Arbeitskreis Quantitative Steuerlehre
Quantitative Research in Taxation – Discussion Papers

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arqus Discussion Paper No. 299
July 2025

www.arqus.info
ISSN 1861-8944

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ABSTRACT

This study examines the effect of tax complexity on the market value of publicly traded firms. Using firm-level measures of tax complexity, we find that a one standard deviation increase in tax complexity—comparable in magnitude to the rise following the U.S. Tax Cuts and Jobs Act—is associated with a 2.6% decline in Tobin's Q. The effect is particularly pronounced for complexity arising from anti-avoidance regulations and post-filing procedures. The negative valuation effect is more substantial for firms with limited opportunities for international profit shifting, weak governance, or low internal information quality. Further analyses reveal that tax system complexity is associated with a reduced growth potential of firms and less R&D and thus negative real responses that go beyond negative investment effects. Overall, our findings provide novel evidence of the economic costs of tax complexity and contribute to the debate on the design of efficient and equitable tax systems.

Keywords: tax complexity, tax avoidance, firm value, tax code complexity, tax framework complexity, cost of complexity

JEL Classifications: M12, H26, H25, H32

Acknowledgements:
We thank Harald Amberger, Kay Blaufus, Matti Boie-Wegener, Jennifer Blouin, Philipp Dörrenberg, Christina Elschner (discussant), Johannes Gaul (discussant), Henning Giese, Niels Johannesen, Jan Kemper, Thomas Kourouxous, Michael Milde, Rainer Niemann, Dario Serrano-Puente, Johannes Voget, and participants at the 47th Annual Congress of the European Accounting Association in Rom, 11th Annual MannheimTaxation Conference, 2nd Ghent Conference on International Taxation, and the 18th Annual Arqus Conference in Graz. Caren Sureth-Sloane gratefully acknowledge financial support by the German Research Foundation (DFG) - Collaborative Research Center (SFB/TRR) Project-ID 403041268 - TRR 266 Accounting for Transparency.

1. Introduction

Globalization, along with the recent rise of digitization and artificial intelligence, has complicated business models. These developments can inhibit policymakers' efforts to design tax systems that ensure compliance by taxpayers while also supporting economic growth. As a result, the complexity of tax regulations and tax processes has grown rapidly in recent years (Devereux, 2016; Asen, 2021; Hoppe et al., 2023, Gerdes et al., 2025). Leading experts increasingly warn of the rising tax complexity in today's international business environment, as reflected in the following two statements.

> *For 2024, the biggest impact is the increasingly burdensome and complex tax reporting and data collection requirements taxpayers must meet.*
>
> Amanda Tickel, Deloitte Global Leader, Tax & Legal Policy, Economics Week, 16 August 2024

> *Canadians are wasting money and losing productivity to deal with recent tax changes. … What was very apparent, however, is that practitioners' tolerance level for the voluminous amounts of change and complexity is at a breaking point.*
>
> Andy Holloway, Postmedia Breaking News, 20 August 2024

Survey evidence by Devereux et al. (2016) shows that senior tax professionals in large multinational firms consider tax uncertainty, closely linked to tax complexity, to be among the top three location factors, mattering more than the statutory tax rate. Yet relatively little is known about the economic consequences of tax complexity for firms. In contrast to other forms of regulatory complexity—such as firm entry regulation—where the effects on entrepreneurship, firm growth, profitability, and risk are well documented (Calomiris et al., 2024; Kalmenovitz, 2023: Trebbi et al., 2023), research on the implications of tax complexity for firms remains scarce. Studies suggest that complex tax systems can impose costs on firms (e.g., higher compliance burdens and the obscuring of tax planning opportunities, Zwick, 2021; Amberger et al., 2025) while also offering benefits (e.g., new tax planning opportunities, Laplante et al. 2019; Diller et al. 2025). Cross-country studies further indicate that complexity arising from tax regulations might offer strategic tax planning advantages for firms while

complexity in tax processes can have particularly harmful effects (Hoppe et al. 2023; Euler et al. 2024). This multifaceted nature of tax complexity leaves the net impact on firm value unclear.

This study is the first to assess the overall costs and benefits of tax complexity for firms as well as its effect on the market value of large public firms. We further investigate which types of tax regulations and processes drive this effect, identify the kinds of firms that benefit or suffer most, and assess whether the effect persists or dissipates. In short, we assess firms' ability to adapt to tax complexity.

What do we know so far about the economic effects of tax complexity on firms? Several studies examine effects on corporate investment and location decisions. Edmiston et al. (2003), Mueller and Voget (2012), and Lawless (2013) show that tax complexity deters foreign direct investment (FDI), a finding that Zagler (2023) extends to developing countries. Euler et al. (2024) document that complexity in tax procedures mostly explain these adverse investment effects.

Zwick (2021) attributes the low uptake of loss carryback refunds by U.S. firms to the high complexity of the relevant regulation. Amberger et al. (2025) similarly show that tax complexity damps the responsiveness of corporate investment to tax incentives introduced through changes in tax rates. Complementing this perspective, Campbell et al. (2025) demonstrate that tax complexity affects capital markets. Exploiting the largely unexpected increase in tax complexity resulting from the U.S. Tax Cuts and Jobs Act, they analyze insider trading and find evidence of heightened market uncertainty, increased information asymmetry, and greater insider trading profitability following this law's enactment. While these findings primarily highlight the costs of tax complexity, Laplante et al. (2019) show that firms may also exploit tax complexity for strategic gain: their findings on the classification of R&D tax credit-related expenses suggest that complexity can be used to secure tax benefits. Euler et al. (2024)

demonstrate positive implications of complexity in tax regulations centered around large multinationals.

Research also links increased complexity to increased investment in tax expertise. Bustos et al. (2022) show that Chilean firms responded to new anti-profit shifting legislation by demanding more external tax advisory services. Similarly, Giese et al. (2024) find that the complexity of tax processes leads to higher staffing of local tax departments in European multinationals. In contrast, complex tax regulations appear less manageable internally and instead lead to greater tax uncertainty.

In sum, although tax complexity is commonly viewed as imposing costs, it may also create strategic opportunities for firms, leaving its net impact on firm value ultimately an empirical matter. This study assesses the net impact of tax complexity on firm value. Specifically, we examine how tax complexity influences the market value of firms in the MSCI World Index over the period 2016 to 2022. Our approach allows us to capture costs and benefits—a broader perspective than the literature, which has so far focused on investment and tax incentives. We further investigate how these costs and benefits vary with firm characteristics, such as profit-shifting potential, internal governance quality, and the quality of internal information systems. Lastly, we assess whether firms adapt to complex tax regulations and procedures.

Our primary measure of tax complexity is the Tax Complexity Index developed by Hoppe et al. (2023). It offers three key advantages for our analysis. First, it distinguishes between complexity in the tax code and in the tax processes, allowing us to analyze the different dimensions. Second, the index is compiled biennially using a consistent and transparent methodology, enabling the application of panel regression techniques. Third, it is based on survey responses from experienced tax professionals. This subjective perspective is particularly valuable, as it captures perceived complexity—an aspect we hypothesize to influence firm

behavior and consequently market valuation. To test the robustness of our results, we also employ the PwC Paying Taxes Score, developed by Djankov et al. (2010) and used, for example, by Amberger et al. (2025).

Our study yields four main findings. First, we find that firms facing higher tax complexity have, on average, a smaller market value. A one standard deviation increase in tax complexity, comparable to the rise experienced in the United States following the Tax Cuts and Jobs Act, corresponds to an average decline in firm value of approximately 2.6%. Complexity in both the tax code and tax framework significantly reduces firm values; the effect for the tax code complexity is, however, about 60% larger. This finding holds in several robustness tests, including the use of an alternative tax complexity measure, the use of a first-differences regression model, an alternative clustering of standard errors, and in an event study design analyzing the implementation of the Anti Tax Avoidance Directive (ATAD) in Europe. Further analysis reveals that complexity arising from anti-BEPS provisions (e.g., transfer pricing and CFC rules) significantly depresses firm value. Among the framework components, only post-filing complexity, pertaining to audits and appeals, exerts a robust negative effect.

Second, we document substantial heterogeneity in the effect of tax complexity across firms. We hypothesize that firms with greater tax planning opportunities may be able to navigate or even benefit from complexity. We test this by stratifying firms based on their tax planning potential, proxied by the share of foreign subsidiaries, the prevalence of affiliates in tax havens, and the statutory tax burden. Our results support this hypothesis. We find that the adverse valuation effects of tax code complexity are strongest among firms with low tax planning capacity. We also find that firms with weak information environments and weak governance are hurt more by tax complexity.

Third, we examine the temporal dynamics of the relationship between tax complexity and firm values by including one- or two-year lags of tax complexity in our models. The results

suggest that firms may adapt to increased tax complexity, consistent with learning effects. Nevertheless, tax framework complexity continues to exert a persistent negative influence, indicating that some frictions are not easily mitigated.

Fourth, we analyze how tax complexity affects firm value by using alternative outcome variables. We find that higher tax code complexity is associated with lower current year return-on-assets and slower sales growth, while complexity in both the code and tax processes reduces R&D intensity. These results point to suppressed firm growth and less innovation as likely transmission channels.

Our findings have implications for policymakers. We provide the first comprehensive evidence that tax complexity imposes significant net costs on firms, reducing firm value on average. And this effect is sizeable. Based on our estimates, if all countries had maintained their 2016 levels of tax complexity, the aggregate market capitalization of firms in our sample would have been approximately 2 percent or almost 900 billion USD higher in 2022.

Although new regulations often aim to enhance fairness and limit tax avoidance, they also impose compliance burdens that can unintentionally distort capital markets. Our research demonstrates that these adverse effects dominate potential benefits and weigh heavily on firms with limited opportunities for international tax planning—precisely those that were not the primary targets of many recent anti-tax avoidance reforms. In addition, firms with efficient internal processes and governance mechanisms are not—or at least not as much—harmed by tax system complexity. Our results further indicate that firms can adapt to high levels of tax code complexity over time. Therefore, frequent changes to a complex tax code are particularly harmful to them.

2. Theoretical Background and Hypotheses

Firm value is commonly modeled as the (risk-adjusted) present value of a firm's expected future cash flows (Brealey et al., 2020). In this framework, tax complexity may affect both the expected after-tax cash flows and the discount rate applied to them. The direction of the effect of tax complexity on after-tax cash flows is theoretically ambiguous. Tax complexity is likely associated with higher compliance burdens (Mueller and Voget, 2012; Marcuss et al., 2013) and administrative costs such as those associated with calculating tax liabilities, producing documentation, and interacting with tax authorities (Edmiston, 2003). Related costs decrease cash flows.

On top of these direct costs, tax complexity may affect tax avoidance and related costs and benefits, leaving its direction theoretically ambiguous. First, high complexity may obscure potential planning strategies, particularly for less sophisticated firms. Second, tax complexity may be associated with unclear tax regulations, which may create new possibilities for tax planning (Krause, 2000; Tran-Nam et al., 2016). In a cross-country setting, these additional tax planning opportunities may also result from a lack of international coordination of complex tax rules. Third, tax complexity may also affect fairness perceptions, with a potential effect on the tax morale (Blesse et al., 2019).

Empirical studies provide evidence for both directions of the relationship. Laplante et al. (2019) document that firms strategically classify expenses to exploit loosely defined R&D tax credits. Euler et al. (2024) find more foreign direct investments by large multinationals in countries with complex tax codes. Saptono et al. (2024) find a positive relationship between tax complexity and tax evasion in a cross-country context. Conversely, Amberger et al. (2025) find that firms' investment sensitivity to tax rate incentives declines with complexity, and Zwick (2021) shows that higher tax complexity reduces the likelihood of firms claiming loss refunds. Relatedly, Osswald and Sureth-Sloane (2024) demonstrate that tax complexity-related risks,

like administrative inefficiencies, reduce the effectiveness of tax loss incentives in encouraging risky investments.

In addition to these cash flow effects, tax complexity may affect the discount rate applied in the firm value model. Higher complexity is generally associated with greater tax uncertainty (Devereux et al., 2016, 2022), particularly when it stems from complex rules that cannot be fully mitigated by increasing internal tax resources (Giese et al., 2024). Studies document that increased tax risk is associated with greater firm risk (Guenther et al., 2017), higher cost of equity (Hutchens and Rego, 2015), and ultimately lower firm value. For instance, Drake et al. (2019) estimate that a one standard deviation increase in tax risk reduces Tobin's Q by approximately 2 percent.

Given the ambiguous impact of tax complexity on after-tax cash flows and the stronger evidence for an upward pressure on the cost of capital, we propose the following hypothesis:

H1*: Higher tax complexity is associated with a reduction in firm value.*

We test this relationship for overall tax complexity as well as for tax code and tax framework complexity and their specific subcategories. Next, we consider heterogeneity in this relationship. Specifically, we argue that firms may be less harmed by tax complexity if they can exploit its potential benefits or are, in general, better able to process complex tax information.

As discussed above, it is unclear whether tax complexity facilitates or constrains tax planning. In the international context, complexity may result from regulatory inconsistencies and a lack of coordination across jurisdictions (Zangari et al., 2017; Hoppe et al., 2023). These inconsistencies—most pronounced in transfer pricing—simultaneously create tax planning opportunities and expose firms to such risks as double taxation (Arena et al., 2021; Diller et al., 2025). Firms can partially mitigate these risks if they are experienced and have the capacity to navigate many tax systems; use measures such as advance pricing agreements, mutual

agreement procedures, or other dispute resolution mechanisms; or exploit tax system differentials. We therefore expect that the costs and benefits of tax complexity differ across firms. We pose two hypotheses. First, we assume—based on the above arguments—that tax complexity creates more profit shifting opportunities than it obscures. Accordingly, firms with a high potential for international profit shifting should be less harmed by tax complexity. Hence, we hypothesize:

> ***H2a****: The negative effect of tax complexity on firm value strengthens when a firm's profit shifting potential is low.*

Second, beyond planning opportunities, the ability to manage tax complexity also depends on a firm's processing capacity. One direct measure is internal information quality, as used by Gallemore and Labro (2015) and McGuire et al. (2018). Their findings show that firms with higher information quality face lower effective tax rates and lower tax risk. We expect these firms to better identify planning opportunities in complex systems and better mitigate associated risks.

Relatedly, firm size also likely matters. Larger firms maintain better-staffed tax departments and allocate more resources to external advisors. Since many tax compliance and planning costs are fixed, they can benefit from economies of scale. This view is supported by Amberger et al. (2025) and Zwick (2021), who find that the costs of tax complexity decrease with firm size—at least in the context of domestic planning. However, larger firms may also face greater scrutiny from tax authorities (Epple and Zelenitz, 1981) and the public (Baker et al., 1998), especially when engaging in aggressive international tax planning. Their broader and more complex operations may also make compliance more challenging.

Another important moderator is internal governance strength. According to Desai and Dharmapala (2006), managers of poorly governed firms may use tax planning to extract private

benefits. Indeed, Desai and Dharmapala (2009) and Wilson (2009) show that tax avoidance enhances firm value only in well-governed firms, and Goh et al. (2016) highlight the role of strong external monitoring. If complex rules provide more cover for managerial opportunism, weak governance may amplify agency costs. In this sense, Campbell et al. (2025) show that firm insiders have benefited, at the cost of external shareholders, from the jump in tax complexity caused by the U.S. Tax Cuts and Jobs Act.

Together, these considerations motivate the following hypothesis:

> ***H2b****: The negative effect of tax complexity on firm value strengthens when a firm's capacity to process complex information is low—that is, when internal information quality is low, firm size is small, or governance standards are weak.*

Finally, we explore whether the adverse consequences of tax complexity attenuate as firms and managers learn to navigate that complexity. We posit that learning occurs both passively—through continued exposure to complex rules—and actively—through organizational adaptation. Firms may adjust by hiring additional internal tax staff (Giese et al., 2024) or engaging more external advisors (Bustos et al., 2022), particularly personnel with experience in dealing with similar rules. Over time, uncertainty may also decline as ambiguity in new rules is resolved through case law or administrative guidance.

> ***H3****: The negative consequences of tax complexity for firm value diminish over time due to firm learning and adaptation.*

We also analyze whether the effects for the hypotheses differ across different kinds or subcategories of tax complexity. We expect that firms' ability to navigate and adapt to complexity differs between complex tax regulations and tax processes and across specific regulations and processes, but we have no clear prediction in what direction.

3. Empirical Design

Our empirical analysis primarily relies on a two-way fixed effects regression model, as specified in Equation (1):

$$ln\,(q_{it}) = \beta_1 TaxComplexity_{it} + \beta_2 STR_{it} + \beta_3 AvgETR_{ct} + \varphi\, Controls_{it} + \gamma\, Controls_{ct} + \eta_i + \sigma_t + \varepsilon_{it}. \quad (1)$$

Following the literature (Desai and Dharmapala, 2009; Bryant-Kutcher et al., 2012; Jacob and Schuett, 2020), we use Tobin's Q (q_{it}) as our baseline measure to capture the market valuation of firms. We define q_{it} as the ratio of the market value of equity (measured as shares outstanding times the stock price at the balance sheet date) plus the book value of total liabilities, to the book value of total assets:

$$q_{it} = (Book\,Value\,of\,Total\,Liabilities_{it} + Market\,Value\,of\,Equity_{it})/(Book\,value\,of\,Total\,Assets_{it}), \quad (2)$$

with $Market\,Value\,of\,Equity_{it} = Number\,of\,Shares_{it} \times Share\,Price_{it}$, of firm *i* in year *t*. Given the skewed distribution of q_{it}, we use its natural logarithm in our regressions.

The key independent variable is the level of tax complexity faced by each firm across its global operations, denoted as $TaxComplexity_{it}$. We use the Tax Complexity Index (TCI) developed by Hoppe et al. (2023) as our primary measure. We compute the firm-level tax complexity as the average of the TCI across all group entity locations, weighted by the number of entities in each country, using subsidiary data from ORBIS.[1]

The TCI captures the perceived complexity of a country's corporate income tax system and comprises two subindices: tax code complexity ($TaxCodeComplexity_{it}$) and tax framework complexity ($TaxFrameworkComplexity_{it}$). It is based on a global survey of senior local tax

[1] The Tax Complexity Index has been updated every two years since 2016. We use the average value for the years *t+1* and *t-1* in all years where no index value is available.

experts from 20 major tax service firms and networks. The tax code complexity index reflects the regulatory complexity of 15 corporate income tax provisions,[2] evaluated across five drivers: ambiguity and interpretation, change, computation, detail, and record keeping. The tax framework complexity index reflects procedural complexity in five areas: guidance, law enactment, payment and filing, audits, and appeals.[3]

We analyze tax complexity at different levels of aggregation. Beyond the overall TCI and the two main subindices, we construct more granular indices: three subcategories of tax code complexity (anti-BEPS rules, domestic group regulations, and other tax provisions) and two subcategories of tax framework complexity (pre- and post-filing processes). This allows us to identify the specific regulations and processes that drive the association between tax complexity and firm value. We also test the robustness of our results using alternative tax complexity proxies, including the PwC Paying Taxes Score (Djankov et al., 2010) and the Tax Competitiveness Index by the Tax Foundation.

To isolate the effect of tax complexity, we control for two additional tax system characteristics. First, we include STR_{it}, the statutory corporate tax rate, computed as the weighted average across all group entity locations. This controls for the documented downward trend in tax rates over time, which contrasts with the rising trend in tax complexity. Second, we include $AvgETR_{ct}$, the average GAAP effective tax rate in the firm's headquarters country and year. This accounts for the potential confounding effect of increasing tax rule restrictiveness, such as the adoption of anti-BEPS legislation, which may simultaneously increase complexity and limit tax planning opportunities. This country-level average mitigates firm-level endogeneity and avoids filtering out firm-specific tax avoidance behavior.

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[2] These 15 regulations cover additional taxes, (alternative) minimum tax, capital gains taxation, CFC rules, taxation of corporate reorganization, depreciation allowances, dividend taxation, general anti-avoidance rules, group taxation, taxation of interest income, investment incentives, loss offsets, royalties, statutory tax rates, and transfer pricing. For details, see Hoppe et al. (2023).

[3] Each of these framework dimensions is composed based on a set of specific more granular tax complexity-relevant issues. For details, see Hoppe et al. (2023).

We also include firm controls commonly used in the literature to account for nontax determinants of firm value: return on assets (ROA_{it}), sales growth ($Growth_{it}$), leverage ($Leverage_{it}$), capital intensity ($CapitalIntensity_{it}$), and firm size, measured as the natural logarithm of total assets ($SIZE_{it}$). Country-level macroeconomic controls include inflation ($Inflation_{ct}$), GDP growth ($GDPGrowth_{ct}$), and six dimensions from the World Governance Indicators. Detailed variable definitions are provided in Table 1.

We rely on the same regression model also to test Hypotheses 2a, 2b, and 3. For Hypotheses 2a and 2b, we examine firm heterogeneity by splitting the sample based on firm characteristics. In Hypothesis 2a, we test whether the negative effect of tax complexity on firm value is mitigated in firms with greater profit-shifting potential. We conduct a median split using the share of foreign affiliates or the share of tax haven affiliates as proxies for profit shifting potential. Assuming that firms with a high expected tax burden have more potential and more pressure for using international profit shifting, we also estimate specifications where we include interactions of tax complexity and proxies for the expected average tax burden of the group.

For Hypothesis 2b, we test whether the negative effect of tax complexity is less pronounced in firms with greater ability to process complex information. Following Gallemore and Labro (2015), we use earnings announcement speed as a proxy for internal information quality and firm size as an additional indicator. We again use a median split approach. To measure internal governance strength, we rely on the presence of a board-level corporate governance committee or the use of performance-based executive compensation.

For Hypothesis 3, we include one-year or two-year lags of tax complexity to test for potential learning effects—i.e., whether firms can adapt to complexity.[4]

[4] We do not include both lags into the same regression to mitigate potential multicollinearity in the case of stable levels of tax complexity.

4. Data

Our sample consists of firms listed in the MSCI World Stock Index over the period of 2016 to 2022.[5] The MSCI World Index includes 1,515 of the largest publicly traded firms across 23 developed countries, representing approximately 90% of total market capitalization in these economies and covering a wide range of sectors and regions. The index includes firms headquartered in North America, Europe, Asia, and the Pacific region.

We collect stock prices and financial statement data from Refinitiv. We exclude observations from the banking, insurance, and other financial sectors as well as firm-year observations with negative pre-tax net income. We further restrict the sample to firm-years with complete ownership data and nonmissing values for all dependent and independent variables. These filters result in a final sample of 6,344 firm-year observations for 1,055 unique firms. Appendix 1 provides a detailed overview of sample selection, while Appendix 2 reports the geographic distribution of firms in our final sample.

We obtain data on the Tax Complexity Index from taxcomplexity.org and data on statutory corporate tax rates and the Tax Fairness Index from the Tax Foundation. Country tax haven status is identified using the consolidated list reported by Bennedsen and Zeume (2017). Additional country macroeconomic and governance indicators are sourced from the World Bank. Data on affiliate locations—used to compute firm-specific average values of tax complexity and statutory tax rates—are retrieved from ORBIS.

Figure 1 displays the development of our main independent variables—tax complexity and its two types and their subcategories—over time. In the upper section of Figure 1, we show the average development of overall tax complexity and its two types—tax code and tax framework complexity—in the headquarters countries of our sample firms. All three lines show, in general, an upwards trend. Whereas tax framework complexity increases continuously over

[5] We refer to the current composition of the index for the selection of firms. We do not expect that survivorship bias affect our findings.

our sample period, tax code complexity starts to rise only after 2020. Both kinds of tax complexity are negatively correlated with the headquarters country's statutory tax rates, as we also learn from the upper graph of Figure 1.

In the lower graph of Figure 1, we show time trends for five subcategories of tax code and tax framework complexity. We learn from this graph that the time trends in both types of tax complexity relate to specific regulations and processes, namely the anti-BEPS regulations and post-filing procedures (i.e., audits and appeals).

Table 2 presents descriptive statistics for all variables used in our final regression analyses.

[Insert Table 2 and Figure 1 about here]

5. Empirical results

5.1. Baseline Results

We present the results of our baseline regression analysis in Table 3, where we estimate Equation 1 to test whether tax complexity is, on average, negatively associated with firm value (Hypothesis 1).

<Insert Table 3 about here>

Specification (1) reports a reduced-form model that includes only the control variables but no tax complexity measures. This serves as a benchmark to evaluate the incremental explanatory power of tax complexity. The estimated coefficients for the control variables are largely consistent with expectations. The natural logarithm of Tobin's Q is positively associated with firm profitability and growth, whereas we estimate a negative coefficient for firm size—suggesting that larger firms trade at lower valuation multiples. Among the country-level controls, $GDPGrowth_{ct}$ and $Inflation_{ct}$ are positively associated with firm value, whereas firms located in countries with weaker political stability tend to have lower market valuations.

We also include two tax burden proxies to account for potential overlap with tax complexity. STR_{it} is the weighted average of statutory tax rates across all jurisdictions where the firm operates, while $AvgETR_{ct}$ captures the average GAAP effective tax rate of all firms headquartered in the same country and year—a broader proxy for the local tax burden. As anticipated, we find a statistically significant negative coefficient for $AvgETR_{ct}$, whereas STR_{it} is not statistically significant in this specification.

In Specifications (2) to (5), we introduce different proxies for tax complexity. In Specification (2), we begin with the overall tax complexity score. The statistically significant coefficient of -0.896 supports Hypothesis 1, indicating that higher levels of tax complexity are associated with lower firm valuations. The effect is also economically meaningful: a one standard deviation increase in average tax complexity is associated with a reduction in Tobin's Q of approximately 2.6 percent. Such a jump in tax complexity was experienced, for example, in the United States after the implementation of the 2017 Tax Cuts and Jobs Act. This magnitude is comparable to that of a one standard deviation increase in the tax burden measures, suggesting that tax complexity and tax burden similarly influence firm valuation.

The results in Specification (2) underscore the importance of including tax complexity in firm valuation models. Compared to the benchmark model in Specification (1), the addition of tax complexity leads to a marked increase in the estimated effect of STR_{it}, highlighting the potential for omitted variable bias when analyses of the tax burden–valuation relationship ignore complexity.

We further disaggregate the two main kinds of tax complexity—tax code complexity and tax framework complexity—in Specifications (3) through (5). When each component is included separately in Specifications (3) and (4), we find that both are negatively associated with firm value. However, the effect of tax code complexity is more pronounced and more statistically significant. Specifically, a one standard deviation increase in average tax code

complexity is associated with a 2.4% decline in Tobin's Q, whereas the corresponding effect of tax framework complexity is almost 40% smaller.

This finding aligns with the evidence of Giese et al. (2024), who show that firms can—at least partially—mitigate the harms of tax framework complexity through greater investment in tax personnel and compliance resources. In contrast, the burdens imposed by tax code complexity, such as the intricacy and opacity of statutory provisions, are less easily offset. This distinction is further confirmed in Specification (5), which includes both subcomponents simultaneously. In this model, only tax code complexity retains a statistically significant negative coefficient.

We conduct a series of robustness tests, presenting the results in Table 4. The first four tests address potential concerns about our primary independent variable by employing alternative measures of tax system complexity. First, we substitute the Tax Complexity Index with the PwC Paying Taxes Score, as a proxy for the administrative burden of tax compliance across countries (Djankov et al., 2010; Amberger et al., 2025). The estimated coefficient remains negative and statistically significant, with the effect size approximately doubling relative to our baseline specification. Second, we examine the Tax Foundation's Tax Competitiveness Index, which is designed to capture the overall competitiveness and neutrality of a country's tax system. While this index may be correlated with complexity, it is not a direct measure. Consistent with this distinction, we find no statistically significant association between the Tax Competitiveness Index and firm value, reinforcing the importance of using a more targeted proxy for tax complexity.

[Insert Table 4 about here]

Our main measure assumes that tax complexity at all firm locations contributes equally to the tax planning environment. However, given that corporate tax departments are often located at the firm's headquarters, we re-estimate our baseline model using two alternative

specifications: one based solely on the headquarters country's tax complexity and another using a weighted index combining 70% group-average tax complexity and 30% headquarters-specific tax complexity. In both cases, the coefficients remain negative and statistically significant, with magnitudes comparable to our baseline results. These findings indicate that our results are insensitive to the weighting of tax complexity across jurisdictions.

In the remaining robustness tests, we address methodological concerns related to model specification and measurement. Specifically, we re-estimate our regression model using first differences rather than levels, cluster standard errors at the country level rather than the firm level, and replace the dependent variable with the relative change in market capitalization instead of the natural logarithm of Tobin's Q. The results based on market capitalization changes are fully consistent with our baseline findings. However, when estimating the model in first differences or clustering standard errors at the country level, we observe statistically significant effects only for the overall tax complexity index and the code complexity component. The coefficient on framework complexity, in contrast, becomes insignificant in these specifications. These findings further underscore that code complexity influences firm value while framework complexity does not.

We now turn to a more granular analysis to identify which specific subcategories of tax complexity matter most for publicly listed firms. This analysis seeks to disentangle the effects of complexity stemming from particular tax regulations and administrative processes. We disaggregate tax code complexity into three subcategories: (i) *anti-BEPS complexity*, which captures the intricacy of six regulatory areas aimed at curbing base erosion and profit shifting; (ii) *domestic corporate group complexity*, which reflects the complexity of four regulatory items specific to national corporate groups; and (iii) *complexity of other regulations*, covering all aspects not captured by the first two. For tax framework complexity, we distinguish between the complexity of *pre-filing processes* and *post-filing processes* (e.g., audits, appeals).

Specifications (1) through (5) of Table 5 include each subcategory individually, while Specification (6) includes all of them simultaneously. The results suggest that the overall effect of tax complexity on firm value is primarily driven by anti-BEPS regulations and post-filing processes. While *domestic corporate group complexity* exhibits a significant negative association with firm value when considered in isolation, its effect becomes statistically insignificant when all subcomponents are included—indicating potential overlap or shared explanatory power with other forms of complexity.

[Insert Table 5 about here]

To further examine the effect of anti-BEPS tax code complexity, we conduct an event study around the adoption of the EU Anti-Tax Avoidance Directive in 2019. This directive serves as a quasi-exogenous shock to tax code complexity, as it was mandated at the EU level and did not result from individual country policy choices. We calculate, for each firm, the change in anti-BEPS tax code complexity between 2018 and 2019 attributable solely to its EU-based affiliates, excluding changes from non-EU jurisdictions.

Our treatment group consists of firms that experienced an increase in EU anti-BEPS complexity during this period, while the control group includes firms that saw a decrease. We exclude firms with no change in EU anti-BEPS complexity (typically those without EU affiliates) and firms headquartered in the EU (to mitigate confounding effects from domestic policy responses or headquarters bias). Results from this analysis are presented in Figure 2, using standard errors clustered at both the firm and country levels.

[Insert Figure 2 about here]

The event study results indicate no evidence of pre-trends, suggesting that anticipation is unlikely to drive the observed effects. In the treatment group, we detect a statistically significant decline in firm value in 2019, coinciding with the directive's implementation—at least when standard errors are clustered at the country level. In subsequent years, the interaction terms

between the treatment indicator and year dummies remain negative but statistically insignificant, suggesting that the effect of increased anti-BEPS complexity may be temporary. These findings further support the notion that heightened regulatory complexity can have immediate, though possibly short-lived, adverse effects on firm valuation.

5.2. Heterogeneity Analyses

We now examine firm heterogeneity in the relationship between tax complexity and firm value to better understand whether tax complexity systematically creates winners and losers. In Hypotheses 2a and 2b, we posit that firms with (1) greater opportunities for international profit shifting, (2) stronger internal information systems/governance standards, or (3) larger size are less harmed by tax system complexity.

Building on the literature, we argue that tax complexity may open additional avenues for tax planning—particularly through international profit shifting. As a result, any negative valuation effects should weaken for firms better positioned to exploit planning opportunities. To test this, we conduct two complementary sets of analyses.

First, we follow Amberger et al. (2025) by interacting tax complexity measures with proxies for firms' tax planning incentives: the group's average statutory tax burden (STR_{it}) and the average effective tax rate of firms headquartered in the same country and year ($AvgETR_{ct}$). We hypothesize that firms facing higher tax burdens have greater incentives to engage in international tax planning and are thus less harmed by tax complexity. Results reported in Table 6 support this prediction. While the baseline effect of tax code complexity remains negative and statistically significant, the interaction terms with both STR_{it} and $AvgETR_{ct}$ are positive and significant, indicating an attenuation of the adverse effect. In contrast, we find no significant interaction effects for tax framework complexity (or for the overall complexity index), suggesting that this kind of complexity is less directly tied to international tax planning strategies.

[Insert Table 6 about here]

Second, we conduct subsample analyses based on two direct proxies for firms' profit-shifting potential: the share of foreign subsidiaries and the share of tax haven affiliates. Using a median split, we re-estimate our baseline model (Equation 1) separately for firms above and below the median of each variable and report the results in Table 7. We find that statistically significant negative effects of both the overall complexity index and tax code complexity are confined to firms with below-median levels of foreign or tax haven affiliates. For firms with higher international presence and thus greater profit-shifting potential, the estimated coefficients are much smaller (or even positive) and statistically insignificant. Results for tax framework complexity are directionally consistent but notably weaker.

[Insert Table 7 about here]

Together, these findings strongly support Hypothesis 2a, indicating that firms with more opportunities for international tax planning are less harmed by complex tax systems. From a policy perspective, this challenges a widely cited rationale for increasing tax complexity—namely, to deter tax avoidance and promote fairness. On the contrary, our results suggest that complexity may instead entrench disparities by benefiting more internationally mobile firms, potentially placing domestically oriented ones at a competitive disadvantage.

We further hypothesize in Hypothesis 2b that firms vary in their capacity to manage tax complexity, particularly in their ability to process complex information. We expect that larger firms possess better internal tax departments and benefit from economies of scale in navigating complex tax systems. A more direct proxy for a firm's information-processing capacity is the speed of earnings announcements, as proposed by Gallemore and Labro (2015), which captures the timeliness of internal reporting. Additionally, we predict that firms with weaker governance may be less harmed by tax complexity. The rationale is that complex tax regulations may offer

greater scope for managerial discretion or rent extraction, potentially benefiting insiders at the expense of shareholders (Campbell et al., 2025).

We test these predictions through subsample analyses based on firm size, earnings announcement speed, and governance characteristics. The results of these tests are reported in Table 8. Contrary to our expectations, we find no evidence that larger firms are less harmed by tax complexity. In fact, the results suggest that the negative valuation effects are more pronounced among firms in the top size tertile. These firms may be more exposed to tax complexity due to the scope of their operations or may be held to higher compliance expectations.

By contrast, our other results support the theoretical predictions—particularly in relation to tax framework complexity and the overall tax complexity index. As reported in Table 8, firms with below-median earnings announcement speed and those lacking a dedicated Corporate Governance Committee or performance-based executive compensation exhibit significantly larger negative effects of tax complexity. These findings imply that highly complex tax systems place a premium on strong internal governance and information systems and that firms with these capabilities can better mitigate the associated costs.

[Insert Table 8 about here]

5.3. Analyses of dynamics over time

So far, our analysis has focused on the contemporaneous relationship of tax complexity and firm value, specifically, the effect of tax complexity on firm value at the end of the same year. However, this static regression design may overlook that the consequences of complex tax regulations and tax processes may evolve.

There are at least two reasons to expect a dynamic relationship. First, the introduction of new regulations and processes may entail one-time implementation costs, such as those resulting from introducing the global minimum tax or country-by-country reporting. These

initial burdens suggest that newly introduced tax complexity may be costlier than persistent tax complexity that firms have incorporated into their routines. Second, firms may need time to adjust their tax planning strategies to new regulations, particularly when the exact application of these new rules is unclear. As a result, potential benefits from newly introduced planning opportunities may only materialize with a delay. We therefore predict, in Hypothesis 3, that the negative effects of tax complexity diminish over time.

To explore these dynamics, we augment our regression model by including one-year or two-year lags of the tax complexity variables in addition or instead of the current-year variables (see Table 9). These additional regression analyses reveal distinct temporal patterns of tax code and tax framework complexity. We find consistently negative coefficients of a similar (or even larger) size for the lagged values of tax framework complexity, suggesting that tax process complexity exerts persistent negative effects on firm value.

Conversely, the impact of tax code complexity appears more transitory. We find a statistically significant negative effect of tax code complexity only for the current value, whereas we estimate even a positive (albeit statistically insignificant) coefficient for its two-year lag. These findings indicate that, while tax processes complexity imposes enduring costs for firms, tax code complexity may become more manageable over time, as firms learn to navigate the complexities in the tax code.

[Insert Table 9 about here]

5.4. Additional analyses on effect channels

Finally, we investigate potential real effects associated with tax complexity that may explain its negative impact on firm value. Drawing on the literature, we consider three potential channels: (i) direct compliance costs that reduce current profitability, (ii) increased tax uncertainty that raises firm risk, and (iii) dampened investment, which may constrain long-term growth.

To explore these mechanisms, we re-estimate Equation 1 using alternative dependent variables. In Section A of Table 10, we use return on assets (ROA_{it}) as a proxy for profitability. Section B employs the standard deviation of ROA_{it} to capture firm risk. In Section C, we examine sales growth, followed by R&D intensity in Section D, and investment in tangible fixed assets in Section E. For each model, we adapt the set of control variables to reflect the respective outcome variable, in line with standards established in the literature.

[Insert Table 10 about here]

Our findings suggest that the harm of tax complexity on firm value cannot be attributed to a single dominant channel. We find that overall tax complexity is significantly negatively associated with both return on assets and sales growth and that these effects are primarily driven by the tax code complexity. This aligns with the overall stronger valuation effect that we find for this subcategory of tax complexity throughout this paper. Moreover, for all three kinds of tax complexity—overall, tax code, and tax framework—we observe a significant negative association with R&D intensity. This suggests that complex tax regulations and processes may discourage firms from engaging in forward-looking, innovative activities.

In contrast, we find no robust evidence linking tax complexity to firm risk or to investment in tangible assets. However, when we incorporate interaction terms between tax complexity and the average statutory tax rates (STR_{it}), we observe additional nuances.[6] Specifically, the interaction between STR_{it} and tax framework complexity yields a positive and statistically significant coefficient, indicating that it is tax framework complexity that particularly moderates the sensitivity of investment to the tax rate. In other words—and extending Amberger et al. (2025)—we show that firms appear to respond less to tax incentives when faced with more complex tax processes, which may dilute the effectiveness of tax policy as an investment lever.

[6] These results are untabulated.

Taken together, these findings indicate that tax complexity—particularly that resulting from complex tax regulations—is associated with negative real responses of firms. The identified negative firm value effects are primarily driven by reduced growth opportunities—reflected in lower profitability and sales growth—and less R&D, rather than by increased perceived risk.

6. Conclusion

Our study documents the significant impact of tax system complexity on the market value of firms listed on the MSCI World stock index. We demonstrate that high tax complexity can reduce firm values, particularly through complex anti-BEPS regulations and complex post-filing processes.

Our study is the first to empirically document this effect and to quantify its magnitude. According to our estimations, an increase in average tax complexity by one standard deviation, similar to what was experienced by the United States after the enactment of the TCJA, reduces firm values on average by about one percent. We also assess the overall loss in market capitalization based on our findings. If all countries would have retained their tax complexity scores from the year 2016, the overall market capitalization of the firms in our sample would have been approximately 2 percent or almost 900 billion USD higher in 2022. In most of our tests, the negative value implications of complex tax regulations turn out worse than those of complex tax procedures.

We also show that tax complexity unevenly affects the values of firms. The negative effects are stronger for firms with a limited potential for tax-motivated profit shifting, like firms with low statutory tax rates or few foreign or tax haven affiliates. Tax complexity is also particularly harmful for firms with weak governance and weak internal information quality.

These findings have important implications for both policymakers and corporate managers. Policymakers must carefully weigh the benefits of new tax regulations against the additional burdens of increased complexity. While aiming to enhance tax fairness and curb tax

avoidance, they should consider the unintended negative consequences on corporate value. These negative effects seem to be temporary if complexity results from tax regulations, but complex tax procedures seem to have a longer-lasting, though smaller, effect. Frequent changes of tax regulations may thus be particularly costly for firms.

For corporate managers, understanding the nuances of tax complexity is crucial for strategic planning and investing. Firms would be well advised to anticipate the costs associated with complex tax systems and adapt their strategic decisions accordingly.

Ultimately, our research contributes to the broader discourse on international tax policy by highlighting the delicate balance between regulatory objectives and economic efficiency. As tax systems evolve, further empirical research is essential to refine understanding of the economic effects of tax complexity and to guide the design of better and more equitable tax policies. This study lays the groundwork for future investigations into the interplay between tax complexity, corporate behavior, and economic outcomes, emphasizing the need for a nuanced approach to tax policy reform.

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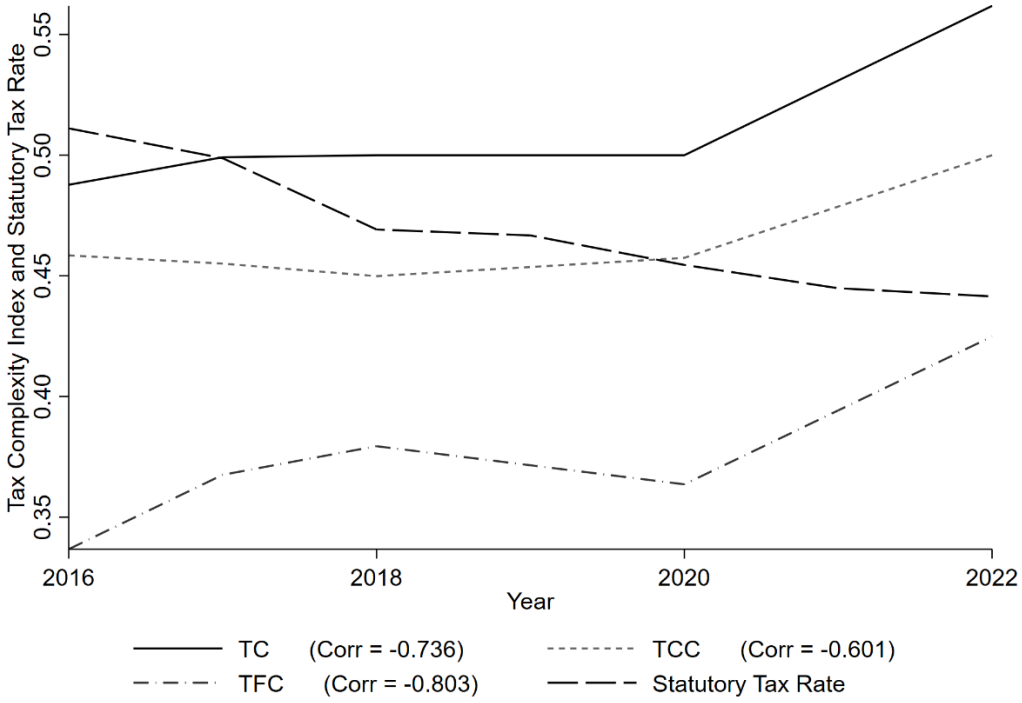
(A) Different kinds of Tax Complexity



(B) Different subcategories of Tax Complexity

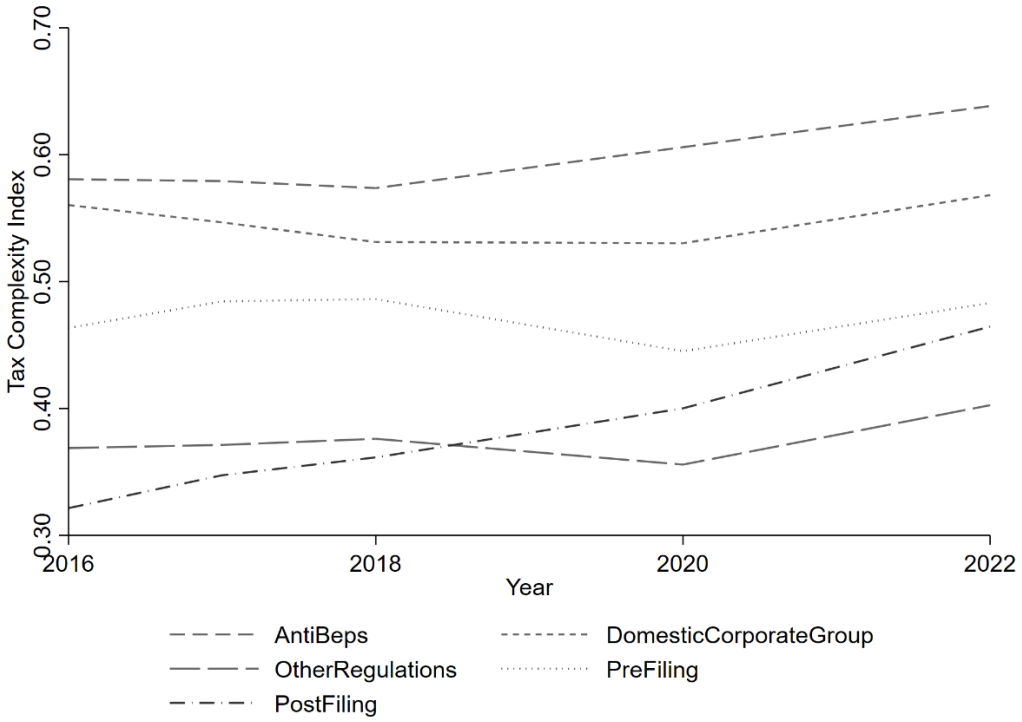
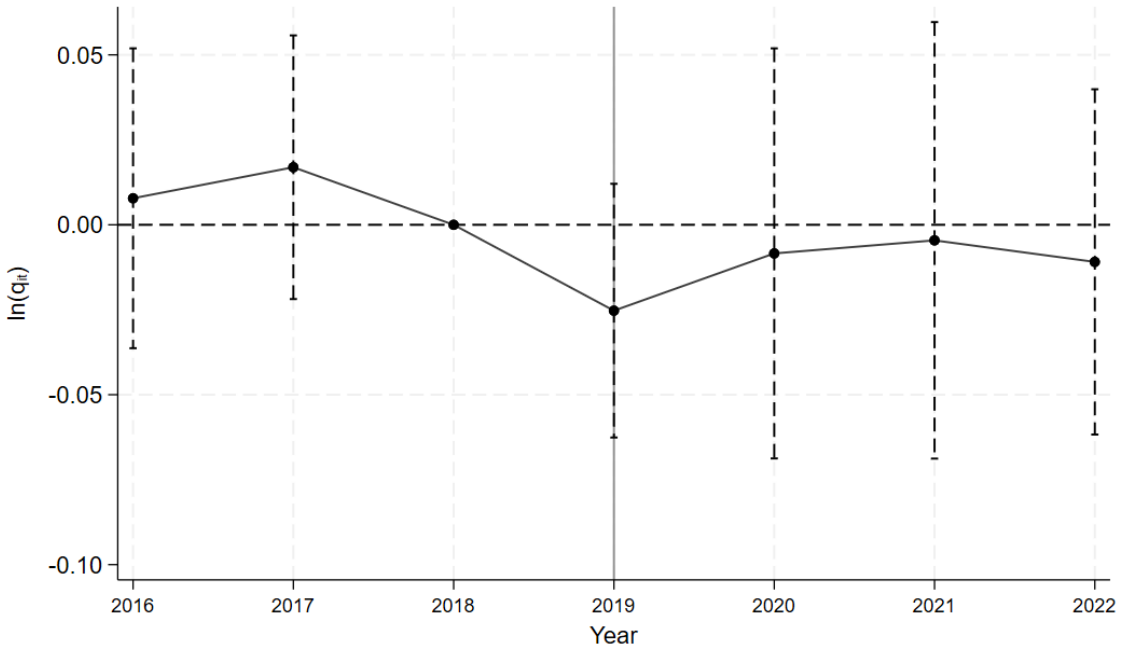


Figure 1 Development of Different kinds and subcategories of Tax Complexity. (A) Different kinds of Tax Complexity. (B) Different subcategories of Tax Complexity. This figure illustrates the development of Tax Complexity Index as well as its to kinds and subcategories used in this paper over the sample period. Each line depicts the unweighted average of tax complexity in the headquarter countries of our sample. The definitions of subcategories of tax complexity are given in Table 1.

(A) Clustering at firm level:



(B) Clustering at country level:

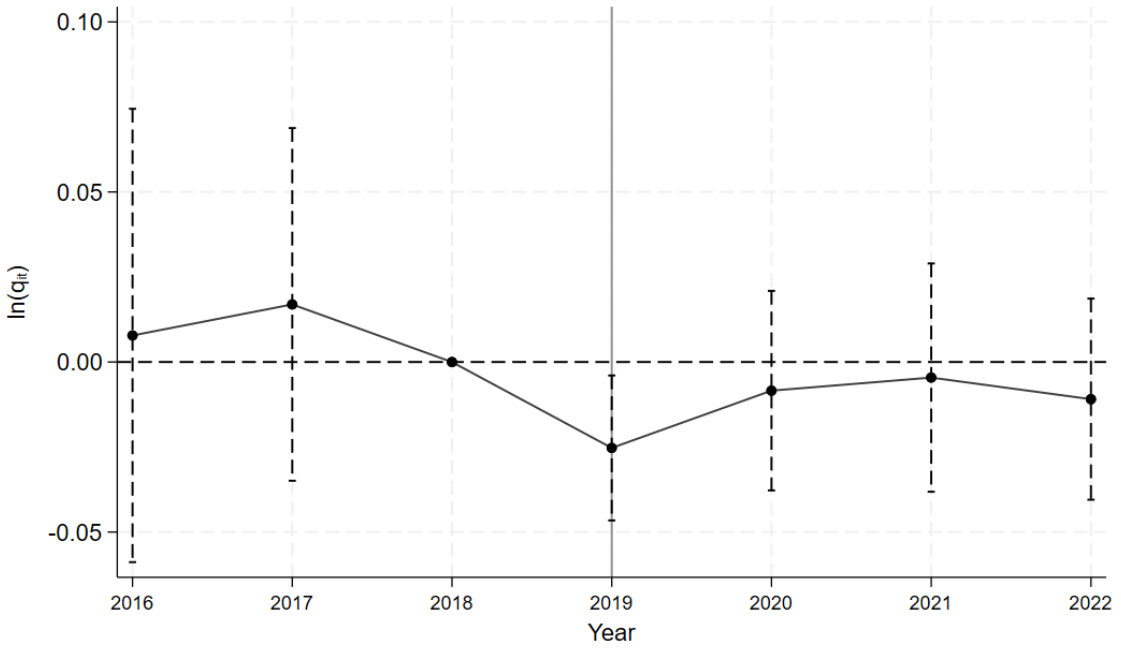


Figure 2 Event Study: ATAD Implementation in the EU (2019). (A) Clustering at firm level. (B) Clustering at country level. This figure shows the results of an event study analyzing the effects of implementing the ATAD I directive in the European Union in 2019. We estimate Equation 1 but replace $TaxComplexity_{it}$ by the interaction term $Treat_i$*$Year_t$, which is depicted in the two graphs (the upper graph clusters standard errors at the firm level, the lower graph at the headquarter country level). $Treat_i$ is equal to one if *EU AntiBEPS Complexity*$_{it}$ has increased from 2018 to 2019, and zero otherwise. The definition of *EU AntiBEPS Complexity*$_{it}$ is provided in Table 1. We disregard all firms headquartered in the European Union and all firms for which the *EU AntiBEPS Complexity*$_{it}$ has not changed from 2018 to 2019.

Table 1: Variable Definitions

ln q_{it}	Natural log of Tobin's Q of firm *i* in year *t*, measured by the total of equity market value and total liabilities book value, divided by total assets book value.	Refinitiv
$TaxComplexity_{it}$	Firm-wide average of the Tax Complexity Index by Hoppe et al. (2023) of firm *i* in year *t*, weighted with the number of subsidiaries per locations.	taxcomplexity.org, ORBIS
$TaxCodeComplexity_{it}$	Firm-wide average of the Tax Code Complexity by Hoppe et al. (2023) of firm *i* in year *t*, weighted with the number of subsidiaries per locations. .	taxcomplexity.org, ORBIS
$TaxFrameworkComplexity_{it}$	Firm-wide average of the Tax Framework Complexity by Hoppe et al. (2023) of firm *i* in year *t*, weighted with the number of subsidiaries per locations. .	taxcomplexity.org, ORBIS
$TaxComplexity\_HQ_{ct}$	Tax Complexity Index by Hoppe et al. (2023) in the headquarter country of firm *i* in year *t*.	taxcomplexity.org
$TaxCodeComplexity\_HQ_{ct}$	Tax Code Complexity by Hoppe et al. (2023) in the headquarter country of firm *i* in year *t*.	taxcomplexity.org
$TaxFramework\text{-}Complexity\_HQ_{ct}$	Tax Framwork Complexity by Hoppe et al. (2023) in the headquarter country of firm *i* in year *t*.	taxcomplexity.org
$anti\text{-}BEPS\text{-}complexity_{it}$	Firm-wide average of six dimension of Tax Code Complexity by Hoppe et al. (2023) of firm *i* in year *t*, weighted with the number of subsidiaries per locations. The dimensions are *cfcrules, generalantiavoidance*, *dividends*, *interest*, *royalties* and *transferpricing*.	taxcomplexity.org, ORBIS
domestic corporate group $complexity_{it}$	Firm-wide average of four dimension of Tax Code Complexity by Hoppe et al. (2023) of firm *i* in year *t*, weighted with the number of subsidiaries per locations. The dimensions are *capialgains*, *corporatereogranization*, *grouptreatment* and *lossoffset*.	taxcomplexity.org, ORBIS
other $regulations_{it}$	Firm-wide average of five dimensions of Tax Code Complexity by Hoppe et al. (2023) of firm *i* in year *t*, weighted with the number of subsidiaries per locations. The dimensions are *additionaltaxes*, *alternativeminimumtax*, *depreciation*, *investmentincentives* and *statutorytaxrates*.	taxcomplexity.org, ORBIS
pre-$filing_{it}$	Firm-wide average of three dimensions of Tax Framework Complexity by Hoppe et al. (2023) of firm *i* in year *t*, weighted with the number of subsidiaries per locations. The dimensions are *guidance*, *enactment*, and *paymentfiling*.	taxcomplexity.org, ORBIS
post-$filing_{it}$	Firm-wide average of two dimensions of Tax Framework Complexity by Hoppe et al. (2023) of firm *i* in year *t*, weighted with the number of subsidiaries per locations. The dimensions are *audits* and *appeals*.	taxcomplexity.org, ORBIS
STR_{it}	Firm-wide average of the statutory corporation tax rate of firm *i* in year *t*, weighted with the number of subsidiaries per locations. .	Tax Foundation, ORBIS
STR_HQ_{ct}	Statutory corporation tax rate in the headquarter country of firm *i* in year *t*.	Tax Foundation
$AvgETR_{ct}$	Average GAAP effective tax rate of country *c* in year *t* as measured by tax expense divided by profit before tax.	Refinitiv
ROA_{it}	Net income of firm *i* in year *t*, divided by total assets.	Refinitiv

$Growth_{it}$	Current year sales of firm *i* in year *t* minus prior year sales, divided by prior year sales.	Refinitiv
$Leverage_{it}$	Total liabilities of firm *i* in year *t*, divided by total assets.	Refinitiv
$CapitalIntensity_{it}$	Fixed assets of firm *i* in year *t*, divided by total assets.	Refinitiv
$Size_{it}$	Natural log of total assets of firm *i* in year *t*.	Refinitiv
$GDPgrowth_{ct}$	Annual percentage growth rate of GDP at market prices based on constant local currency of country *c* in year *t*.	World Bank
$Inflation_{ct}$	Inflation of country *c* in year *t*, as measured by the annual growth rate of the GDP implicit deflator.	World Bank
$Accountability_{ct}$	Dimension of the WWGI of country *c* in year *t*. Reflects perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.	www.govindicators.org
$PoliticalStability_{ct}$	Dimension of the WWGI of country *c* in year *t*. Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism.	www.govindicators.org
$GovernmentEffectiveness_{ct}$	Dimension of the WWGI of country *c* in year *t*. Reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	www.govindicators.org
$RegulatoryQuality_{ct}$	Dimension of the WWGI of country *c* in year *t.* Reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.	www.govindicators.org
$RuleofLaw_{ct}$	Dimension of the WWGI of country *c* in year *t*. Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.	www.govindicators.org
$Corruption_{ct}$	Dimension of the WWGI of country *c* in year *t*. Reflects perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.	www.govindicators.org
$\Delta MarketCap_{it}$	Annual growth rate in market capitalization at the firm level measured as the first difference of the firm's market value over its lagged value.	Refinitiv
$PayingTaxesScore_{it}$	The inverse of the firm-wide average of the PwC Paying Taxes Score of firm *i* in year *t*. This measure is based on a survey that the World Bank, in cooperation with PwC, conducted annually from 2004 to 2021.	PwC World Bank Doing Business Survey
$TaxCompetitiveIndex_{it}$	The inverse of the firm-wide average of the Tax Competitive Index of firm *i* in year *t*. The Tax Foundation ranks countries based on the competitiveness and neutrality of their tax systems.	Tax Foundation

TaxComplexity adj_{it}	Firm-wide average of the Tax Complexity Index by Hoppe et al. (2023) of firm *i* in year *t*, combining 70% for the headquarter and 30% for the subsidiaries	taxcomplexity.org
$International_i$	Number of international located subsidiaries of firm *i* scaled by the total number of subsidiaries.	ORBIS
$TaxHaven_i$	Number of tax haven subsidiaries defined in accordance with Bennedsen & Zeume (2017) of firm *i* scaled by the total number of subsidiaries.	ORBIS
Corporate Governance Board Committee	The dummy variable is assigned a value of one having a corporate governance board committee and zero otherwise.	Refinitiv
Performance-based Compensation	The dummy variable is assigned a value of 1 if the firm has a policy for performance-oriented compensation that is effective in attracting and retaining senior executives and board members.	Refinitiv
Earnings Announcement Speed	This variable is employed to measure the time span between the conclusion of the financial year and the subsequent announcement of the dividend distribution, standardized to years.	Refinitiv
EU AntiBEPS $Complexity_{it}$	Firm-wide average of five dimensions of Tax Code Complexity by Hoppe et al. (2023) of firm *i* in year t, weighted with the number of subsidiaries per location. The dimensions are *cfcrules, generalantiavoidance*, *interest*, *royalties* and *transferpricing*. Only the complexity of regulations at EU locations is considered; the complexity at all other locations is set to zero.	taxcomplexity.org, ORBIS
$yield_{it}$	Net income of firm *i* in year *t*, divided by total assets.	Refinitiv
$uncertainty_{it}$	The volatility of operating profitability, measured as the standard deviation of EBIT scaled by total assets.	Refinitiv
$growth_{it}$	The firm's revenue growth between year *t*-1 and *t*, calculated as the change in the natural logarithm of total revenue, divided by two.	Refinitiv
$innovation_{it}$	R&D expenditures of firm *i* in year *t*, divided by total assets.	Refinitiv
$investment_{it}$	The natural logarithm of the difference between the firm's fixed tangible assets and their lagged value in year *t*.	Refinitiv
Ln(Total Fixed Assets)$_{it}$	Natural log of fixed assets of firm *i* in year *t*.	Refinitiv
Ln(Employees)$_{it}$	Natural log of the number of employees of firm *i* in year *t*.	Refinitiv
$EBIT\_sc_{it}$	EBIT of firm *i* in year *t*, divided by total assets.	Refinitiv
Ln(Total Revenue)$_{it}$	Natural log of total revenue of firm *i* in year *t*.	Refinitiv

Note: This table shows definitions and data sources for all dependent and independent variables.

TABLE 2
Descriptive Statistics

	(1) N	(2) Mean	(3) SD	(4) P5	(5) P95
ln q_{it}	6344	0.727	0.639	-0.064	1.944
$TaxComplexity_{it}$	6344	0.384	0.029	0.331	0.430
$TaxCodeComplexity_{it}$	6344	0.501	0.038	0.444	0.561
$TaxFrameworkComplexity_{it}$	6344	0.264	0.026	0.217	0.302
$TaxComplexity\_HQ_{ct}$	6344	0.373	0.052	0.270	0.450
$TaxCodeComplexity\_HQ_{ct}$	6344	0.495	0.068	0.330	0.580
$TaxFrameworkComplexity\_HQ_{ct}$	6344	0.247	0.042	0.170	0.310
$anti\text{-}BEPS\text{-}complexity_{it}$	6344	0.543	0.041	0.475	0.607
domestic corporate group $complexity_{it}$	6344	0.497	0.041	0.439	0.557
other $regulations_{it}$	6344	0.411	0.059	0.313	0.500
EU $AntiBEPS\ Complexity_{it}$	6344	0.001	0.010	-0.007	0.011
$pre\text{-}filing_{it}$	6344	0.265	0.035	0.204	0.325
$post\text{-}filing_{it}$	6344	0.263	0.032	0.218	0.316
STR_{it}	6344	0.274	0.039	0.229	0.365
STR_HQ_{ct}	6344	0.275	0.057	0.190	0.389
$AvgETR_{ct}$	6344	0.232	0.294	0.116	0.416
ROA_{it}	6344	0.086	0.062	0.020	0.206
$Growth_{it}$	6344	0.801	27.64	-0.547	1.737
$Leverage_{it}$	6344	0.280	0.208	0.003	0.572
$CapitalIntensity_{it}$	6344	0.476	0.233	0.153	0.914
$Size_{it}$	6344	23.41	1.268	21.39	25.58
$GDPgrowth_{ct}$	6344	1.687	2.984	-4.147	5.945
$Inflation_{ct}$	6344	2.188	2.332	-0.190	7.041
$Accountability_{ct}$	6344	1.094	0.287	0.845	1.557
$PoliticalStability_{ct}$	6344	0.549	0.441	-0.036	1.115
$GovernmentEffectiveness_{ct}$	6344	1.480	0.235	1.231	1.863
$RegulatoryQuality_{ct}$	6344	1.494	0.244	1.189	1.879
$RuleofLaw_{ct}$	6344	1.500	0.224	1.297	1.839
$Corruption_{ct}$	6344	1.435	0.354	1.020	2.068
$PayingTaxesScore_{it}$	6344	0.158	0.027	0.125	0.200
$\Delta MarketCap_{it}$	6230	0.104	0.245	-0.261	0.522
$TaxCompetitiveIndex_{ct}$	6315	60.98	5.150	55.10	70.39
$yield_{it}$	6344	0.096	0.072	0.018	0.240
$uncertainty_{it}$	4702	0.017	0.021	0.001	0.057
$growth_{it}$	5479	0.039	0.081	-0.057	0.164
$innovation_{it}$	6344	0.017	0.034	0.000	0.090
$investment_{it}$	3588	19.66	1.791	16.73	22.45
$TaxComplexity\ adj_{it}$	6344	0.376	0.043	0.290	0.443
$TaxCodeComplexity\ adj_{it}$	6344	0.497	0.056	0.364	0.569
$TaxFrameworkComplexity\ adj_{it}$	6344	0.252	0.036	0.189	0.308
$Ln(Total\ Fixed\ Assets)_{it}$	5754	22.13	1.629	19.39	24.67
$Ln(Employees)_{it}$	6091	9.849	1.532	7.246	12.20
$EBIT\_sc_{it}$	5603	0.105	0.074	0.028	0.252
$Ln(Total\ Revenue)_{it}$	6342	22.86	1.314	20.75	25.08
Earnings $Announcement\ Speed_{it}$	5219	-0.258	2.025	-1.118	-0.082

Note: This table shows summary statistics for all dependent and independent variables.

TABLE 3
Baseline Results

	(1)	(2)	(3)	(4)	(5)
	ln q_{it}	*ln* q_{it}	*ln* q_{it}	*ln* q_{it}	*ln* q_{it}
$TaxComplexity_{it}$		-0.8956***			
		(-3.49)			
$TaxCodeComplexity_{it}$			-0.6198***		-0.4761*
			(-2.86)		(-1.90)
$TaxFrameworkComplexity_{it}$				-0.5703**	-0.3760
				(-2.29)	(-1.32)
STR_{it}	-0.0828	-0.3065	-0.2633	-0.2136	-0.3077
	(-0.48)	(-1.55)	(-1.35)	(-1.11)	(-1.54)
$AvgETR_{ct}$	-0.0249***	-0.0250***	-0.0257***	-0.0243***	-0.0251***
	(-2.92)	(-2.93)	(-3.04)	(-2.83)	(-2.95)
ROA_{it}	1.7904***	1.7808***	1.7851***	1.7826***	1.7812***
	(11.46)	(11.39)	(11.40)	(11.41)	(11.39)
$Growth_{it}$	0.0001***	0.0001***	0.0001***	0.0001***	0.0001***
	(6.15)	(5.86)	(6.01)	(5.94)	(5.90)
$Leverage_{it}$	0.0516	0.0530	0.0541	0.0511	0.0532
	(0.71)	(0.73)	(0.74)	(0.70)	(0.73)
$CapitalIntensity_{it}$	-0.0793	-0.0833	-0.0840	-0.0800	-0.0834
	(-0.98)	(-1.03)	(-1.04)	(-0.98)	(-1.03)
$Size_{it}$	-0.2316***	-0.2329***	-0.2320***	-0.2329***	-0.2328***
	(-7.48)	(-7.47)	(-7.46)	(-7.49)	(-7.47)
$GDPgrowth_{ct}$	0.0076***	0.0081***	0.0080***	0.0079***	0.0081***
	(3.98)	(4.24)	(4.19)	(4.13)	(4.24)
$Inflation_{ct}$	0.0054**	0.0044*	0.0045*	0.0051**	0.0045*
	(2.19)	(1.83)	(1.90)	(2.07)	(1.88)
$Accountability_{ct}$	0.0672	0.0500	0.0513	0.0541	0.0463
	(1.16)	(0.87)	(0.88)	(0.94)	(0.80)
$PoliticalStability_{ct}$	-0.0784***	-0.0812***	-0.0813***	-0.0790***	-0.0811***
	(-3.54)	(-3.65)	(-3.67)	(-3.55)	(-3.64)
$GovernmentEffectiveness_{ct}$	0.0034	0.0183	0.0251	-0.0003	0.0176
	(0.07)	(0.36)	(0.49)	(-0.01)	(0.35)
$RegulatoryQuality_{ct}$	0.0559	0.0783*	0.0529	0.0871**	0.0742*
	(1.28)	(1.86)	(1.23)	(2.04)	(1.70)
$RuleofLaw_{ct}$	-0.0309	-0.0426	-0.0519	-0.0234	-0.0421
	(-0.42)	(-0.58)	(-0.71)	(-0.32)	(-0.58)
$Corruption_{ct}$	-0.0606	-0.0212	-0.0349	-0.0345	-0.0236
	(-1.05)	(-0.35)	(-0.59)	(-0.58)	(-0.39)
Observations	6,344	6,344	6,344	6,344	6,344
Adj. R-sq	0.9211	0.9213	0.9212	0.9212	0.9212
Firm & Year FE	YES	YES	YES	YES	YES

Note: This table presents results for the effect of tax system complexity on firm value. The samples in all columns include observations for the years 2016 to 2022. The dependent variable is *ln q*, measured as the natural log of Tobin's Q. The main independent variable of interest is the firm-year specific average level of tax complexity. It is captured either by the overall Tax Complexity Index (*TaxComplexity*) or by its two subcategories reflecting separately the complexity of tax regulations (*TaxCodeComplexity*) or the complexity of tax processes (*TaxFrameworkComplexity*). All regressions include firm and year fixed effects. All variables are defined in Table 1. We report t-statistics in parenthesis, based on standard errors clustered by firm. ***, **,and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 4
Robustness Tests

Dependent variable (if not otherwise stated) Category of Tax Complexity		(1) $ln\ q_{it}$ TC_{it}	(2) $ln\ q_{it}$ TCC_{it}	(3) $ln\ q_{it}$ TFC_{it}
Section A: PwC Paying Taxes Score	$TaxComplexity_{it}$	-1.9868***		
		(-3.02)		
	Observations	6,344		
	Adj. R-sq	0.9212		
Section B: Tax Competitive Index	$TaxComplexity_{it}$	-0.0601		
		(-0.92)		
	Observations	6,315		
	Adj. R-sq	0.9204		
Section C: Headquarter country Tax Complexity	$TaxComplexity\_HQ_{ct}$	-0.6764***	-0.4168***	-0.5262***
		(-3.96)	(-3.18)	(-3.00)
	Observations	6,344	6,344	6,344
	Adj. R-sq	0.9216	0.9214	0.9214
Section D: 70% Firm average/30% Headquarter country Tax Complexity	$TaxComplexity\_adj_{it}$	-0.6900***	-0.4458***	-0.4966**
		(-3.55)	(-2.92)	(-2.50)
	Observations	6,344	6,344	6,344
	Adj. R-sq	0.9213	0.9212	0.9212
Section E: First Difference Estimator	$\Delta TaxComplexity_{it}$	-0.7401**	-0.9129***	0.1368
		(-2.50)	(-3.54)	(0.53)
	Observations	5,048	5,048	5,048
	Adj. R-sq	0.3189	0.3203	0.3181
Section F: Clustering at country-level	$TaxComplexity_{it}$	-0.8956***	-0.6198**	-0.5703
		(-2.86)	(-2.28)	(-1.29)
	Observations	6,344	6,344	6,344
	Adj. R-sq	0.9213	0.9212	0.9212
Section G: Dependent variable $\Delta MarketCap_{it}$	$TaxComplexity_{it}$	-0.8012***	-0.6985***	-0.4921**
		(-3.19)	(-3.09)	(-2.48)
	Observations	6,225	6,225	6,225
	Adj. R-sq	0.3510	0.3511	0.3504

Note: This table presents results of seven robustness tests for the baseline regressions in Table 3. If not otherwise specified, the dependent variable is *ln q*, measured as the natural log of Tobin's Q. The main independent variable of interest is the firm-year specific average level of tax complexity. If not otherwise specified, it is captured either by the overall Tax Complexity Index (*TaxComplexity, TC*) in the first column or by its two subcategories reflecting separately the complexity of tax regulations (*TaxCodeComplexity, TCC*) or the complexity of tax processes (*TaxFrameworkComplexity, TFC*) in columns 2 and 3. All regressions include firm and year fixed effects and the set of control variables used in Table 3. In sections (A) and (B) we use the Paying Taxes Score (PwC/Worldbank) and Tax Competitiveness Index (Tax Foundation) as alternative measures of tax complexity. In (C) we refer to the headquarter country's level of tax complexity. In (D) we use a weighted definition of *TaxComplexity*, reflecting the firm-average (70%) and the headquarter country's (30%) level of tax complexity. In (E) we consider all dependent and independent variables in first differences. In (F) we cluster standard errors at the headquarter country-level. In (G) we use an alternative definition of the dependent variable. All variables are defined in Table 1. We report t-statistics in parenthesis, based on standard errors clustered by firm. ***, **,and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 5
Subcategories of Tax Complexity

Dependent variable	(1) $ln\ q_{it}$	(2) $ln\ q_{it}$	(3) $ln\ q_{it}$	(4) $ln\ q_{it}$	(5) $ln\ q_{it}$	(6) $ln\ q_{it}$
anti-BEPS-complexity$_{it}$	-0.5869***					-0.5101*
	(-4.22)					(-1.94)
domestic group complexity$_{it}$		-0.5262**				-0.1853
		(-2.17)				(-0.55)
other regulations$_{it}$			0.1314			0.5383
			(0.46)			(1.34)
pre-filing$_{it}$				-0.1870		0.8037**
				(-0.72)		(2.47)
post-filing$_{it}$					-0.6131***	-0.8154***
					(-3.77)	(-3.23)
Observations	6,344	6,344	6,344	6,344	6,344	6,344
Firm & Year FE	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES
Adj. R^2	0.9212	0.9213	0.9210	0.9210	0.9214	0.9215

Note: This table presents results for the effect of subcategories of tax system complexity on firm value. The samples in all columns include observations for the years 2016 to 2022. The dependent variable is *ln q*, measured as the natural log of Tobin's Q. The main independent variable of interest is the firm-year specific average of a category of tax system complexity. The *anti-BEPS-complexity* reflects the complexity of the following regulations: of *cfcrules*, *generalantiavoidance*, *interest*, *royalties*, *dividends*, *transferpricing*. The *domestic corporate group complexity* reflects the complexity of the following regulations: *capitalgains*, *corporatereogranization*, *grouptreatment*, *lossoffset. Other regulations* reflect the complexity of the following regulations: *additionaltaxes*, *alternativeminimumtax*, *depreciation*, *investmentincentives*, *statutorytaxrates. Pre-filing* reflects the complexity of the following processes: *guidance*, *enactment*, *paymentfiling*. *Post-filing* reflects the complexity of the following processes: *audits*, *appeals.* All regressions include firm and year fixed effects and the set of control variables used in Table 3. All variables are defined in Table 1. We report t-statistics in parenthesis, based on standard errors clustered by firm. ***, **,and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 6
Heterogeneity: Profit Shifting Potential I

	(1)	(2)	(3)
Category of Tax Complexity	TC_{it}	TCC_{it}	TFC_{it}
Section A: Interaction of Tax Complexity and STR			
$TaxComplexity_{it}$	-2.0948	-4.1568***	3.5627***
	(-1.64)	(-3.76)	(2.91)
$TaxComplexity_{it}$ x STR_{it}	4.3666	13.2690***	-14.6625***
	(0.98)	(3.32)	(-3.43)
Observations	6,344	6,344	6,344
Firm & Year FE	YES	YES	YES
Controls	YES	YES	YES
Adj. R-sq	0.9213	0.9214	0.9213
Section B: Interaction of Tax Complexity and AvgETR			
$TaxComplexity_{it}$	-0.9802***	-0.7374***	-0.4570*
	(-3.65)	(-3.33)	(-1.80)
$TaxComplexity_{it}$ x $AvgETR_{ct}$	0.4270	0.5966**	-0.4736
	(0.98)	(2.44)	(-1.21)
Observations	6,344	6,344	6,344
Firm & Year FE	YES	YES	YES
Controls	YES	YES	YES
Adj. R-sq	0.9213	0.9212	0.9212

Note: In this table we assess how the association between tax complexity and firm value is moderated by the firm-level tax burden. To this end, we include interactions of tax complexity and STR_{it} in Section A and interactions of tax complexity and $AvgETR_{ct}$ in Section B. The samples in all columns include observations for the years 2016 to 2022. The dependent variable is *ln q*, measured as the natural log of Tobin's Q. The main independent variables of interest are the firm-year specific average level of tax complexity and the respective interactions. Tax complexity is captured either by the overall Tax Complexity Index (*TaxComplexity, TC*) in the first column or by its two subcategories reflecting separately the complexity of tax regulations (*TaxCodeComplexity, TCC*) or the complexity of tax processes (*TaxFrameworkComplexity, TCF*) in column 2 and 3. All regressions include firm and year fixed effects and the set of control variables used in Table 3. All variables are defined in Table 1. We report t-statistics in parenthesis, based on standard errors clustered by firm. ***, **,and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 7
Heterogeneity: Profit Shifting Potential II

	(1)	(2)	(3)
Dependent variable	$ln\ q_{it}$	$ln\ q_{it}$	$ln\ q_{i}$
Kind of Tax Complexity	TC_{it}	TCC_{it}	TFC_{it}
Section A: Sample split: Share of foreign affiliates			
Below Median (Obs. 3,162)			
$TaxComplexity_{it}$	-0.7414***	-0.5647**	-0.4081
	(-2.84)	(-2.43)	(-1.40)
Adj. R-sq	0.9298	0.9298	0.9297
Above Median (Obs. 3,182)			
$TaxComplexity_{it}$	0.1000	-0.0430	0.2206
	(0.15)	(-0.08)	(0.37)
Adj. R-sq	0.9165	0.9165	0.9165
Section B: Sample split: Share of tax haven affiliates			
Below Median (Obs. 3,161)			
$TaxComplexity_{it}$	-0.9810***	-0.7077***	-0.6131**
	(-3.63)	(-2.83)	(-2.30)
Adj. R-sq	0.9380	0.9487	0.986
Above Median (Obs. 3,183)			
$TaxComplexity_{it}$	-0.6198	-0.5132	-0.3886
	(-1.08)	(-1.19)	(-0.70)
Adj. R-sq	0.9064	0.9064	0.9064

Note: In this table we assess how the association between tax complexity and firm value differs in subsamples with different potential for international profit shifting. To this end, we split the sample according to the firm-level share of foreign subsidiaries (Section A) and according to the firm-level share of tax haven affiliates (Section B). The samples in all columns include observations for the years 2016 to 2022. The dependent variable is *ln q*, measured as the natural log of Tobin's Q. The main independent variable of interest is the firm-year specific average level of tax complexity. It is captured either by the overall Tax Complexity Index (*TaxComplexity, TC*) in the first column or by its two subcategories reflecting separately the complexity of tax regulations (*TaxCodeComplexity, TCC*) or the complexity of tax processes (*TaxFrameworkComplexity, TCF*) in column 2 and 3. All regressions include firm and year fixed effects and the set of control variables used in Table 3. All variables are defined in Table 1. We report t-statistics in parenthesis, based on standard errors clustered by firm. ***, **,and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 8
Heterogeneity: Information Processing Capacity

	(1)	(2)	(3)
Dependent variable	$ln\ q_{it}$	$ln\ q_{it}$	$ln\ q_{i}$
Kind of Tax Complexity	TC_{it}	TCC_{it}	TFC_{it}
Section A: Sample split: Corporate Governance Board Committee			
No CGBC (Obs. 2,666)			
$TaxComplexity_{it}$	-1.1441**	0.2384	-1.4076***
	(-2.53)	(0.61)	(-3.80)
Adj. R-sq	0.9175	0.9172	0.9180
With CGBC (Obs. 3,469)			
$TaxComplexity_{it}$	-0.1897	-0.3628	0.2371
	(-0.57)	(-1.22)	(0.63)
Adj. R-sq	0.9283	0.9284	0.9283
Section B: Sample split: Performance-based Compensation			
No performance-based compensation (Obs. 341)			
$TaxComplexity_{it}$	-3.3390*	2.9991**	-3.4394**
	(-1.97)	(2.14)	(-2.58)
Adj. R-sq	0.9330	0.9326	0.9351
With performance based compensation (Obs. 5,776)			
$TaxComplexity_{it}$	-0.7936***	-0.5320**	-0.5346**
	(-2.91)	(-2.37)	(-2.03)
Adj. R-sq	0.9245	0.9244	0.9244
Section C: Sample split: Earnings Announcement Speed			
Below Median (Obs. 2,648)			
$TaxComplexity_{it}$	-1.2318***	-0.4571	-1.2510***
	(-3.34)	(-1.27)	(-3.37)
Adj. R-sq	0.9251	0.9247	0.9252
Above Median (Obs. 2,571)			
$TaxComplexity_{it}$	-0.9185**	-0.9322***	-0.0868
	(-2.02)	(-2.78)	(-0.18)
Adj. R-sq	0.9183	0.9185	0.9181
Section D: Sample split: Firm Size			
Below Median (Obs. 3,183)			
$TaxComplexity_{it}$	-0.7398*	-0.5818*	-0.3130
	(-1.73)	(-1.80)	(-0.72)
Adj. R-sq	0.8997	0.8997	0.8995
Above Median (Obs. 3,161)			
$TaxComplexity_{it}$	-1.2876***	-0.8217***	-1.0182***
	(-4.83)	(-3.26)	(-4.56)
Adj. R-sq	0.9274	0.9276	0.9277

Note: In this table we assess how the association between tax complexity and firm value differs in subsamples with different capacity for processing complex information. To this end, we split the sample according to the existence of a Corporate Governance Board Committee (Section A) and Performance-Based Compensation (Section B) as well as according to the Earnings Announce Speed (Section C) and Firm Size (Section D). The samples in all columns include observations for the years 2016 to 2022. The dependent variable is *ln q*, measured as the natural log of Tobin's Q. The main independent variable of interest is the firm-year specific average level of tax complexity. It is captured either by the overall Tax Complexity Index (*TaxComplexity, TC*) in the first column or by its two subcategories reflecting separately the complexity of tax regulations (*TaxCodeComplexity, TCC*) or the complexity of tax processes (*TaxFrameworkComplexity, TCF*) in column 2 and 3. All regressions include firm and year fixed effects and the set of control variables used in Table 3. All variables are defined in Table 1. We report t-statistics in parenthesis, based on standard errors clustered by firm. ***, **,and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 9
Dynamic Effects of Tax Complexity

Dependent variable	(1) $ln\ q_{it}$	(2) $ln\ q_{it}$	(3) $ln\ q_{it}$	(4) $ln\ q_{it}$
Section A: Tax Complexity Index				
$TaxComplexity_{it}$	-0.5995*	-1.1914***		
	(-1.87)	(-3.68)		
$TaxComplexity_{it-1}$	-0.3473		-0.7031***	
	(-1.28)		(-2.60)	
$TaxComplexity_{it-2}$		-0.7957**		-0.3256
		(-2.24)		(-0.95)
Observations	5,474	4,324	5,474	4,324
Firm & Year FE	YES	YES	YES	YES
Controls	YES	YES	YES	YES
Adj. R-sq	0.9286	0.9379	0.9285	0.9376
Section B: Tax Code Complexity				
$TaxCodeComplexity_{it}$	-0.7083***	-0.7286***		
	(-2.68)	(-2.80)		
$TaxCodeComplexity_{it-1}$	0.3254		-0.0605	
	(1.15)		(-0.24)	
$TaxCodeComplexity_{it-2}$		0.1895		0.5326*
		(0.61)		(1.88)
Observations	5,474	4,324	5,474	4,324
Firm & Year FE	YES	YES	YES	YES
Controls	YES	YES	YES	YES
Adj. R-sq	0.9285	0.9379	0.9284	0.9377
Section C: Tax Framework Complexity				
$TaxFrameworkComplexity_{it}$	0.0243	-0.6983**		
	(0.09)	(-2.33)		
$TaxFrameworkComplexity_{it-1}$	-0.7935***		-0.7805***	
	(-3.54)		(-3.22)	
$TaxFrameworkComplexity_{it-2}$		-1.3189***		-1.0987***
		(-4.82)		(-4.14)
Observations	5,474	4,324	5,474	4,324
Firm & Year FE	YES	YES	YES	YES
Controls	YES	YES	YES	YES
Adj. R-sq	0.9286	0.9381	0.9286	0.9380

Note: In this table we assess time properties of the association between tax complexity and firm value. To this end, we add one-year or two-year lags of tax complexity to the regression. The samples in columns 1 and 3 include observations for the years 2017 to 2022, the samples in columns 2 and 4 include observations for the years 2018 to 2022. The dependent variable is *ln q*, measured as the natural log of Tobin's Q. The main independent variable of interest is the firm-year specific average level of tax complexity. It is captured either by the overall Tax Complexity Index (*TaxComplexity, TC*) in Section A or by its two subcategories reflecting seperately the complexity of tax regulations (*TaxCodeComplexity, TCC*) or the complexity of tax processes (*TaxFrameworkComplexity, TCF*) in Sections B and C. All regressions include firm and year fixed effects and the set of control variables used in Table 3. All variables are defined in Table 1. We report t-statistics in parenthesis, based on standard errors clustered by firm. ***, **,and * denote significance at the 1%, 5%, and 10% levels, respectively.

TABLE 10
Effect Channels

Kind of Tax Complexity		(1) TC_{it}	(2) TCC_{it}	(3) TFC_{it}
Section A: Profitability	**Dep. variable:**	**$yield_{it}$**	**$yield_{it}$**	**$yield_{it}$**
	$TaxComplexity_{it}$	-0.1201**	-0.1263**	-0.0461
		(-2.13)	(-2.40)	(-1.13)
	Observations	6,084	6,084	6,084
	Adj. R-sq	0.7436	0.7437	0.7433
Section B: Firm Risk	**Dep. variable:**	**$uncertainty_{it}$**	**$uncertainty_{it}$**	**$uncertainty_{it}$**
	$TaxComplexity_{it}$	-0.0118	-0.0050	-0.0171
		(-0.66)	(-0.34)	(-1.00)
	Observations	4,697	4,697	4,697
	Adj. R-sq	0.2165	0.2164	0.2166
Section C: Firm Growth	**Dep. variable:**	**$growth_{it}$**	**$growth_{it}$**	**$growth_{it}$**
	$TaxComplexity_{it}$	-0.1854*	-0.2343**	0.0232
		(-1.78)	(-2.33)	(0.29)
	Observations	5,472	5,472	5,472
	Adj. R-sq	0.1753	0.1760	0.1747
Section D: Innovation expenses	**Dep. variable:**	**$innovation_{it}$**	**$innovation_{it}$**	**$innovation_{it}$**
	$TaxComplexity_{it}$	-0.0263**	-0.0192**	-0.0128*
		(-2.49)	(-2.19)	(-1.66)
	Observations	3,809	3,809	3,809
	Adj. R-sq	0.9578	0.9578	0.9578
Section E: Investment	**Dep. variable:**	**$investment_{it}$**	**$investment_{it}$**	**$investment_{it}$**
	$TaxComplexity_{it}$	-2.4603	-1.6014	-1.7363
		(-0.99)	(-0.71)	(-1.01)
	Observations	3,530	3,530	3,530
	Adj. R-sq	0.6320	0.6320	0.6320

Note: In this table we assess what potential real responses of firms may explain the valuation effect of tax complexity. We estimate Equation 1 using the following alternative dependent variables: $yield_{it,}$ is the net income divided by total assets; $uncertainty_{it,}$ is the standard deviation of future yields for current and the next two years; $growth_{it}$ is the Compound Annual Growth Rate of total revenue for current and the next two years; $innovation_{it}$ is the firm's R&D expenses divided by total assets; $investment_{it}$ is the natural log of the change in tangible fixed assets. The samples in all columns include observations for the years 2016 to 2022. The main independent variable of interest is the firm-year specific average level of tax complexity. It is captured either by the overall Tax Complexity Index (*TaxComplexity, TC*) in Column (1) or by its two subcategories reflecting seperately the complexity of tax regulations (*TaxCodeComplexity, TCC*) or the complexity of tax processes (*TaxFrameworkComplexity, TCF*) in Columns (2) and (3). All regressions include firm and year fixed effects. All regressions include the set of control variables from Table 3, subject to some modifications in firm controls to account for the nature of the dependent variables. In Section A, we additionally include the *ln (fixed assets)* and *ln (employees)*, but disregard $ROA_{it,}$ *Size* and *CapitalIntensity*. In Section B, we additionally include the *EBIT_sc*, but disregard ROA_{it}. In Section C, we disregard ROA_{it} and *Growth*. In Section D, we include *investment*, but disregard ROA_{it} and *Growth*. In Section E, we include *ln(revenue)*, but disregard *Size* and *Growth*. All variables are defined in Table 1. We report t-statistics in parenthesis, based on standard errors clustered by firm. ***, **,and * denote significance at the 1%, 5%, and 10% levels, respectively.

Appendix

Appendix 1: Sample Selection

1,451 Firms over 7 Years		10,157
Excluding Banks, Insurances and Other Financials	./.	1,554
Excluding Negative Net Income Before Taxes	./.	863
Excluding Incomplete Data for ownership information	./.	455
Excluding: Sample Baseline Regression	./.	941
Final Sample		**6,344**

Note: This table describes the sample selection process for the sample used in the baseline regressions.

Appendix 2: Geographic Distribution of the Sample

Code	*Country*	*Firms*	*Observations*
AU	Australia	37	211
AT	Austria	3	17
BE	Belgium	6	38
CA	Canada	57	306
CN	China	1	3
DK	Denmark	10	65
FI	Finland	11	66
FR	France	46	273
DE	Germany	44	265
HK	Hong Kong	23	143
IE	Ireland	18	115
IL	Israel	4	21
IT	Italy	14	80
JP	Japan	193	1,229
NL	Netherlands	18	106
NZ	New Zealand	6	42
NO	Norway	9	51
PT	Portugal	3	19
ES	Spain	17	88
SE	Sweden	21	134
CH	Switzerland	34	213
GB	United Kingdom	57	329
US	United States	423	2,530
		1,055	6,344

Note: This table reports the number of firms and observations per headquarter country.

Impressum:
Arbeitskreis Quantitative Steuerlehre, arqus, e.V.
Vorstand: Prof. Dr. Ralf Maiterth (Vorsitzender),
Prof. Dr. Kay Blaufus, Prof. Dr. Dr. Andreas Löffler
Sitz des Vereins: Berlin

Herausgeber: Kay Blaufus, Jochen Hundsdoerfer, Martin Jacob, Dirk Kiesewetter, Rolf J. König, Lutz Kruschwitz, Andreas Löffler, Ralf Maiterth, Heiko Müller, Jens Müller, Rainer Niemann, Deborah Schanz, Sebastian Schanz, Caren Sureth-Sloane, Corinna Treisch

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ISSN 1861-8944