branch income in the presence of a tax treaty. The method of tax relief in the presence of a tax treaty can vary between different treaties, in which case no unique applicable tax regime can be indicated. The first column indicates the method of tax relief for foreign branch income only if a country has consistently applied the same method in all tax treaties becoming effective in 2000 or later. The second column gives the method for tax relief that applies to foreign branch income in the absence of a tax treaty. Footnotes: a: Belgium only charges 25% of the standard tax rate if the deduction regime applies in order to reduce double taxation; and b: in the case of excess foreign tax credits, Luxembourg allows a deduction of the excess foreign taxes as expenses.

Country of residence	Branch taxation	
	With recently concluded tax treaty (1)	Unilateral (without tax treaty) (2)
Austria	Exemption	Exemption
Belgium	Exemption	Deduction ^a
Bulgaria		Credit
Croatia		Credit
Czech Republic	Credit	Credit
Denmark	Credit	Credit
Estonia	Credit	Deduction
Finland	Credit	Credit
France	Exemption	Exemption
Germany	Exemption	Credit
Greece	Credit	Credit
Hungary	Exemption	Credit
Iceland		Credit
Ireland	Credit	Deduction
Italy	Credit	Credit
Japan	Credit	Credit
Latvia	Credit	Credit
Lithuania	Credit	Credit
Luxembourg	Exemption	Credit ^b
Netherlands	Exemption	Exemption
Norway		Credit
Poland	Credit	Credit
Portugal	Credit	Credit
Romania	Credit	Credit
Slovak Republic	Credit	No relief
Spain	Credit	Credit
Sweden	Credit	Credit
Switzerland	Exemption	Exemption
United Kingdom	Credit	Credit
United States	Credit	Credit

Table IA.VI
Tax Regimes for Foreign Branches in 2004

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, and N=No relief from double taxation.

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	E																		
Bulgaria	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	E	E																	
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	E	E																	
Czech Republic	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	E	E	E																
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	E	E	E	E															
Estonia	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	E	E	E	E	E														
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	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	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	E	E	E	E	E	E	E	E											
Greece	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	E	E	E	E	E	E	E	E											
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	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	E	E	E	E	E	E	E	E	E										
Ireland	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	E	E	E	E	E	E	E	E	E										
Italy	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	E	E	E	E	E	E	E	E	E										
Japan	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	E	E	E	E	E	E	E	E	E	E									
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	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	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	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	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	E	E	E	E	E	E	E	E	E	E	E	E							
Poland	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	E	E	E	E	E	E	E	E	E	E	E	E							
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	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	E	E	E	E	E	E	E	E	E	E	E	E	E						
Slovak Republic	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	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	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	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	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E			
United Kingdom	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	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		
United States	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	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E

Table IA.VII
**Country Ranking of Double Tax Rates on International
Branch Income in 2004**

The first 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. The table is ordered in an ascending manner with respect to the average double tax rate $\bar{\tau}_i^{branch}$. The second column reports the average double tax rate from the point of view of source countries. The countries listed on the left now represent the source country and the tax rates apply to branch income flows *leaving* the country. The average is then taken across all potential residence countries.

Country	Branch income	
	Received $\bar{\tau}_i^{branch}$	Paid $\bar{\tau}_j^{branch}$
Belgium	0.0	0.7
Estonia	0.0	18.9
France	0.0	0.5
Germany	0.0	0.2
Netherlands	0.0	0.6
Poland	0.0	5.3
Switzerland	0.0	3.0
Lithuania	0.1	8.5
Iceland	0.2	6.8
Latvia	0.6	8.5
Hungary	1.0	6.5
Bulgaria	1.1	5.1
Ireland	1.1	10.3
Croatia	1.2	5.2
Slovak Republic	1.2	5.1
Austria	1.3	0.6
Luxembourg	2.2	1.3
Romania	2.7	3.1
Norway	3.8	1.9
Portugal	4.3	2.0
Czech Republic	4.5	1.6
Sweden	4.5	2.1
Finland	5.0	1.6
Denmark	5.7	1.4
United Kingdom	5.7	1.5
Spain	7.3	0.5
Greece	9.2	0.8
Italy	11.3	0.3
United States	13.8	0.1
Japan	15.8	0.0
Total	3.5	3.5

Table IA.VIII
First-stage Results for the Direction of M&As Instrumental
Variable Regression

The table reports first-stage OLS regressions that are part of the IV estimation reported in column (10) of Table VI. The dependent variable is $\Delta\theta^{double}$ in regression (1) and $\Delta Taxrate$ in regression (2). The variables relate to mergers between a firm a and a firm b . The variable $\Delta\theta^{double}$ is the double tax burden if firm a acquires firm b minus the double tax burden if firm b acquires firm a ; $\Delta\theta_{t-1}^{double}$ and $\Delta\theta_{t-2}^{double}$ are the double tax burdens lagged by one and two years; $\Delta Taxrate$ is the difference between corporate income tax rates of firm a 's country of origin and firm b 's country of origin; and $\Delta Taxrate_{t-1}$ and $\Delta Taxrate_{t-2}$ are the difference in tax rates lagged by one and two years. $\Delta Size$ is the difference between total assets of firm a and firm b relative to the sum of total assets; $\Delta Liquidity$ is the difference between liquidity ratios of firm a and firm b ; $\Delta Leverage$ is the difference between the ratios of liabilities to assets of firm a and firm b ; ΔROA is the difference between the returns on assets of firm a and firm b ; $\Delta Stockmarket$ is the difference between the stock market capitalizations of firm a 's country of origin and firm b 's country of origin relative to the sum of stock market capitalizations lagged by one year; $\Delta Credit$ is the difference between domestic credit to the private sector of firm a 's country of origin and domestic credit to the private sector of firm b 's country of origin relative to the sum of credit provision lagged by one year; and $\Delta Exch.rate$ is the difference between the changes in the real bilateral exchange rates of firm a 's country of origin and firm b 's country of origin in percentage points lagged by one year. Country fixed effects are not reported. Stars indicate the significance level: *: 5%, **: 1%. For detailed variable definitions and data sources, see the main text's Appendix.

	(1)	(2)
	$\Delta\theta^{double}$	$\Delta Taxrate$
$\Delta\theta_{t-1}^{double}$	1.292** (0.044)	0.428* (0.181)
$\Delta\theta_{t-2}^{double}$	-0.283** (0.044)	-0.369* (0.182)
$\Delta Size$	-0.027 (0.040)	0.137 (0.163)
$\Delta Liquidity$	0.116 (0.123)	-0.261 (0.508)
$\Delta Leverage$	0.000 (0.052)	0.102 (0.215)
ΔROA	-0.035 (0.075)	0.012 (0.309)
$\Delta Taxrate_{t-1}$	-0.014 (0.011)	0.714** (0.047)
$\Delta Taxrate_{t-2}$	-0.016 (0.012)	0.026 (0.050)
$\Delta Stockmarket$	-0.003 (0.245)	-1.484 (1.010)
$\Delta Credit$	0.026 (0.281)	1.608 (1.158)
$\Delta Exch.rate$	0.020 (0.141)	-0.725 (0.583)
N	574	574
R ²	98.86	94.71

Table IA.IX
First-stage Results for the Gravity Model of M&As
Instrumental Variable Regression

The table reports first-stage OLS regressions which are part of the IV estimation reported in column (9) of Table IX. The dependent variable is τ_{ijt}^{double} in regression (1), τ_{it} in regression (2) and τ_{jt} in regression (3). The variable τ_{ijt}^{double} is the double tax rate that applies to dividend income repatriated from the target firms' country j to acquiror firms' country i in the year t ; τ_{it} and τ_{jt} are the corporate income tax rates in country i and country j in year t ; τ_{ijt-1}^{double} and τ_{ijt-2}^{double} are the double tax rates lagged by one and two years; τ_{it-1} , τ_{it-2} , τ_{jt-1} , and τ_{jt-2} are corporate income tax rates in country i and country j lagged by one and two years; $Distance_{ij}$ 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 country j 's GDP in year t ; $GDPpercap_{it}$ and $GDPpercap_{jt}$ are the logarithms of the per capita income of countries i and j in year t ; $(Stocks/GDP)_{it-1}$ is the logarithm of country i 's stock market capitalization relative to its GDP in 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 year $t-1$; $\Delta Exch.rate_{ijt-1}$ is the change in the logarithm of the real bilateral exchange rate between countries i and j between year $t-1$ and year $t-2$; $Tariffs_{jt}$ is the logarithm of the average tariff on goods imported to country j in year t ; $Controls_{jt}$ is an index of the number of capital controls in country j in year t ; $Border_{ij}$ indicates whether countries i and j share a common land border; $Language_{ij}$ indicates whether countries i and j share a common language; and EU_{ijt} indicates whether countries i and j were both members of the European Union in year t . Country and time fixed effects are not reported. Stars indicate the significance level: *, 5%, **, 1%. For detailed variable definitions and data sources, see the main text's Appendix.

	(1)	(2)	(3)
	τ_{ijt}^{double}	τ_{it}	τ_{jt}
τ_{ijt-1}^{double}	0.827** (0.012)	0.086** (0.016)	-0.018 (0.016)
τ_{ijt-2}^{double}	0.023* (0.011)	-0.100** (0.015)	0.006 (0.016)
τ_{it-1}	-0.033** (0.009)	0.690** (0.011)	0.003 (0.012)
τ_{it-2}	-0.024** (0.008)	-0.034** (0.011)	-0.001 (0.011)
τ_{jt-1}	0.048** (0.009)	0.017 (0.013)	0.717** (0.013)
τ_{jt-2}	-0.001 (0.009)	-0.020 (0.012)	-0.022 (0.012)
$Distance_{ij}$	0.094 (0.078)	0.036 (0.104)	0.015 (0.106)
GDP_{it}	14.542** (1.927)	11.962** (2.552)	2.177 (2.616)
GDP_{jt}	1.133 (1.839)	2.044 (2.436)	2.179 (2.497)
$GDPpercap_{it}$	-16.922** (2.132)	-15.673** (2.823)	-2.603 (2.894)
$GDPpercap_{jt}$	-0.675 (2.036)	-2.044 (2.697)	-6.954* (2.764)
$(Stocks/GDP)_{it-1}$	-0.001 (0.069)	-0.821** (0.091)	0.055 (0.093)
$(Credit/GDP)_{it-1}$	0.383** (0.132)	0.836** (0.174)	-0.182 (0.179)
$\Delta Exch.rate_{ijt-1}$	0.994** (0.300)	3.041** (0.397)	-2.426** (0.407)
$Tariffs_{jt}$	-0.377** (0.113)	-0.028 (0.150)	-0.047 (0.154)
$Controls_{jt}$	-0.038 (0.026)	0.004 (0.034)	0.241** (0.035)
$Border_{ij}$	0.054 (0.129)	-0.033 (0.170)	-0.080 (0.175)
$Language_{ij}$	0.266* (0.132)	0.049 (0.174)	0.045 (0.179)
EU_{ijt}	-0.738** (0.097)	0.221 (0.128)	0.220 (0.131)
N	7100	7100	7100
R ²	88.03	91.18	89.47