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Abstract: This paper analyzes the association between tax complexity and foreign direct investments (FDI) based on the newly developed Tax Complexity Index (TCI) and its components. For a sample of 15,607 new foreign subsidiaries, we find no association between total tax complexity, as proxied by the TCI, and the location probability. When we decompose the TCI into tax code complexity and tax framework complexity, we find opposing associations. Tax code complexity is positively related to the location probability, while tax framework complexity is negatively related to it. These associations are, for example, driven by the complexity of transfer pricing and loss offset regulations in the tax code and the dimensions guidance, audits, as well as filing and payments, in the tax framework. In additional analyses, we find that the associations are sensitive to certain characteristics, such as country-specific and firm-specific characteristics. For example, the positive tax code association diminishes when tax rates are high. Overall, we are the first to provide empirical evidence on potential cost-benefit tradeoffs of tax complexity for FDI and thereby enhance prior literature, which has primarily focused on the costs of tax complexity.

1 Introduction

Prior literature provides strong evidence that the corporate tax rate is an important determinant in multinational corporations' (MNCs) location decisions.[1] Beyond tax rates, literature has increasingly started to analyze the role of other tax system characteristics, such as tax depreciation allowances (Overesch and Wamser 2009), anti-profit shifting rules (Buettner et al. 2018), double taxation reliefs (Huizinga and Voget 2009, Voget 2011, Barrios et al. 2012, Merz et al. 2017) or the attractiveness of tax systems (Schanz et al. 2017), in this decision process. So far, little attention has been paid to tax complexity, although this topic is widely discussed in recent years (Devereux 2016; Hoppe et al. 2017; IMF and OECD 2017). There are only few empirical studies that examine the role of tax complexity in location decisions. These studies analyze foreign direct investments (FDI) and provide some evidence for a negative effect of tax complexity.[2] However, an important limitation of these studies is the way that they measure tax complexity very narrowly. The most common tax complexity measures are the time to comply and the number of tax payments indicators of the "Paying Taxes" study of PwC et al.[3] These indicators only focus on specific aspects of tax complexity, which are rather cost-oriented. Moreover, they are calculated for a case study company, which is based on strict assumptions that are generally not suitable to examine FDI (e.g., the company is assumed to have no foreign exposure). Overall, it is questionable whether the results of prior studies are due to the specific measures and whether they are generalizable to tax complexity in general. To answer these questions, more comprehensive and appropriate tax complexity measures are necessary.

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[1] For overviews, see Hines (1999), De Mooij and Ederveen (2003), Devereux and Maffini (2007), and Voget (2015). Most studies either use statutory or effective tax rates. See Papke (1991), Devereux and Griffith (1998), Stöwhase (2002), Buettner and Ruf (2007), Overesch and Wamser (2009), Overesch and Wamser (2010), and Becker et al. (2012).

[2] This finding also appears to be in line with the expectations and results of some theoretical and experimental studies on tax complexity and tax uncertainty. See Beck and Jung (1989), Slemrod (1989), Boylan and Frischmann (2006), Mills et al. (2010), and Niemann and Sureth-Sloane (2016).

[3] The "Paying Taxes" study is published annually. The first version is PwC and World Bank Group (2006), while the most recent version is PwC et al. (2019). When we do not refer to a particular version of the study but rather to the entire study, we use "PwC et al.". For a description of the methodology, see PwC and World Bank Group (2011).

In this study, we depart from the assumption that tax complexity only imposes costs on firms. We argue that it also provides firms with benefits, such as tax planning opportunities (Krause 2000; Laplante et al. 2019) or increased tax fairness, for example, through tailored tax regulations (Cuccia and Carnes 2001; Galli and Profeta 2009; Barton 2011; Blesse et al. 2019). Which of these opposing effects dominates is not clear. Hence, the association between tax complexity and FDI might be positive, negative, or even insignificant. To analyze this, we use the newly developed Tax Complexity Index (TCI) of Hoppe et al. (2019). This index represents a comprehensive tax complexity measure that covers the complexity of the corporate income tax system as faced by MNCs in 100 countries for the year 2016. We follow Hoppe et al. (2019) and define tax complexity as a characteristic of the tax system that arises from the difficulty of reading, understanding, and complying with the tax code, as well as from various issues within the administrative and legislative processes and features of a tax system. In line with this definition, the TCI consists of two subindices, a tax code complexity subindex and a tax framework complexity subindex.

Our empirical analysis is based on a sample of 15,607 new foreign subsidiaries obtained from the Orbis database as a proxy for FDI.[4] These subsidiaries are located in 39 different host countries and owned by 10,749 parent firms from 69 different home countries. We find no association between the probability of a subsidiary being located in a specific country and the total tax complexity of this country based on the TCI. However, when we exploit the richness of the TCI and split it into its two subindices, we find a positive association for tax code complexity and a

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[4]　To be consistent with prior studies on tax complexity and location decisions (Edmiston et al. 2003; Djankov et al. 2010; Lawless 2013; Müller and Voget 2014), we focus on the investment decision between different foreign countries. Hence, we refer to the decision of where to locate assuming that parent firms have already decided to invest abroad (Devereux and Griffith 1998). This approach has also been widely applied in related literature (e.g., Overesch and Wamser 2009; Barrios et al. 2012; Merz et al. 2017; Buettner et al. 2018). We acknowledge that tax complexity might also be considered for domestic investment decisions. However, domestic investment decisions are likely to be different and consequently require a modified research setting. Hence, we leave this analysis to future research.

negative association for tax framework complexity. A deeper analysis of the associations indicates that the positive tax code association is mainly driven by the complexity of transfer pricing and loss offset regulations, while the negative tax framework association is mainly driven by the complexity of tax guidance, tax audits, as well as tax filing and payments. In additional analyses, we estimate the interaction between tax complexity and selected characteristics, such as country-specific and firm-specific characteristics, and find that the relationship between tax complexity and location probability is sensitive to some characteristics, such as the effective average tax rate of the host country or the size and the industry of the foreign subsidiary.

We contribute to the extensive literature on the determinants of location decisions.[5] In particular, we extend the strand of literature that analyzes the relationship between tax complexity and FDI decisions. Edmiston et al. (2003) examine the effect of tax complexity and uncertainty in the tax laws on country-level FDI inflows for 25 transition countries. This study, which was conducted before the "Paying Taxes" study of PwC et al. was first carried out, focuses on a few selected aspects of the tax law. Using the Central and East European Tax Directory published by the International Bureau of Fiscal Documentation, they derive three tax complexity measures (i.e., number of special tax rates, number of lines in tax base description, and ambiguity of language in the tax law) and two uncertainty measures (i.e., number of changes in tax parameters and number of changes in opposing directions), which are mostly simple count-based measures. Their results indicate negative effects of tax complexity and uncertainty on FDI. Djankov et al. (2010) investigate the effect of corporate taxes on country-level FDI. Although it is not the main focus of their study, they address tax complexity by analyzing the impact of tax administrative burden on FDI inflows for 61 countries in a robustness check. Administrative burden is measured by the time to comply and the number of tax payments indicators of the "Paying Taxes" study of PwC et al. However, they only find significantly negative results for

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[5] For overviews, see Blonigen (2005) and Blonigen and Piger (2014).

the time to comply measure. In contrast to Edmiston et al. (2003) and Djankov et al. (2010) who focus on unilateral country-level FDI inflows, Lawless (2013) examines bilateral country-level FDI flows. Similar to Djankov et al. (2010), she also employs the time to comply and the number of tax payments indicators of the "Paying Taxes" study. Lawless (2013) finds that tax complexity is negatively related to the existence of FDI flows (extensive margin) but overall, finds no evidence for the volume of FDI flows (intensive margin). She concludes that tax complexity mainly influences the location choice but does not affect the investment volume. Finally, Müller and Voget (2014) investigate the effect of tax complexity on firm-level FDI based on a sample of German parent firms from the Microdatabase Direct Investment (MiDi) of Deutsche Bundesbank. They focus on the decision of whether to invest in a country (extensive margin) and employ the time to comply indicator of the "Paying Taxes" study.[6] Their findings provide additional evidence for a negative effect of tax complexity on FDI.

We make three key contributions. First, we measure tax complexity more broadly compared to prior literature by employing the tax complexity indices of Hoppe et al. (2019). These measures enable us to move away from a purely cost-oriented view of tax complexity and to analyze the association between tax complexity and FDI in more detail. Second, our results provide the first empirical evidence on the benefits of tax complexity. While some prior studies mention potentially positive implications of tax complexity, none of them finds evidence for a positive effect. Third, tax complexity has mostly been investigated at the country level. Following Müller and Voget (2014), we argue that the decision to carry out an FDI project is made at the firm-level. Our firm-level approach also enables us to analyze whether the association between tax complexity and FDI is affected by certain firm-specific characteristics. While the data of Müller and Voget (2014) are restricted to Germany as a home country, we build on their analysis by

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[6] In their analysis, they also add the number of tax payments. However, its effect on FDI is insignificant. See Müller and Voget (2014).

broadening it to a sample of 39 host and 69 home countries worldwide. Our findings enhance the knowledge on tax complexity and FDI, which is relevant for different target groups. On the one hand, we indicate that tax complexity has different facets, each of which might have a different association with FDI. Researchers should be aware of this when choosing the appropriate tax complexity measure for the respective research setting. On the other hand, we provide some insight for policymakers indicating that tax complexity is not bad per se.

The remainder of this paper is as follows. In the next section, we provide a short model for location decisions and elaborate on our prediction. We further introduce the previously mentioned tax complexity measures and present our empirical specification. In Section 3, we provide an overview of our sample and descriptive statistics. In Sections 4 and 5, we conduct our analysis and several robustness checks. In the last section, we address the limitations of our study and conclude.

2 Theoretical and Empirical Setup

2.1 Theoretical Model and Prediction

We use a conditional logit model in line with the seminal paper of McFadden (1973). It has been widely applied in previous literature in various research settings (e.g., to investigate firms' location choice).[7] According to this model, the profit Π of a firm, i, from locating in a specific country, j, is given by:

$$\Pi_{ij} = \Pi(Z_{ij}) = \beta Z_{ij} + \epsilon_{ij} \tag{1}$$

where Z_{ij} represents a vector of variables that capture different characteristics, such as country-specific or firm-specific characteristics. Z_{ij} can be decomposed into:

$$\Pi(Z_{ij}) = \Pi(X_{ij}; W_i) = \Pi(x_{ij,1}, \dots, x_{ij,n}; w_{i,1}, \dots, w_{i,o}). \tag{2}$$

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[7]   For example, the conditional logit model is also used by Barrios et al. (2012), Müller and Voget (2014), and Feld et al. (2016).

As the o purely firm-specific characteristics ($w_{i,1}, \dots, w_{i,o}$ covered by the vector W_i) do not vary across the location alternatives, they do not need to be considered for the location choice. Hence, we separate them from the n remaining variables ($x_{ij,1}, \dots, x_{ij,n}$) included in the vector X_{ij}. To maximize its profits, a firm chooses location j, which leads to profits higher than all remaining alternatives k:

$$\Pi_{ij} > \Pi_{ik} \text{ for all } k \neq j \tag{3}$$

Therefore, the dependent variable in this location choice model, *location*, is obtained by applying the following binary coding scheme:

$$Location_{ij} = \begin{cases} 1 \text{ if } \Pi_{ij} > \Pi_{ik} \text{ for all } k \neq j \text{ and} \\ 0 \text{ otherwise}, \end{cases} \tag{4}$$

and the probability of investing in a specific country is given through equation (5):

$$Prob(Location_i = j | X_{i1}, X_{i2}, \dots, X_{iJ}) = \frac{e^{\beta X_{ij}}}{\sum_{j=1}^{J} e^{\beta X_{ij}}}, \tag{5}$$

which highlights that the location choice of a firm is conditional on the existing alternatives. As we are interested in analyzing the relationship between tax complexity and the decision of a parent firm to invest in a foreign country, we integrate tax complexity, among other variables, into the model as a host country-specific characteristic that is reflected in the vector X_{ij}. Hence, tax complexity affects the profit of a firm according to equation (2) and therefore, also the likelihood of investing into a specific country according to equation (5). Since tax complexity cannot only be costly but also beneficial for firms (Krause 2000; Carnes and Cuccia 2001; Galli and Profeta 2009; Barton 2011; Blesse et al. 2019; Laplante et al. 2019), it is difficult to provide a clear prediction on the association between tax complexity and the location probability ex ante.

The most common view of tax complexity is that it creates costs (e.g., Slemrod 1989; Müller and Voget 2014). These costs can either be fixed or variable, and fixed costs can be further divided into one-time and constant fixed costs. One-time fixed costs can occur when firms are confronted with a new tax system and have to become familiar with it. By contrast, constant fixed costs can arise from basic compliance requirements that each firm in a country faces, such as preparing and filing tax forms or handling regular tax audits. However, tax complexity also creates variable costs. Variable costs result from requirements that are related, for example, to the operations and size of a firm. These costs include compliance costs that result from specific regulations, or the time to appeal against a tax audit decision. While the costs of tax complexity have already been studied in depth far back in the past, the benefits of tax complexity have often been neglected. Benefits include the extent to which firms can use complexity to reduce their tax payments, for example, through tax exemptions, allowances, deductions, and credits provided in the tax law (Blesse et al. 2019). Moreover, ambiguity might offer firms the opportunity for tax planning (Laplante et al. 2019) or to tailor taxes to firm-specific situations (Barton 2011), which leads to increased tax fairness. When considering the benefits of tax complexity, tax fairness generally plays an important role (Cuccia and Carnes 2001; Galli and Profeta 2009).

When taking prior empirical studies on the relationship between tax complexity and foreign investment into account, Edmiston et al. (2003), Lawless (2013), and Müller and Voget (2014) find a significantly negative relationship, while Djankov et al. (2010) find no relationship. However, it might be possible that their findings are driven by the tax complexity measures they apply. The time to comply measure, which is applied by all studies except for Edmiston et al. (2003), follows a cost-based measurement approach by capturing the costs to prepare, file, and pay corporate, sales, and labor taxes. It can be questioned whether this measure covers the costs and benefits of tax complexity to the same extent. Moreover, it is questionable in general

whether all positive and negative elements show up in a cost-based measure.[8] Similar issues apply to the number of tax payments measure that captures the total number of taxes paid, the method of payment, the frequency of payment, and the number of agencies involved. However, the most serious concern is that all "Paying Taxes" measures are derived based on a case study company that is a medium-sized, purely domestic firm without foreign exposure.

To overcome potential measurement biases, we use the newly developed TCI of Hoppe et al. (2019). This measure has been specifically designed to comprehensively capture income tax complexity as faced by MNCs across countries. In contrast to the measures of PwC et al. that were applied in prior studies, the TCI is a composite measure that covers various facets of tax complexity, both in the tax code and in the tax framework (i.e., features and processes of the tax system). It can also be decomposed into its components and thus, be used to analyze the channels through which tax complexity affects the location decision. Due to the cost-benefit tradeoff of tax complexity, the associations between tax complexity and the location probability might vary among the different tax complexity components. They can be positive, indicating that the benefits from tax planning and increased tax fairness dominate the costs; or negative, indicating a dominating role of the costs of tax complexity. The associations might also be insignificant, indicating that the benefits and costs outweigh each other or that tax complexity does not matter at all.

2.2 Tax Complexity Measures

The TCI of Hoppe et al. (2019) covers the complexity of tax code regulations (captured by the tax code complexity subindex) and the complexity of the administrative and legislative features and processes within the tax framework (captured by the tax framework complexity subindex), as faced by MNCs. The data for index construction came from a global online survey among

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[8]   For example, certain elements of tax complexity do not lead to costs in terms of time but to uncertainty or more strategic tax planning.

highly experienced tax experts of the 19 largest international tax services firms and networks.[9] In total, the survey yielded data for 100 countries for the year 2016.

The tax code complexity subindex is composed of 15 dimensions, specifically, corporate income tax regulations that were identified as being relevant for MNCs worldwide, ranging from regulations on additional local and industry-specific income taxes to transfer pricing regulations.[10] The complexity of each of these regulations was determined based on five globally important complexity drivers, namely, ambiguity and interpretation, change, computation, detail, and record keeping.

The tax framework complexity subindex is composed of five dimensions: tax guidance (i.e., guidance provided by the tax authority or by any law to clarify uncertain tax treatments or procedures), tax law enactment (i.e., the process of how a tax regulation is enacted, starting with the discussion of a change in the tax law and ending with the regulation becoming effective), tax filing and payments (i.e., the process of preparing and filing tax returns, as well as the payment and refund of taxes), tax audits (i.e., examination of the tax returns by the tax authority and extent to which they can be anticipated and prepared), and tax appeals (i.e., the process from filing an appeal with the responsible institution to its resolution at the administrative or judicial appeal level). In contrast to the complexity of the tax code, that of the dimensions of the tax framework was determined based on complexity drivers specific to each dimension. For example, the tax audits dimension contains complexity drivers such as inconsistent decisions by tax officers or bad communication of audit topics.[11]

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[9]   The firms and networks are Baker Tilly Roelfs, BDO, Crowe Kleeberg, Deloitte, DFK, Ecovis, HLB Stückmann, KPMG, Kreston, Moore Stephens, Nexia, PKF, PwC, RSM, Rödl & Partner, Taxand, UHY, Warth & Klein Grant Thornton, and WTS.

[10] The full list of regulations includes regulations on additional local and industry-specific income taxes, (alternative) minimum taxation, capital gains and losses, controlled foreign corporation, corporate reorganization, depreciation and amortization, dividends including withholding taxes, general anti-avoidance, group treatment, interest including withholding taxes, general anti-avoidance, group treatment, interest including withholding taxes and thin capitalization, investment incentives, loss offset, royalties including withholding taxes, statutory corporate income tax rate, and transfer pricing.

[11] See Appendix B in Hoppe et al. (2019) for a complete list of the complexity drivers.

For both subindices, the complexity drivers and dimensions were aggregated by Hoppe et al. (2019) to obtain the subindices. Finally, the TCI is the simple average of the two subindices. In principle, all indices can range between 0 (not complex at all) and 100 (extremely complex).[12] They are available at www.taxcomplexity.org.

Figure 1 illustrates the quintiles of the TCI (panel A), as well as of the tax code and the tax framework complexity subindex (panel B and C). As indicated in all panels, there is no geographical clustering of tax complexity. Moreover, in panels B and C, we observe that countries often differ in their classification with regard to tax code and tax framework complexity. There are countries with a high tax code complexity relative to their tax framework complexity (e.g., Germany), and vice versa (e.g., Bulgaria).

[Insert Figure 1 here]

Overall, the data of Hoppe et al. (2019) provide a unique opportunity to analyze the association between tax complexity and the location choice more comprehensively.

2.3 Empirical Specification

Based on our theoretical considerations, we use a conditional logit model and thus, focus on the extensive margin (Devereux and Griffith 1998).[13] The model is illustrated in equation (6). We use robust standard errors clustered at the level of the subsidiary's industry based on the two-digit NACE Rev. 2 categories.[14] All variables used in the model are defined in Appendix A.

$$Location_{ij} = \beta_1 Complexity_j + \beta_2 Controls_j + \beta_3 Controls_{ij} + \epsilon_{ij} \qquad (6)$$

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[12] In Hoppe et al. (2019), the values range between 0 (not complex at all) and 1 (extremely complex). For the purpose of our analysis, we have multiplied these decimal values by 100 to improve the comparability with the tax rate.

[13] As indicated earlier, the extensive margin describes the decision of whether to invest in a foreign country. Due to data limitations at the firm level (limited or no financial data), we are not able to examine the intensive margin (investment volume) for a similar sample size. Furthermore, the intensive margin is often analyzed at the country level, which would considerably reduce our sample size as tax complexity data is only available for the year 2016.

[14] Following Müller and Voget (2014), this clustering captures that certain countries might be particularly attractive or unattractive for some industries.

The variable *location* represents the dependent variable and follows the coding scheme of equation (4); it equals one if subsidiary i is located in a potential host country j and zero otherwise (Barrios et al. 2012; Müller and Voget 2014; Feld et al. 2016; Silva and Lagoa 2018). Our variable of interest, *complexity*, captures the level of tax complexity of the (potential) host country. In line with prior literature, we assume that tax complexity influences location decisions and is thus a determinant of FDI. In our baseline regressions, we use the TCI, as well as the tax code and tax framework complexity subindices of Hoppe et al. (2019). In our robustness checks, we also apply alternative specifications of *complexity*, such as complexity differentials. In line with our theoretical considerations, we expect to find varying (i.e., positive, negative or even insignificant) coefficients among the different tax complexity measures of Hoppe et al. (2019).

We also take several control variables into account. The first set of control variables refers to the (potential) host country. To account for the tax rate association, which has often been observed in prior literature, we use the *effective average tax rate* as a measure for the corporate tax burden.[15] This variable equals the effective average tax rate provided by the Oxford University Centre for Business in our main regression models (Egger et al. 2009; Overesch and Wamser 2010; Lawless et al. 2018). In our robustness checks, we also apply alternative tax rate measures, such as the statutory tax rate (Barrios et al. 2012; Becker et al. 2012; Huizinga et al. 2014; Buettner et al. 2018). We expect the coefficient of *effective average tax rate* to be negative, as a higher tax burden should reduce the probability of an investment. We include the gross domestic product (GDP) to control for the market size and the economic power of a country and expect that a higher GDP attracts investments (i.e., that *GDP* has a positive coefficient) (Overesch and Wamser 2010; Becker et al. 2012; Müller and Voget 2014; Buettner et al. 2018). The growth rate of the population (*population growth*) is used to control for the dynamics of a

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[15] For a long time, the statutory tax rate has been applied as a common proxy for the tax rate of a corporation. As it is often criticized for not adequately reflecting firms' actual tax burden (e.g., Egger et al. 2009), we use the effective average tax rate, which accounts for tax base adjustments, such as depreciation allowances.

country. If considered as a proxy of market size development (e.g., with regard to consumers or employees), it should have a positive coefficient (Batten and Vo 2009). However, a high population growth rate is also typical for poor countries, which could indicate a negative coefficient (Ahlburg 1996; Klasen and Lawson 2007). We further capture the labor market conditions by the labor freedom component of the Heritage Foundation's index of economic freedom (*labor freedom*). In line with prior literature, we expect the relation between *labor freedom* and *location* to be positive, as a higher flexibility in the labor market should increase the probability of entering the market (Hebous et al. 2011; Herger et al. 2016).[16] The last two country-specific control variables are *inflation*, which is the inflation rate of consumer prices in percent, and *exchange*, which is the real effective exchange rate index. Both variables cover important areas of the competitiveness and the financial risk of a country. We expect higher values to be negatively related to the location probability (Blonigen et al. 2014; Müller and Voget 2014; Feld et al. 2016; Buettner et al. 2018).[17]

The second set of control variables captures the bilateral relationship between the host country (i.e., where the new foreign subsidiary is located) and the home country (i.e., where its parent firm is located). We include *common language* as a measure for cultural similarity (Huizinga et al. 2014; Davies et al. 2016; Merz et al. 2017). If two countries share the same language, we expect this to be positively related to *location*. Furthermore, we use *distance*, covering the number of kilometers between the host country and the home country (Hebous et al. 2011; Feld et al. 2016; Merz et al. 2017; Schanz et al. 2017). We expect a longer distance to be negatively associated with the location probability. As a special case of a very short distance, we also include *contiguity*, which is a dummy variable equal to one if the host and home countries have

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[16] We refrain from using an additional labor cost proxy as such a variable would decrease the number of countries covered by our sample to a large extent.

[17] In contrast to this view, it might be argued that exchange rates do not matter because of the parity of interest and exchange rates. However, due to the prior empirical evidence on the effect of exchange rates on FDI (e.g., Feld et al. 2016), we keep this variable in our model. Even if we assume that the exchange rate is not relevant for the FDI decision and exclude it from our regression model, the results stay qualitatively the same.

a common border and zero otherwise (Barrios et al. 2012; Herger et al. 2016; Feld et al. 2016). We expect a common border to increase the location probability.

Last, we use *previous presence*, which accounts for prior subsidiaries of the parent firm in a country (Müller and Voget 2014). It takes a value of one if a parent firm had already established a subsidiary in the respective country before the new investment took place and zero otherwise.[18] We expect that previous activity in a country is positively related to the location probability.

Following the spirit of Müller and Voget (2014), Merz et al. (2017), and Davies et al. (2018), we use lagged values for all independent variables and hence, focus on the year before the investment took place.[19] This approach captures that investments are usually influenced by past information and not carried out immediately.

3 Data and Descriptive Statistics

Our empirical analysis is based on firm-level data taken from the Orbis database of Bureau van Dijk (BvD). This database contains standardized accounting, as well as ownership data of private and public companies worldwide. There are many firm-level studies that investigate the effect of taxes on FDI by using BvD databases such as Orbis, Amadeus, or Bankscope (e.g., Barrios et al. 2012; Becker et al. 2012; Huizinga et al. 2014; Lawless et al. 2018). Besides these databases, there are also several studies that use country-specific micro-level databases. For example, studies on German inbound or outbound investments often use the MiDi provided by Deutsche Bundesbank (e.g., Buettner and Ruf 2007; Müller and Voget 2014; Merz et al. 2017). However, this database only reports investments if certain thresholds are met.[20] Hence, it does

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[18] To construct the variable *previous presence*, we downloaded all subsidiaries covered by Orbis, together with information on their country, year of incorporation, and global ultimate owner. Based on this comprehensive dataset, we determined the year in which a global ultimate owner was first active in a specific country.

[19] Egger et al. (2009) highlight that this approach can also be useful to mitigate potential endogeneity concerns.

[20] The balance sheet of the investment must exceed three million euros, and the amount of shares held must be at least 10% to be captured by the MiDi. See § 11 Law on Foreign Trade and Payments in conjunction with § 64 Foreign Trade and Payment Regulations.

not provide a full picture of the investment activity. Using Orbis, we have data on multinational firms with global ultimate owners (GUO) and investments in many different countries. According to prior literature, we define the GUO as the parent firm that is supposed to be the decision maker, while an investment is defined as a newly established foreign subsidiary (Barrios et al. 2012; Merz et al. 2017; Lawless et al. 2018). A firm is called a subsidiary if at least 50.01% of the shares are owned by another single firm.

From Orbis, we gathered all 2017 incorporated public and private limited companies (subsidiaries) with a known GUO (parent firm).[21] Afterwards, we excluded observations without information on the country of the subsidiary or the parent firm because we needed this information to determine the home and host countries of an investment. Since this study is devoted to foreign investments, we deleted all observations for which the home and host countries were the same. Moreover, we only kept observations with information on the industry of the subsidiary to be able to cluster the standard errors at the level of the subsidiary's industry and to conduct industry-specific analyses. We expanded the firm-level data by the tax complexity data obtained from www.taxcomplexity.org and other data from various publicly available data sources, such as the World Bank World Development Indicators, the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) database or the Oxford University Centre for Business. For observations to be included in the sample, sufficient data to estimate our regression models had to be available. Finally, we ended up with a sample of 15,607 new foreign subsidiaries in 39 different countries. They are owned by 10,749 parent firms from 69 different countries. This indicates that the average parent firm has set up about 1.45 new subsidiaries in 2017.[22] Table 1 provides an overview of the country distributions of parent firms and subsidiaries.

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[21]   We assume that the ownership information at the date of data collection (10/12/2019) is representative for the year 2017, as we do not have access to dynamic ownership information. In case the parent firm was categorized as one or more named individuals or families, we went through the ownership path and replaced this owner type by the first company in the ownership structure.

[22]   This ratio is similar to that of Barrios et al. (2012) who analyze 909 new investments of 722 parent firms based on the Amadeus data (1.26 subsidiaries per parent firm on average).

[Insert Table 1 here]

Most parent firms come from the United Kingdom (1,200 or 11.16%), followed by the United States (1,093 or 10.17%) and Switzerland (887 or 8.25%). The table shows that these countries are also the home countries of many new foreign subsidiaries. For example, we observe that 1,699 (10.89%) of the subsidiaries are established by parent firms located in the United Kingdom. The most frequently chosen host country is Germany (2,968 or 19.02%), followed by the United Kingdom (1,888 or 12.10%) and the Netherlands (1,586 or 10.16%). Hence, the top three host countries represent 41.28% of our total sample.[23] Most of the remaining countries host between 100 and 700 subsidiaries.

The summary statistics on the size (panel A) and the industry (panel B) of the subsidiaries are provided in Table 2. Most subsidiaries are either small (11,844 or 75.89%) or medium-sized (2,377 or 15.23%), according to the size classification of Orbis. There are only few subsidiaries that are large (982 or 6.29%) or very large (404 or 2.59%). With regard to the industry, we cover a wide range of different industries, with seven industry groups representing a relatively large share of subsidiaries. The industry with the largest number of subsidiaries is wholesale and retail trade, repair of motor vehicles and motorcycles (2,651 or 16.99%), followed by professional, scientific, and technical activities (2,017 or 12.93%), and financial and insurance activities (1,962 or 12.57%).

[Insert Table 2 here]

The summary statistics on all variables used in the baseline estimations are presented in Table 3. While panel A shows the number of actual investments, panel B includes the alternative

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[23] Although these numbers appear to be rather high, it is very common in the FDI literature that a small number of countries cover a large share of the sample. For example, the top three (five) host countries in related studies vary between 33.45% and 62.16% (50.90% and 73.85%). See Barrios et al. (2012), Huizinga et al. (2014), Davies et al. (2016), and Lawless et al. (2018).

location choices and thus, represents the sample for the conditional logit analysis.[24] We focus on panel A.[25] The mean value of the TCI is 37.22. This value represents the mean of the mean value of tax code complexity (48.20) and the mean value of tax framework complexity (26.25). Overall, we observe very different levels of total tax complexity, as well as tax code and tax framework complexity, in our sample. The effective average tax rate has a mean value of 22.13%, ranging from 8.16% to 34.85%. We also observe that 23% of the host countries have the same language as their home countries. Moreover, we see from the descriptive statistics on *contiguity* that 25% of all subsidiaries share a common border with their parent firm and are thus closely located to each other. Last but not least, we find that for 59% of the subsidiaries, the parent firm has already been active in the respective country before the subsidiary was established in 2017.

[Insert Table 3 here]

Table 4 contains the correlation coefficients among the variables used in the baseline estimations. Similar to Table 3, this table distinguishes between the actual investments (panel A) and the sample for the conditional logit analysis (panel B). We do not observe critical correlation patterns and hence, do not expect our empirical model to be affected by multicollinearity concerns.

[Insert Table 4 here]

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[24] The sample size of the conditional logit sample (595,014) is obtained by multiplying the actual investments (15,607) by the number of countries in the sample (39) and reducing them by the number of home country investments alternatives.

[25] Except for the bilateral variables and the variable *previous presence*, the summary statistics in both panels are relatively similar.

4 Results

4.1 Main Results

Our main results are presented in Table 5. In column (1), we estimate our model without including the tax complexity measures. In line with prior literature, we find negative coefficients for *effective average tax rate*, *population growth*, *inflation*, *exchange*, and *distance*, suggesting that countries with a higher effective average tax rate, higher inflation rate, higher exchange rate, and longer distance are less likely to be host countries for foreign subsidiaries. Furthermore, we find positive coefficients for *GDP*, *common language*, and *previous presence*, indicating a positive association between the location probability and these variables. In contrast to our expectations, the coefficient of *labor freedom* is negative. Hence, countries with a higher degree of labor freedom seem to be less attractive for the location of foreign subsidiaries. One potential reason might be that stricter labor laws have become beneficial for both firms and employees, for example, by mandating certain types of benefits for employees and attracting skilled labor or by ensuring that employees cannot easily loose or quit their jobs. Finally, the coefficient of *contiguity* is statistically insignificant. Since we already capture geographical proximity to some extent by controlling for the distance between the host and the home country (*distance*), *contiguity* might not provide additional explanatory power.

[Insert Table 5 here]

From column (2) onwards, we consider the tax complexity measures of Hoppe et al. (2019). In the first step, we add the TCI as a measure of total tax complexity. However, the coefficient of *TCI* is statistically insignificant, raising the question of whether total tax complexity is not related to the location choice or whether there are positive and negative aspects of tax complexity that offset each other. We address this question in columns (3) to (5) where we decompose the TCI into its two subindices, the tax code and the tax framework complexity subindices. In columns (3) and (4), we include these subindices separately, while in column (5), we use both

indices. We find a positive coefficient for tax code complexity, indicating that a higher level of complexity inherent in the tax regulations is associated with a higher location probability. By contrast, we observe a negative coefficient for tax framework complexity, suggesting that a higher level of complexity inherent in the features and processes of a tax system is associated with a lower location probability. Given the two opposing findings, the insignificant coefficient of *TCI* in column (2) appears to be the result of positive and negative aspects, which offset each other.[26]

To interpret the magnitude of the single coefficients of the conditional logit model, we estimate the average marginal effects of the complexity measures for the three countries that host more than 10% of the foreign subsidiaries of our sample (Germany, United Kingdom, and the Netherlands).[27] We also calculate the average marginal effect of the effective average tax rate to be able to compare the effects of the tax complexity measures to this common tax variable. For Germany, we obtain values of 0.0015 (*tax code complexity*), -0.0019 (*tax framework complexity*), and -0.0028 (*effective average tax rate*). This indicates that, on average, a one-unit increase in the tax code complexity subindex in Germany is associated with a 0.15 percentage points higher probability to locate in Germany, while a one-unit increase in the tax framework complexity subindex in Germany is associated with a 0.19 percentage points lower probability.[28]

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[26] To compare our results with those of prior studies, we also used the two complexity measures that have been applied most often in the past. In an untabulated analysis, we find a negative association between the number of tax payments and the location probability, which is in line with Lawless (2013). Surprisingly, we find a positive association between the time to comply and the probability of location. One potential explanation for this result might be that prior studies build on much older data than we do and that the time to comply indicator of PwC et al. has decreased substantially worldwide during the last years, on average. However, when we account for the enhancements in the methodology of the "Paying Taxes" study in the last years and include the new version of the overall "Paying Taxes" measure, we again find a negative association between the tax burden and the location probability, providing support for the view that taxes and compliance costs are negatively related to the location choice.

[27] Due to the strong assumptions of the margins command in Stata, we follow Remler and Van Ryzin (2015) and calculate marginal effects for each observation and then estimate the average.

[28] Compared with the effective average tax rate, a change in the tax complexity subindices is somewhat difficult to interpret since they are composed of many different elements. If we look at the tax framework subindex and take the element "inconsistent decisions of tax officers" as an example, we see that if this aspect becomes a problem in a country (while it was not a problem before), the tax framework complexity subindex of this country increases by approximately two units.

By contrast, a one percentage point increase in the effective average tax rate in Germany is associated with a 0.28 percentage point lower probability of location. Hence, an increase of 6.84 units in tax code complexity and a decrease of 5.23 units in tax framework complexity are approximately comparable to a 3.53 percentage point reduction in the effective average tax rate. Either of these changes would approximately be associated with a one percentage point increase in the location probability. For the United Kingdom and the Netherlands, the marginal effects are slightly smaller. We receive values of 0.0014 (United Kingdom) and 0.0013 (Netherlands) for tax code complexity, -0.0018 (United Kingdom) and -0.0017 (Netherlands) for tax framework complexity, and -0.027 (United Kingdom) and -0.0025 (Netherlands) for the effective average tax rate. Compared with prior research, our results on the effective average tax rate are comparable but somewhat smaller. For example, Silva and Lagoa (2018), who examine FDI projects over the period from 1998 to 2006, find that for the United Kingdom, a one percentage point reduction in the effective average tax rate increases the location probability by 0.55 percentage points. One reason for this larger value (compared to our value of 0.28) might be the reduction and convergence of tax rates over the last years (Lee and Swenson 2012; Tax Foundation 2019), leading to a decreasing role of tax rates in investment decisions. However, it might also be due to methodological differences between Silva and Lagoa (2018) and our study.

Our main results not only confirm prior findings but also provide novel insights. The result on the association between tax framework complexity and the location probability is highly in line with prior studies that use the measures of the "Paying Taxes" study and provide evidence for a negative effect of tax complexity. In these studies, the negative effect is expected to result from tax compliance costs, reducing firms' profits. According to the methodology of PwC and World Bank Group (2011), a large part of compliance costs is caused by preparing, filing, and paying taxes. Since these processes are also captured by the tax framework subindex, a partial explanation for our negative association might be the dominance of their negative aspects.

The positive association between tax code complexity and the location choice is notable and in contrast to prior research that has shown negative (or no) effects of tax complexity. However, it provides empirical evidence for our discussion on the benefits of a complex tax code, such as the clarity due to numerous tax rules covering each tax case or the ambiguity that leads to tax planning opportunities. Although a complex tax code can also have many disadvantages, our result suggests that for new foreign investments, the advantages dominate. The positive tax code association also highlights that a high level of tax complexity is not bad per se or discourages firms from investing in a foreign country. However, due to the limitations of our study, we cannot make causal conclusions and propose that tax code complexity is generally a suitable tool to attract more FDI.

Since the subindices are also composite measures, it is possible that certain dimensions of tax code or tax framework complexity have a stronger or even a different association than others. To explore this possibility, we include the dimensions of the tax code complexity and the tax framework complexity subindices, instead of the composite subindices, in separate regression models. The supplementary analysis is displayed in Appendix B. As the dimensions of each subindex are often highly correlated with each other, we refrain from using them in the same regression model to avoid multicollinearity issues. Instead, we estimate 15 regression models for the dimensions of tax code complexity and five regression models for the dimensions of tax framework complexity. Each model includes one dimension of tax code or tax framework complexity, while it still controls for the other complexity component (tax framework complexity or tax code complexity).[29]

In Table B1, among the 15 tax code dimensions, we obtain six significantly positive coefficients, four significantly negative coefficients, and five insignificant coefficients. The highest

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[29]   We obtain qualitatively the same results when we use a "remaining complexity" measure that covers not only the complexity of the tax framework (tax code) but also the complexity of the remaining 14 (4) dimensions of the tax code (tax framework).

positive coefficients are observed for *transfer pricing complexity* and *loss offset complexity*. This indicates that the complexity of these regulations might be helpful for firms and thus, attract investments. For example, ambiguous transfer pricing regulations might provide firms with the necessary discretion to apply the rules on an individual basis, while detailed loss offset rules might be indicative of several benefits, such as a loss carryback option or the existence of a cross-border loss offset regime (Dreßler and Overesch 2013). By contrast, the highest negative coefficients are obtained for *statutory tax rate complexity* and *additional taxes complexity*. For example, different tax rates or many changes in tax rates may induce uncertainty, while detailed regulations on additional taxes may increase compliance costs by requiring many tax base adjustments.

In Table B2, we break down the tax framework subindex into its five dimensions. We find three significantly negative coefficients, one significantly positive coefficient, and one insignificant coefficient. The negative coefficients are obtained for *guidance complexity*, *audits complexity*, and *filing & payments complexity*. The negative coefficient for *filing & payments complexity* does not seem to be surprising, given the results of prior research. By contrast, the results on tax guidance and tax audits are novel. It seems that investments are discouraged when guidance is complex, for example, due to a lack of tools to clarify how the tax law is applied, thus inducing uncertainty and even costs if the application is denied. Similarly, audits seem to be a complexity issue that, through problems in the anticipation of tax audits and the audit process itself, hinders investments. In line with our discussion on the benefits of tax complexity, we find some evidence for positive aspects of tax framework complexity, as indicated by the coefficient of *enactment complexity*. A complex enactment process, which is characterized, for example, by a long time period until a tax law change, seems to be rather positively (e.g., clarity due thoughtful tax rules) than negatively (e.g., uncertainty) associated with new foreign investments.

4.2 Additional Analysis

To further examine our main results on the association between the level of tax complexity and the location choice, we conduct some additional analyses in which we estimate the interaction between the complexity measures of Hoppe et al. (2019) and some common characteristics. Table 6 displays the interaction with two country-specific characteristics (*effective average tax rate* and *GDP*) and the variable *previous presence*.

[Insert Table 6 here]

Columns (1) and (2) show the results for the effective average tax rate. In column (1), we find that the coefficient of the TCI remains insignificant. However, the coefficient of the interaction term of the TCI and the effective average tax rate is negative. To capture the overall effect, we calculate the sum of the coefficient of the TCI and the interaction term. Based on a Wald test, we find that the sum is negative and significant. This finding suggests that the association between total tax complexity and the probability of location becomes negative with increasing effective average tax rates. Hence, the total tax complexity reduces the location probability when tax rates are high. One reason for this result might be that the benefits of tax complexity decrease or become less relevant with increasing tax rates, such that they do not exceed the costs anymore. Column (2) supports this argumentation. While the overall tax framework complexity association is still significantly negative, the overall tax code complexity association becomes insignificant. Thus, we do not find evidence for an association between tax code complexity and the location probability when tax rates are high. The analysis on the GDP is displayed in columns (3) and (4). In column (3), the coefficient is statistically insignificant not only for the TCI and the interaction term but also for the sum. However, in column (4), we find that both the positive association for tax code complexity and the negative association for tax framework complexity diminish with increasing GDP. This finding indicates that the benefits

and costs of tax code and tax framework complexity decrease or become less relevant for investment decisions when the market power of a country is high. In columns (5) and (6), we test whether previous activities in a country through foreign subsidiaries influence the role of tax complexity in the location decision. It might be argued that whenever a parent firm already has a subsidiary in a country, one-time fixed costs (and also benefits) do not repeat in case of a new investment. As illustrated in column (5), the overall effect of the TCI is insignificant. However, when we look at column (6), we find that similar to the results on GDP, the positive association for tax code complexity and the negative association for tax framework complexity diminish if a parent was present in a country before. As shown by the Wald tests, both overall coefficients are insignificant. Based on these results, we conclude that tax complexity primarily affects the very first investments. However, to some extent, these findings have to be treated with caution since the calculation of the variable *previous presence* was performed based on all available data in Orbis with regard to firms' ownership structure, assuming that this full dataset is complete and accurate.[30]

So far, all subsidiaries have been pooled in the sample. However, subsidiaries with different characteristics might show different associations between the level of tax complexity and the location probability. To examine the sensitivity of the associations with regard to firm-specific characteristics, we introduce interactions with subsidiary-specific and parent firm-specific characteristics in Table 7 and 8.[31] In line with prior literature (Lawless et al. 2018), we focus on the size of the parent firm and the subsidiary (Table 7), as well as the industry of the subsidiary (Table 8).

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[30] In case of asymmetric data availability (i.e., one country is covered more comprehensively by Orbis than another country), there could be a measurement bias in this variable. It is not possible to make a clear prediction on this potential measurement bias, as asymmetric data availability could affect the measurement bias in both directions.

[31] Note that, since we use a conditional logit model, firm-specific characteristics would drop out when included without interaction because they do not vary across the location alternatives.

In columns (1) to (4) of Table 7, we include interactions of the tax complexity measures of Hoppe et al. (2019) with dummies for the size of a parent firm. The dummies are based on the size classifications of Orbis. We focus on the lower and the upper part of the size distributions. The dummies are one for small parent firms in columns (1) and (2) and one for very large parent firms in columns 3 and 4, and zero otherwise. It could be argued that the role of tax complexity in location decisions is different for small or very large parent firms. For example, very large parent firms are often present in various countries and thus, have lots of experience and knowledge. Hence, they may benefit from knowledge-spillovers so that the costs of tax complexity are less severe for new foreign investments. By contrast, small parent firms may react more strongly to the cost side of tax complexity as they probably have less knowledge about tax issues in other countries and thus, face a higher relative cost burden compared with their larger counterparts. We do not find any evidence for such a response for small parent firms. The main results correspond to the baseline regression model and are not significantly affected by the interactions. However, for very large parent firms, the association between tax framework complexity and the location probability diminishes, indicating that the costs of tax framework are lower or less important. A different picture appears when we consider the interactions between tax complexity and the size of the subsidiaries in columns (5) to (8). For both small and very large subsidiaries, we find a significantly negative sum of the coefficient of the TCI and the interaction term, indicating a negative association between the total tax complexity and the probability of location. While the positive association for tax code complexity does not substantially change, especially for small subsidiaries, the negative association for tax framework complexity increases, particularly for very large subsidiaries. Hence, for very large investments, the tax framework's complexity seems to be more negative or more relevant for the

location decision. Although this result seems to be surprising at first glance, it might be explained by the fact that very large subsidiaries are permanently affected by tax framework complexity, for example, through annual tax audits and frequent tax payments. Therefore, countries with a higher level of tax framework complexity may be associated with higher costs, providing a greater disincentive to establish very large subsidiaries in these countries.[32]

Table 8 examines the interactions with the three main industry groups among the new foreign subsidiaries: holding subsidiaries, manufacturing subsidiaries, and wholesale subsidiaries.[33] From a theoretical perspective, the industry of the subsidiary might have a crucial impact on the location choice. For example, holding subsidiaries do not depend on specific resources, do not have to be close to their customers, and usually do not have their own business activities. Hence, their location choice appears to be more flexible, making them more sensitive to tax complexity. By contrast, subsidiaries of other industries, such as manufacturing subsidiaries, appear to be less flexible, as they are more dependent on the economic environment of a country.

[Insert Table 8 here]

Columns (1) and (2) display the results for holding subsidiaries. In line with our argumentation, we find that holding subsidiaries are more sensitive to tax complexity. As indicated by column (2), the associations for tax code complexity and tax framework complexity are much stronger. Moreover, when looking at the TCI in column (1), the overall coefficient becomes significantly negative. Hence, holding subsidiaries seem to react more strongly to the costs of tax framework complexity than to the benefits of tax code complexity. For manufacturing subsidiaries, which are examined in columns (3) and (4), we observe similar results for tax code complexity but

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[32] Similarly, Lawless et al. (2018) find that the negative association between the tax rate and the location decision increases for large firms.

[33] The industries are identified using the NACE Rev. 2 classification.

different results for tax framework complexity. The overall coefficient for the TCI in column (3) is positive, which is driven (as indicated in column 4) by a mitigated tax framework complexity association and an increased positive tax code complexity association. These results are quite striking. However, as manufacturing subsidiaries are usually capital- and labor-intensive tax framework complexity might be less important for their location decision. In columns (5) and (6), we focus on the wholesale industry, which we consider to be more neutral with regard to capital and labor resource requirements. We do not find any differences in the associations, indicating that these subsidiaries are comparable to the average sample firm.

5 Robustness Checks

To check the robustness of our results, we carry out two comprehensive sets of robustness checks. The first set deals with potentials concerns that are related to our sample. In Table 9, we test whether the results are robust against the exclusion of certain home countries, as it might be argued that our results are driven by the investment behavior of parent firms from a specific country.[34]

[Insert Table 9 here]

In columns (1) to (4), we exclude the two largest home countries, namely the United Kingdom (columns 1 and 2) and the United States (columns 3 and 4), each of which represents more than 10% of the sample. We find results that are similar to the main results in Table 5.[35] The results are also quite similar when we exclude the United Kingdom and the United States at the same time, reducing our sample size by more than 20% (columns 5 and 6). In columns (7) and (8),

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[34] We do not conduct the same kind of analysis for host countries, as this approach would artificially bias our sample by removing actual investments into a certain country, as well as alternative investments in this country. By contrast, when removing single home countries from our sample, the investment alternatives among the remaining home countries stay quite the same.

[35] To rule out concerns that our results are only robust against the exclusion of the United Kingdom and the United States, we also estimated the regression models for 67 alternative samples, each of which excludes one of the home countries. Across all specifications (untabulated), we find qualitatively the same results, with the TCI having an insignificant coefficient, tax code complexity having a significantly positive coefficient, and tax framework complexity having a significantly negative coefficient.

we address the impact of potential influential parent firms more broadly by restricting the sample to investments of parent firms that come from member countries of the Organisation for Economic Co-operation and Development (OECD). This analysis reduces the heterogeneity in parent firms by focusing on the investment behavior of parent firms that operate in a comparable environment that is characterized by certain minimum standards, such as a democratic political system and the support of free market economies. We still find evidence for a positive association between tax code complexity and the location probability, as well as a negative association for tax framework complexity. Overall, we conclude that our findings appear not to be driven by the investment behavior of certain home countries.

In Table 10 we address several other potential issues related to the sample. In columns (1) and (2), we test whether the results might be affected by the specific year we consider. We extend our sample by including not only new establishments in 2017 but also in 2016, thus examining two years of data.[36] In accordance with our prior empirical specification, we use control variables of the year 2015 to predict the establishments of foreign subsidiaries in 2016. However, due to the lack of tax complexity data for the year 2015, we use the data for the year 2016, assuming that tax complexity is approximately the same in 2015. The results are qualitatively the same for the two-year sample. In terms of statistical significance, the coefficients become slightly weaker, which might result from the noise introduced by using 2016 tax complexity data to measure tax complexity in 2015.[37]

[Insert Table 10 here]

In the next step, we again extend our sample. This time, we include another type of investments, namely mergers and acquisitions (M&As) that took place in 2017. We collect this data from

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[36] Due to incomplete data for the most recent years, we decided to go back in time. As tax complexity is expected to change over the years, we just look at one additional year.

[37] In addition to the extension of the sample period, in untabulated analyses, we also focus on a reduced sample period by analyzing each half of the year 2017 separately. For both half-years, we find qualitatively the same results compared with those in Table 5.

Zephyr and obtain 2,275 additional investments, resulting in a total sample of 17,876 investments. As can be seen in columns (3) and (4), the results for this extended sample are very similar to the main results in Table 5.[38]

Furthermore, we examine whether the results are affected by the number of investments per parent firm per country. While most parent firms invest in a country once (10,702 or 88.33%), there are several parent firms that establish two or more subsidiaries in a country. For example, there are 62 parent firms that establish ten or more subsidiaries in the same country. To account for the possibility that multiple investments belong to the same investment decision, we exclude all host country duplicates of parent firms and rerun our regressions based on 12,116 investments. As indicated in columns (5) and (6), the results are robust. The coefficient of the TCI remains insignificant, while the coefficients of tax code and tax framework complexity remain significant.[39]

The second set of robustness checks focuses on the measurement of tax complexity and the overall tax burden. Table 11 examines alternative specifications for the tax complexity measures of Hoppe et al. (2019). In columns (1) to (4), we focus on the potential objection that tax complexity is a feature of the tax system that is not directly observable. Therefore, we use classifications rather than values. Based on a quintile split of the tax complexity values, we classify the complexity levels into five categories, ranging from very low (1) to very high (5).

[Insert Table 11 here]

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[38] We do not include M&A investments in our main sample, as there is mixed evidence on whether new investments and M&As can be treated equally. For example, Hebous et al. (2011) find that new investments react more strongly to high tax rates than M&A investments. By contrast, Müller and Voget (2014) do not find any significant difference between new investments and M&A investments.

[39] In an additional robustness check, we exclude the investments of parent firms that only invest in a single country. This check examines whether the results change when parent firms have specific investment objectives, such as market expansion. Based on 3,799 investments, we find the same results with regard to our tax complexity measures: the coefficient of the TCI is insignificant, while the coefficient of tax code (tax framework) complexity is positive (negative).

In columns (1) and (2), we replace the tax complexity values by these categories. In columns (3) and (4), we slightly deviate from this approach and employ the complexity categories as defined by Hoppe et al. (2019) based on their sample of 100 countries. For both approaches, we obtain the same results: there is no association between the TCI and the location probability, but a positive association with tax code complexity and a negative association with tax framework complexity. Furthermore, we test the assumption that parent firms do not only compare the benefits and costs of tax complexity of different potential host countries but also look at the differences between the potential host country and the home country. In this case, parent firms should use tax complexity differentials rather than tax complexity levels as their decision criterion. In columns (5) and (6), we re-estimate our main models using tax complexity differentials, calculated as the difference between the tax complexity level in the host country and the home country. For example, a positive difference indicates a host country with a higher level of tax complexity compared with the home country. We find no association between the difference of the TCI and the location choice. However, the association is positive for the tax code complexity differential and negative for the tax framework complexity differential. Hence, the direction of the association stays the same, irrespective of whether we consider tax complexity levels or differentials. Finally, we investigate the association between the TCI and the location probability in more detail. It might be argued that the null result for the TCI is artificially driven by the equal weightings of the tax code complexity subindex and the tax framework complexity subindex that are applied by Hoppe et al. (2019) to calculate the TCI. To rule out these concerns, we recalculate the TCI by applying different weightings. As illustrated in Table 12, the weightings have only little impact on the results obtained. Irrespective of whether the subindices are weighted 30:70 or 80:20, the coefficient of the TCI remains insignificant. It only becomes statistically significant at the extreme ends, (i.e., when the TCI is approximately equal to one of the two subindices).

[Insert Table 12 here]

With our last robustness check, we acknowledge the large stream of literature that has analyzed the effect of different tax rate measures on FDI (e.g., Overesch and Wamser 2010). In Table 13, we examine whether our results are robust to alternative tax rate proxies. In columns (1) and (2), we therefore replace the effective average tax rate by the statutory tax rate. Our tax complexity results are robust to this alternative specification. Besides the statutory tax rate, we also use the effective marginal tax rate which measures the tax burden of a marginal investment. As illustrated in columns (3) and (4), the coefficients of the tax complexity subindices remain significant, although they lose some statistical power. The effective marginal tax rate itself has significantly negative coefficients that are considerably smaller than those of the effective average tax rate and the statutory tax rate. In general, the results for the effective marginal tax rate have to be treated with some caution, since the EMTR is not a very suitable measure in our setting, which considers new establishments.[40]

[Insert Table 13 here]

6 Conclusion

In this paper, we investigate the association between tax complexity and MNCs' location decisions based on a sample of 15,607 new foreign subsidiaries by using novel tax complexity data. We find that the location choice of MNCs is not significantly related to the level of total tax complexity, as measured by the TCI. However, when decomposing the TCI into its subindices, we find significant results, with tax code complexity being positively, and tax framework complexity being negatively, related to the probability of investing in a country. The associations identified are also robust to several robustness checks. They are mainly driven by the complexity of transfer pricing and loss offset regulations, as well as guidance, audits, and tax filing and

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[40]   Devereux and Griffith (1998), Buettner and Ruf (2007), and Silva and Lagoa (2018) argue that it is rather the effective average tax rate than the effective marginal tax rate that matters for location decisions.

payments. Our analysis of the interactions reveals that the relationship between tax complexity and location probability is sensitive to certain characteristics, such as country-specific and firm-specific characteristics (e.g., the effective average tax rate or the size and the industry of the subsidiary). Overall, we are the first to provide empirical evidence on the potential benefits of tax complexity. With the findings obtained from decomposing the TCI, we enhance prior studies that find a negative or no effect of tax complexity on FDI.

Our study is subject to a major limitation, specifically, the availability of the tax complexity data for only one year. This limitation imposes some restrictions to our analysis. First, we are not able to use a fixed-effect regression model that includes time-fixed and country-fixed effects. Second, our setting is limited to the identification of associations and does not allow drawing causal inferences. Third, we are restricted to Orbis, as it contains information on firms across the world. Although Orbis has many advantages, it is sometimes criticized for its data quality. To address this concern, it would be helpful to use other databases that, for example, only contain specific investments (e.g., MiDi for German outbound investments). However, as can be inferred from the rather small sample of Müller and Voget (2014), the use of alternative databases would reduce our sample size considerably, not allowing for any meaningful analysis. With additional tax complexity data becoming available, future research will be able to eliminate these restrictions (e.g., by employing panel data). In such a setting, it might also be possible to identify exogenous shocks and hence, establish causality. Furthermore, alternative samples can be used to further strengthen the implications derived.

This paper provides a valuable starting point for a new view on the relationship between tax complexity and FDI. Our results are particularly interesting for the research community, as they indicate that the results of previous studies might be strongly related to the narrow view on tax complexity. Hence, we encourage future research to put more emphasis on the cost-benefit tradeoff and the selection of the appropriate measure for the respective research setting. The

results are also relevant for policymakers, as they reveal that tax complexity does not have to

be bad per se.

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Figure 1: Overview country tax complexity
Panel A: Tax Complexity Index (TCI)
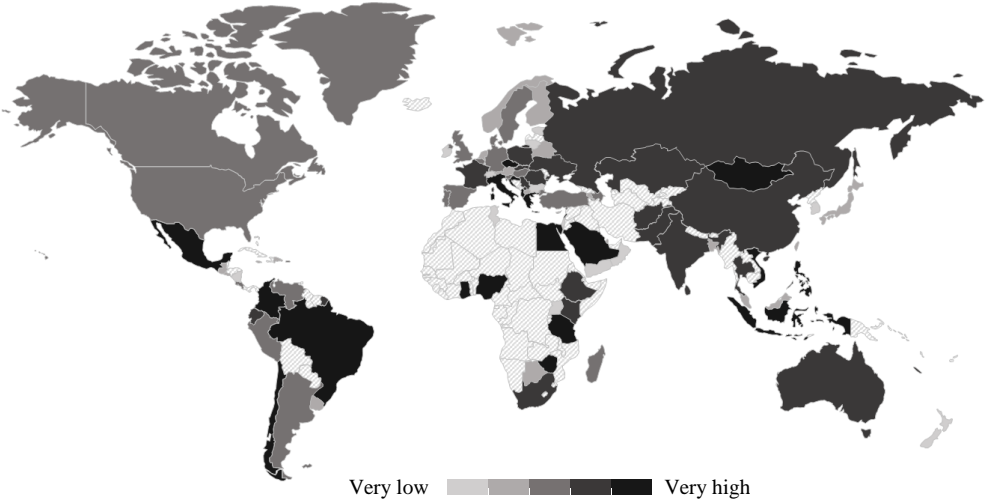
Panel B: Tax code complexity subindex
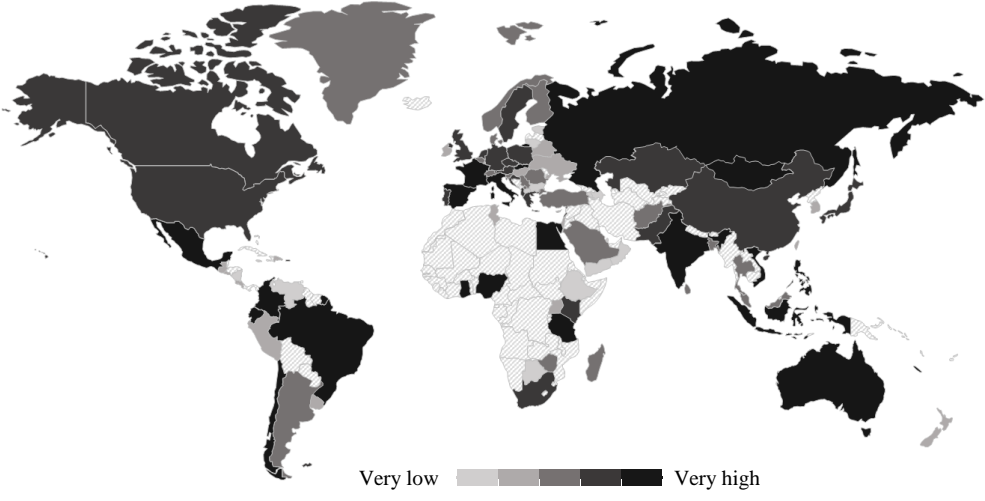
Panel C: Tax framework complexity subindex
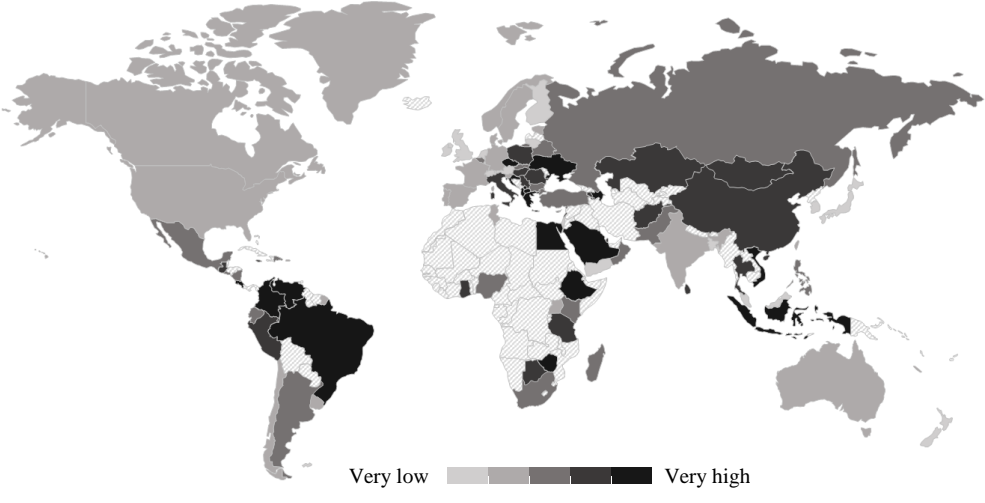
Table 1: Country distribution

Country	Parent firms by home country	Subsidiaries by home country	Subsidiaries by host country
Albania	5	5	0
Argentina	4	4	0
Australia	316	423	174
Austria	273	358	486
Azerbaijan	1	1	0
Bangladesh	1	1	0
Barbados	2	2	0
Belarus	2	2	0
Belgium	283	382	257
Brazil	35	76	106
Bulgaria	37	38	204
Canada	159	212	13
Chile	8	13	3
China, Republic of	252	330	110
Colombia	2	2	0
Costa Rica	1	1	0
Croatia	22	27	130
Cyprus	219	273	0
Czech Republic	539	793	589
Denmark	188	235	369
Egypt	2	2	0
Estonia	49	63	0
Finland	94	115	115
France	366	624	119
Germany	794	1,209	2,968
Greece	8	10	4
Hong Kong	169	214	0
Hungary	70	79	63
India	90	117	0
Indonesia	1	2	0
Ireland	127	291	46
Israel	66	102	9
Italy	424	491	1,137
Japan	197	316	8
Korea, Republic of	65	78	27
Lebanon	5	7	0
Lithuania	38	39	0
Luxembourg	506	914	219
Macedonia	3	3	0
Malaysia	25	33	0
Malta	95	148	0
Mauritius	14	19	0
Mexico	15	16	9
Netherlands	426	682	1,586
New Zealand	19	21	352
Norway	171	326	217
Pakistan	3	3	0
Philippines	6	6	0
Poland	65	80	399
Portugal	29	42	627
Qatar	3	5	0
Romania	54	57	691
Russian Federation	44	45	626
Saudi Arabia	6	10	1
Singapore	114	167	0
Slovakia	101	129	389
Slovenia	45	47	0
South Africa	64	86	9
Spain	342	514	1,074
Sweden	309	476	148
Switzerland	887	1,214	186
Taiwan	33	43	0
Thailand	13	22	0
Tunisia	1	1	0

Turkey	138	181	0
Ukraine	5	5	46
United Kingdom	1,200	1,699	1,888
United States of America	1,093	1,661	203
Vietnam	6	15	0
Total	10,749	15,607	15,607

Table 2: Subsidiary size and industry distribution

Panel A: Size

Size classification	Observations	Percent
Small company	11,844	75.89%
Medium company	2,377	15.23%
Large company	982	6.29%
Very large company	404	2.59%
Total	15,607	100.00%

Panel B: Industry

Industry	Observations	Percent
Agriculture, forestry and fishing	155	0.99%
Mining and quarrying	91	0.58%
Manufacturing	1,291	8.27%
Electricity, gas, steam and air conditioning supply	363	2.33%
Water supply, sewerage, waste management and remediation activities	63	0.40%
Construction	771	4.94%
Wholesale and retail trade, repair of motor vehicles and motorcycles	2,651	16.99%
Transportation and storage	507	3.25%
Accommodation and storage	368	2.36%
Information and communication	1,520	9.74%
Financial and insurance activities	1,962	12.57%
Real estate activities	1,681	10.77%
Professional, scientific, and technical activities	2,017	12.92%
Administrative and support service activities	1,547	9.91%
Public administration and defense, social security	2	0.01%
Education	80	0.51%
Human health and social work activities	159	1.02%
Arts, entertainment and recreation	123	0.79%
Other service activities	253	1.62%
Activities of households as employers	1	0.01%
Activities of extraterritorial organizations and bodies	2	0.01%
Total	15,607	100.00%

Table 3: Descriptive statistics

Panel A: Actual investments

Variable	Obs.	Mean	Std. Dev.	Min.	p10	p50	p90	Max.
Tax Complexity Index (TCI)	15,607	37.22	4.39	26.59	32.37	37.07	43.29	53.19
Tax code complexity	15,607	48.20	5.15	23.42	42.96	48.10	53.77	60.83
Tax framework complexity	15,607	26.25	6.21	15.97	15.97	25.10	35.88	45.55
Effective average tax rate	15,607	22.13	4.97	8.16	16.09	21.58	27.59	34.85
Ln(GDP)	15,607	27.55	1.27	24.65	25.96	27.84	28.88	30.56
Population growth	15,607	0.47	0.58	-0.70	-0.32	0.53	1.08	2.25
Labor freedom	15,607	60.62	11.71	42.40	50.60	57.60	77.20	91.40
Inflation	15,607	0.70	1.81	-1.54	-0.52	0.48	1.28	13.90
Exchange	15,607	96.90	7.13	71.80	92.05	95.98	104.92	143.78
Common language	15,607	0.23	0.42	0.00	0.00	0.00	1.00	1.00
Ln(Distance)	15,607	7.29	1.21	4.09	5.78	7.16	9.01	9.88
Contiguity	15,607	0.25	0.43	0.00	0.00	0.00	1.00	1.00
Previous presence	15,607	0.59	0.49	0.00	0.00	1.00	1.00	1.00

Panel B: Conditional logit sample

Variable	Obs.	Mean	Std. Dev.	Min.	p10	p50	p90	Max.
Tax Complexity Index (TCI)	595,014	37.35	5.71	26.59	28.37	37.07	43.83	53.19
Tax code complexity	595,014	46.80	7.05	23.42	35.72	48.44	54.12	60.83
Tax framework complexity	595,014	27.90	7.35	15.97	18.94	25.10	37.82	45.55
Effective average tax rate	595,014	21.72	5.64	8.16	15.43	21.58	29.21	34.85
Ln(GDP)	595,014	27.00	1.38	24.65	25.22	26.87	28.61	30.56
Population growth	595,014	0.60	0.79	-0.70	-0.42	0.54	1.96	2.25
Labor freedom	595,014	61.96	12.75	42.40	43.50	60.50	83.90	91.40
Inflation	595,014	1.53	2.99	-1.54	-0.80	0.61	6.33	13.90
Exchange	595,014	96.33	14.01	71.80	79.60	95.98	117.75	143.78
Common language	595,014	0.11	0.32	0.00	0.00	0.00	1.00	1.00
Ln(Distance)	595,014	8.02	1.16	4.09	6.50	8.00	9.38	9.88
Contiguity	595,014	0.07	0.26	0.00	0.00	0.00	0.00	1.00
Previous presence	595,014	0.15	0.36	0.00	0.00	0.00	1.00	1.00

Notes: Variables are defined in Appendix A.

Table 4: Correlation tables

Panel A: Actual investments

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Tax Complexity Index (TCI)		**0.55**	**0.86**	**0.07**	**0.11**	**-0.47**	**-0.26**	**-0.22**	**-0.61**	**-0.23**	0.01	**0.03**	**-0.05**
(2) Tax code complexity	**0.72**		**0.17**	0.03	0.05	**-0.49**	**-0.08**	**-0.08**	**-0.26**	**-0.20**	**0.12**	**-0.09**	0.00
(3) Tax framework complexity	**0.82**	**0.19**		-0.08	-0.03	**-0.44**	**-0.21**	**-0.22**	**-0.55**	**-0.21**	**-0.05**	**0.06**	**-0.07**
(4) Effective average tax rate	**0.06**	**0.30**	**-0.16**		**0.53**	**0.36**	**-0.50**	**0.14**	**-0.11**	**0.18**	-0.01	**0.15**	-0.01
(5) Ln(GDP)	**0.14**	**0.44**	**-0.17**	**0.54**		**0.37**	**-0.27**	**0.26**	-0.07	**0.19**	0.02	**0.08**	0.06
(6) Population growth	**-0.54**	**-0.25**	**-0.55**	**0.35**	**0.23**		0.07	**0.51**	**0.15**	**0.35**	-0.04	**0.15**	0.08
(7) Labor freedom	**-0.27**	**-0.27**	**-0.15**	**-0.39**	**-0.10**	**0.27**		**0.19**	**0.44**	**0.15**	**0.17**	**-0.21**	0.07
(8) Inflation	**0.17**	**0.19**	**0.08**	0.02	**0.12**	**0.15**	-0.04		**0.14**	**0.28**	**0.12**	0.03	0.07
(9) Exchange	**-0.44**	**-0.29**	**-0.38**	0.05	**0.15**	**0.30**	**0.45**	**-0.43**		**0.31**	0.06	-0.07	0.02
(10) Common language	**-0.21**	**-0.13**	**-0.19**	**0.18**	**0.20**	**0.38**	**0.19**	0.00	**0.32**		-0.08	**0.40**	0.01
(11) Ln(Distance)	-0.01	0.02	-0.03	0.00	**0.10**	0.06	**0.19**	**0.11**	**0.12**	-0.04		**-0.62**	0.04
(12) Contiguity	**0.03**	0.03	0.01	**0.16**	0.04	0.08	**-0.19**	0.00	-0.07	**0.40**	**-0.60**		-0.03
(13) Previous presence	-0.03	0.03	-0.06	0.00	0.08	0.08	0.07	0.05	0.04	0.01	0.06	-0.03	

Panel B: Conditional logit sample

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Tax Complexity Index (TCI)		**0.76**	**0.82**	**0.10**	**0.12**	**-0.24**	**-0.25**	**0.18**	**-0.36**	**-0.16**	**0.09**	-0.02	-0.01
(2) Tax code complexity	**0.78**		**0.34**	**0.42**	**0.39**	**-0.09**	**-0.17**	**0.18**	**-0.34**	-0.06	**0.15**	0.01	0.04
(3) Tax framework complexity	**0.80**	**0.26**		**-0.16**	**-0.20**	**-0.39**	**-0.24**	**0.09**	**-0.35**	**-0.18**	0.00	-0.04	-0.04
(4) Effective average tax rate	**0.21**	**0.48**	**-0.14**		**0.47**	**0.29**	-0.07	**0.26**	**-0.09**	**0.13**	**0.28**	0.06	0.04
(5) Ln(GDP)	**0.16**	**0.46**	**-0.20**	**0.56**		**0.23**	**0.15**	**0.28**	0.02	0.07	**0.15**	0.08	0.08
(6) Population growth	**-0.28**	-0.06	**-0.37**	**0.25**	**0.16**		**0.31**	**0.45**	**0.18**	**0.27**	**0.25**	0.03	0.00
(7) Labor freedom	**-0.27**	**-0.16**	**-0.26**	-0.03	**0.24**	**0.27**		0.03	**0.22**	**0.16**	**0.18**	-0.04	0.00
(8) Inflation	**0.34**	**0.21**	**0.32**	**0.08**	0.04	**0.10**	**-0.18**		**-0.18**	0.05	**0.34**	-0.04	-0.03
(9) Exchange	**-0.30**	**-0.24**	**-0.24**	-0.07	**0.22**	**0.22**	**0.17**	**-0.38**		0.06	-0.06	0.01	0.01
(10) Common language	**-0.17**	-0.07	**-0.20**	**0.12**	0.07	**0.27**	**0.15**	-0.04	0.01		-0.05	**0.36**	0.07
(11) Ln(Distance)	**0.09**	**0.13**	0.02	**0.23**	**0.21**	**0.22**	**0.21**	**0.21**	0.05	-0.08		**-0.39**	-0.08
(12) Contiguity	-0.02	0.03	-0.06	0.06	0.05	0.02	-0.05	-0.06	-0.02	**0.36**	**-0.44**		**0.10**
(13) Previous presence	0.00	**0.05**	**-0.05**	0.04	0.08	-0.01	-0.01	-0.05	0.00	0.07	-0.07	**0.10**	

Notes: Pearson's correlation coefficients are shown in the lower triangle while Spearman's rank correlations appear above the diagonal. Bold data denote statistically significant correlations (p < 0.1).

Table 5: Baseline estimation

Variable	(1)	(2)	(3)	(4)	(5)
Tax Complexity Index (TCI)		-0.015			
		(0.013)			
Tax code complexity			0.015***		0.022***
			(0.005)		(0.007)
Tax framework complexity				-0.025*	-0.028**
				(0.014)	(0.014)
Effective average tax rate	-0.038***	-0.037***	-0.041***	-0.038***	-0.042***
	(0.010)	(0.009)	(0.010)	(0.010)	(0.010)
Ln(GDP)	0.420***	0.430***	0.392***	0.402***	0.359***
	(0.057)	(0.060)	(0.060)	(0.056)	(0.059)
Population growth	-0.271**	-0.326***	-0.247*	-0.415***	-0.399***
	(0.123)	(0.102)	(0.127)	(0.108)	(0.114)
Labor freedom	-0.010***	-0.011***	-0.009***	-0.011***	-0.010***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Inflation	-0.092***	-0.086***	-0.094***	-0.076***	-0.077***
	(0.017)	(0.014)	(0.018)	(0.013)	(0.014)
Exchange	-0.008***	-0.010***	-0.007***	-0.009***	-0.006***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Common language	0.475***	0.474***	0.491***	0.502***	0.528***
	(0.081)	(0.081)	(0.077)	(0.070)	(0.065)
Ln(Distance)	-0.574***	-0.566***	-0.576***	-0.552***	-0.550***
	(0.033)	(0.028)	(0.033)	(0.025)	(0.024)
Contiguity	-0.095	-0.088	-0.096	-0.073	-0.071
	(0.098)	(0.093)	(0.098)	(0.088)	(0.087)
Previous presence	4.180***	4.182***	4.173***	4.177***	4.167***
	(0.249)	(0.249)	(0.249)	(0.248)	(0.247)
Observations	595,014	595,014	595,014	595,014	595,014
Subsidiaries	15,607	15,607	15,607	15,607	15,607
Pseudo R²	0.350	0.351	0.351	0.352	0.353
Log-likelihood	-36,924	-36,905	-36,900	-36,819	-36,771

Notes: Conditional logit estimations. All continuous variables are mean-centered. The dependent variable is location. It is equal to one if an investment takes place in the respective foreign country, and zero otherwise. Robust standard errors, clustered at the level of the subsidiary's industry, are provided in parentheses. ***, ** and * denote significances at the level of 1%, 5% and 10%, respectively. Variable definitions are provided in Appendix A.

Table 6: Control interactions

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Tax Complexity Index (TCI)	-0.024		-0.015		-0.007	
	(0.015)		(0.014)		(0.007)	
Tax code complexity		0.012*		0.015		0.029***
		(0.007)		(0.010)		(0.008)
Tax framework complexity		-0.028**		-0.029**		-0.027***
		(0.013)		(0.014)		(0.009)
Tax Complexity Index (TCI) x Effective average tax rate	-0.006***					
	(0.001)					
Tax code complexity x Effective average tax rate		-0.004***				
		(0.001)				
Tax framework complexity x Statutory tax rate		-0.001				
		(0.001)				
Tax Complexity Index (TCI) x Ln(GDP)			-0.001			
			(0.004)			
Tax code complexity x Ln(GDP)				-0.004		
				(0.005)		
Tax framework complexity x Ln(GDP)				0.012**		
				(0.005)		
Tax Complexity Index (TCI) x Previous presence					-0.022	
					(0.017)	
Tax code complexity x Previous presence						-0.019**
						(0.008)
Tax framework complexity x Previous presence						-0.002
						(0.016)
Effective average tax rate	-0.045***	-0.044***	-0.037***	-0.037***	-0.037***	-0.043***
	(0.010)	(0.010)	(0.009)	(0.012)	(0.009)	(0.010)
Ln(GDP)	0.463***	0.399***	0.430***	0.369***	0.433***	0.362***
	(0.057)	(0.054)	(0.060)	(0.053)	(0.061)	(0.059)
Population growth	-0.376***	-0.468***	-0.325***	-0.491***	-0.330***	-0.403***
	(0.094)	(0.111)	(0.102)	(0.130)	(0.101)	(0.115)
Labor freedom	-0.012***	-0.011***	-0.011***	-0.007***	-0.011***	-0.010***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Inflation	-0.092***	-0.089***	-0.086***	-0.080***	-0.086***	-0.077***
	(0.015)	(0.017)	(0.013)	(0.014)	(0.014)	(0.014)
Exchange	-0.011***	-0.008***	-0.010***	-0.008***	-0.010***	-0.006***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Common language	0.532***	0.561***	0.474***	0.535***	0.466***	0.519***
	(0.079)	(0.069)	(0.080)	(0.064)	(0.085)	(0.068)
Ln(Distance)	-0.545***	-0.528***	-0.566***	-0.561***	-0.563***	-0.548***
	(0.027)	(0.023)	(0.025)	(0.022)	(0.027)	(0.023)
Contiguity	-0.060	-0.027	-0.087	-0.095	-0.081	-0.067
	(0.094)	(0.085)	(0.091)	(0.080)	(0.090)	(0.083)
Previous presence	4.155***	4.141***	4.182***	4.167***	4.183***	4.187***
	(0.249)	(0.248)	(0.249)	(0.246)	(0.247)	(0.248)
Wald test complexity variable + interaction term = 0; p < 0.1	Yes	No / Yes	No	No / No	No	No / No
Observations	595,014	595,014	595,014	595,014	595,014	595,014
Subsidiaries	15,607	15,607	15,607	15,607	15,607	15,607
Pseudo R²	0.354	0.356	0.351	0.353	0.351	0.353
Log-likelihood	-36,727	-36,601	-36,905	-36,736	-36,890	-36,755

Notes: Conditional logit estimations. All continuous variables are mean-centered. The dependent variable is location. It is equal to one if an investment takes place in the respective foreign country, and zero otherwise. Robust standard errors, clustered at the level of the subsidiary's industry, are provided in parentheses. ***, ** and * denote significances at the level of 1%, 5% and 10%, respectively. Variable definitions are provided in Appendix A.

Table 7: Firm interactions – Size

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tax Complexity Index (TCI)	-0.017		-0.011		0.008		-0.014	
	(0.017)		(0.008)		(0.025)		(0.012)	
Tax code complexity		0.024***		0.021***		0.024*		0.021***
		(0.009)		(0.007)		(0.013)		(0.007)
Tax framework complexity		-0.030*		-0.025***		-0.009		-0.027**
		(0.018)		(0.009)		(0.025)		(0.012)
Tax Complexity Index (TCI) x Parent small	0.004							
	(0.010)							
Tax code complexity x Parent small		-0.004						
		(0.008)						
Tax framework complexity x Parent small		0.003						
		(0.009)						
Tax Complexity Index (TCI) x Parent very large			-0.013					
			(0.016)					
Tax code complexity x Parent very large				0.003				
				(0.009)				
Tax framework complexity x Parent very large				-0.009				
				(0.016)				
Tax Complexity Index (TCI) x Subsidiary small					-0.030			
					(0.018)			
Tax code complexity x Subsidiary small						-0.003		
						(0.010)		
Tax framework complexity x Subsidiary small						-0.025		
						(0.016)		
Tax Complexity Index (TCI) x Subsidiary very large							-0.066**	
							(0.030)	
Tax code complexity x Subsidiary very large								0.021
								(0.017)
Tax framework complexity x Subsidiary very large								-0.078*
								(0.041)
Effective average tax rate	-0.037***	-0.042***	-0.036***	-0.042***	-0.037***	-0.042***	-0.036***	-0.042***
	(0.009)	(0.010)	(0.009)	(0.010)	(0.009)	(0.010)	(0.009)	(0.010)
Ln(GDP)	0.430***	0.359***	0.430***	0.361***	0.430***	0.358***	0.430***	0.360***
	(0.060)	(0.059)	(0.061)	(0.060)	(0.060)	(0.059)	(0.061)	(0.059)
Population growth	-0.326***	-0.399***	-0.325***	-0.396***	-0.327***	-0.401***	-0.326***	-0.397***
	(0.102)	(0.114)	(0.102)	(0.115)	(0.101)	(0.114)	(0.101)	(0.114)
Labor freedom	-0.011***	-0.010***	-0.011***	-0.010***	-0.011***	-0.010***	-0.011***	-0.010***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Inflation	-0.086***	-0.077***	-0.086***	-0.077***	-0.086***	-0.077***	-0.085***	-0.077***
	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)
Exchange	-0.010***	-0.006***	-0.010***	-0.006***	-0.009***	-0.006***	-0.010***	-0.006***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Common language	0.473***	0.528***	0.471***	0.526***	0.476***	0.529***	0.473***	0.528***
	(0.083)	(0.066)	(0.084)	(0.067)	(0.081)	(0.065)	(0.082)	(0.064)
Ln(Distance)	-0.566***	-0.550***	-0.565***	-0.549***	-0.567***	-0.551***	-0.566***	-0.549***
	(0.027)	(0.023)	(0.027)	(0.023)	(0.027)	(0.023)	(0.028)	(0.024)
Contiguity	-0.088	-0.071	-0.087	-0.070	-0.088	-0.070	-0.085	-0.068
	(0.093)	(0.087)	(0.093)	(0.086)	(0.094)	(0.088)	(0.092)	(0.085)
Previous presence	4.182***	4.166***	4.180***	4.164***	4.183***	4.169***	4.182***	4.167***
	(0.249)	(0.247)	(0.248)	(0.246)	(0.249)	(0.246)	(0.249)	(0.247)
Wald test complexity variable + interaction term = 0; p < 0.1	No	Yes / Yes	No	Yes / No	Yes	Yes / Yes	Yes	Yes / Yes
Observations	595,014	595,014	595,014	595,014	595,014	595,014	595,014	595,014
Subsidiaries	15,607	15,607	15,607	15,607	15,607	15,607	15,607	15,607
Pseudo R²	0.351	0.353	0.351	0.353	0.351	0.353	0.351	0.353
Log-likelihood	-36,904	-36,770	-36,900	-36,766	-36,883	-36,739	-36,890	-36,742

Notes: Conditional logit estimations. All continuous variables are mean-centered. The dependent variable is location. It is equal to one if an investment takes place in the respective foreign country, and zero otherwise. Robust standard errors, clustered at the level of the subsidiary's industry, are provided in parentheses. ***, ** and * denote significances at the level of 1%, 5% and 10%, respectively. Variable definitions are provided in Appendix A.

Table 8: Firm interactions – Industry

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Tax Complexity Index (TCI)	-0.006		-0.020		-0.020	
	(0.007)		(0.013)		(0.016)	
Tax code complexity		0.016***		0.020***		0.021**
		(0.005)		(0.007)		(0.008)
Tax framework complexity		-0.015***		-0.032**		-0.031**
		(0.004)		(0.014)		(0.016)
Tax Complexity Index (TCI) x Subsidiary holding	-0.126***					
	(0.011)					
Tax code complexity x Subsidiary holding		0.087***				
		(0.010)				
Tax framework complexity x Subsidiary holding		-0.195***				
		(0.005)				
Tax Complexity Index (TCI) x Subsidiary manufacturing			0.052***			
			(0.016)			
Tax code complexity x Subsidiary manufacturing				0.014***		
				(0.004)		
Tax framework complexity x Subsidiary manufacturing				0.036***		
				(0.014)		
Tax Complexity Index (TCI) x Subsidiary wholesale					0.024	
					(0.018)	
Tax code complexity x Subsidiary wholesale						0.006
						(0.005)
Tax framework complexity x Subsidiary wholesale						0.017
						(0.016)
Effective average tax rate	-0.036***	-0.040***	-0.036***	-0.042***	-0.036***	-0.042***
	(0.009)	(0.009)	(0.009)	(0.010)	(0.009)	(0.010)
Ln(GDP)	0.436***	0.371***	0.431***	0.360***	0.430***	0.360***
	(0.064)	(0.062)	(0.061)	(0.059)	(0.061)	(0.059)
Population growth	-0.330***	-0.354***	-0.329***	-0.402***	-0.327***	-0.401***
	(0.102)	(0.121)	(0.101)	(0.114)	(0.101)	(0.114)
Labor freedom	-0.010***	-0.011***	-0.011***	-0.010***	-0.011***	-0.010***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Inflation	-0.086***	-0.079***	-0.086***	-0.077***	-0.086***	-0.077***
	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)
Exchange	-0.010***	-0.006***	-0.010***	-0.006***	-0.010***	-0.006***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Common language	0.468***	0.545***	0.473***	0.527***	0.473***	0.526***
	(0.084)	(0.063)	(0.081)	(0.065)	(0.081)	(0.064)
Ln(Distance)	-0.567***	-0.544***	-0.567***	-0.551***	-0.566***	-0.550***
	(0.028)	(0.023)	(0.028)	(0.024)	(0.028)	(0.024)
Contiguity	-0.082	-0.061	-0.087	-0.070	-0.087	-0.070
	(0.090)	(0.083)	(0.093)	(0.086)	(0.093)	(0.086)
Previous presence	4.179***	4.164***	4.182***	4.166***	4.181***	4.166***
	(0.250)	(0.249)	(0.250)	(0.247)	(0.250)	(0.248)
Wald test complexity variable + interaction term = 0; p < 0.1	Yes	Yes / Yes	Yes	Yes / No	No	Yes / Yes
Observations	595,014	595,014	595,014	595,014	595,014	595,014
Subsidiaries	15,607	15,607	15,607	15,607	15,607	15,607
Pseudo R²	0.353	0.360	0.351	0.353	0.351	0.353
Log-likelihood	-36,758	-36,353	-36,876	-36,738	-36,893	-36,758

Notes: Conditional logit estimations. All continuous variables are mean-centered. The dependent variable is location. It is equal to one if an investment takes place in the respective foreign country, and zero otherwise. Robust standard errors, clustered at the level of the subsidiary's industry, are provided in parentheses.***, ** and * denote significances at the level of 1%, 5% and 10%, respectively. Variable definitions are provided in Appendix A.

Table 9: Robustness – Parent country exclusion

Variable	Excl. United Kingdom (largest country)		Excl. United States (2nd largest country)		Excl. United Kingdom and United States		Only OECD	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tax Complexity Index (TCI)	-0.019		-0.004		-0.008		-0.012	
	(0.013)		(0.010)		(0.010)		(0.014)	
Tax code complexity		0.025***		0.022***		0.026***		0.022***
		(0.007)		(0.006)		(0.006)		(0.007)
Tax framework complexity		-0.035**		-0.020*		-0.026**		-0.026*
		(0.014)		(0.011)		(0.011)		(0.015)
Effective average tax rate	-0.039***	-0.046***	-0.036***	-0.040***	-0.040***	-0.046***	-0.029***	-0.034***
	(0.010)	(0.011)	(0.009)	(0.010)	(0.010)	(0.011)	(0.009)	(0.011)
Ln(GDP)	0.422***	0.339***	0.418***	0.358***	0.413***	0.339***	0.412***	0.349***
	(0.065)	(0.065)	(0.060)	(0.061)	(0.065)	(0.067)	(0.058)	(0.055)
Population growth	-0.331***	-0.422***	-0.284**	-0.350***	-0.279***	-0.365***	-0.322***	-0.396***
	(0.088)	(0.098)	(0.112)	(0.123)	(0.100)	(0.107)	(0.112)	(0.123)
Labor freedom	-0.011***	-0.010***	-0.007***	-0.006***	-0.007***	-0.006***	-0.008***	-0.007***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Inflation	-0.086***	-0.075***	-0.079***	-0.071***	-0.079***	-0.070***	-0.105***	-0.098***
	(0.014)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.022)	(0.021)
Exchange	-0.009***	-0.006***	-0.014***	-0.011***	-0.015***	-0.012***	-0.005**	-0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Common language	0.572***	0.635***	0.442***	0.499***	0.566***	0.638***	0.433***	0.491***
	(0.086)	(0.071)	(0.096)	(0.083)	(0.100)	(0.085)	(0.098)	(0.078)
Ln(Distance)	-0.501***	-0.486***	-0.622***	-0.610***	-0.564***	-0.552***	-0.574***	-0.556***
	(0.026)	(0.022)	(0.035)	(0.032)	(0.033)	(0.031)	(0.031)	(0.026)
Contiguity	0.028	0.049	0.043	0.043	0.155**	0.155**	-0.061	-0.049
	(0.087)	(0.079)	(0.078)	(0.076)	(0.074)	(0.072)	(0.095)	(0.089)
Previous presence	4.218***	4.202***	4.054***	4.043***	4.081***	4.071***	4.019***	4.007***
	(0.249)	(0.248)	(0.269)	(0.266)	(0.270)	(0.268)	(0.251)	(0.249)
Observations	530,452	530,452	531,896	531,896	467,334	467,334	491,503	491,503
Subsidiaries	13,908	13,908	13,946	13,946	12,247	12,247	13,276	13,276
Pseudo R²	0.365	0.368	0.350	0.352	0.366	0.369	0.337	0.339
Log-likelihood	-32,171	-32,005	-33,004	-32,918	-28,268	-28,154	-31,771	-31,670

Notes: Conditional logit estimations. All continuous variables are mean-centered. The dependent variable is location. It is equal to one if an investment takes place in the respective foreign country, and zero otherwise. Robust standard errors, clustered at the level of the subsidiary's industry, are provided in parentheses. In specifications (1) and (2), all parent firms from the United Kingdom (largest home country) are excluded. Specifications (3) and (4) exclude all parent firms from the United States (2nd largest home country). In specifications (5) and (6), all parent firms from the United Kingdom and the United States are excluded at the same time. Specifications (7) and (8) include parent firms from OECD countries only. ***, ** and * denote significances at the level of 1%, 5% and 10%, respectively. Variable definitions are provided in Appendix A.

Table 10: Robustness – Other sample modifications

Variable	2016 & 2017		M&As		Investment limit	
	(1)	(2)	(3)	(4)	(5)	(6)
Tax Complexity Index (TCI)	-0.016		-0.012		-0.012	
	(0.014)		(0.013)		(0.011)	
Tax code complexity		0.018***		0.021***		0.017**
		(0.007)		(0.007)		(0.007)
Tax framework complexity		-0.025*		-0.025*		-0.022**
		(0.014)		(0.013)		(0.011)
Effective average tax rate	-0.041***	-0.045***	-0.029***	-0.034***	-0.039***	-0.044***
	(0.007)	(0.008)	(0.008)	(0.009)	(0.007)	(0.007)
Ln(GDP)	0.440***	0.378***	0.415***	0.350***	0.421***	0.366***
	(0.052)	(0.045)	(0.054)	(0.053)	(0.048)	(0.056)
Population growth	-0.282***	-0.320***	-0.303***	-0.366***	-0.296***	-0.355***
	(0.103)	(0.112)	(0.089)	(0.100)	(0.094)	(0.102)
Labor freedom	-0.012***	-0.011***	-0.007***	-0.007***	-0.013***	-0.012***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)
Inflation	-0.027***	-0.023***	-0.074***	-0.065***	-0.094***	-0.087***
	(0.005)	(0.005)	(0.011)	(0.012)	(0.010)	(0.010)
Exchange	-0.008***	-0.005***	-0.008***	-0.005***	-0.011***	-0.008***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Common language	0.450***	0.482***	0.469***	0.511***	0.377***	0.417***
	(0.041)	(0.034)	(0.069)	(0.057)	(0.042)	(0.036)
Ln(Distance)	-0.560***	-0.546***	-0.521***	-0.508***	-0.590***	-0.578***
	(0.019)	(0.018)	(0.029)	(0.026)	(0.019)	(0.018)
Contiguity	-0.037	-0.015	-0.107	-0.090	0.006	0.017
	(0.089)	(0.078)	(0.085)	(0.079)	(0.066)	(0.062)
Previous presence	4.098***	4.084***	4.381***	4.368***	3.895***	3.883***
	(0.253)	(0.251)	(0.226)	(0.225)	(0.236)	(0.232)
Observations	1,224,147	1,224,147	681,756	681,756	461,921	461,921
Subsidiaries	32,105	32,105	17,883	17,883	12,116	12,116
Pseudo R²	0.343	0.345	0.367	0.369	0.317	0.318
Log-likelihood	-76,784	-76,587	-41,235	-41,110	-30,142	-30,077

Notes: Conditional logit estimations. All continuous variables are mean-centered. The dependent variable is location. It is equal to one if an investment takes place in the respective foreign country, and zero otherwise. Robust standard errors, clustered at the level of the subsidiary's industry, are provided in parentheses. In specifications (1) and (2), the sample includes foreign subsidiaries established in 2016 and 2017. Specifications (3) and (4) also cover M&A investments in addition to new incorporations. In specifications (5) and (6), only one investment per parent firm per country is kept in the sample. ***, ** and * denote significances at the level of 1%, 5% and 10%, respectively. Variable definitions are provided in Appendix A.

Table 11: Robustness – Tax complexity measures

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Tax Complexity Index (TCI) categories sample	-0.101 (0.074)					
Tax code complexity categories sample		0.109*** (0.023)				
Tax framework complexity categories sample		-0.141** (0.065)				
Tax Complexity Index (TCI) categories Hoppe et al. (2019)			-0.047 (0.043)			
Tax code complexity categories Hoppe et al. (2019)				0.315*** (0.042)		
Tax framework complexity categories Hoppe et al. (2019)				-0.193*** (0.069)		
Tax Complexity Index (TCI) differences					-0.015 (0.013)	
Tax code complexity differences						0.022*** (0.007)
Tax framework complexity differences						-0.028** (0.014)
Effective average tax rate	-0.033*** (0.008)	-0.044*** (0.010)	-0.036*** (0.009)	-0.047*** (0.010)	-0.037*** (0.009)	-0.042*** (0.010)
Ln(GDP)	0.429*** (0.061)	0.385*** (0.058)	0.426*** (0.059)	0.287*** (0.060)	0.430*** (0.060)	0.359*** (0.059)
Population growth	-0.379*** (0.106)	-0.374*** (0.105)	-0.315*** (0.104)	-0.420*** (0.114)	-0.326*** (0.102)	-0.399*** (0.114)
Labor freedom	-0.012*** (0.002)	-0.009*** (0.002)	-0.010*** (0.002)	-0.006** (0.003)	-0.011*** (0.002)	-0.010*** (0.002)
Inflation	-0.083*** (0.014)	-0.076*** (0.013)	-0.088*** (0.015)	-0.065*** (0.014)	-0.086*** (0.014)	-0.077*** (0.014)
Exchange	-0.010*** (0.002)	-0.008*** (0.002)	-0.009*** (0.002)	-0.001 (0.002)	-0.010*** (0.002)	-0.006*** (0.002)
Common language	0.484*** (0.076)	0.502*** (0.072)	0.473*** (0.082)	0.543*** (0.073)	0.474*** (0.081)	0.528*** (0.065)
Ln(Distance)	-0.556*** (0.024)	-0.567*** (0.027)	-0.569*** (0.030)	-0.550*** (0.022)	-0.566*** (0.028)	-0.550*** (0.024)
Contiguity	-0.070 (0.084)	-0.070 (0.086)	-0.094 (0.098)	-0.031 (0.071)	-0.088 (0.093)	-0.071 (0.087)
Previous presence	4.184*** (0.250)	4.166*** (0.247)	4.184*** (0.250)	4.135*** (0.247)	4.182*** (0.249)	4.167*** (0.247)
Observations	595,014	595,014	595,014	595,014	595,014	595,014
Subsidiaries	15,607	15,607	15,607	15,607	15,607	15,607
Pseudo R²	0.351	0.353	0.350	0.357	0.351	0.353
Log-likelihood	-36,864	-36,763	-36,912	-36,514	-36,905	-36,771

Notes: Conditional logit estimations. All continuous variables are mean-centered. The dependent variable is location. It is equal to one if an investment takes place in the respective foreign country, and zero otherwise. Robust standard errors, clustered at the level of the subsidiary's industry, are provided in parentheses. ***, ** and * denote significances at the level of 1%, 5% and 10%, respectively. Variable definitions are provided in Appendix A.

Table 12: Robustness – Tax Complexity Index (TCI) weighting

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Tax Complexity Index (TCI) 10% Code / 90% Framework	-0.026* (0.014)								
Tax Complexity Index (TCI) 20% Code / 80% Framework		-0.026* (0.015)							
Tax Complexity Index (TCI) 30% Code / 70% Framework			-0.024 (0.015)						
Tax Complexity Index (TCI) 40% Code / 60% Framework				-0.021 (0.015)					
Tax Complexity Index (TCI) 50% Code / 50% Framework					-0.015 (0.013)				
Tax Complexity Index (TCI) 60% Code / 40% Framework						-0.009 (0.011)			
Tax Complexity Index (TCI) 70% Code / 30% Framework							-0.001 (0.008)		
Tax Complexity Index (TCI) 80% Code / 20% Framework								0.006 (0.006)	
Tax Complexity Index (TCI) 90% Code / 10% Framework									0.011** (0.005)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	595,014	595,014	595,014	595,014	595,014	595,014	595,014	595,014	595,014
Subsidiaries	15,607	15,607	15,607	15,607	15,607	15,607	15,607	15,607	15,607
Pseudo R²	0.352	0.352	0.351	0.351	0.351	0.350	0.350	0.350	0.350
Log-likelihood	-36,832	-36,848	-36,867	-36,886	-36,905	-36,918	-36,924	-36,921	-36,912

Notes: Conditional logit estimations. All continuous variables are mean-centered. The dependent variable is location. It is equal to one if an investment takes place in the respective foreign country, and zero otherwise. Robust standard errors, clustered at the level of the subsidiary's industry, are provided in parentheses. ***, ** and * denote significances at the level of 1%, 5% and 10%, respectively. Variable definitions are provided in Appendix A.

Table 13: Robustness – Tax rate measures

Variable	(1)	(2)	(3)	(4)
Tax Complexity Index (TCI)	-0.014		-0.023	
	(0.013)		(0.014)	
Tax code complexity		0.023***		0.012*
		(0.007)		(0.007)
Tax framework complexity		-0.028**		-0.029**
		(0.014)		(0.014)
Statutory tax rate	-0.027***	-0.033***		
	(0.007)	(0.008)		
Effective marginal tax rate			-0.010*	-0.010*
			(0.006)	(0.005)
Ln(GDP)	0.398***	0.326***	0.352***	0.279***
	(0.048)	(0.050)	(0.046)	(0.050)
Population growth	-0.334***	-0.409***	-0.363***	-0.429***
	(0.100)	(0.114)	(0.099)	(0.110)
Labor freedom	-0.009***	-0.009***	-0.006***	-0.004*
	(0.002)	(0.003)	(0.002)	(0.002)
Inflation	-0.079***	-0.069***	-0.072***	-0.062***
	(0.014)	(0.014)	(0.015)	(0.015)
Exchange	-0.007***	-0.003*	-0.008***	-0.005**
	(0.002)	(0.002)	(0.002)	(0.002)
Common language	0.466***	0.519***	0.440***	0.484***
	(0.083)	(0.066)	(0.080)	(0.065)
Ln(Distance)	-0.576***	-0.564***	-0.577***	-0.568***
	(0.029)	(0.025)	(0.029)	(0.026)
Contiguity	-0.083	-0.065	-0.112	-0.106
	(0.091)	(0.084)	(0.103)	(0.100)
Previous presence	4.186***	4.170***	4.210***	4.203***
	(0.245)	(0.243)	(0.245)	(0.244)
Observations	595,014	595,014	595,014	595,014
Subsidiaries	15,607	15,607	15,607	15,607
Pseudo R²	0.350	0.352	0.349	0.350
Log-likelihood	-36,947	-36,811	-37,014	-36,918

Notes: Conditional logit estimations. All continuous variables are mean-centered. The dependent variable is location. It is equal to one if an investment takes place in the respective foreign country, and zero otherwise. Robust standard errors, clustered at the level of the subsidiary's industry, are provided in parentheses. ***, ** and * denote significances at the level of 1%, 5% and 10%, respectively. Variable definitions are provided in Appendix A.

Appendix A: Variable definitions and data sources

Table A1: Complexity variables

Variable	Definition	Source
(Alternative) minimum tax complexity	Complexity inherent in regulations on (alternative) minimum taxation (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Additional taxes complexity	Complexity inherent in regulations on additional taxes (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Appeals complexity	Complexity inherent in the appeals dimension (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Audits complexity	Complexity inherent in the audits dimension (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Capital gains complexity	Complexity inherent in regulations on capital gains (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
CFC-rules complexity	Complexity inherent in CFC regulations (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Corporate reorganization complexity	Complexity inherent in regulations on corporate reorganization (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Depreciation & amortization complexity	Complexity inherent in regulations on depreciation and amortization (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Dividends complexity	Complexity inherent in regulations on dividends (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Enactment complexity	Complexity inherent in the enactment dimension (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Filing & payment complexity	Complexity inherent in the payment and filing dimension (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
General anti-avoidance complexity	Complexity inherent in regulations on general anti-avoidance (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Group treatment complexity	Complexity inherent in regulations on group treatment (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Guidance complexity	Complexity inherent in the guidance dimension (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Interest complexity	Complexity inherent in regulations on interest (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Investment incentives complexity	Complexity inherent in regulations on investment incentives (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Loss offset complexity	Complexity inherent in regulations on loss offset (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Royalties complexity	Complexity inherent in regulations on royalties (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Statutory tax rate complexity	Complexity inherent in regulations on the statutory tax rate (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Tax code complexity	Subindex measuring a country's tax code complexity, i.e. the complexity of tax regulations (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Tax code complexity categories Hoppe et al. (2019)	Code complexity categorization based on the quintile distribution of code complexity (1 = very low complexity, 5 = very high complexity).	Hoppe et al. (2019)
Tax code complexity categories sample	Code complexity categorization based on the quintile distribution of code complexity (sample specific; 1 = very low complexity, 5 = very high complexity).	Own calculation based on www.taxcomplexity.org
Tax code complexity differences	Difference of code complexity between host country and home country.	Own calculation based on Hoppe et al. (2019)
Tax Complexity Index (TCI)	Index measuring a country's overall tax complexity (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org
Tax Complexity Index (TCI) categories Hoppe et al. (2019)	Total tax complexity categorization based on the quintile distribution of total tax complexity (1 = very low complexity, 5 = very high complexity).	Hoppe et al. (2019)
Tax Complexity Index (TCI) categories sample	Total tax complexity categorization based on the quintile distribution of total tax complexity (sample specific; 1 = very low complexity, 5 = very high complexity).	Own calculation based on www.taxcomplexity.org
Tax Complexity Index (TCI) differences	Difference of total complexity between host country and home country.	Own calculation based on Hoppe et al. (2019)
Tax framework complexity	Subindex measuring a country's tax framework complexity, i.e. the complexity of tax enactment, guidance, filing & payment, audits and appeals (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org

Tax framework complexity categories Hoppe et al. (2019)	Framework complexity categorization based on the quintile distribution of framework complexity (1 = very low complexity, 5 = very high complexity).	Hoppe et al. (2019)
Tax framework complexity categories sample	Framework complexity categorization based on the quintile distribution of framework complexity (sample specific; 1 = very low complexity, 5 = very high complexity).	Own calculation based on www.taxcomplexity.org
Tax framework complexity differences	Difference of framework complexity between host country and home country.	Own calculation based on Hoppe et al. (2019)
Transfer pricing complexity	Complexity inherent in regulations on transfer pricing (0 = not complex at all, 100 = extremely complex).	www.taxcomplexity.org

Table A2: Control variables

Variable	Definition	Source
Common language	Dummy variable that indicates whether host country and home country have a common primary language.	CEPII
Contiguity	Dummy variable that indicates whether host country and home country are contiguous.	CEPII
Distance*	Number of kilometers between host country and home country.	CEPII
Effective average tax rate	Rate of tax on investments earning returns greater than a company's cost of capital.	Oxford University Centre for Business
Effective marginal tax rate	Rate of tax that applies to an investment that earns just enough to break even with a company's cost of capital.	Oxford University Centre for Business
Exchange	Real effective exchange rate index (2010 = 100).	IMF
GDP*	Gross domestic product in current US-Dollar.	World Bank
Inflation	Inflation (consumer prices) in %.	World Bank
Labor freedom	Measure that considers various aspects of the legal and regulatory framework of a country's labor market, including regulations concerning minimum wages, laws inhibiting layoffs, severance requirements, and measurable regulatory restraints on hiring and hours worked, plus the labor force participation rate as an indicative measure of employment opportunities in the labor market (0 = very low freedom; 100 = very high freedom).	Heritage Foundation
Population growth	Annual population growth rate per year.	World Bank
Previous presence	Dummy variable that indicates whether a parent company has a subsidiary in a country before the investment takes place.	Own calculation based on Orbis
Statutory tax rate	Rate at which profits are taxed by statute.	Tax Foundation

Notes: For variables marked with an asterisk, the natural logarithm is used in the empirical analysis.

Table A3: Firm-level variables

Variable	Definition	Source
Location	Dummy variable that indicates whether an investment takes place in a country.	Own calculation based on Orbis
Parent small	Dummy variable that indicates whether a parent firm is small according to Orbis (e.g., total assets below 2.6 million USD).	Orbis
Parent very large	Dummy variable that indicates whether a parent firm is very large according to Orbis (e.g., total assets above 2.6 million USD).	Orbis
Subsidiary holding	Dummy variable that indicates whether a subsidiary is a holding firm (NACE 64.20).	Own calculation based on Orbis
Subsidiary manufacturing	Dummy variable that indicates whether a subsidiary is a manufacturing firm (NACE 10.00-33.20).	Own calculation based on Orbis
Subsidiary small	Dummy variable that indicates whether a subsidiary is small according to Orbis (e.g., total assets below 260 million USD).	Orbis
Subsidiary very large	Dummy variable that indicates whether a subsidiary is very large according to Orbis (e.g., total assets above 260 million USD).	Orbis
Subsidiary wholesale	Dummy variable that indicates whether a subsidiary is a wholesale firm (NACE 45.00-47.99).	Own calculation based on Orbis

Appendix B: Code and framework complexity dimensions

Table B1: Code complexity dimensions

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Additional taxes complexity	-0.019*** (0.006)														
(Alternative) minimum tax complexity		-0.013** (0.006)													
General anti-avoidance complexity			0.006 (0.007)												
Capital gains complexity				-0.014*** (0.005)											
CFC-rules complexity					0.017*** (0.002)										
Depreciation & amortization complexity						0.005 (0.006)									
Dividends complexity							0.025*** (0.003)								
Group treatment complexity								0.019*** (0.003)							
Investment incentives complexity									-0.003 (0.003)						
Interest complexity										0.012* (0.007)					
Loss offset complexity											0.049*** (0.005)				
Corporate reorganization complexity												-0.001 (0.005)			
Royalties complexity													0.003 (0.009)		
Statutory tax rate complexity														-0.038*** (0.006)	
Transfer pricing complexity															0.051*** (0.006)
Tax framework complexity	-0.015 (0.010)	-0.027* (0.014)	-0.026* (0.014)	-0.023 (0.014)	-0.031** (0.015)	-0.026* (0.013)	-0.031** (0.013)	-0.005 (0.012)	-0.024* (0.014)	-0.024* (0.012)	-0.017 (0.011)	-0.025* (0.014)	-0.027* (0.014)	-0.011 (0.017)	-0.039*** (0.013)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	595,014	595,014	595,014	595,014	595,014	595,014	595,014	595,014	595,014	595,014	595,014	595,014	595,014	595,014	595,014
Subsidiaries	15,607	15,607	15,607	15,607	15,607	15,607	15,607	15,607	15,607	15,607	15,607	15,607	15,607	15,607	15,607
Pseudo R²	0.355	0.353	0.352	0.353	0.355	0.352	0.354	0.355	0.352	0.353	0.362	0.352	0.352	0.359	0.361
Log-likelihood	-36,646	-36,740	-36,804	-36,750	-36,627	-36,813	-36,692	-36,639	-36,815	-36,766	-36,276	-36,819	-36,818	-36,407	-36,293

Notes: Conditional logit estimations. All continuous variables are mean-centered. The dependent variable is location. It is equal to one if an investment takes place in the respective foreign country, and zero otherwise. Robust standard errors, clustered at the level of the subsidiary's industry, are provided in parentheses. ***, ** and * denote significances at the level of 1%, 5% and 10%, respectively. Variable definitions are provided in Appendix A.

Table B2: Framework complexity dimensions

Variable	(1)	(2)	(3)	(4)	(5)
Appeals complexity	-0.003				
	(0.011)				
Audits complexity		-0.040***			
		(0.009)			
Enactment complexity			0.013**		
			(0.006)		
Filing & payments complexity				-0.037***	
				(0.011)	
Guidance complexity					-0.077***
					(0.011)
Tax code complexity	0.017***	0.025***	0.011	0.025***	0.036***
	(0.006)	(0.006)	(0.007)	(0.006)	(0.008)
Controls	Yes	Yes	Yes	Yes	Yes
Observations	595,014	595,014	595,014	595,014	595,014
Subsidiaries	15,607	15,607	15,607	15,607	15,607
Pseudo R²	0.351	0.358	0.352	0.356	0.363
Log-likelihood	-36,898	-36,459	-36,812	-36,597	-36,223

Notes: Conditional logit estimations. All continuous variables are mean-centered. The dependent variable is location. It is equal to one if an investment takes place in the respective foreign country, and zero otherwise. Robust standard errors, clustered at the level of the subsidiary's industry, are provided in parentheses. ***, ** and * denote significances at the level of 1%, 5% and 10%, respectively. Variable definitions are provided in Appendix A.