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Abstract

We examine the association between international taxation and the organizational form a multinational corporation (MNC) selects for foreign direct investment (FDI). Using micro-level data on inbound FDI relations in Germany, we find that a higher tax burden on foreign income earned in a corporate subsidiary increases the probability of selecting a non-corporate flow-through. This effect, which is economically meaningful, varies with an MNC's income-shifting opportunities, industry-specific risk, country-level differences in regulatory quality, and prior host-country experience. In addition, we find that selecting a flow-through because of a tax benefit is associated with lower investment and a more complex group structure. Our results inform policy makers about how MNCs might respond to tax-law changes in their organizational form choices and suggest that the differential taxation of subsidiaries and flow-throughs could have economic consequences for MNCs and their affiliates.

JEL-Classification: M41, H25, H73, K34

Keywords: Organizational Form Choice, Group Structures, International Taxation, Multinationals, Economic Consequences

1 Introduction

We examine the association between taxes levied on cross-border economic activities (international taxation) and the organizational form a multinational corporation (MNC) selects for foreign direct investment (FDI).[1] We also explore whether the chosen organizational form has economic consequences for the MNC. Cross-border economic activities of MNCs and the associated group structures have two sides. On the one hand, group structures with affiliates in multiple countries arise from FDI that stimulates economic growth and development (UNCTAD 2017). On the other hand, these structures enable an MNC to shift income to tax havens and to exploit loopholes in tax systems.[2] Despite prior research showing that international taxation influences the location of foreign affiliates (Dyreng, Lindsey, Markle, and Shackelford 2015) and the design of internal ownership chains (Lewellen and Robinson 2013), we know little about how international taxation affects an MNC when selecting an organizational form for a new affiliate in the FDI host country.

Understanding the effect of international taxation on organizational form choices of an MNC is important for several reasons. First, worldwide net FDI inflows ranged from $1.4 to $3.1 trillion between 2005 and 2013 (World Bank 2018) and MNCs have to select an organizational form for these investments. Second, current initiatives to reform the international tax system, such as the OECD Action Plan on Base Erosion and Profit Shifting (BEPS), have the potential to alter the taxation of organizational forms (OECD 2013). Since organizational forms differ in their non-tax characteristics (Ayers, Cloyd, and Robinson 1996; Scholes, Wolfson, Erickson, Hanlon, Maydew, and Shevlin 2014), selecting an organizational form because of a tax consequences could affect subsequent economic decisions, such as

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[1] International taxation includes all taxes levied on foreign income (Huizinga, Laeven, and Nicodème 2008, Huizinga and Voget 2009, Barrios, Huizinga, Laeven, and Nicodème 2012). We discuss international taxation in Section 2.1 and in Appendix B.

[2] Dutch regulatory filings suggest that Google saved $3.6 billion in taxes in 2015 using a group structure named "Double Irish with a Dutch Sandwich" (Wood 2016). This structure has been used by several other MNCs (e.g., Apple; see Ram 2016).

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investment or risk-taking. Thus, assessing the relation between international taxation and the organizational form choices of MNCs provides insights into the potential impact of tax-policy changes on these decisions. Finally, shedding light on the economic consequences of organizational form choices facilitates the design of targeted tax rules.

When establishing a new affiliate in the FDI host country, a foreign investing entity can choose between the organizational forms of a corporate subsidiary and a non-corporate flow-through. International taxation determines the tax burden on income earned in the host country and shapes the tax costs and benefits of organizational forms (see Figure 1). Since the dividend-withholding tax only applies to dividend distributions of a subsidiary, this tax is the main tax cost (benefit) of a subsidiary (flow-through). Non-tax costs and benefits mainly stem from differences in liability exposure where a subsidiary is legally independent from the rest of the MNC, limiting liability of the investing entity (Gordon and MacKie-Mason 1994, Ayers et al. 1996). Further, although a subsidiary implies higher compliance (Demirguc-Kunt, Love, and Maksimovic 2006, Cerutti, Dell'Ariccia, and Martinez Peria 2007) and coordination costs (Goolsbee and Maydew 2002), transferring ownership in a subsidiary is less costly than in a flow-through. As the MNC selects the organizational form with the best cost-benefit relation (Hodder, McAnally, and Weaver 2003), we expect the investing entity to be sensitive to international taxation. Thus, we predict that the likelihood of establishing a new affiliate as a flow-through is positively associated with the tax cost of a subsidiary.

Prior research provides evidence that taxes affect organizational form choices in domestic settings (see Hanlon and Heitzman (2010) for a review). MNCs, however, differ from domestic or standalone firms along several dimensions. First, unlike domestic firms, an MNC could reduce dividend-withholding taxes prior to the organizational form choice by establishing the new affiliate in a host country that lightly taxes dividend distributions (Dyreng et al. 2015). Second, by operating in several taxing jurisdictions, an MNC could

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shift taxable income across border (Hines and Rice 1994, Klassen and Laplante 2012) and limit an affiliate's exposure to international taxation. Third, an MNC has greater market power than a domestic firm and could shift the economic burden of international taxation to its stakeholders (Dyreng, Jacob, Jiang, and Müller 2019). These differences cast doubt on whether international taxation is associated with organizational form choices of MNCs and suggest that there is support for the null hypothesis

In our empirical tests, we examine foreign investing entities that establish a new affiliate in Germany, our host country of interest.[3] Germany is a powerful setting because the extensive double tax treaty network implies variation in the tax burden difference between organizational forms based on the home country of the investing entity. At the same time, all organizational form choices occur in the identical regulatory environment. Further, since most existing tax systems are based on common principles (Barrios et al. 2012), the tax effects of international taxation and our findings generalize to several country combinations.

We use the Microdatabase Direct Investment (MiDi) of the Deutsche Bundesbank as our primary data source. This dataset reports anonymized micro-level data on the stock of inbound FDI relations in Germany. As a key advantage, the MiDi database contains the organizational form of these FDI relations, which is unavailable in most conventional datasets. Our initial sample includes 2,182 organizational form choices for the years 2005-2013. Investing entities establishing a new affiliate belong to an MNC and are located in 59 home countries. These countries account for more than 99 percent of all inbound FDI relations recorded in the MiDi database. 24.43 percent of the organizational form choices result in a flow-through, underlining the relevance of this organizational form.

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[3] The investing entity is located either in the same country as the parent of the MNC (direct investment) or in a different country (indirect investment). We analyze organizational form choices of the investing entity because data on the entire group structure is not available (see Section 3.1).

In our first tests, we document that the probability of establishing a new affiliate as a flow-through is positively associated with the tax burden difference between organizational forms. This effect is economically meaningful and comparable to the effect of non-tax determinants: a one standard deviation increase in the tax cost of a subsidiary is associated with a 4.1 percentage point higher probability of establishing a flow-through. Thus, MNCs are sensitive to international taxation when selecting an organizational form for a newly established foreign affiliate. We also exploit a 2008 tax reform in Germany, which reduced the withholding tax on dividend distributions to a subset of home countries in our sample. Corroborating our baseline results, we find a lower probability of establishing a new affiliate as a flow-through for investing entities located in home countries affected by the reform.

Next, we conduct several cross-sectional tests to identify conditions under which the relation between international taxation and organizational form choices of MNCs might vary. Specifically, we examine variation in income-shifting opportunities (Klassen and Laplante 2012) and find that investing entities are less sensitive to the tax burden difference if MNCs have greater opportunities to shift taxable income. We also explore variation in non-tax factors and find that industry-specific risk and differences in regulatory quality between Germany and the home country of the MNC mitigate the tax sensitivity. These results indicate that MNCs highly value a subsidiary's non-tax benefit of limited liability and legal independence. In contrast, we find a higher tax sensitivity for investing entities with prior host-country experience.

Finally, we extend our sample to all observations available for a new affiliate in the MiDi database and examine consequences of organizational form choices. We find that, compared to a subsidiary, a new affiliate established as a flow-through takes on less risk, is less profitable, and is associated with a *less* complex group structure. In addition, if an MNC chooses a flow-through because of a tax benefit, the affiliate exhibits lower investment and is

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associated with a *more* complex group structure. These results suggest that the chosen organizational form has economic consequences for the MNC and the new affiliate.

Our study offers several insights for policy makers and researchers interested in organizational form choices of MNCs and the resulting group structures. First, we provide novel evidence for the effect of taxes on organizational form choices and the trade-offs MNCs face when making these decisions. Prior research on domestic or standalone firms shows that although industry-specific tax incentives affect organizational form choices (Petroni and Shackelford 1995, Hodder et al. 2003, Utke 2019), non-tax factors tend to drive these decisions on average (Gordon and MacKie-Mason 1994, Ayers et al 1996, MacKie-Mason and Gordon 1997, Goolsbee 2004). Our results, in contrast, indicate that tax burden differences between organizational forms are an economically important determinant of the organizational form an MNC selects for a foreign affiliate. This result is relevant for policy makers as it suggests that organizational form choices of MNCs might respond more strongly to tax-law changes than decisions of domestic or standalone firms. Further, our cross-sectional tests identify several conditions under which these responses might be stronger or weaker.

Second, we contribute to research on the impact of taxes on group structures of MNCs. While prior research finds that international taxation influences locational choices for foreign affiliates (Mintz and Weichenrieder 2010, Dyreng et al. 2015), we document that international taxation is also associated with the organizational form of these affiliates. This finding indicates that besides being important for attracting FDI, host-country tax rules could additionally influence the legal form of cross-border investment. This result is also relevant for researchers that examine group structures of MNCs since it suggests that limiting the analysis to corporate subsidiaries might neglect a significant share of an MNC's cross-border investment and the tax and non-tax deliberations shaping the associated group structures.

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Third, we add to studies on the consequences of organizational form choices. While prior research shows that non-corporate forms lead to lower firm-level growth (Demirguc-Kunt et al. 2006), our results suggest that selecting a non-corporate flow-through is associated with lower risk-taking, lower profitability, and a less complex group structure. In addition, exploiting a tax benefit through a flow-through might come at the cost of lower investment and a more complex group structure. These findings inform recent tax-policy initiatives by shedding light on the consequences of differently taxing organizational forms. For instance, in the BEPS Action Plan, the OECD emphasizes withholding taxes to combat tax-motivated income shifting (OECD 2013). Implementing such a policy differently across organizational forms could impact organizational form choices and affect subsequent economic decisions. Finally, our results are useful to financial-statement users by suggesting that the organizational form of cross-border investment could signal differences in investment or risk-taking within MNCs.

The remainder of this study is organized as follows. Section 2 outlines the institutional background, discusses prior research, and derives our hypotheses. Section 3 describes the MiDi database, our samples, and the research design. Section 4 presents results for the determinants of organizational form choices while results for their economic consequences are discussed in Section 5. Section 6 concludes.

2 Institutional Background, Prior Research, and Hypotheses Development

International Taxation and Organizational Forms

We examine investing entities that select an organizational form for a newly established foreign affiliate. As outlined in Figure 1, the investing entity could be located either in the same country as the parent of the MNC, which leads to direct investment, or in a different country, which we classify as indirect investment. We group organizational forms available to the investing entity into two categories: (i) subsidiaries and (ii) flow-throughs.

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Subsidiaries are legally independent corporate forms while flow-throughs denote non-corporate forms, such as partnerships or branches, that legally belong to the investing entity.[4]

Foreign income earned in a subsidiary and in a flow-through is subject to three layers of international taxation. These layers include (i) the host country corporate income tax, (ii) the dividend-withholding tax levied on a subsidiary's dividend distributions, and (iii) the corporate income tax in the home country of the investing entity (Huizinga et al. 2008, Huizinga and Voget 2009, Barrios et al. 2012).

If subsidiaries and flow-throughs are taxed differently along one of these dimensions, the tax burden on foreign income differs between the two organizational forms. Specifically, a subsidiary leads to a higher tax burden if the investing entity is located in a home country that exempts foreign income from tax (territorial tax system) or in a home country that does not relief foreign income from double taxation. This is due to the dividend-withholding tax, which is not offset by a tax credit in the home country. If the investing entity is located in a home country that taxes foreign income while granting a tax credit for foreign taxes paid (worldwide tax system), the extent to which a subsidiary might lead to a higher tax burden depends on host and home country corporate income tax rates and the tax credit granted. The dividend-withholding tax is again the main driver of any tax burden difference.[5]

For each home-country-year, we calculate the tax burden difference between organizational forms and derive the tax cost of a subsidiary. We take statutory corporate income tax rates, dividend-withholding tax rates, the home country tax system, and double tax treaties into account. We provide more details on this approach in Appendix B.

INSERT FIGURE 1 HERE

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[4] In Appendix C, we provide further background on the organizational forms available to an MNC in Germany.

[5] The tax cost of a subsidiary could be negative if the investing entity is located in a home country that operates a worldwide tax system for flow-throughs and a territorial system for subsidiaries. Most home countries in our sample operate the same tax system for both organizational forms.

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Prior Research

Determinants and Consequences of Organizational Form Choices

Prior research on determinants of organizational form choices has mainly examined domestic settings and documents economically small effects of taxes on these decisions. Gordon and MacKie-Mason (1994), for instance, use macro-level data and find that the non-tax costs associated with non-corporate forms, such as the lack of capital-market access and unlimited liability, facilitate incorporation in the trade, service, and manufacturing sector. MacKie-Mason and Gordon (1997) show that differences in the taxation of organizational forms affect the allocation of assets and taxable income between the corporate and non-corporate sector. However, the authors conclude that non-tax determinants tend to dominate the organizational form choices in their sample.

Firm-level analyses of small businesses provide more nuanced results. Ayers et al. (1996) show that non-tax determinants, such as business risk and financing requirements, dominate organizational form choices of small firms. Taxes, in contrast, affect the choice between organizational forms with similar non-tax costs and benefits, such as S and C corporations. In analyzing 1992 census data from the retail sector, Goolsbee (2004) finds a relatively large tax effect, which is driven by low non-tax costs of operating through a non-corporate form in this sector. For closely-held firms, Romanov (2006) and Edmark and Gordon (2013) show that high personal income tax rates provide an incentive for high-income individuals to shift income into corporate forms.

Evidence for taxes as a determinant of organizational form choices for large firms or MNCs is rare because the non-tax costs of operating through a non-corporate form (e.g., the lack of capital-market access) seem prohibitively high for these firms (Ayers et al. 1996). The effect of taxes is limited to specific incentives that outweigh non-tax costs in narrow settings. For instance, Hodder et al. (2003) show that the opportunity to avoid dividend taxes and alternative minimum taxes increases a bank's probability of converting from a taxable C-

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corporation to a non-taxable S-corporation. Similarly, simulation results in Goolsbee and Maydew (2002) suggest that real estate investment trusts (REITs), which avoid dividend taxes on real estate income, offer tax savings that are concentrated in a small number of industries.

While prior research has frequently studied the determinants of organizational form choices, evidence for the consequences of these decisions is limited. In a cross-country study, Demirguc-Kunt et al. (2006) find similar firm-level growth for corporate and non-corporate forms. However, in countries with high-quality financial and legal institutions, corporate forms grow faster due to capital-market access and lower financing frictions. The tax benefits associated with an organizational form could also influence subsequent economic decisions. Donohoe, Lisowsky, and Mayberry (2018) study the choice of U.S. banks to convert from a C-corporation to a tax-favored S-corporation. To improve their competitive position, banks invest tax savings into advertising spending and higher deposit rates. Utke (2019) examines equity carve-outs into Master Limited Partnerships (MLPs) and finds that tax-sensitive shareholders increase their ownership stake in the more lightly taxed MLP, whereas tax-exempt shareholders invest more heavily in the tax-disadvantaged parent firm.

Taxes and Group Structures of MNCs

Cross-border economic activities of MNCs involve group structures with affiliates in several countries (ICIJ 2014). Prior research suggests that taxes might shape specific elements of these structures. Dyreng et al. (2015), for instance, examine locational choices for U.S.-owned foreign subsidiaries and find that MNCs strategically select a host country to minimize the withholding tax on dividend distributions. Similarly, Lewellen and Robinson (2013) examine internal ownership chains of U.S. MNCs and show that several tax factors, such as double tax treaties, controlled-foreign corporation rules, and capital gains taxes, determine the location of a subsidiary and the choice between direct and indirect ownership chains. In a purely domestic setting, Petroni and Shackelford (1995) show that multi-state U.S. insurers choose between a subsidiary and a licensing agreement for their cross-state expansion in order

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to jointly optimize state taxes and regulatory costs. Buettner, Riedel, and Runkel (2011) study the local business tax in Germany and find that income-shifting opportunities incentivize multi-jurisdictional firms to retain separate taxation of their subsidiaries rather than opting for tax consolidation. In a European setting, Oestreicher and Koch (2012) find that the dividend-withholding tax reduces the likelihood of establishing vertical group structures.

Hypotheses Development

When establishing a new affiliate, the investing entity selects the organizational form with the best cost-benefit relation (MacKie-Mason and Gordon 1997, Goolsbee 1998, 2004, Luna and Murray 2010). In a cross-border setting, the dividend-withholding tax only applies to dividend distributions of a subsidiary while a flow-through is not subject to this tax. Thus, the dividend-withholding is the main tax cost (benefit) of a subsidiary (flow-through).[6] In addition, if the investing entity is located in a country with a worldwide tax system, an MNC might offset tax losses incurred in a foreign flow-through with taxable income of the investing entity. Such a cross-border loss offset is typically not available for foreign subsidiaries.[7]

Compared to a standalone or domestic firm, an MNC might weigh non-tax costs and benefits of organizational forms differently. For a standalone firm, preventing access to the capital market is a major non-tax cost associated with a flow-through (Ayers et al. 1996). This factor is less relevant for an MNC because it could raise capital globally and finance foreign affiliates through the internal capital market (Desai, Foley, and Hines 2004). In contrast, differences in the liability exposure of the investing entity are relevant in a cross-border context because claims from creditors, employees, and customers against the new affiliate can expose the investing entity and the MNC to risk. A subsidiary offers the non-tax benefit of

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[6] The statutory dividend-withholding tax is an upper bound for the tax cost of a subsidiary as is might be reduced by a tax credit under a worldwide tax system or by the deferral of the repatriation of foreign income (Foley, Hartzell, Titman, and Twite 2007, Blouin and Krull 2009).

[7] Only a limited number of countries (e.g., Austria, Denmark, France, Italy, etc.) offer a cross-border loss offset for subsidiaries.

limited liability that protects the MNC against claims (Gordon and MacKie-Mason 1994), which limits the loss potential to the equity stake in the affiliate (Ayers et al. 1996).[8]

Aside from limited liability, several other non-tax determinants might affect organizational form choices in a cross-border setting. For instance, the transfer of ownership in a subsidiary is less costly as its shares can be easily transferred. Transferring ownership in a flow-through, in contrast, requires a transfer of assets or the re-negotiation of the partnership agreement (Ayers et al. 1996). Conversely, a subsidiary implies higher compliance costs due to stricter regulatory and financial reporting requirements and higher coordination costs due to the separation of ownership and control (Goolsbee and Maydew 2002).

When establishing a new affiliate, the investing entity determines these tax and non-tax costs and benefits and selects the organizational form with the best cost-benefit relation (Luna and Murray 2010). As a higher tax cost of selecting a subsidiary raises the tax benefit of a flow-through, we expect the probability of establishing a flow-through to increase accordingly. Based on these arguments, we formulate the following baseline hypothesis:

Hypothesis 1:   *The tax cost of a subsidiary is positively associated with the probability of establishing a flow-through.*

The relation under H1 assumes that an MNC repatriates foreign income via dividend distributions that are subject to international taxation. An MNC, however, might limit the extent to which income is exposed to international taxation and therefore mitigate the tax cost of a subsidiary by shifting income to a low-tax country (Hines and Rice 1994, Dyreng and Markle 2016).[9] Since income shifting reduces the tax cost of a subsidiary, we expect an MNC with income-shifting opportunities to be less sensitive to tax burden differences between organizational forms. These arguments suggest the following cross-sectional hypothesis:

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[8] For instance, an MNC requires EUR 25,000 to establish a *GmbH* in Germany. Thus, in the absence of intra-firm comfort letters, the potential loss of the investing entity is limited to this amount.
[9] Common strategies exploit discretion in setting intra-firm transfer prices (Klassen and Laplante 2012), cost-sharing arrangements (De Simone and Sansing 2019), and tax-deductible intra-firm interest or royalty payments.

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Hypothesis 2:   *The association between the tax cost of a subsidiary and the probability of establishing a flow-through is weaker for MNCs with income-shifting opportunities.*

With respect to non-tax determinants, the risk profile of the industry in which the new affiliate operates can alter the cost-benefit relation of organizational forms. Capital-intensive industries, such as manufacturing or wholesale, involve high industry-specific risk that raises the likelihood of losses for the investing entity and the MNC. As the non-tax benefit of limited liability is valuable in these industries (Liu 2014), we expect the tax burden difference to be a less important. Thus, we formulate the following cross-sectional hypothesis:

Hypothesis 3a: *The association between the tax cost of a subsidiary and the probability of establishing a flow-through is weaker for new affiliates subject to high industry-specific risk.*

An MNC that engages in FDI is subject to several sets of regulation. Low regulatory quality in the parent home country, such the inability of the government to implement and maintain stable regulation, could pose significant risk to cross-border investments (Dikova, Sahib, and van Witteloostuijn 2010). While establishing a legally independent subsidiary prevents risk associated with low regulatory quality from spilling over to the new affiliate, a flow-through legally belongs to the investing entity and low regulatory quality could directly impact the new affiliate and its business. As a subsidiary shields cross-border investment from risk associated with low regulatory quality, we expect the investing entity to be less sensitive to the tax burden difference. This leads to the following cross-sectional hypothesis:

Hypothesis 3b: *The association between the tax cost of a subsidiary and the probability of establishing a flow-through is weaker for MNCs located in countries with low regulatory quality.*

Establishing a new affiliate can coincide with a market entry in the host country. An MNC that enters a foreign market for the first time has to collect information about tax-

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efficient group structures (Feller and Schanz 2017), evaluate local market conditions, and take strategic decisions, such as how to finance the market entry or how much to invest in the host country. In contrast, an MNC with prior experience in the host country may be able to devote greater effort in establishing tax-efficient group structures. Thus, we expect an investing entity with prior host-country experience to be more sensitive to the tax burden difference. Based on these arguments, we state the following cross-sectional hypothesis:

Hypothesis 3c: *The association between the tax cost of a subsidiary and the probability of establishing a flow-through is stronger for MNCs with prior host-country experience.*

Since a subsidiary and a flow-through differ along several dimensions, the chosen organizational form could have economic consequences for the new affiliate (Demirguc-Kunt et al. 2006). For instance, greater liability exposure associated with a flow-through might reduce an MNCs propensity to take on risk (John, Litov, and Yeung 2008, Acharya, Amihud, and Litov 2011) and alter the investment behavior of the new affiliate (Coles, Daniel, and Naveen 2006). As the non-tax costs of unlimited liability increase with the size of the new affiliate, the MNC has weaker incentives to undertake large and risky investments. At the same time, a low-risk investment strategy is likely to result in lower profitability and requires a less complex group structure in the FDI host country. Based on these arguments, we formulate the following hypothesis:

Hypothesis 4: *Establishing a foreign affiliate as a flow-through is negatively associated with i) risk-taking, ii) investment, iii) profitability, and iv) the complexity of the group structure in the FDI host country.*

3   Data and Research Design

MiDi Database and Supplementary Data Sources

We use the MiDi database of the Deutsche Bundesbank as our primary data source.[10] The MiDi database is a *below firm-level* dataset that provides anonymized micro-level data on the stock of in- and outbound FDI relations in Germany starting in the year 1999.[11] According to the German Foreign Trade and Payments Regulation (*Außenwirtschaftsverordnung*), an inbound FDI relation has to be reported to the Deutsche Bundesbank if an investing entity holds at least 10 percent of the shares or voting rights of a subsidiary or a partnership located in Germany with a balance sheet total of more than EUR 3 million. A German branch or a permanent establishment held by an investing entity also has to be reported if the business assets amount to EUR 3 million and more (Lipponer 2011, Schild and Walter 2017).

Data for the German affiliate includes an identifier, industry affiliation, annual balance sheet positions, and annual turnover, after-tax profit, and the number of employees.[12] The key advantage of the MiDi database is that we can identify the organizational form of the affiliate. This information is either limited or unavailable in conventional data sources, such as Orbis or Compustat. Being an FDI database, the dataset also provides the percentage of shares held by the investing entity and the share of asset and liability positions of the affiliate attributable to the investing entity or other affiliates of the MNC. This includes information on intra-firm debt provided to the affiliate. The main drawbacks of the MiDi database are the lack of income statement information and that data on the investing entity and the parent is limited to an identifier for the investing entity and the respective home countries. We are thus unable to conduct in-depth analysis on the parent and affiliates outside of Germany.

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[10] DOI: 10.12757/Bbk.MiDi.9913.01.01.

[11] Penalties and data appraisal techniques ensure high data quality (Lipponer 2011, Schild and Walter 2017)

[12] Aside from a numeric identifier, the MiDi Database does not include any identifying information for the German affiliate. The firm name of the affiliate is not recorded in the database.

Although the MiDi database limits our analysis to Germany, several arguments suggest that Germany is a powerful setting to examine organizational form choices of MNCs. First, Germany has an extensive double tax treaty network that provides variation in the tax burden difference between organizational forms based on the home country of the investing entity. Since all organizational form choices in our sample are subject to the identical host country regulation, we exploit variation in tax costs and benefits while keeping non-tax characteristics of organizational forms constant. Second, since most existing tax systems are based on common principles, the tax effects of international taxation apply to a large number of country combinations (Huizinga et al. 2008, Huizinga and Voget 2009, Barrios et al. 2012). Third, Germany is a G7 country where MNCs tend to invest for economic reasons, leading to a long-term presence in the host country. Fourth, in contrast to studies using domestic settings (e.g., Petroni and Shackelford 1995), our cross-border approach allows us to test whether country-level differences moderate the effect of taxes on organizational form choices.

We supplement data from the MiDi database with dividend-withholding tax rates, home and host country corporate income tax rates, and information on the home country tax system. We collect this data from corporate tax guides (e.g., Ernst & Young 2005-2013). Data for control variables stems from several sources, including the World Bank's regulatory quality indicators database (World Bank 2005-2013) and Thomson Reuter's Datastream.

Sample Selection

Sample I: Organizational Form Choice Sample

To obtain a sample of organizational form choices, we identify the first observation of an inbound FDI relation in Germany between 1999 and 2013 (18,265 observations). First, we drop observations prior to the year 2005 as information to differentiate newly established from pre-existing affiliates is unavailable prior to 2005 (12,206 observations). Second, we drop observations where the investing entity holds less than 25 percent of the shares of the new affiliate (360 observations). Strategic decisions under German corporate law require the

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consent of more than 75 percent of the shareholders. The 25 percent threshold ensures that the investing entity may influence the organizational form choice for the new affiliate.[13] Third, we drop observations without sufficient tax information (19 observations). Lastly, we exclude observations of pre-existing affiliates where the first observation in the database results from overshooting the reporting threshold (3,498 observations). For the years 2005 to 2013, these restrictions yield 2,182 organizational form choices. Table 1 summarizes the sample selection.

INSERT TABLE 1 HERE

Sample II: Economic Consequences Sample

To study the economic consequences of organizational form choices, we extend our organizational form choice sample to any observation available for a new affiliate in the MiDi database. Starting with the year of the organizational form choice, we obtain 6,798 affiliate-year observations for the years 2005 to 2013. The sample size varies across our empirical tests because some of the regression variables require several years of prior data.

Research Design

Determinants of Organizational Form Choices

To model organizational form choices and to test H1, we estimate the following logistic regression model:

$$\Pr(Flow-Through_i) = \alpha + \beta_1 Taxwedge_t + \sum \beta X + Year + Industry + \varepsilon. \qquad (1)$$

$\Pr(Flow-Through_i)$ is the probability that an investing entity establishes new affiliate *i* as a flow-through. Unless indicated otherwise, we measure variables in the year of the organizational form choice. *Flow-Through* is an indicator variable with the value of one if affiliate *i* is established as a flow-through and zero if established as a subsidiary. *Taxwedge* is our main variable of interest and captures the tax burden difference between organizational

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[13] Our inferences are unchanged when applying alternative thresholds, such as 50, 75, or 100 percent. If the new affiliate is held by multiple investing entities, we keep the observation for the main investor.

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forms. We expect a positive coefficient for β_1, consistent with the probability of establishing affiliate i as a flow-through being positively associated with the tax cost of a subsidiary.

Vector X includes control variables for determinants of organizational form choices. First, we control for characteristics of affiliate i and include *LN(Employ)* as the logarithm of employees and *LN(Assets)* as the logarithm of total assets to proxy for affiliate size. The non-tax benefit of limited liability increases in affiliate size (Liu 2014). We add *LossYear* as an indicator variable with the value of one if affiliate i reports a loss.[14] Losses serve as a risk indicator and increase the non-tax benefit of limited liability (Ayers et al. 1996). *LossYear* also captures potential tax benefits of a cross-border loss offset through a flow-through.

Next, since organizational forms differ in financial-reporting requirements, we include *Leverage* to control for debtholder demand for financial statement information (Armstrong, Guay, and Weber 2010). Further, we include *Roa* as net profit over total assets to control for profitability. We add *Brownfield* as an indicator variable with the value of one if affiliate i is established through a merger and acquisition (M&A) and zero if it is established from scratch (greenfield investment). M&A is more likely to involve a subsidiary because shares in a subsidiary are less costly to transfer. We also include *Distribution* as an indicator variable with the value of one if affiliate i distributes foreign profit in year *t+1, InternDebt* as the ratio of intra-firm debt to total assets and *Intangibles* as an indicator variable with the value of one if affiliate i is established in an intangible-asset intensive industry (Hall, Helmers, Rogers, and Sena 2014). These variables control for immediate profit distributions and income-shifting opportunities, which alter the tax costs and benefits of organizational forms.

Second, we control for characteristics of the investing entity. We add *NumInv* as the number of inbound FDI relations of the investing entity in Germany. A higher number of FDI

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[14] Inferences are unchanged when extending *LossYear* to two or three years of consecutive losses (untabulated). Aside from a risk aspect, *LossYear* might also capture differences in profitability and the likelihood of distributing foreign income. To capture these dimensions, we include *Roa* and *Distribution* as separate control variables.

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relations implies host-country experience and indicates that risk is spread across several affiliates, lowering the non-tax benefit of limited liability. To capture cooperation among investors, we control for the percentage of shares held by the investing entity in affiliate *i* (*Holdings*). Cooperation requires commitment, for instance through unlimited liability, which suggests a negative association between *Holdings* and the probability of establishing a flow-through. We add *DirectFDI* as an indicator variable with the value of one if the investing entity engages in direct investment, and zero for indirect investment. An MNC engages in indirect investment to exploit double tax treaties (Mintz and Weichenrieder 2010, Wamser 2011) or to benefit from regulatory differences between countries (Cerutti et al. 2007). The first strategy requires a subsidiary to obtain tax treaty entitlement, while the second strategy is based on a flow-through that operates via licenses granted to other affiliates.

Third, we control for characteristics of the parent home country. We include *LN(Dist)* as the distance between Germany and the parent home country to capture coordination costs and cross-border frictions. While a flow-through implies low coordination costs (Goolsbee and Maydew 2002), distance leads to cross-border frictions, increasing a subsidiary's non-tax benefit of legal independence. We add *DiffRegQuality* to control for country-level differences in regulatory quality. We use World Bank's regulatory quality indicators, which measure the ability of the government to implement sound regulation (World Bank 2005-2013). A legally independent subsidiary shields FDI from risk associated with low regulatory quality in the parent home country. To control for institutional differences, we follow LaPorta, Lopez-de-Silanes, Shleifer, and Vishny (2008) and include indicator variables for the origin of the home country legal system (*LegorUK*, *LegorFR*, *LegorSC*). We add *Year* and *Industry* fixed effects to capture year shocks and time-invariant industry characteristics. We cluster standard errors at the investing-entity level to account for serial correlation (Petersen 2009).[15]

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[15] Our main inferences are unchanged when using alternative clusters (e.g., industry, year, the home country of the investing entity, or the parent home country).

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To formally test our cross-sectional hypotheses, we include variables in Equation (1) that partition our sample into subsamples in which we expect the association between *Taxwedge* and *Flow-Through* to differ. We explain these tests in more detail below.

Economic Consequences of Organizational Form Choices

To examine economic consequences of organizational form choices and to test H4, we estimate the following OLS regression:

$$Depvar_{it} = \alpha + \beta_1 Flow - Through_i + \sum \beta X + Year + Industry + \varepsilon. \qquad (2)$$

Depvar is a set of dependent variables, which includes *RiskTaking*, *Investment*, *Roa*, and *Complexity*, all measured in year *t*. We follow Langenmayr and Lester (2018) and compute *RiskTaking* as the industry-year adjusted standard deviation of affiliate *i*'s return on assets (*Roa*) over the three-year period *t* to *t+2*. *Investment*, our proxy for annual investment of affiliate *i*, is calculated as the change in fixed and intangible assets from year *t-1* to *t* and divided by lagged total assets. *Roa* is net profit over total assets and captures the profitability of affiliate *i*. *Complexity*, our proxy for the complexity of the group structure in the FDI host country, is the natural logarithm of the number of affiliates held by affiliate *i* in Germany.

In line with Equation (1), *Flow-Through,* our main variable of interest, is an indicator variable with the value of one (zero) if affiliate *i* was established a flow-through (subsidiary). We expect negative coefficients for *Flow-Through* in all tests, consistent with establishing affiliate *i* as a flow-through being negatively associated with risk-taking, investment, profitability, and the complexity of the group structure.

We follow prior research on risk-taking and investment (Cummins, Hassett, and Hubbard 1996, Baker, Stein, and Wurgler 2003, Langenmayr and Lester 2018) and include a set of control variables (Vector **X**). To control for differences in size, the presence of losses, and the availability of internal funds, we add *LN(Employ)*, *LN(Assets)*, *LossYear*, *Leverage*, and *Roa* from Equation (1). To control for investment opportunities, we include *PE-Ratio* as

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the mean price-to-earnings (PE) ratio of publicly listed firms operating in the same industry as affiliate i.[16] In addition, we add *LN(Sales)* as the natural logarithm of sales, *Investment* as the annual change in fixed and intangible assets over lagged total assets, *Cash* as cash over total assets, and *Age* as year t less the year affiliate i was established. We lag *LN(Employ)*, *LN(Assets)*, *Leverage*, *Roa*, *LN(Sales), Investment*, and *Cash* by one year as the value of these variables in year t-1 is likely to be associated with *Depvar* in year t. We include year and industry-fixed effects and again cluster standard errors at the investing-entity level.

4   Results for Determinants of Organizational Form Choices

Descriptive Statistics

Investing entities in our sample are located in 59 home countries, which account for more than 99 percent of all inbound FDI relations recorded in the MiDi database. For each home-country-year, we compute the tax cost of a subsidiary (see Appendix B). Table 2, Panel A suggests that *Taxwedge* varies across home countries.[17] *Taxwedge* is zero for most EU countries because the Parent-Subsidiary-Directive abolished the withholding tax on dividend distributions within the EU. In contrast, *Taxwedge* is high for tax havens, such as the British Virgin Islands or Jersey, because Germany has not signed double tax treaties with these countries. Thus, the dividend-withholding becomes a final burden on a subsidiary's dividend distributions. *Taxwedge* also varies over time. In total, we record 83 changes in *Taxwedge* (45 increases and 38 decreases). 62 changes occur around a 2008 tax reform in Germany, which reduced the corporate income tax rate and the dividend-withholding tax rate. The remaining changes spread across our sample period and stem from changes in home country corporate income tax rates, home country tax systems, or dividend-withholding tax rates.

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[16] We obtain monthly PE-ratios for publicly listed firms in Germany from Datastream. We calculate annual industry-level PE-ratios based on one digit ICB-codes by taking the median. For further details and recent two applications of this measure, see Shroff, Verdi, and Yu (2014) and Amberger, Markle, and Samuel (2019).

[17] In line with Deutsche Bundesbank's confidentiality rules, we present home countries with a minimum of three observations per organizational form that result from three distinct investing entities. Our sample includes another 32 home countries that do not fulfill this confidentiality requirement.

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Organizational form choices in our sample include 1,649 subsidiaries and 533 flow-throughs. The unconditional probability of establishing a flow-through is 24.43 percent (533/2,182). We observe the highest number of new affiliates for investing entities from neighboring countries (e.g., Luxembourg, the Netherlands, Switzerland, and Austria) and from major economies (e.g., the United States and the United Kingdom). Consistent with variation in *Taxwedge*, we observe differences in the relative importance of organizational forms. Despite a *Taxwedge* of zero, investing entities from neighboring countries establish flow-throughs. This is the result of low geographical distance diminishing coordination costs and similarities in legal systems reducing risk associated with unlimited liability. Both aspects reduce the non-tax costs of a flow-through and increase its relative attractiveness.

Panel B presents organizational form choices by sample year. The number of new affiliates increases in sample years 2005-2007 and again after the year 2010. The number of new affiliates decreases between 2008 and 2010, which is likely the result of the global financial crisis. The relative importance of flow-throughs varies over time and increases in sample years 2007-2009 and again in the years 2011-2013. Panel C presents organizational form choices by industry.[18] We observe the highest number of new affiliates in the financial services industry, and the lowest in the transportation industry. The relative importance of flow-throughs is highest in the energy supply and construction industries, and lowest in the wholesale, information and communication, and manufacturing industries. These differences suggest that industry characteristics affect organizational form choices.

INSERT TABLE 2 HERE

Table 3 shows descriptive statistics for the full sample and separately for subsidiaries and flow-throughs. We conduct t-tests (Wilcoxon rank-sum tests) to assess differences in means (medians) between subsamples. The mean of *Taxwedge* is significantly larger for flow-

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[18] We aggregate observations based on one-digit NACE Rev. 2 codes to ensure a meaningful analysis.

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Electronic copy available at: https://ssrn.com/abstract=2929347

throughs (t-statistic -2.86), consistent with investing entities being sensitive to tax burden differences in organizational form choices. The difference in medians is insignificant (z-statistic -0.64) because 80.9 percent of the new affiliates report a *Taxwedge* of zero.[19] The differences in means and medians for remaining variables are in line with our expectations.

<div align="center">INSERT TABLE 3 HERE</div>

Table 4 presents Pearson coefficients for univariate correlations between our dependent and independent variables. In line with the descriptive statistics, the correlation between *Taxwedge* and *Flow-Through* is positive and significant ($p < 0.01$). Thus, the tax cost of a subsidiary is positively associated with the probability of establishing a flow-through, which is consistent with H1. Correlations between the remaining variables are generally consistent with the descriptive statistics.

<div align="center">INSERT TABLE 4 HERE</div>

Tests of H1: Tax Burden Difference and Organizational Form Choices

To test H1, we estimate Equation (1) on the organizational form choice sample and present results in Table 5.[20] In column 1, we exclude year and industry-fixed effects while we estimate the full model in column 3. As predicted, coefficients on *Taxwedge* are positive and significant in both columns ($p < 0.01$). This result suggests that the probability of establishing a flow-through is positively associated with the tax cost of a subsidiary. Results for control variables are generally as expected.[21] For instance, the probability of establishing a flow-through is negatively associated with affiliate size (*LN(Employ)*) and losses (*LossYear*) and

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[19] The share of observations with a *Taxwedge* of zero implies a similar central tendency of *Taxwedge* in both subsamples, which renders the difference in medians insignificant. In Table 9, we drop observations with a *Taxwedge* of zero and obtain results consistent with our baseline findings. We keep these observations in our primary sample because they provide information on non-tax determinants of organizational form choices.

[20] To facilitate a meaningful interpretation, we standardize independent variables to have a mean of zero and a standard deviation of one prior to estimating regressions.

[21] Given the extensive set of control variables, we calculate variance inflation factor scores (VIFs). For the model in column 3, the maximum VIF for our independent variables is 2.61 (*Intangibles*). Among year and industry-fixed effects, the maximum VIF is 3.62 ("*Manufacturing*" industry), which alleviates multicollinearity concerns.

positively associated with profit distributions (*Distribution*) and the number of FDI relations held by the investing entity (*NumInv*).

The area under the receiver operating characteristic (ROC) curve suggests that our regression models exhibit reasonable predictive power (Hosmer, Lemeshow, and Sturdivant 2013). For instance, the regression in column 3 predicts the correct organizational form for 78.9 percent of the observations our sample. Comparing the area under the ROC curve for the regressions in columns 1 and 3, we note that year and industry-fixed effects significantly increase the predictive power of the regression model ($\chi^2 = 42.82$, $p < 0.01$). This indicates that the tax and non-tax determinants captured in our regression model as well as year and industry characteristics explain organizational form choices in our sample.

To gauge the economic significance of our results, we report marginal effects for the independent variables. In column 4, a one standard deviation increase in *Taxwedge* (i.e. by 3.48 percentage points) is associated with a 4.1 percentage point higher probability of establishing a flow-through. In comparison, a one standard deviation increase in *Leverage* (*Roa*) is associated with a 3.7 (7.7) percentage point lower probability of establishing a flow-through.[22] In addition, a likelihood ratio test suggests that adding *Taxwedge* as an independent variable significantly improves the fit of our regression model ($\chi^2 = 18.20$, $p < 0.01$).

Taken together, these results support H1: The probability of establishing a flow-through is positively associated with the tax cost of a subsidiary. The tax burden difference between organizational forms is an economically important determinant of the organizational form an MNC selects for a new affiliate. In fact, the marginal effect of *Taxwedge* is similar to continuous non-tax determinants.

INSERT TABLE 5 HERE

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[22] When calculating marginal effects for year and industry-fixed effects (untabulated), we find that the marginal effect of a specific industry (except for the industry "*Energy Supply*") or a specific year is similar to the marginal effect of categorical non-tax determinants (e.g., *LossYear, Brownfield, DirectFDI*). Thus, the variables in our regression model capture economically important determinants of organizational form choices.

Tests of H2: Income-Shifting Opportunities

H2 predicts that the tax burden difference is less relevant for organizational form choices of MNCs with income-shifting opportunities. To test this, we modify Equation (1) and present results in Table 6. In column 1, we interact *Taxwedge* with *HighIntDebt,* which is an indicator variable with the value of one if intra-firm debt provided to the new affiliate by foreign affiliates is above the sample median. Intra-firm interest payments allow an MNC to repatriate foreign income without triggering the dividend-withholding tax and we expect a lower tax sensitivity for a new affiliate with high intra-firm debt. Consistent with this expectation, the coefficient on *Taxwedge#HighIntDebt* is negative and significant ($p < 0.01$). An F-test suggests that the joint effect of *Taxwedge* and *HighIntDebt* on *Flow-Through* ($\beta1+\beta3$) is indistinguishable from zero ($p = 0.36$). In column 2, we interact *Taxwedge* with *Intangibles* to proxy for income shifting via intra-firm royalty payments on intangible assets. In line with the previous test, we expect and find a negative and significant coefficient on *Taxwedge#Intangibles* (column 3, $p = 0.07$). An F-test suggests that the joint effect of *Taxwedge* and *Intangibles* ($\beta1+\beta5$) is again indistinguishable from zero ($p = 0.25$).

Taken together, these results support H2: The tax cost of a subsidiary is less important for organizational form choices of MNCs with income-shifting opportunities. Repatriation strategies that reduce the extent to which income is e

xposed to international taxation moderate the tax sensitivity of investing entities and dampen the effect tax burden differences between subsidiaries and flow-throughs on organizational form choices.

<center>INSERT TABLE 6 HERE</center>

Tests of H3a, H3b, and H3c: Non-Tax Factors

H3a-c predict that non-tax factors moderate the tax sensitivity of investing entities. To test this, we modify Equation (1) and present results in Table 7. In column 1, we test H3a and

<center>24</center>

interact *Taxwedge* with *HighIndRisk,* which is an indicator variable with the value of one if the new affiliate is established in the manufacturing or wholesale industry. As a subsidiary's non-tax benefit of limited liability is valuable in these capital-intensive industries, we expect *Taxwedge* to be less relevant. Supporting this prediction, the coefficient on *Taxwedge#HighIndRisk* is negative and significant (p = 0.09).[23] An F-test indicates that the joint effect of *Taxwedge* and *HighIndRisk* ($\beta1+\beta3$) is indistinguishable from zero (p = 0.35). These results suggest that the tax burden difference is less relevant for organizational form choices in industries with high industry-specific risk.

In column 3, we test H3b and interact *Taxwedge* with *HighRegDiff*, which is an indicator variable with the value of one if the difference in regulatory quality between Germany and the parent home country is above the sample median. A legally independent subsidiary shields cross-border investment from risk associated with low regulatory quality in the parent home country and we expect the tax cost of a subsidiary to becomes less relevant in an organizational form choice. Consistent with this prediction, we find a negative and significant coefficient on *Taxwedge#HighRegDiff* (p = 0.06). An F-test suggests that the joint effect of *Taxwedge* and *HighRegDiff* ($\beta1+\beta5$) is different from zero (p = 0.04). This suggests that low regulatory quality in the parent home county reduces the relevance of *Taxwedge*.

In column 5, we test H3c and interact *Taxwedge* with *HighExp,* which is an indicator variable with the value of one if the investing entity reports at least one additional inbound FDI relation in Germany at the time it establishes the new affiliate. An MNC with prior host-country experience has greater knowledge of tax-efficient group structures and is more familiar with local market conditions, increasing the importance of tax costs and benefits of

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[23] Depreciation is an alternative explanation for this result. The investing entity might be less sensitive to *Taxwedge* if depreciation diminishes the taxable income of the new affiliate. To examine this, we interact *Taxwedge* with an indicator variable taking the value of one if the ratio of fixed and intangible assets to total assets of the new affiliate is above the sample median. Supporting an explanation based on industry-specific risk, we find a positive and significant coefficient on the interaction (p < 0.01). This result is also in line with fewer income-shifting opportunities and mirrors our findings for intangible-asset intensive industries in Table 6.

organizational forms. In line with this expectation, the coefficient on *Taxwedge#HighExp* is positive and significant (p < 0.01).[24] These results suggest that host-country experience increases the relevance of *Taxwedge* as a determinant of organizational form choices.

Taken together, these results support H3a to H3c: Non-tax factors moderate the relation between the tax burden difference and organizational form choices. Results for industry-specific risk and differences in regulatory quality suggest that MNCs highly value non-tax benefits of limited liability and legal independence associated. Thus, in settings where these non-tax benefits are important, MNCs might weakly respond to tax-law changes in their organizational form choices.

<div align="center">INSERT TABLE 7 HERE</div>

Difference-in-Differences Analysis: 2008 Tax Reform in Germany

To rule out that correlated omitted variables might drive our results, we examine a 2008 tax reform in Germany that provided a plausibly exogenous shock to the tax cost of a subsidiary. The reform was enacted in August 2007 and implemented in two steps. First and effective from January 1, 2008, the corporate income tax rate, including the local business tax, was reduced by 9 percentage points (OECD 2019). In a second step, the dividend-withholding tax was reduced by 10.6 percentage points, effective from January 1, 2009. While the lower corporate income tax rate led to an increase in *Taxwedge*, this effect was more than offset by the reduction in the dividend-withholding tax. For investing entities from countries affected by the reform, these changes led to a net decrease in *Taxwedge*. In contrast, the reform did not change the tax cost of a subsidiary for countries with a *Taxwedge* of zero prior to the reform.

We exploit these features in a difference-in-differences (DiD) research design. To this end, we add *Reform* and *Post* to Equation (1). *Reform* is an indicator variable with the value of one if the investing entity is located in a country for which *Taxwedge* changed through the

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[24] An F-test suggests that the joint effect of *Taxwedge* and *HighExp* ($\beta1+\beta7$) is larger than zero (p < 0.01).

reform (treatment observations), and zero if *Taxwedge* equals zero in the entire sample period (control observations). *Post* is an indicator variable with the value of one for organizational form choices after the reform (i.e. 2008 or later). We interact *Reform* with *Post* to assess whether the reform altered the probability of establishing a flow-through for treatment observations relative to investing entities located in countries that were not affected by the reform. Since the reform lead to a decrease in *Taxwedge*, we expect a negative coefficient on *Reform#Post*, consistent with a lower probability of establishing a flow-through after the reform. We present this analysis as supplementary because every new affiliate contributes only one observation to our sample. Thus, rather than tracking affiliates over time, we test whether the reform altered the probability of establishing a new affiliate as a flow-through.

We present results in Table 8. In column 1, coefficients on *Reform* and *Post* are positive and significant (all p < 0.01). These results suggest that the probability of establishing a flow-through is generally higher for investing entities located in countries affected by the reform and for observations in the post-reform period. Importantly, we find a negative and significant coefficient on *Reform#Post* (p = 0.06). This result indicates that, relative to the control observations, the probability of establishing a flow-through in the post-reform period is lower for investing entities located in a country affected by the reform.

In column 2, we replace *Post* with year indicators to assess whether treatment and control observations exhibit similar pre-reform trends in the probability of establishing a flow-through. Using 2007 as a reference year, we find insignificant coefficients on *Reform#Year2005* and *Reform#Year2006* (all p < 0.26). These results indicate that the probability of establishing a flow-through does not differ between treatment and control observations prior to the reform, providing support for parallel pre-reform trends. Coefficients on the remaining interactions are negative and significant starting in 2010. Thus, the tax reform affected organizational form choices from 2010 onwards, which seems reasonable given the staggered implementation of the reform.

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Overall, the results in this section suggest that a reduction in *Taxwedge* lowered the probability of establishing a new affiliate as a flow-through. We therefore conclude that the tax cost of a subsidiary has a likely causal effect on organizational form choices of MNCs.

INSERT TABLE 8 HERE

Robustness Tests

To provide additional evidence for the robustness of our findings, we conduct a battery of sensitivity tests and report results in Table 9. First, we re-estimate Equation (1) with annual changes in *Taxwedge*. Specifically, we apply *ΔTaxwedge,* which is *Taxwedge* in year *t+1* less *Taxwedge* in year *t*. In column 1, the coefficient on *ΔTaxwedge* is positive and significant ($p = 0.07$). In line with the results in the previous section, this test further alleviates concerns that omitted variables might drive our baseline findings.

To assess whether large MNCs and their investing entities drive our results, we drop observations of investing entities that establish more than one affiliate in our sample. Although reducing the sample to 1,655 observations, the coefficient on *Taxwedge* in column 2 remains positive and significant ($p = 0.01$). The marginal effect of *Taxwedge* is similar to the baseline estimate in column 4 of Table 5. Thus, large MNCs and investing entities with one affiliate exhibit a similar sensitivity to tax burden differences in organizational form choices.

Next, we drop observations with a *Taxwedge* of zero (column 3) and observations of investing entities located in a tax haven (column 4).[25] Corroborating our baseline results, coefficients on *Taxwedge* are positive and significant in both columns ($p = 0.05$). The marginal effect in column 3 is slightly larger than our baseline estimate. These results alleviate concerns that observations with a *Taxwedge* of zero might affect our results and that our findings might not generalize beyond investing entities located in tax havens.

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[25] From the home countries in Panel A of Table 2, we drop observations of investing entities located in the British Virgin Islands, Cyprus, Jersey, Liechtenstein, Luxembourg, Mauritius, and Switzerland (see Gravelle 2009).

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In column 5, we separately include the two components of *Taxwedge*: (i) the dividend-withholding tax (*Wht*) and (ii) the corporate income tax levied or the tax credit granted in the home country of the investing entity (*HomeTax*). We find positive and significant coefficients for components (p = 0.02). These results suggest that the tax sensitivity of an MNC is not limited to the dividend-withholding tax. Investing entity consider the tax treatment of foreign income in the home country when selecting an organizational form for a new affiliate.[26]

INSERT TABLE 9 HERE

5   Results for Economic Consequences of Organizational Form Choices

Descriptive Statistics

In Table 10, we report descriptive statistics for the economic consequences sample and present results for tests of differences in means and medians between subsidiaries and flow-throughs. Recall that this sample includes any observation available for a new affiliate in the MiDi database for the sample period 2005 to 2013. As expected and in line with H4, a new affiliate established as a flow-through exhibits lower risk raking (*RiskTaking,* p < 0.01), lower investment (*Investment,* p = 0.01), and a lower profitability (*Roa*, p < 0.01) than a new affiliate established as a subsidiary. In addition, a flow-through holds fewer affiliates in Germany (*Complexity,* p <0.01), which is consistent with a less complex group structure.

INSERT TABLE 10 HERE

In Table 11, we report Pearson coefficients for univariate correlations between our dependent and independent variables. *Flow-Through* exhibits a negative correlation with three out of four dependent variables (*RiskTaking*, *Roa*, and *Complexity*), which is significant at the one-percent level. The correlation between *Flow-Through* and *Investment* is negative but

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[26] In additional tests (untabulated), we drop observations if the new affiliate is established in a regulated industry and observations if the parent is located in a tax haven (Gravelle 2009). We continue to find positive and significant coefficients on *Taxwedge* in both tests, which further supports the robustness of our results.

insignificant (p = 0.03). These correlations are in line with the descriptive statistics in Table 10 and generally consistent with our expectations.

INSERT TABLE 11 HERE

Tests of H4: Economic Consequences of Organizational Form Choices

Testing H4 and examining the economic consequences of organizational form choices raises endogeneity concerns, because self-selection into a subsidiary or a flow-through based on tax and non-tax costs and benefits of organizational forms could bias inferences from Equation (2). To address this concern, we follow Leuz and Verrecchia (2000) and re-estimate Equation (1) on the organizational form choice sample using a probit regression. Results in Table 12, Panel A are very similar to our baseline findings. From this first-stage regression, we calculate the inverse mills ratio and include this measure as an additional control variable in second-stage regressions based on Equation (2).[27]

Panel B presents results from estimating Equation (2) for all dependent variables. As predicted, *Flow-Through* is negatively associated with *RiskTaking* (p < 0.01), *Roa* (p = 0.01), and *Complexity* (p = 0.02). For *Investment*, the coefficient on *Flow-Through* is negative but insignificant (p = 0.81).[28] These results support H4: Compared to a subsidiary, a new affiliate established as a flow-through takes on less risk, is less profitable, and is associated with a less complex group structure. Thus, the organizational form selected for cross-border investment could have economic consequences for the MNC and the new affiliate.

INSERT TABLE 12 HERE

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[27] To obtain reliable estimates, this approach requires a variable that fulfills the exclusion restriction, i.e. a variable that affects the dependent variable in the second-stage regression only through the organizational form choice modelled in the first stage. We believe that *Taxwedge* fulfills this requirement in our setting because this variable captures the tax burden difference between organizational forms. This tax burden difference should not be directly associated with risk-taking, investment, profitability, or group-structure complexity. In fact, we find insignificant coefficients when including *Taxwedge* in Equation (2) (untabulated).

[28] The inverse mills ratio is insignificant in three out of four regressions, which suggests that our results do not seriously suffer from endogeneity concerns.

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In Table 13, we test whether choosing an organizational form to exploit a tax benefit has distinct consequences for the new affiliate. To this end, we interact *Flow-Through* with *Taxwedge* in the year the new affiliate was established. Results for the main effect of *Flow-Through* are similar to Table 12. However, the coefficient on *Flow-Through#Taxwedge* is negative and significant for *Investment* (p = 0.02) and positive and significant for *Complexity* (p < 0.01). These results suggest that selecting a flow-through because of a tax benefit is associated with lower investment and a more complex group structure. MNCs tend to establish a flow-through at the first layer of their group structure to reap a tax benefit while spreading risk associated with unlimited liability across affiliates held by the flow-through.

INSERT TABLE 13 HERE

6   Conclusion

We examine the association between international taxation and organizational form choices of MNCs. Analyzing micro-level data on inbound FDI relations in Germany, we document that the tax burden difference between subsidiaries and flow-throughs is an economically important determinant of these decisions. This effect, which is comparable in magnitude to non-tax determinants, is weaker for MNCs with income-shifting opportunities and for organizational form choices subject to high industry-specific risk and large country-level differences in regulatory quality. Investing entities with prior host-country experience are more sensitive to the tax burden difference. We also exploit a 2008 tax reform in Germany and find that a reduction in the tax cost of a subsidiary lowered the probability of establishing a new affiliate as a flow-through, providing support for a causal interpretation of our findings.

We also shed light on the economic consequences of organizational form choices. Our results suggest that, compared to a subsidiary, a new affiliate established as a flow-through takes on less risk, is less profitable, and is associated with a less complex group structure. In

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addition, we find that selecting a flow-through because of a tax benefit is associated with lower investment and a more complex group structure.

Our findings offer several insights for researchers and policy makers interested in group structures of MNCs and the design of targeted tax rules for organizational forms. First, we add to studies on the determinants of organizational form choices. While prior research shows that non-tax factors tend to dominate organizational form choices in domestic settings, our findings suggest that taxes are an important determinant for MNCs. Thus, MNCs might respond more strongly to tax-law changes in their organizational form choices than domestic or standalone firms. Second, we extend research on group structures of MNCs by showing that international taxation is associated with the organizational form of foreign affiliates. Host-country tax rules might not only attract cross-border investment but also shape its organizational form. Third, we show that organizational form choices and differences in the taxation of organizational forms could have economic consequences and that the legal form selected for FDI might indicate differences in risk-taking or investment within MNCs.

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Appendix A: Variable Descriptions

Dependent Variables

Flow-Through	Indicator variable with the value of one if the new affiliate *i* is established in year *t* as a flow-through, and zero otherwise (i.e. as a subsidiary). Source: MiDi-Database, variable *re1* = 3 or 4, Schild and Walter (2017).
RiskTaking	Risk-taking of affiliate *i* in year *t* as standard deviation of *Roa* over the three-year period *t* to *t+2* and adjusted for the industry-year mean of *RiskTaking* (based on one-digit NACE Rev. 2 industry codes). Source: variable *Roa*.
Investment	Investment of affiliate *i* in year *t* as change in fixed and intangible assets from year *t-1* to *t* and divided by total assets in year *t-1*. Source: MiDi-Database, variables *(p11[t]–p11[t-1])/p40[t-1]*100*, Schild and Walter (2017).
Roa	Return on assets of affiliate *i* in year *t* as net profit in year *t* and divided by total assets in year *t*. Source: MiDi-Database, variables *p32/p40*, Schild and Walter (2017).
Complexity	Natural logarithm of the number of inbound FDI relations held by affiliate *i* in Germany in year *t*. Source: MiDi-Database, natural logarithm of the sum of variable *nu2*, Schild and Walter (2017).

Tax Variables

Taxwedge	Tax cost of a subsidiary for foreign income earned in affiliate *i* in year *t*. The variable is calculated conditional on the home country of the investing entity. We collect information from Worldwide Corporate Tax Guides and domestic tax law. Source: Worldwide Corporate Tax Guides 2005-2013, Ernst & Young (2005-2013); own calculations.
Wht	Dividend-withholding tax levied in Germany on a subsidiary's dividend distributions in year *t*. The variable is calculated conditional on the home country of the investing entity. We collect information from German tax law and double tax treaties in place between Germany and the home country of the investing entity. Source: German Double Tax Treaties, German Domestic Tax Law.
HomeTax	Corporate income tax levied or tax credit granted in the home country of the investing entity on foreign income earned in affiliate *i* in year *t*. The variable is calculated conditional on the home country of the investing entity. We collect information from Worldwide Corporate Tax Guides and domestic tax law. Source: Worldwide Corporate Tax Guides 2005-2013, Ernst & Young (2005-2013); own calculations.

Control Variables: Determinants of Organizational Form Choices

LN(Employ)	Natural logarithm of 1 plus the number of employees of affiliate *i* in year *t*. Source: MiDi-Database, variable *ln(1+p05)*, Schild and Walter (2017).
LN(Assets)	Natural logarithm of 1 plus total assets of affiliate *i* in year *t*. Source: MiDi-Database, variable *ln(1+p40)*, Schild and Walter (2017).
LossYear	Indicator variable with the value of one if affiliate *i* reports a loss in year *t,* and zero otherwise. Source: MiDi-Database, variable *p32 < 0*, Schild and Walter (2017).

Leverage	Debt ratio of affiliate *i* in year *t* as total debt in year *t* and divided by total assets in year *t*. Source: MiDi-Database, variables *p33/p40*, Schild and Walter (2017).
Brownfield	Indicator variable with the value of one if affiliate *i* is established in year *t* through M&A, and zero otherwise (i.e. through greenfield investment). Source: MiDi-Database, variable *em1= 2*, Schild and Walter (2017).
Distribution	Indicator variable with the value of one if affiliate *i* distributes profit in year *t+1*, and zero otherwise. We identify distributions as a reduction in total equity from year *t* to *t+1* (total equity in year *t* + profit in year *t* + retained profit in year *t* – total equity in year *t+1* – retained profit in year *t+1*). Source: MiDi-Database, *Distribution = variables p23[t]+p29[t]+p30[t]+p32[t]+p31[t]–p23[t+1]–p29[t+1] –p30[t+1]– p31[t+1]*, Schild and Walter (2017).
InternDebt	Internal debt ratio of affiliate *i* in year *t* as intra-firm debt in year *t* and divided by total assets in year *t*. Source: MiDi-Database, variables *p34/p40* (for sample years 2005-2008) and (*p35+p37*)/*p40* (for sample years 2009-2013), Schild and Walter (2017).
Intangibles	Indicator variable with the value of one if affiliate *i* is established in year *t* in an intangible-asset intensive industry, and zero otherwise. We classify industries according to the following NACE Rev. 2 industry codes as intangible-asset intensive: 1900, 2000, 2100, 2600, 2700, 2800, 2900, 5800, 5900, 6000, 6100, 6200, 6300. Source: MiDi-Database, variable *br1,* Schild and Walter (2017).
NumInv	Number of inbound FDI relations of the investing entity in Germany in year *t*. Source: MiDi-Database, sum of variable *nu4*, Schild and Walter (2017).
Holdings	Percentage of shares held by the investing entity in affiliate *i* in year *t*. Source: MiDi-Database, variable *bgu*, Schild and Walter (2017).
DirectFDI	Indicator variable with the value of one if the investing entity is located in the same country as the parent in year *t*, and zero otherwise. Source: MiDi-Database, variables *lan = la4*, Schild and Walter (2017).
LN(Dist)	Natural logarithm of the distance in kilometers between the capital city of the parent home country and Germany. Source: Gleditsch (2013).
DiffRegQuality	Difference in regulatory quality between Germany and the parent home country in year *t*. Regulatory quality is measured in annual percentile ranks. Source: Worldwide Governance Indicators 2005-2013, World Bank (2005-2013).
LegorUK	Indicator variable with the value of one if the parent home country legal system is of British legal origin, and zero otherwise. Source: LaPorta et al. (2008).
LegorFR	Indicator variable with the value of one if the parent home country legal system is of French legal origin, and zero otherwise. Source: LaPorta et al. (2008).
LegorSC	Indicator variable with the value of one if the parent home country legal system is of Scandinavian legal origin, and zero otherwise. Source: LaPorta et al. (2008).

Control Variables: Economic Consequences of Organizational Form Choices

PE-Ratio	Price-to-earnings ratio for all publicly listed firms operating in the same industry as affiliate i. *PE-Ratio* is calculated for year t as the median of monthly price-to-earnings ratios. Source: Datastream.
LN(Sales)	Natural logarithm of 1 plus total sales of affiliate i in year t. Source: MiDi-Database, variable *ln(1+p04*1000)*, Schild and Walter (2017).
Cash	Cash holdings of affiliate i in year t as assets other than fixed assets, intangible assets, financial assets, and current assets in the form of claims in year t and divided by total assets in year t. Source: MiDi-Database, variable *p21/p40*, Schild and Walter (2017).
Age	Age of affiliate i in year t as year t less the year in which affiliate i was established. Source: MiDi-Database, *jhr*, Schild and Walter (2017).

Partitioning and Difference-in-Differences Variables

HighIntDebt	Indicator variable with the value of one if the ratio of intra-firm debt provided by foreign affiliates to total assets of affiliate i in year t is above the sample median, and zero otherwise. Source: MiDi-Database, variables *p37/p40*, Schild and Walter (2017).
HighIndRisk	Indicator variable with the value of one if affiliate i is established in year t in the manufacturing or wholesale industry, and zero otherwise. Manufacturing denotes industry classification C and wholesale industry classification G (one-digit NACE Rev. 2 industry codes). Source: MiDi-Database, variable *br1*, Schild and Walter (2017).
HighRegDiff	Indicator variable with the value of one if the difference in the regulatory quality between Germany and the parent home country in year t is above the sample median, and zero otherwise. Source: variable *DiffRegQuality*.
HighExp	Indicator variable with the value of one if the investing entity holds at least one additional inbound FDI relation in Germany in year t, and zero otherwise. Source: variable *NumInv*.
Reform	Indicator variable with the value of one if the 2008 tax reform in Germany led to a change in *Taxwedge* for the home country of the investing entity, and zero if *Taxwedge* for the home country of the investing entity is equal to zero for the entire sample period. Source: variable *Taxwedge*.
Post	Indicator variable with the value of one for sample years after the 2008 tax reform in Germany (i.e. year 2008 or later), and zero for sample years before the 2008 tax reform. Source: variable *jhr*.

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Appendix B: Tax Cost of a Subsidiary

As outlined in Section 2, foreign income earned in a subsidiary and a flow-through is subject to three layers of international taxation. The first layer is the corporate income tax τ_c^{host} in the host country (Layer 1 in Figure 1). While a subsidiary is subject to unlimited tax liability in the host country, the investing entity faces limited tax liability when choosing a flow-through. In both cases, the host country taxes income earned at τ_c^{host} (Article 7 OECD Model Tax Convention, OECD 2017). For Germany, τ_c^{host} is equal to 38.6 percent for the first sample years but reduces to 29.8 percent after 2007. These tax rates include a solidarity surcharge and the local business tax (*Gewerbesteuer*) levied by German municipalities. We use average tax rates because municipalities enjoy some leeway in setting local business tax rates.

The second layer is the dividend-withholding tax τ_w levied on a subsidiary's dividend distributions (Layer 2 in Figure 1). This tax applies when profit is distributed to the investing entity. Thus, τ_w has the character of a shareholder-level tax (Scholes et al. 2014, Utke 2019) and a repatriation tax (Desai, Foley, and Hines 2001). The German tax rate on distributions to non-EU countries and to countries without a double tax treaty was 26.4 percent for the first sample years but decreased to 15.8 percent as from 2009. For home countries that have singed a double tax treaty with Germany, τ_w ranges from 5 to 15 percent. The Parent-Subsidiary Directive abolishes τ_w for dividend distributions to EU countries.[29] A flow-through is not subject to this layer of international taxation.[30]

The third layer is the corporate income tax τ_c^{home} in the home country (Layer 3 in Figure 1). To mitigate double taxation, the home country either exempts foreign income from τ_c^{home} (territorial tax system) or taxes foreign income at τ_c^{home} while granting a tax

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[29] This exemption applies to investing entities that hold at least 10 percent of the shares in a subsidiary. Since we limit our analysis to investing entities that hold at least 25 percent in the new affiliate (see Section 3.2), dividend-withholding tax rates for investing entities located in the EU are equal to zero in our sample.

[30] Some countries might levy a tax on the profit distributions of a branch to equally tax subsidiaries and branches. Such a tax, however, does not apply in our setting.

credit for τ_w and τ_c^{host} (worldwide tax system). In rare cases, the home country taxes foreign income at τ_c^{home} without granting relief from double taxation.

Territorial tax systems differ in the extent to which foreign income is exempt from τ_c^{home}. Home countries may fully exempt foreign income or tax a fraction w at τ_c^{home}. Thus, for an investing entity from a home country with a territorial tax system, the effective tax burden on foreign income earned in a subsidiary T_S or in a flow-through T_F is given by

$$T_S = \tau_c^{host} + (1 - \tau_c^{host}) * \tau_w + (1 - \tau_c^{host}) * w * \tau_c^{home},$$

$$T_F = \tau_c^{host} + (1 - \tau_c^{host}) * w * \tau_c^{home}.$$

Under a worldwide tax system, the home country taxes foreign income earned in a subsidiary when distributed to the investing entity. To mitigate double taxation, the home country grants a tax credit, which is limited to τ_c^{home}. In case of a direct tax credit, τ_w is credited and the investing entity is subject to home county corporate income tax in excess of $(1 - \tau_c^{host}) * \tau_w$. An indirect tax credit also includes τ_c^{host}, and the investing entity is subject to home country corporate income tax in excess of $\tau_c^{host} + (1 - \tau_c^{host}) * \tau_w$. In case of a flow-through, the home country taxes foreign income when earned and grants a tax credit for τ_c^{host}. The investing entity is subject to home country corporate income tax in excess of τ_c^{host}. For an investing entity from a home country with a worldwide tax system, the effective tax burden on foreign income earned in a subsidiary T_S or in a flow-through T_F is given by

$$T_S = \max\{\tau_c^{host} + (1 - \tau_c^{host}) * \tau_w; \ \tau_c^{host} + (1 - \tau_c^{host}) * \tau_c^{home}\}, \text{(direct tax credit)}$$

$$T_S = \max\{\tau_c^{host} + (1 - \tau_c^{host}) * \tau_w; \ \tau_c^{home}\}, \text{(indirect tax credit)}$$

$$T_F = \max\{\tau_c^{host}; \ \tau_c^{home}\}.$$

Some home countries neither exempt foreign income from τ_c^{home} nor grant a tax credit for τ_w and τ_c^{host}, which results in double taxation of foreign income. For an investing entity

from a home country that does not grant any relief from double taxation, the effective tax burden on foreign income earned in a subsidiary T_S or in a flow-through T_F is given by

$$T_S = \tau_c^{host} + (1 - \tau_c^{host}) * \tau_w + \tau_c^{home},$$

$$T_F = \tau_c^{host} + \tau_c^{home}.$$

In the table below, we derive the tax burden difference between organizational forms and determine the tax cost of a subsidiary for each home country tax system. As discussed in Section 2, a subsidiary induces a higher tax burden equal to the dividend-withholding tax if the investing entity is located in a home country with a territorial tax system or in a home country that does not grant any relief from double taxation. If the investing entity is located in a home country with a worldwide tax system, tax cost of a subsidiary depends on the corporate income tax rates in the host and the home country and the tax credit granted.

Home Country Tax System	Tax Cost of a Subsidiary $(T_S - T_F)$
Territorial tax system	$(1 - \tau_c^{host}) * \tau_w$
Worldwide tax system (direct tax credit)	
if $\tau_c^{host} > \tau_c^{home} > \tau_w$	$(1 - \tau_c^{host}) * \tau_w$
if $\tau_c^{host} > \tau_c^{home} \wedge \tau_w > \tau_c^{home}$	$(1 - \tau_c^{host}) * \tau_w$
if $\tau_c^{home} > \tau_c^{host} \wedge \tau_c^{home} > \tau_w$	$\tau_c^{host} - \tau_c^{home} * \tau_w$
if $\tau_w > \tau_c^{host} > \tau_c^{home}$	$\tau_c^{host} + (1 - \tau_c^{host}) * \tau_w - \tau_c^{home}$
Worldwide tax system (indirect tax credit)	
if $\tau_c^{host} > \tau_c^{home}$	$(1 - \tau_c^{host}) * \tau_w$
if $\tau_c^{home} > \tau_c^{host} + (1 - \tau_c^{host}) * \tau_w > \tau_c^{host}$	0
if $\tau_c^{host} + (1 - \tau_c^{host}) * \tau_w > \tau_c^{home} > \tau_c^{host}$	$\tau_c^{host} + (1 - \tau_c^{host}) * \tau_w - \tau_c^{home}$
No relief from double taxation	$(1 - \tau_c^{host}) * \tau_w$

Note: This table presents the tax burden difference between a subsidiary and a flow-through. We derive the tax cost of a subsidiary for each home country tax system. T_S is the tax burden on foreign income earned in a subsidiary and T_F on foreign income earned in a flow-through, respectively. τ_c^{host} is the statutory corporate income tax rate in the host country. The host country taxes income earned in a subsidiary and a flow-through at τ_c^{host}. τ_w is the statutory dividend-withholding tax rate on a subsidiary's dividend distributions. This tax does not apply on a flow-through. τ_c^{home} is the statutory corporate income tax rate in the home country. To mitigate double taxation, the home country either exempts foreign income from tax (territorial tax system) or taxes foreign income at the home country corporate income tax rate while granting a tax credit for the dividend-withholding tax and the host country corporate income tax (worldwide tax system with direct or indirect tax credit). Some countries do not grant relief from double taxation.

Appendix C: Overview of Organizational Forms in Germany

The following table provides an overview of the organizational forms available to an MNC in Germany. We describe the characteristics of the organizational forms for commercial law and tax law. We classify organizational forms into flow-throughs and subsidiaries.

Flow-Throughs	
Branch/Permanent Establishment	A branch (permanent establishment) is the place through which an enterprise carries out its business (§ 13 German commercial code). The enterprise establishing a branch is subject to unlimited liability under commercial law. A branch has no legal personality for domestic or international tax purposes. Germany taxes income generated by a German branch while taking any double tax treaty into account (see Article 7 OECD Model Tax Convention). For domestic and international tax purposes, income of a branch is attributed to the enterprise establishing the branch. No dividend-withholding taxes apply when profits flow to the enterprise establishing the branch.
OHG (= General Partnership)	An OHG is a general partnership operated by two or more parties that are subject to unlimited liability under commercial law. An OHG has no legal personality for domestic and international tax purposes. The tax treatment of an OHG is identical to a branch.
KG (= Limited Partnership)	A KG is a limited partnership operated by two or more parties where at least one party is subject to unlimited liability under commercial law. The liability of the other party is limited to the equity stake in the partnership. A KG has no legal personality for domestic and international tax purposes. The tax treatment of a KG is identical to a branch.
Subsidiaries	
AG (= Corporation eligible for having its shares traded on a stock exchange)	An AG is a corporation established under German corporate law as has at least one shareholder. An AG is eligible for having its shares traded on a stock exchange. Shareholders of an AG are subject to limited liability under commercial law. An AG has legal personality for domestic and international tax purposes. Germany taxes income generated by an AG registered or head-quartered in Germany. Profit distributions to shareholders are subject to a dividend-withholding tax.
GmbH (= Corporation *not* eligible for having its shares traded on a stock exchange)	A GmbH is a corporation established under German corporate law and has at least one shareholder. In contrast to an AG, a GmbH is not eligible for having its shares traded on the stock exchange. The liability consequences and the tax treatment are identical to an AG.
Societas Europae (= Corporation under corporate law of the European Union)	The societas europaea is a corporation established under the corporate law of the European Union and has at least one shareholder. The liability consequences and the tax treatment are identical to an AG.

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Figures

Figure 1
International Taxation and Organizational Forms
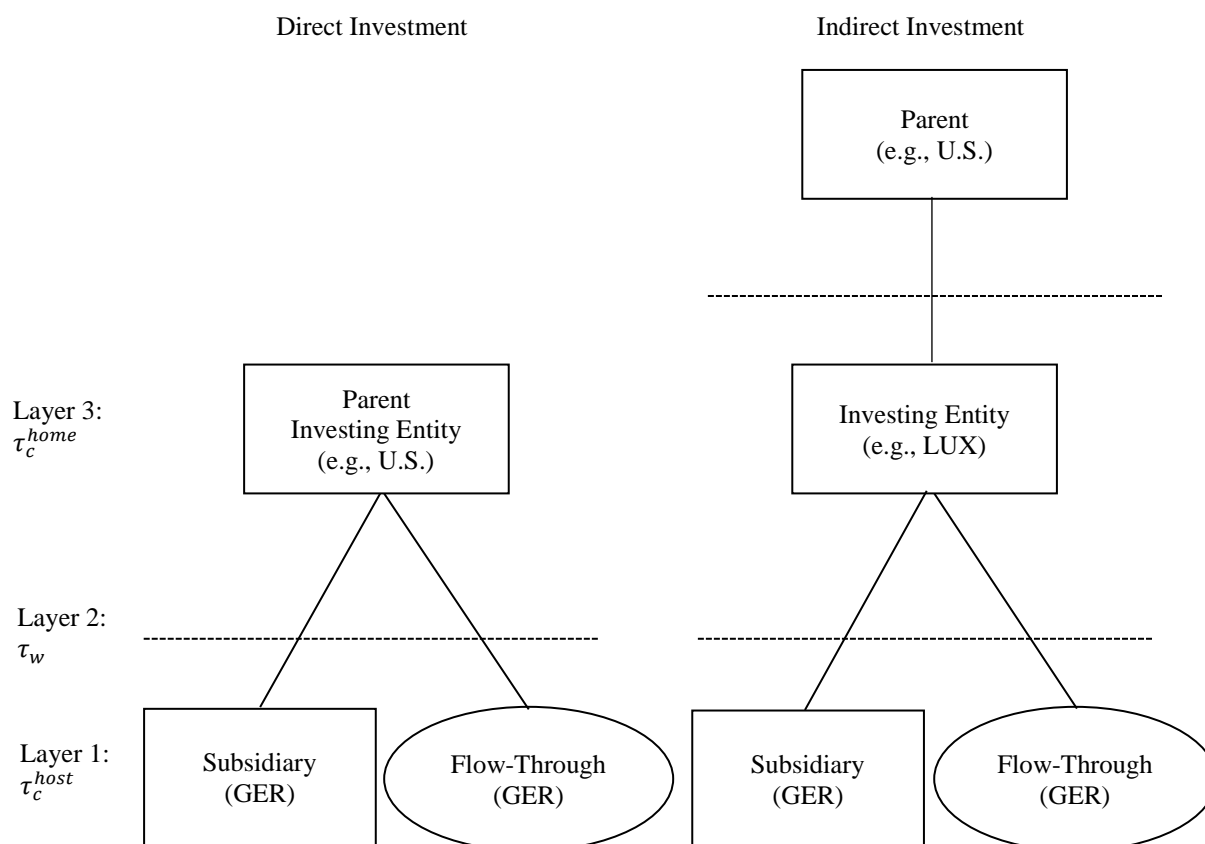
Note: This figure outlines the three layers of international taxation. The investing entity selects an organizational form for a new affiliate in the host country (Germany). The investing entity is part of an MNC and located either in the same country as the parent (e.g., the United States: direct investment) or in a different country (e.g., Luxembourg: indirect investment). The three layers of international taxation determine the tax burden on foreign income earned in a subsidiary and a flow-through, respectively. Layer 1 is the statutory corporate income tax in the host country (τ_c^{host}). The host country taxes income earned in a subsidiary and a flow-through at τ_c^{host}. Layer 2 is the statutory dividend-withholding tax (τ_w) levied on a subsidiary's dividend distributions. This tax does not apply to a flow-through. Layer 3 is the statutory corporate income tax in the home country (τ_c^{home}). The home county taxes foreign income when earned in the host country or when repatriated to the investing entity. To mitigate double taxation, the home country either exempts foreign income from tax (territorial tax system) or taxes foreign income at the home country corporate income tax rate while granting a tax credit for the dividend-withholding tax and the host country corporate income tax (worldwide tax system with direct or indirect tax credit). Some home countries do not grant relief from double taxation.

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Tables

Table 1

Sample Selection (Organizational Form Choice Sample)

Data Restrictions	Observations
First observation of inbound investment in Germany (years 1999-2013)	18,265
Less observations before 2005	-12,206
Less observations where the main investor holds < 25 percent of the shares	-360
Less observations with insufficient data to calculate *Taxwedge*	-19
Less observations of pre-existing firms	-3,498
Organizational Form Choice Sample	2,182

Note: This table presents the sample selection for the organizational form choice sample. The sample includes the first observation of a new affiliate in Germany (sample years 2005-2013). We define variables in the Appendix. Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

Table 2
Sample Composition
Panel A: *Taxwedge* and Observations by Home Country

Home Country	*Taxwedge* Mean	Subsidiaries N	Flow-Throughs N	Total N
Austria	0.00	131	34	165
Belgium	1.11	25	8	33
British Virgin Islands	13.12	6	0	6
Canada	3.19	9	3	12
China	6.53	25	3	28
Cyprus	1.56	19	3	22
Czech Republic	6.21	5	0	5
Denmark	0.00	36	18	54
Finland	0.00	18	0	18
France	0.00	80	17	97
Ireland	0.00	18	6	24
Italy	0.95	35	9	44
Jersey	13.12	12	24	36
Liechtenstein	9.10	4	8	12
Luxembourg	0.00	367	133	500
Malaysia	3.27	3	0	3
Mauritius	3.27	3	0	3
Mexico	3.19	3	0	3
Netherlands	0.00	237	85	322
Norway	0.33	10	3	13
Republic of Korea	16.68	8	0	8
Russian Federation	11.35	3	0	3
Spain	-0.02	31	5	36
Sweden	0.00	38	4	42
Switzerland	0.00	135	55	190
United Kingdom	0.00	130	45	175
United States	0.93	128	24	152
Additional Observations		130	46	176
Total		**1,649**	**533**	**2,182**

Panel B: Observations by Sample Year

Years	Subsidiaries	Flow-Throughs	Total
2005	136	25	161
2006	274	37	311
2007	240	66	306
2008	187	70	257
2009	141	56	197
2010	126	30	156
2011	192	51	243
2012	174	100	274
2013	179	98	277
Total	1,649	533	2,182

Panel C: Observations by Industry

Industries	Subsidiaries	Flow-Throughs	Total
Manufacturing	287	46	333
Energy Supply	25	58	83
Construction	237	147	384
Wholesale	137	11	148
Transportation	36	11	47
Information and Communication	41	7	48
Financial Services	481	154	635
Professional Services	325	78	403
Other Services	80	21	101
Total	1,649	533	2,182

Note: This table presents information on the sample composition. Panel A presents the mean tax cost of a subsidiary (*Taxwedge*) and the number of observations by home country of the investing entity. In line with Deutsche Bundesbank's confidentiality rules, we present home countries with a minimum of three observations per organizational form that result from three distinct investing entities. Our sample includes another 32 home countries that do not fulfill this confidentiality requirement. These observations are summarized under *Additional Observations*. Panel B presents observations by sample year. Panel C presents observations by industry. Industry classification is based on one-digit NACE Rev. 2 industry codes. We define variables in the Appendix. Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

Table 3
Descriptive Statistics (Organizational Form Choice Sample)

Variables	N	Full Sample Mean	SD	Subsidiaries (N = 1,649) Mean	SD	Flow-Throughs (N = 533) Mean	SD	t-statistics	z-statistics
Flow-Through	2,182	0.244	0.430	0.000	0.000	1.000	0.000		
Taxwedge	2,182	1.137	3.479	0.996	3.157	1.573	4.300	-2.862***	-0.643
LN(Employ)	2,182	1.577	2.143	1.725	2.188	1.118	1.926	6.109***	6.351***
LN(Assets)	2,182	17.280	1.558	17.300	1.567	17.200	1.527	1.355	1.402
LossYear	2,182	0.527	0.499	0.563	0.496	0.413	0.493	6.124***	6.053***
Leverage	2,182	0.654	0.574	0.652	0.575	0.661	0.572	-0.290	-0.078
Roa	2,182	-0.027	0.190	-0.015	0.166	-0.064	0.247	4.306***	-0.002
Brownfield	2,182	0.518	0.500	0.530	0.499	0.482	0.500	1.921*	1.921*
Distribution	2,182	0.227	0.419	0.200	0.400	0.313	0.464	-5.083***	-5.449***
InternDebt	2,182	0.309	0.364	0.331	0.365	0.240	0.352	5.123***	5.431***
Intangibles	2,182	0.109	0.311	0.127	0.333	0.051	0.220	6.105***	4.946***
NumInv	2,182	3.651	7.680	2.796	5.500	6.296	11.780	-6.630***	-7.859***
Holdings	2,182	0.918	0.181	0.928	0.172	0.886	0.202	4.341***	7.163***
DirectFDI	2,182	0.754	0.431	0.778	0.416	0.681	0.467	4.282***	4.521***
LN(Dist)	2,182	6.506	1.912	6.603	1.835	6.209	2.107	3.871***	3.056***
DiffRegQuality	2,182	3.045	12.970	3.330	13.120	2.163	12.460	1.854*	1.997**
LegorUK	2,182	0.234	0.424	0.230	0.421	0.248	0.432	-1.660*	-1.682*
LegorFR	2,182	0.489	0.500	0.485	0.500	0.505	0.500	2.183**	2.145**
LegorSC	2,182	0.059	0.236	0.063	0.243	0.047	0.212	1.128	1.069
Wht	2,182	2.010	5.115	1.856	4.712	2.487	6.180	-2.164**	-0.030

Note: This table presents descriptive statistics for the organizational form choice sample. We present means and standard deviations for dependent and independent variables. We present results for the full sample and separately for subsidiaries and flow-throughs. We conduct a two-sample t-test assuming unequal variances (Wilcoxon rank-sum test) to compare means (medians) between subsamples. We winsorize continuous variables at the 1st and 99th percentile. We define variables in the Appendix. *, **, and *** represent significance levels of 0.10, 0.05, and 0.01, respectively (two-tailed). Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

Table 4
Correlation Table (Organizational Form Choice Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(1) Flow-Through	1.00																		
(2) Taxwedge	0.07*	1.00																	
(3) LN(Employ)	-0.12*	0.00	1.00																
(4) LN(Assets)	-0.03	-0.07*	0.07*	1.00															
(5) LossYear	-0.13*	-0.03	-0.16*	-0.03	1.00														
(6) Leverage	0.01	0.00	-0.07*	-0.20*	0.20*	1.00													
(7) Roa	-0.11*	0.02	0.03	0.14*	-0.42*	-0.44*	1.00												
(8) Brownfield	-0.04	0.02	0.25*	-0.02	-0.11*	0.04	-0.02	1.00											
(9) Distribution	0.12*	0.04	0.05	0.04	-0.24*	-0.10*	0.13*	0.09*	1.00										
(10) InternDebt	-0.11*	-0.03	-0.09*	-0.02	0.21*	0.47*	-0.23*	0.00	-0.13*	1.00									
(11) Intangibles	-0.11*	0.03	0.45*	-0.07*	-0.11*	-0.06*	0.05	0.16*	0.00	-0.08*	1.00								
(12) NumInv	0.20*	-0.08*	-0.22*	-0.19*	0.03	0.25*	-0.18*	0.08*	0.02*	-0.12*	-0.11*	1.00							
(13) Holdings	-0.10*	-0.11*	-0.05	-0.01	0.10*	0.06*	-0.02	-0.06*	-0.05	0.15*	-0.07*	0.02	1.00						
(14) DirectFDI	-0.10*	0.04	-0.01	-0.13*	-0.01	-0.01	0.07*	-0.04	-0.04	-0.07*	0.00	0.00	-0.11*	1.00					
(15) LN(Dist)	-0.09*	0.22*	0.16*	0.02	-0.04	-0.05	0.03	0.05	-0.03	0.08*	0.10*	-0.20*	0.01	-0.11*	1.00				
(16) DiffRegQuality	-0.04	0.46*	0.11*	-0.05	-0.04	0.03	-0.01	0.02	0.00	0.02	0.07*	-0.09*	-0.06*	-0.06*	0.31*	1.00			
(17) LegorUK	0.04	0.17*	0.01*	0.08*	0.03	0.00	-0.06*	0.06*	0.02	0.10*	0.01	-0.08*	0.07*	-0.40*	0.52*	0.07*	1.00		
(18) LegorFR	-0.05	-0.15*	-0.07*	0.00	0.04	0.02	0.02	-0.06*	0.01	-0.09*	-0.08*	0.06*	-0.01	0.31*	-0.44*	-0.09*	-0.54*	1.00	
(19) LegorSC	-0.02	-0.08*	0.00*	-0.02	0.02	0.03	0.00	0.01	-0.03	0.06*	-0.01	-0.06*	0.04	0.10*	0.05	-0.13*	-0.18*	-0.19*	1.00

Note: This table presents Pearson correlation coefficients for the organizational form choice sample. We winsorize continuous variables at the 1st and 99th percentile. We define variables in the Appendix. * represents a significance level of 0.01. Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Micro-database Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

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Table 5
Baseline Results: Tax Burden Difference and Organizational Form Choices

	Flow-Through		Flow-Through	
	(1)	(2)	(3)	(4)
	Coef./(SE)	ME	Coef./(SE)	ME
Taxwedge	0.250***	0.042	0.265***	0.041
	(0.076)		(0.075)	
LN(Employ)	-0.200***	-0.034	0.001	0.000
	(0.077)		(0.098)	
LN(Assets)	-0.012	-0.002	0.060	0.009
	(0.067)		(0.071)	
LossYear	-1.008***	-0.172	-1.030***	-0.164
	(0.177)		(0.163)	
Leverage	-0.093	-0.016	-0.238**	-0.037
	(0.070)		(0.095)	
Roa	-0.481***	-0.081	-0.492***	-0.077
	(0.090)		(0.089)	
Brownfield	-0.215	-0.036	-0.454***	-0.071
	(0.165)		(0.151)	
Distribution	0.410***	0.073	0.350**	0.058
	(0.147)		(0.151)	
InternDebt	-0.206**	-0.035	-0.150	-0.023
	(0.097)		(0.097)	
Intangibles	-0.752***	-0.106	-0.821**	-0.105
	(0.250)		(0.364)	
NumInv	0.265*	0.044	0.211	0.033
	(0.160)		(0.141)	
Holdings	-0.195***	-0.033	-0.205***	-0.032
	(0.058)		(0.058)	
DirectFDI	-0.523***	-0.094	-0.462***	-0.077
	(0.175)		(0.176)	
LN(Dist)	-0.196**	-0.033	-0.083	-0.013
	(0.091)		(0.084)	
DiffRegQuality	-0.156*	-0.026	-0.171**	-0.027
	(0.090)		(0.086)	
LegorUK	0.164	0.028	0.207	0.033
	(0.248)		(0.226)	
LegorFR	-0.187	-0.031	-0.115	-0.018
	(0.283)		(0.237)	
LegorSC	0.090	0.015	-0.430	-0.060
	(0.327)		(0.359)	
Intercept	-0.273		0.352	
	(0.255)		(0.374)	
Year-FE	N		Y	
Industry-FE	N		Y	
N	2,182		2,182	
Pseudo R²	0.129		0.208	
Area under ROC	0.726		0.789	

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Note: This table presents results for the association between the tax burden difference and organizational form choices. The dependent variable, *Flow-Through*, is an indicator variable with the value of one if the new affiliate is established as a flow-through, and zero otherwise. Columns 1 and 3 (2 and 4) report coefficients (marginal effects) for a logistic regression based on Equation (1). We calculate marginal effects while holding continuous variables at their means. We standardize independent variables to have a mean of zero and a standard deviation of one prior to estimating regressions. The regression in column 1 (3) is estimated without (with) year and industry-fixed effects. We winsorize continuous variables at the 1st and 99th percentile. We calculate heteroscedasticity-robust standard errors clustered at the investing-entity level. We define variables in the Appendix. *, **, and *** represent significance levels of 0.10, 0.05, and 0.01, respectively (two-tailed). Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

Table 6
Cross-Sectional Results: Income-Shifting Opportunities

	Flow-Through		*Flow-Through*	
	(1)	(2)	(3)	(4)
	Coef./(SE)	ME	Coef./(SE)	ME
Taxwedge β1	0.385***	0.059	0.293***	0.046
	(0.082)		(0.079)	
HighIntDebt	-0.143*	-0.022		
	(0.085)			
Taxwedge#HighIntDebt β3	-0.292***	-0.045		
	(0.097)			
Intangibles	-0.774**	-0.099	-0.651*	-0.086
	(0.364)		(0.368)	
Taxwedge#Intangibles β5			-0.168*	-0.026
			(0.094)	
Additional Controls	Y		Y	
Year-FE	Y		Y	
Industry-FE	Y		Y	
N	2,182		2,182	
Pseudo R²	0.217		0.210	
Area under ROC curve	0.792		0.790	
F-Test: β1+β3=0	0.830		-	
F-Test: β1+β5=0	-		1.330	
p-Value	0.362		0.248	

Note: This table presents results for cross-sectional tests based on income-shifting opportunities. The dependent variable, *Flow-Through,* is an indicator variable with the value of one if the new affiliate is established as a flow-through, and zero otherwise. *HighIntDebt* is an indicator variable with the value of one if the ratio of intra-firm debt provided by foreign affiliates to total assets of the new affiliate is above the sample median, and zero otherwise. *Intangibles* is an indicator variable with the value of one if the new affiliate is established in an intangible-asset intensive industry, and zero otherwise. Columns 1 and 3 (2 and 4) report coefficients (marginal effects) for a logistic regression based on Equation (1). We calculate marginal effects while holding continuous variables at their means. We standardize independent variables to have a mean of zero and a standard deviation of one prior to estimating regressions. All regressions are estimated with year and industry-fixed effects. We winsorize continuous variables at the 1st and 99th percentile. We calculate heteroscedasticity-robust standard errors clustered at the investing-entity level. We define variables in the Appendix. *, **, and *** represent significance levels of 0.10, 0.05, and 0.01, respectively (two-tailed). Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

Table 7
Cross-Sectional Results: Non-Tax Factors

	Flow-Through		Flow-Through		Flow-Through	
	(1)	(2)	(3)	(4)	(5)	(6)
	Coef./(SE)	ME	Coef./(SE)	ME	Coef./(SE)	ME
Taxwedge $\beta 1$	0.381***	0.052	0.423***	0.066	0.173**	0.027
	(0.111)		(0.129)		(0.076)	
HighIndRisk	-0.456**	-0.062				
	(0.232)					
Taxwedge#HighIndRisk $\beta 3$	-0.245*	-0.033				
	(0.143)					
HighRegDiff			0.031	0.005		
			(0.189)			
Taxwedge#HighRegDiff $\beta 5$			-0.264*	-0.041		
			(0.138)			
HighExp					0.034	0.005
					(0.105)	
Taxwedge#HighExp $\beta 7$					0.218***	0.034
					(0.081)	
Additional Controls	Y		Y		Y	
Year-FE	Y		Y		Y	
Industry-FE	Y		Y		Y	
N	1,416		2,182		2,182	
Pseudo R²	0.236		0.208		0.209	
Area under ROC curve	0.811		0.787		0.791	
F-Test: $\beta 1 + \beta 3 = 0$	0.890		-		-	
F-Test: $\beta 1 + \beta 5 = 0$	-		4.300		-	
F-Test: $\beta 1 + \beta 7 = 0$	-		-		15.780	
p-Value	0.347		0.038**		< 0.001***	

Note: This table presents results for cross-sectional tests based on non-tax factors. We drop regulated industries (industry classification D, J, and K based on one-digit NACE Rev. 2 industry codes) in columns 1-2. The dependent variable, *Flow-Through,* is an indicator variable with the value of one if the new affiliate is established as a flow-through, and zero otherwise. *HighIndRisk* is an indicator variable with the value of one if the new affiliate is established in the manufacturing or the wholesale industry, and zero otherwise. *HighRegDiff* is an indicator variable with the value of one if the difference in the regulatory quality between Germany and the parent home country is above the sample median, and zero otherwise. *HighExp* is an indicator variable with the value of one if the investing entity holds at least one additional inbound FDI relation in Germany, and zero otherwise. Columns 1, 3, and 5 (2, 4, and 6) report coefficients (marginal effects) for a logistic regression based on Equation (1). We calculate marginal effects while holding continuous variables at their means. We standardize independent variables to have a mean of zero and a standard deviation of one prior to estimating regressions. All regressions are estimated with year and industry-fixed effects. We winsorize continuous variables at the 1st and 99th percentile. We calculate heteroscedasticity-robust standard errors clustered at the investing-entity level. We define variables in the Appendix. *, **, and *** represent significance levels of 0.10, 0.05, and 0.01, respectively (two-tailed). Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

Table 8
Difference-in-Differences Analysis: 2008 Tax Reform in Germany

	Flow-Through		Flow-Through	
	(1)	(2)	(3)	(4)
	Coef./(SE)	ME	Coef./(SE)	ME
Reform	0.870***	0.154	0.986**	0.177
	(0.298)		(0.400)	
Post	1.017***	0.146		
	(0.323)			
Reform#Post	-0.655*	-0.089		
	(0.349)			
Reform#Year2005			-0.803	-0.097
			(0.715)	
Reform#Year2006			0.145	0.023
			(0.654)	
Reform#Year2008			-0.823	-0.099
			(0.615)	
Reform#Year2009			0.358	0.061
			(0.569)	
Reform#Year2010			-1.392**	-0.140
			(0.703)	
Reform#Year2011			-1.040*	-0.117
			(0.625)	
Reform#Year2012			-1.103**	-0.122
			(0.547)	
Reform#Year2013			-1.095*	-0.121
			(0.578)	
Additional Controls	Y		Y	
Industry-FE	Y		Y	
Year-FE	Y		Y	
N	2,089		2,089	
Log-Likelihood	-919		-912	
Area under ROC	0.790		0.794	

Note: This table presents results for a DiD analysis of the 2008 tax reform in Germany. The dependent variable, *Flow-Through*, is an indicator variable with the value of one if the new affiliate is established as a flow-through, and zero otherwise. Columns 1 and 3 (2 and 4) report coefficients (marginal effects) for a logistic regression based on Equation (1). We calculate marginal effects while holding continuous variables at their means. We standardize independent variables to have a mean of zero and a standard deviation of one prior to estimating regressions. All regressions are estimated with year and industry-fixed effects. We winsorize continuous variables at the 1st and 99th percentile. We calculate heteroscedasticity-robust standard errors clustered at the investing-entity level. We define variables in the Appendix. *, **, and *** represent significance levels of 0.10, 0.05, and 0.01, respectively (two-tailed). Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

Table 9
Additional Robustness Tests

Analysis	Flow-Through Δ Taxwedge (1) ME/(SE)	Flow-Through One Affiliate (2) ME/(SE)	Flow-Through Drop Taxwedge=0 (3) ME/(SE)	Flow-Through Drop Tax Haven (4) ME/(SE)	Flow-Through Withholding Tax (5) ME/(SE)
ΔTaxwedge	0.019*				
	(0.069)				
Taxwedge		0.027***	0.051**	0.029**	
		(0.078)	(0.192)	(0.085)	
Wht					0.383***
					(0.109)
HomeTax					0.210**
					(0.093)
Additional Controls	Y	Y	Y	Y	Y
Industry-FE	Y	Y	Y	Y	Y
Year-FE	Y	Y	Y	Y	Y
N	1,905	1,665	417	1,331	2,182
Pseudo R²	0.185	0.169	0.333	0.160	0.208
Area under ROC curve	0.778	0.772	0.857	0.766	0.788

Note: This table presents results for additional robustness tests. In column 1, we estimate Equation (1) using annual changes in *Taxwedge*. We drop observations if the investing entity establishes more than one new affiliate in our sample in column 2, observations with *Taxwedge* equal to zero in column 3, and observations if the investing entity is located in a tax haven in column 4. In column 5, we replace *Taxwedge* with *Wht* and *HomeTax*. The dependent variable, *Flow-Through*, is an indicator variable with the value of one if the new affiliate is established as a flow-through, and zero otherwise. In all columns, we report marginal effects for a logistic regression based on Equation (1). We calculate marginal effects while holding continuous variables at their means. We standardize independent variables to have a mean of zero and a standard deviation of one prior to estimating regressions. All regressions are estimated with year and industry-fixed effects. We winsorize continuous variables at the 1st and 99th percentile. We calculate heteroscedasticity-robust standard errors clustered at the investing-entity level. We define variables in the Appendix. *, **, and *** represent significance levels of 0.10, 0.05, and 0.01, respectively (two-tailed). Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

Table 10
Descriptive Statistics (Economic Consequences Sample)
Panel A: Dependent Variables

Variables	Full Sample			Subsidiaries			Flow-Throughs			t-statistics	z-statistics
	N	Mean	SD	N	Mean	SD	N	Mean	SD		
RiskTaking	4,679	-0.001	0.122	3,748	0.004	0.127	931	-0.021	0.098	6.499***	8.865***
Investment	6,770	0.300	10.140	5,362	0.438	10.300	1,408	-0.226	9.515	2.291**	5.029***
Roa	6,770	-0.029	0.221	5,362	-0.035	0.242	1,408	-0.013	0.185	-3.543***	-3.732***
Complexity	6,770	0.507	0.728	5,362	0.536	0.736	1,408	0.396	0.687	6.710***	7.816***

Panel B: Independent Variables

Variables	N	Mean	SD	N	Mean	SD	N	Mean	SD	t-statistics	z-statistics
Flow-Through	6,770	0.208	0.406	6,362	1.000	0.000	1,408	0.000	0.000		
PE-Ratio	6,770	17.310	4.175	5,362	17.320	3.965	1,408	17.260	4.896	0.414	1.498
LN(Employ)	6,770	1.793	2.208	5,362	1.866	2.222	1,408	1.513	2.132	5.484***	6.007***
LN(Assets)	6,770	17.470	10.150	5,362	17.430	1.548	1,408	17.580	1.645	-3.088***	-2.525**
LossYear	6,770	0.457	0.498	5,362	0.499	0.500	1,408	0.298	0.458	14.336***	13.433***
Leverage	6,770	0.641	0.480	5,362	0.663	0.479	1,408	0.555	0.475	7.545***	7.404***
Roa	6,770	-0.023	0.211	5,362	-0.025	0.217	1,408	-0.015	0.189	-1.771*	-3.968***
LN(Sales)	6,770	7.763	8.289	5,362	7.581	8.334	1,408	8.457	8.078	-3.597***	-1.368
Investment	4,981	0.393	10.150	3,988	0.503	10.260	993	-0.050	9.646	1.594	3.423***
Cash	6,770	0.012	0.045	5,362	0.012	0.043	1,408	0.016	0.053	-2.638***	1.153
Age	6,770	3.079	1.875	5,362	3.131	1.896	1,408	2.881	1.782	4.620***	4.211***
Taxwedge	6,770	1.244	3.626	5,362	0.949	3.011	1,408	2.369	5.209	-9.814***	-6.226***

Note: This table presents descriptive statistics for the economic consequences sample. In Panel A (B), we present means and standard deviations for our dependent (independent) variables. We conduct a two-sample t-test assuming unequal variances (Wilcoxon rank-sum test) to compare means (medians) between subsamples. In Panel B, *LN(Employ)*, *LN(Assets)*, *Leverage, Roa, LN(Sales)*, *Investment,* and *Cash* are lagged by one year. All continuous variables are winsorized at the 1st and 99th percentile. We define variables in the Appendix. *, **, and *** represent significance levels of 0.10, 0.05, and 0.01, respectively (two-tailed). Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

Table 11
Correlation Table (Economic Consequences Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) RiskTaking	1.00														
(2) Investment	-0.02	1.00													
(3) Roa	-0.44*	0.03	1.00												
(4) Complexity	0.00	-0.02	0.01	1.00											
(5) Flow-Through	-0.08*	-0.03	0.04*	-0.08*	1.00										
(6) PE-Ratio	0.01	-0.02	-0.01	0.04*	-0.01	1.00									
(7) LN(Employ) (Lag)	-0.02	0.00	0.05*	-0.10*	-0.06*	-0.03	1.00								
(8) LN(Assets) (Lag)	-0.04*	-0.01	0.04*	0.52*	0.04*	0.00	0.13*	1.00							
(9) LossYear	0.19*	0.02	-0.45*	0.01	-0.16*	-0.01	-0.17*	-0.08*	1.00						
(10) Leverage (Lag)	0.16*	-0.03	-0.25*	-0.13*	-0.09*	0.03	-0.11*	-0.20*	0.26*	1.00					
(11) Roa (Lag)	-0.19*	0.01	0.40*	0.02	0.02	-0.02	0.03	0.10*	-0.27*	-0.42*	1.00				
(12) LN(Sales) (Lag)	-0.01	-0.05*	0.05*	-0.22*	0.04*	-0.01	0.75*	0.02	-0.18*	-0.05*	0.04*	1.00			
(13) Investment (Lag)	-0.02	0.19*	0.00	-0.02	-0.02	-0.01	0.04*	0.06*	0.02	-0.03	0.03	0.00	1.00		
(14) Cash (Lag)	0.07*	0.01	-0.04*	-0.10*	0.04*	-0.01	0.12*	-0.09*	0.01	0.03	-0.09*	0.11*	-0.01	1.00	
(15) Age	-0.01	-0.08*	0.01	0.05*	-0.05*	0.18*	0.06*	0.07*	-0.02	0.02	-0.01	0.06*	-0.09*	0.00	1.00

Note: This table presents Pearson correlation coefficients for the economic consequences sample. We winsorize continuous variables at the 1st and 99th percentile. We define variables in the Appendix. *(Lag)* denotes variables lagged by one year. * represents a significance level of 0.01. Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Micro-database Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

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Table 12
Economic Consequences of Organizational Form Choices
Panel A: Organizational Form Choice (First-Stage Probit Regression)

	Flow-Through
	(1)
	Coef. / (SE)
Taxwedge	0.152***
	(0.044)
LN(Employ)	0.010
	(0.055)
LN(Assets)	0.031
	(0.040)
LossYear	-0.577***
	(0.089)
Leverage	-0.265**
	(0.114)
Roa	-0.300***
	(0.054)
Brownfield	-0.253***
	(0.084)
Distribution	0.215**
	(0.086)
InternDebt	-0.096
	(0.064)
Intangibles	-0.448**
	(0.196)
NumInv	0.136
	(0.095)
Holdings	-0.115***
	(0.033)
DirectFDI	-0.272***
	(0.100)
LN(Dist)	-0.042
	(0.049)
DiffRegQuality	-0.096**
	(0.048)
Legor_UK	0.115
	(0.127)
Legor_FR	-0.049
	(0.130)
Legor_SC	-0.230
	(0.198)
Intercept	-0.563
	(0.399)
Year-FE	Y
Industry-FE	Y
N	2,182
Pseudo R²	0.204

Panel B: Economic Consequences (Second-Stage OLS Regression)

	RiskTaking (1) Coef./(SE)	*Investment* (2) Coef./(SE)	*Roa* (3) Coef./(SE)	*Complexity* (4) Coef./(SE)
Flow-Through	-0.017***	-0.006	-0.023**	-0.113**
	(0.006)	(0.423)	(0.010)	(0.048)
PE-Ratio	0.002	-0.062	-0.004	0.013
	(0.002)	(0.210)	(0.005)	(0.013)
LN(Employ)	-0.004	-0.011	-0.002	0.031
	(0.005)	(0.326)	(0.007)	(0.034)
LN(Assets)	-0.003	0.200	0.004	0.290***
	(0.003)	(0.162)	(0.005)	(0.024)
LossYear	0.037***	0.368	-0.202***	0.025
	(0.005)	(0.280)	(0.010)	(0.025)
Leverage	0.011***	-0.244	-0.044***	-0.011
	(0.004)	(0.174)	(0.008)	(0.016)
Roa	-0.015***	0.087		-0.023**
	(0.003)	(0.186)		(0.009)
LN(Sales)	0.007	-1.293***	-0.003	-0.052*
	(0.005)	(0.321)	(0.006)	(0.027)
Investment	-0.003		0.002	-0.031***
	(0.002)		(0.003)	(0.008)
Cash	0.007**	0.201	-0.003	-0.028***
	(0.003)	(0.137)	(0.004)	(0.010)
Age	-0.002	-0.994***	0.006	-0.009
	(0.004)	(0.212)	(0.006)	(0.020)
Inverse Mills Ratio	-0.009	0.266	0.027***	0.032
	(0.007)	(0.413)	(0.010)	-(0.044)
Intercept	0.004	-0.913	0.011	0.372***
	(0.015)	(1.265)	(0.018)	(0.087)
Industry-FE	Y	Y	Y	Y
Year-FE	Y	Y	Y	Y
N	4,679	6,770	4,981	4,981
Adjusted R^2	0.075	0.028	0.245	0.445

Note: This table presents results for economic consequences of organizational form choices. Panel A presents results from a first-stage probit regression based on Equation (1) on the organizational form choice sample. Panel B presents results from a second-stage OLS regression based on Equation (2) on the economic consequences sample adjusted for selection bias. In Panel A, the dependent variable, *Flow-Through*, is an indicator variable with the value of one if the new affiliate is established as a flow-through, and zero otherwise. In Panel B, the dependent variable, *RiskTaking,* is the standard deviation of *Roa* of the new affiliate over the three-year period *t* to *t+2* and adjusted for the industry-year mean (based on one-digit NACE Rev. 2 industry codes). *Investment* is the annual change in fixed and intangible assets of the new affiliate dividend by lagged total assets. *Roa* is the net profit of the new affiliate and divided by total assets. *Complexity* is the natural logarithm of the number of inbound FDI relations of the new affiliate in Germany. In Panel B, *LN(Employ), LN(Assets)*, *Leverage*, *Roa*, *LN(Sales)*, *Investment*, and *Cash* are lagged by one year. We standardize independent variables to have a mean of zero and a standard deviation of one prior to estimating regressions. All regressions are estimated with year and industry-fixed effects. All continuous variables are winsorized at the 1st and 99th percentile. We calculate heteroscedasticity-robust standard errors clustered at the investing-entity level. We define variables in the Appendix. *, **, and *** represent significance levels of 0.10, 0.05, and 0.01, respectively (two-tailed). Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi) for the years 2005 to 2013, own calculations.

Table 13
Economic Consequences conditional on *Taxwedge* (Second-Stage OLS Regression)

	RiskTaking (1) Coef./(SE)	*Investment* (2) Coef./(SE)	*Roa* (3) Coef./(SE)	*Complexity* (4) Coef./(SE)
Flow-Through β1	-0.017***	0.166	-0.023**	-0.138***
	(0.006)	(0.418)	(0.010)	(0.049)
Taxwedge	0.001	0.201	0.003	-0.050***
	(0.003)	(0.235)	(0.004)	(0.016)
Flow-Through#Taxwedge β3	0.000	-0.538***	-0.002	0.083***
	(0.003)	(0.210)	(0.005)	(0.019)
Additional Controls	Y	Y	Y	Y
Industry-FE	Y	Y	Y	Y
Year-FE	Y	Y	Y	Y
N	4,679	6,770	4,981	4,981
Adjusted R-squared	0.075	0.030	0.245	0.452

Note: This table presents results for economic consequences of organizational form choices conditional on *Taxwedge*. We estimate a second-stage OLS regression based on Equation (2) on the economic consequences sample adjusted for selection bias. The dependent variable, *RiskTaking,* is the standard deviation of *Roa* of the new affiliate over the three-year period *t* to *t+2* and adjusted for the industry-year mean (based on one-digit NACE Rev. 2 industry codes). *Investment* is the annual change in fixed and intangible assets of the new affiliate dividend by lagged total assets. *Roa* is the net profit of the new affiliate and divided by total assets. *Complexity* is the natural logarithm of the number of inbound FDI relations of the new affiliate in Germany. *LN(Employ)*, *LN(Assets)*, *Leverage, Roa, LN(Sales), Investment,* and *Cash* are lagged by one year. We standardize independent variables to have a mean of zero and a standard deviation of one prior to estimating regressions. All regressions are estimated with year and industry-fixed effects. All continuous variables are winsorized at the 1st and 99th percentile. We calculate heteroscedasticity-robust standard errors clustered at the investing-entity level. We define variables in the Appendix. *, **, and *** represent significance levels of 0.10, 0.05, and 0.01, respectively (two-tailed). Source: Research Data and Service Centre (RDSC) of the Deutsche Bundesbank, Microdatabase Direct Investment (MiDi) for the years 2005 to 2013, own calculations.