Tax-motivated firm splitting

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Abstract

How do corporate tax systems shape the boundaries of the firm? This paper shows that progressive corporate income taxation can distort firms' organizational structures by inducing tax-motivated firm splitting. I use administrative data on corporations and their owners and exploit two reforms that altered the tax benefits and costs of dividing a firm into multiple entities. First, I show that a temporary increase in the tax advantage of splitting reduces the share of firms filing jointly for corporate income tax purposes. Second, once the benefit is perceived as permanent and minimum capital requirements for new firms are abolished, the number of firms per entrepreneur rises significantly and persistently. Finally, I show that reorganizations are primarily driven by tax motives, as I find no effect on firms' total assets, employment, or industry diversification. These findings highlight extensive-margin responses of business organization to corporate taxation, with relevant implications for the understanding of firm dynamics and for tax design.

JEL codes: H25, H26, H32
Keywords: Firm splitting, corporate income tax, tax avoidance

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1 Introduction

Recent research shows that individuals at the top of the income distribution face decreasing effective tax rates and remit a large share of tax liabilities through the corporate income tax paid via their firms rather than via individual income taxes (e.g., Bach, Bozio, Guillouzouic, and Malgouyres, 2025; Bruil, Van Essen, Leenders, Lejour, Möhlmann, and Rabaté, 2024). A natural implication of these findings is that achieving progressivity at the top of the individual income distribution requires taxing firms' corporate profits progressively.[1] However, introducing nonlinearities into the corporate income tax (CIT) schedule can create incentives for firms to reorganize in ways that reduce overall tax liabilities, potentially undermining redistributive objectives. When corporate income tax schedules are progressive, for instance in presence of threshold-based marginal tax rates (MTR), business owners have an incentive to divide operations across multiple legal entities so that tax liabilities are minimized. Whether such tax-motivated firm splitting occurs in practice remains an open question.

This paper asks: does the corporate tax system affect firms' organization? I demonstrate that progressive corporate income taxation can alter organizational structures by encouraging tax-driven firm splitting. This organizational response has important implications for tax design and for the measurement of economic activity. Progressive CIT systems or reduced CIT rates are typically intended to shield small and medium-sized enterprises (SMEs) from high corporate income tax rates.[2] Tax-induced firm splitting may undermine this objective by distorting eligibility for subsidies and credit programs linked to firm size and by eroding the corporate tax base, thereby weakening fiscal capacity.[3] Beyond tax design, the prevalence of tax-motivated firm splitting also affects the measurement of business dynamics and the allocation of economic resources. By artificially inflating the number of firms, such behavior can bias entry statistics, leading policymakers and researchers to overstate entrepreneurial activity and to misinterpret trends in competition or productivity. Finally, restructuring undertaken for tax purposes may

[1] For instance, Senator Elizabeth Warren proposed introducing progressivity into the United States (US) corporate tax system by imposing a surtax on corporations with global net income exceeding $100 million (Saez and Zucman, 2019).

[2] For example, prior to the 2017 Tax Cuts and Jobs Act, the US applied a progressive CIT schedule with marginal rates increasing at several profit thresholds. The Netherlands and the United Kingdom have also implemented nonlinear schedules, featuring higher rates above defined brackets. In many countries, small firms face simplified or preferential regimes–such as minimum alternative taxes or reduced statutory rates–based on observable indicators (e.g., turnover or assets), reverting to the standard regime once thresholds are exceeded (Slemrod, 2019). Within the European Union, ten member states currently grant lower CIT rates to firms below specific thresholds for profit, turnover, or employment (van Essen, Griffioen, and Lejour, 2024).

[3] Firm splitting is a central policy concern in the design of progressive CIT systems. A recent report on the reduced CIT rate in the Netherlands highlights this risk (van Essen et al., 2024), and Saez and Zucman (2019) likewise emphasize the importance of anti-avoidance provisions to prevent artificial splitting in the context of Senator Elizabeth Warren's proposed corporate tax on large US companies.

entail administrative and legal costs that divert resources from productive investments.

To the best of my knowledge, this paper provides the first direct causal evidence of tax-motivated firm splitting. I exploit two reforms in the Netherlands that jointly altered the benefits and costs of splitting. The first introduced a CIT kink at high levels of taxable income, increasing the gains from splitting. The second abolished minimum capital requirements for new firms, reducing the costs of establishing new legal entities.[4] Together, these reforms generated sharp changes in the net benefits of splitting, which I use to identify tax-driven restructuring. Following Miller, Pope, and Smith (2024), I classify firms into treated and control groups based on their pre-reform taxable income distribution. Treated firms are those more likely to be affected by the introduction of the kink given their pre-reform corporate taxable income, whereas control firms are those less likely to be affected.

By exploiting these reforms and twelve years of administrative data on private firms and their individual owners, I demonstrate that corporate taxes affect firms' organizational structures. First, I show that a temporary increase in the tax advantage of splitting reduces the use of joint filing for CIT purposes among firms most affected by the introduction of the kink. This suggests that, after the reform, corporate groups with multiple legal entities that had previously filed joint tax returns began filing separately, whereas groups that had filed separately faced weaker incentives to opt into the regime.[5] Next, I show that once the benefit is perceived as permanent and the costs of starting a new firm drop following the abolition of minimum capital requirements, the number of firms per entrepreneur rises significantly. This suggests that entrepreneurs split their business into two or more separate legal entities.

Finally, I ask to what extent firm activity is affected by these reorganizations. From a theoretical perspective, the effects on firm outcomes are ambiguous. Tax savings from splitting might be productively reinvested, leading to expansion; alternatively, tax-motivated reorganizations could entail efficiency losses. It is also possible that such changes leave firm performance unchanged if they represent purely financial adjustments with no implications for underlying operations. Consistent with the latter prediction, despite the documented reorganization of firm structures, I find no evidence that the reform affected total assets, employment, or industry diversification. This suggests that the observed reorganization is primarily driven by tax motives rather than differential expansion op-

[4]Minimum capital requirements are not a resource cost per se, since the funds remain within the firm as equity. However, they raise the private cost of entry because the capital must be available upfront, creating a liquidity constraint and opportunity cost as the funds are tied up in the firm. Additionally, related verification or registration procedures may add direct compliance costs.

[5]This is the so-called "fiscal unit" or group-filing/consolidation regime, which allows a group of related companies to be taxed together as a single entity for CIT purposes. Countries that allow for such regimes include the Netherlands, France, Spain, and Luxembourg. A similar regime exists in the United States for federal income tax purposes.

portunities between treated and control firms, and that, at least in the short term, it does not affect firms' real economic activities.

While the literature acknowledges the possibility of tax-induced firm splitting (see e.g., Cullen and Gordon, 2002; Slemrod, 2019), there is no direct causal evidence documenting this behavior. Goolsbee (2004) finds that increases in state CIT rates raise the number of establishments per firm in states with flat taxes but reduce it in states with a progressive CIT schedule, consistent with firms breaking up into smaller entities with fewer establishments per firm under progressive taxation. Onji (2009) argues that the clustering of publicly traded companies below a sales threshold for preferential value added tax regime is consistent with firm splitting. However, lacking panel micro data on firms or their owners, these papers cannot directly probe the mechanism. By combining administrative panel data with variation arising from multiple reforms, this study isolates splitting as the operative mechanism while documenting the effect of corporate tax incentives on limited liability companies.

Agostini, Engel, Repetto, and Vergara (2018) show that following a reform that made special tax regimes for small businesses more restrictive, reported individual income under that regime declined while reported income from alternative sources increased. However, their analysis remains at the level of tax regime choice and income reallocation while this paper complements and extends their work by focusing on firm-splitting behavior as a direct organizational response to CIT incentives. More generally, splitting firms has been discussed as potential behavioral response in presence of discontinuous changes in monitoring, tax enforcement and regulations around size thresholds (e.g., Almunia and Lopez-Rodriguez, 2018; Garicano, Lelarge, and Van Reenen, 2016; Klimsa and Ullmann, 2023), yet none of these studies directly tests this mechanism.

By documenting and quantifying an underexplored extensive margin response to corporate taxation, I contribute to the debate on the differences between micro and macro elasticities in the context of the corporate taxable income elasticity (CETI).[6] The distinction between these elasticities mirrors the classic debate on labor supply elasticities, where larger macro estimates are often attributed to optimization frictions and extensive margin responses.[7] In the context of corporate taxation, the small magnitude of micro-elasticities estimated using bunching methods can be reconciled with extensive

[6]The heterogeneity of existing CETI estimates has been discussed for instance by De Mooij and Ederveen (2008) and more recently by Agostini et al. (2025), Krapf and Staubli (2025) and Swonder and Vergara (2025). In these discussions, differences across CETI estimates have also been attributed to methodological differences, with focus on the extent to which different empirical approaches can capture long-term responses to corporate tax changes. In this context, my findings highlight that organizational responses to corporate taxation may appear with a lag.

[7]See for instance Chetty (2012); Chetty, Friedman, Olsen, and Pistaferri (2011); Chetty, Guren, Manoli, and Weber (2013). In the context of the labor supply literature, differences between micro and macro estimates can also be explained by dynamic returns to effort (Kleven, Kreiner, Larsen, and Søgaard, 2025) and human capital accumulation (e.g., Keane and Rogerson, 2012, 2015).

margin responses in the sense that these method tends to identify responses conditional on firms' current organizational choices. By contrast, macro elasticities may be larger as they embed both extensive- and intensive-margin adjustments, including entry, exit, and restructuring decisions.

More broadly, this paper contributes to the growing literature on firms' extensive-margin responses to corporate taxation by documenting an underexplored channel, alongside entry decisions (e.g. Bacher and Brülhart, 2013; Da Rin, Di Giacomo, and Sembenelli, 2011; Djankov, Ganser, McLiesh, Ramalho, and Shleifer, 2010), legal form choice (e.g. Bilicka and Raei, 2023; Chen, Qi, and Schlagenhauf, 2018; De Mooij and Nicodème, 2008; Elschner, 2013; Goolsbee, 1998, 2004; Lejour and Massenz, 2021; Mackie-Mason and Gordon, 1997; Massenz, 2025; Tazhitdinova, 2020), location decisions and profit shifting to subsidiaries in tax havens (e.g., Beer, De Mooij, and Liu, 2020; Bilicka, 2019; Bilicka, Devereux, and Güçeri, 2024; Lejour and Schindler, 2024).

Finally, this paper complements strands of research studying firms' responses to corporate income taxation (e.g., Agostini et al., 2025; Boonzaaier, Harju, Matikka, and Pirttilä, 2019; Brockmeyer, 2014; Bukovina, Lichard, and Palguta, 2025; Coles, Patel, Seegert, and Smith, 2022; Devereux, Liu, and Loretz, 2014; Harju, Koivisto, and Matikka, 2022; Massenz, 2024), the effects of entry regulation (e.g., Bacher, Fagereng, Ring, and Wold, 2025; Branstetter, Lima, Taylor, and Venâncio, 2014; Djankov, La Porta, Lopez-de Silanes, and Shleifer, 2002; Klapper, Laeven, and Rajan, 2006), corporate tax complexity (e.g., Francois and Vicard, 2025; Gallemore, Labro, and Scanlon, 2023; Scholes and Wolfson, 1990; Zwick, 2021), and the optimal design of CIT systems (e.g., Dávila and Hébert, 2023; Sharma, Slemrod, Stimmelmayr, Wilson, and Choi, 2025).

The rest of the paper is organized as follows. Section 2 discusses the institutional setting and the reforms. Section 3 describes the empirical strategy and section 4 the data. Section 5 presents the results and section 6 concludes.

2 Institutional setting

The majority of Dutch companies are private limited liability corporations. These firms are not publicly listed and are typically owned by a small group of shareholders who are also actively involved in the company's operations. In the Dutch context, such firms are classified as owner-managed when there is at least one individual who holds at least five percent of the firm's shares *and* works for the company.[8] Owner-managed firms account for approximately 70 percent of all limited liability companies in the Netherlands. The fiscal environment in which Dutch companies operate has undergone substantial reforms

[8]By law owner-managers must pay themselves a wage each year (Bettendorf, Lejour, and van't Riet, 2017). Wage income is taxed under a progressive personal income tax schedule and dividends received from their companies are taxed at a flat rate.

since the early 2000s, and particularly in the aftermath of the global financial crisis. I discuss them in more detail below.

All companies in the Netherlands are liable to pay corporate taxes on taxable income.[9] From 2001, the Dutch CIT system features a reduced rate for firms reporting taxable income below a specified threshold. The preferential rate initially applied to taxable income up to about €22,700, and entailed a reduction of about five percentage points relative to the standard rate.[10] In 2007, the system was expanded to three brackets, with companies facing a 20 percent MTR up to €25,000, 23.5 percent between €25,000 and €60,000, and 25.5 percent above €60,000. During the financial crisis, the government simplified and relaxed the system to support SMEs. In October 2008, it introduced a one-off, *retroactive* measure for the 2008 tax year: the middle tax bracket was abolished, and the lower 20 percent rate was extended to profits up to €275,000. Subsequently, in December 2008, the government announced that as a *temporary* measure for the 2009-2010 fiscal years, there would be a kink at €200,000 with a 25.5 percent MTR above the threshold and 20 percent tax rate below. The 2011 Tax Plan, discussed and approved in Fall 2010, made the €200,000 kink *permanent* and lowered the top CIT rate from 25.5 to 25 percent. This structure remained unchanged until 2018.

The introduction of a kink and MTR changes at high levels of taxable income strengthened firms' incentives to split into smaller entities as a way to achieve lower combined average tax rates.[11] Figure 1a summarizes these tax incentives by plotting changes in MTR in 2007, 2008 and 2009. Figure 1b depicts the tax savings from splitting a company into two entities in 2009, at different levels of total corporate taxable income.[12] The blue dashed line shows CIT liabilities if corporate taxable income is reported by a single legal entity in one CIT return. The red dotted line depicts CIT liabilities when total taxable income

[9]Corporate taxable income is determined by adjusting the firm's commercial profit for non-deductible expenses, tax-exempt income, and fiscal valuation differences, while also applying tax deductions–such as investment allowances and depreciation–and loss carryforwards and carrybacks.

[10]In 2001, the standard CIT rate was 35 percent for income above 50,000 guilders (€22,689), while income below this threshold was taxed at 30 percent (van Essen et al., 2024). Between 2003 and 2006, corporate taxes were substantially reduced, yet the kink remained stable at €22,689 and the difference between the low and high MTR remained about 5 percentage points. Figure A.1 in the appendix summarizes the evolution of the Dutch CIT system over time.

[11]Beyond lowering average tax rates, splitting a firm into multiple entities, such as by establishing a holding with one or more operating companies, can yield additional benefits. A holding structure isolates operational risks from asset ownership and benefits from the Dutch participation exemption, which eliminates double taxation on dividends and capital gains from qualifying subsidiaries. Profits can be retained and reinvested within the group without triggering immediate personal taxation, and employing the owner-manager through the holding reduces reference wage obligations and administrative burdens. However, such structures also entail higher compliance costs, more complex accounting, and greater scrutiny of inter-company transactions.

[12]For transactions across entities, transfer pricing regulations must apply to ensure that intercompany dealings are conducted at arm's length. In practice, however, it is feasible to allocate taxable income across entities when the underlying business activities are organized accordingly–for example, when production or other functions are divided between entities. The two entities may represent either one holding and one operational company, or two operational companies within the same corporate group.

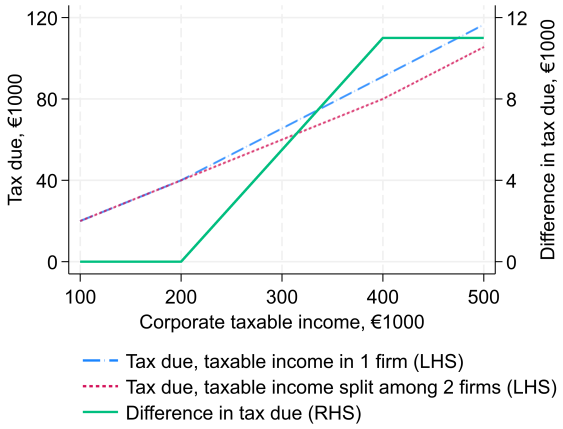
is instead allocated between two entities filing separate CIT returns. The solid green line shows the difference between the two series, which is positive for firms with taxable income above the kink and increases up to €11,000 euros for firms with total taxable income of €400,000. Beyond this point, total tax savings plateau, as any additional euro of income is taxed at the top MTR of 25.5 percent, unless a new entity is established.

Figure 1: Changes in MTR around the kink and tax savings from splitting

(a) MTR changes



(b) Tax savings from splitting in 2009



Notes: Figure 1a shows how MTR changed at different levels of taxable income in 2007, 2008 and 2009. Figure 1b computes tax due for companies at different levels of taxable income in 2009. The blue line depicts total tax due when taxable income is attributed to one legal entity. The red line depicts how the tax due changes when taxable income is distributed among two legal entities. The green line depicts the difference between the two series.

An additional reform implemented in the Netherlands in 2012 reduced the costs of creating new firms, and consequently also the costs associated with splitting existing firms. The so-called Flex-BV reform was motivated by the desire to make the Dutch private limited liability company more attractive for entrepreneurs and SMEs. A central element of the reform was the abolition of the minimum capital requirements. Previously, starting a private limited liability company in the Netherlands required a minimum issued share capital of €18,000.[13] After the reform, companies could be incorporated with as little as €0.01 in share capital, shifting the focus from formal capital requirements to stronger rules on director liability and creditor protection. The Flex-BV proposal was submitted to Parliament in May 2007 and approved with broad consensus by the Lower House on 15 December 2009. A complementary Implementation Act was adopted in October 2011, and both acts were passed by the Senate in June 2012. The reform entered into force on 1 October 2012.[14] While the Flex-BV reform eliminated minimum capital requirements,

[13]Failure to make this payment in full implied an incorporation defect and meant that shareholders would be personally liable to creditors alongside the company. Contributions could be in cash or in kind, but in the latter case an auditor's report certifying the value of the contribution was required.

[14]Figure A.2 provides a timeline summarizing the FlexBV and CIT reforms discussed in this section.

entrepreneurs still faced other costs when establishing new firms. Aside from paid-in capital, starting a new business in the Netherlands required roughly €2,049 in set-up costs, with the main expense being the notary's fee for drafting the incorporation deed.[15]

All Dutch corporations must file annual CIT returns, but eligible firms can opt to file jointly as part of a fiscal unit. To qualify, the parent company must hold at least 95 percent of the legal and economic ownership and voting rights in the subsidiary, both must share the same financial year and accounting principles, and all companies within the fiscal unit must be Dutch residents for tax purposes–with limited exceptions for permanent establishments in the European Union. This regime allows qualifying corporate groups to be treated as a single taxpayer for CIT purposes, thereby consolidating profits and losses and neutralizing most intra-group transactions. The primary economic benefits lie in the immediate offset of losses across entities, cash-flow smoothing, and administrative simplification through consolidated filing. Opting in or out of the regime is procedurally straightforward, requiring only a formal request to the tax authority, and can in principle be done from one fiscal year to the next at relatively low administrative cost. A fiscal unit is created by submitting the required forms to the Tax Authority within three months of the desired start date and can be dissolved jointly by the parent and subsidiary, effective from the date the request is received by the Tax Authority, without retroactive effect.

3 Method

This paper exploits two reforms that altered the tax benefits and costs of splitting firms to assess the prevalence of such behavior. I estimate the causal effect of the reforms on firm splitting using a difference-in-differences framework:

$$Y_{it} = \gamma + \beta \cdot T_i \cdot \text{Post}_t + \sum_t \delta_t \cdot \mathbf{x}_i^{'} \cdot \text{Year}_t + \alpha_i + \lambda_t + \varepsilon_{it} \tag{1}$$

where subscripts i and t denote firms and years, respectively. Y_{it} is the outcome variable of interest, either an indicator for joint filing or the number of firms per entrepreneur. The specification includes firm fixed effects α_i and year fixed effects λ_t. Standard errors are clustered at the firm level. Post_t is a dummy that equals one in all post-reform years, that is all years after 2008. T_i is the firm-level treatment indicator. The term $\mathbf{x}_i^{'} \cdot \text{Year}_t$ captures interactions between year dummies and time-invariant firm characteristics. I

[15] World Bank (2008, p. 52). The incorporation deed is estimated to cost about €1,750 by the World Bank (2008, 2012, 2015) In 2008, according to the Ease of Doing Business Database retrieved from the World Bank (2025), set-up costs amounted to 6 percent of income per capita in the Netherlands, slightly below the OECD average of 6.38 percent (excluding the Netherlands). Beyond costs, the process of starting a business was also relatively efficient as of 2008, involving fewer days and procedures than the OECD average, though it required a higher minimum paid-in capital as a share of income per capita (World Bank, 2025).

discuss the definition of treatment and the choice of baseline year and control variables in the paragraphs below. To investigate the evolution of differences across treated and control firms over time, I also employ a dynamic difference-in-difference specification:

$$Y_{it} = \gamma + \sum_{t \neq 2008} \beta_t \cdot \mathrm{T}_i \cdot \mathrm{Year}_t + \sum_{t \neq 2008} \delta_t \cdot \mathbf{x}_i^{'} \cdot \mathrm{Year}_t + \alpha_i + \lambda_t + \epsilon_{it} \tag{2}$$

The firm-level treatment indicator T_i captures exposure to the 2009 CIT reform, which introduced a kink at €200,000 of taxable income. Firms with pre-reform taxable income close to or above this threshold faced stronger incentives to adjust their organizational structure. Accordingly, I classify as treated those firms that reported taxable income exceeding €175,000 but below €300,000 in any year before 2009. Control firms are those reporting taxable income between €100,000 and €175,000 at least once but never above €175,000 during the pre-reform period. As robustness, I examine how the results vary when varying this definition. This approach is similar to Miller et al. (2024), who investigate owner-managers' responsiveness to personal tax rates changes. I use taxable income reported by firms in 2007 and 2008 to build treated and control groups of firms as the 2008 kink was introduced retroactively. As it was announced in October 2008, profits and losses had been realized by the vast majority of firms, leaving limited room for adjustments. Consistent with firms being constrained in their response to the introduction of the kink in 2008, Massenz (2024) finds no evidence of bunching at the €275,000 kink in 2008, but documents bunching at €200,000 over 2009–2018.

The impact of the reforms is expected to vary depending on firms' pre-reform organizational structure. Among owner-managers operating a single firm before 2009, the introduction of the kink increased the relative benefit of creating an additional entity. By contrast, entrepreneurs who already controlled multiple firms could instead shift income across existing entities without necessarily needing to expand their portfolios. To account for this heterogeneity, I allow post-reform trajectories to differ by owners' initial portfolios. Specifically, I interact year dummies with an indicator distinguishing firms whose owners held only one firm from those controlling multiple firms before 2009.

The vector $\mathbf{x}_i'$ further includes indicators for the firm's industry and deciles of asset growth and the natural logarithm of equity, all measured in the last pre-reform year. These interactions flexibly account for heterogeneous dynamics among firms operating in different sectors and with varying pre-reform growth prospects or capital intensity. The latter two indicators are included because the likelihood of founding a new firm may depend on both the growth potential of the existing business (and expected tax savings) and the amount of capital already tied up in it. The decision to file jointly for CIT is likewise expected to vary with expected growth and firm size (proxied by total equity). Larger firms tend to differ in tax-planning capacity, compliance incentives,

and administrative sophistication, whereas slower-growing firms are more likely to record losses, making joint filing more attractive within corporate groups.

The coefficients β_t in equation 2 capture yearly differences in outcomes between treated and control firms relative to the baseline year.[16] For firms belonging to a corporate group that meets the conditions to form a fiscal unit, the introduction of a kink at higher income levels reduces the incentive to file jointly. Consequently, existing fiscal units may choose to separate and entities within a group that are not yet part of a fiscal unit may become less inclined to opt for joint CIT filing. These responses could occur even if the kink is perceived as temporary. However, because the reform was announced at the end of 2008, and the dissolution of fiscal units takes effect only from the date the Tax Authorities receive the request, I expect joint CIT filing to decrease starting at the earliest in 2009.

Among owner-managers operating a single firm before 2009, the introduction of the kink increased the relative benefit of creating an additional entity. However, high minimum capital requirements and the initially temporary nature of the reform likely limited immediate responses. The approval of the Flex-BV reform at the end of 2009 and the 2010 announcement that the kink would be made permanent likely shifted expectations, raising the perceived returns to establishing new firms. For liquidity-constrained entrepreneurs, firm creation may have remained infeasible until the actual abolition of capital requirements in 2012. I therefore expect an increase in the number of firms per owner as the kink became permanent and (expected) incorporation costs declined.

4 Data

I use administrative records and corporate tax return data from Statistics Netherlands, available over 2007-2018. The so-called SZODGA dataset covers the population of owner-managed companies established and registered in the Netherlands. As discussed in section 2, owner-managers are individuals holding at least 5 percent of a company's shares *and* working for the company. The dataset includes all firms for which such individuals exist in a given year, and provides information on corporate taxable income, deductions and balance sheet information such as total assets and equity. As discussed by Massenz (2024), the dataset covers approximately 70 percent of Dutch limited liability companies.

Each firm is identified by a unique firm identifier. The unit of observation is the corporate tax declaration, which may correspond to either a single legal entity or a corporate group filing jointly for tax purposes. In the latter case, the dataset records the group under the identifier of the entity submitting the return.[17] The dataset includes an indicator

[16] These coefficients capture intention to treat – that is, their estimates provide the causal effect of being in the group of firms exposed to stronger tax incentives to split, regardless of whether a firm actually adjusted its organizational structure.

[17] Firm identifiers for individual entities within a fiscal unit are not observed. For groups filing jointly,

for group filing status each year, which implies that I can express the outcome variable as a dummy that equals one for firms filing corporate taxes as a fiscal unit. For each corporation in each year the dataset reports its owner-managers, identified by a unique individual identifier. Crucially, this allows to compute, for each firm and each year, the number of additional firms owned by its owners. The outcome variable is then the natural logarithm of the number of firms per owner, or the maximum number of firms owned by any of those owners when a firm has multiple owners in a given year. I can additionally link data from the business registry dataset (ABR), which contains information on the number of employees in each firm, the 2-digit industry in which the firm operates and the year in which it was established.

Table 1: Summary statistics

	Mean	SD	p1	p50	p99	N
			Control group			
Corporate taxable income	91036	98346	-241917	112127	172856	29739
Total number of firms per owner	1.04	0.21	1.00	1.00	2.00	30369
Joint CIT filing	0.45	0.50	0.00	0.00	1.00	29772
Total assets (ln)	13.75	0.99	11.61	13.69	16.20	30024
Equity (ln)	12.92	1.20	9.90	12.84	15.90	30026
Employees	6.02	142.60	0.00	2.00	41.00	29642
Firm age	10.28	10.52	0.00	8.00	56.00	26747
Number of owner-managers	1.30	0.53	1.00	1.00	3.00	30369
Number of years firm is observed	9.49	3.41	1.00	12.00	12.00	30369
			Treatment group			
Corporate taxable income	153930	461582	-401674	202746	297102	14839
Total number of firms per owner	1.05	0.25	1.00	1.00	2.00	15287
Joint CIT filing	0.56	0.50	0.00	1.00	1.00	14858
Total assets (ln)	14.19	0.97	11.96	14.13	16.59	15073
Equity (ln)	13.37	1.18	9.97	13.34	16.23	15072
Employees	7.63	44.84	0.00	3.00	59.00	14858
Firm age	11.30	11.88	0.00	9.00	66.00	13092
Number of owner-managers	1.33	0.57	1.00	1.00	3.00	15287
Number of years firm is observed	9.14	3.61	1.00	11.00	12.00	15287

Notes: This table reports descriptive statistics for firms in the control and treatment groups over 2007–2008. Treated firms are those reporting pre-reform taxable income between €175,000 and €300,000 in any year before 2009; control firms reported between €100,000 and €175,000 but never above €175,000. Corporate taxable income is measured in euros. Total assets and equity are expressed in natural logarithms. Joint CIT filing is an indicator variable equal to one if the firm is filing tax return as a fiscal unit. Total number of firms per owner measures, for each firm-year observation, the maximum number of firms owned by the owner-managers of that firm in that year. Firm age is measured in years since incorporation. Number of years firm is observed indicates the length of the firm's panel in the sample.

For the analysis, I exclude firms that at any point in time have more than 20 owner-managers and firms with negative assets or equity.[18] Table 1 displays summary statistics of the main firm-level variables for treated and control group of firms, defined as discussed in section 3. It is worth noting that as taxable income increases fewer and fewer firms

owner-managers may be employed by either the parent or a subsidiary.

[18]This restriction may omit cases where multiple family members each own less than 5 percent while also working at the firm. In practice, this adjustment removes only a few hundred observations over 2009–2018.

are observed, resulting in more control firms relatively to treated firms despite selecting a wider range of taxable income to define treated firms. In addition, due to the definition of treatment and control groups, the analysis sample requires that firms and their corporate taxable income is observed and falls within the range specified in section 2 at least once in 2007 or in 2008. This means that firms may be observed only one year pre-reform and that in one of the two years they may record losses. Figure A.3 in the appendix shows the evolution of average outcomes – joint CIT filing and number of firms per owner – for the treatment and control group. The figure also displays average outcomes over time for two subgroups, namely firms for which their owner-managers are involved in at most one company in 2008, and those where owner-managers are involved in more than one company in 2008.

5 Results

Table 2 shows results obtained when estimating equation 1. In column 1, I find that the reform significantly reduced joint CIT filing by about 1.8 percentage points on average, which correspond to a 3.2 percent decrease relative to the pre-reform period. This suggests that, after the reform, corporate groups with multiple legal entities that had previously filed joint tax returns began filing separately, whereas groups that had filed separately faced weaker incentives to opt into the regime. In column 2, I find that the reform significantly increased the number of firms per owner by 0.4 percent. I expect these estimate to represent a lower bound of the reform's impact, as the SZO database only includes firms and owners who are both substantial shareholders and who work within the firm.[19] Despite modest in size, these results suggest the reforms incentivize entrepreneurs to split their business into two separate legal entities.

I investigate dynamics over time by estimating equation 2. Figure 2 summarizes the results, which are also reported in table A.1 in the appendix. Figure 2a shows that the reform reduced the share of firms filing jointly for CIT purposes. The effect is statistically different from zero starting from 2010, and the gap between treated and control firms widens over time. By contrast, there seem to be no significant differences between treated and control firms in the pre-reform year and in the first year after the reform. Micro data is available only from 2007, so earlier pre-reform periods cannot be included. However, the lack of pre-reform differences suggests that treated and control firms followed similar trends before the policy change.

Figure 2b depicts the effect of the reform on the total number of companies per owner. It shows that there are no significant differences between treated and control firms pre-

[19]That is, I expect the measurement error to result in a downward bias of the estimates. In future research, it may be possible to expand the analysis by using data from SZOAB, a dataset including all Dutch corporations and their owners.

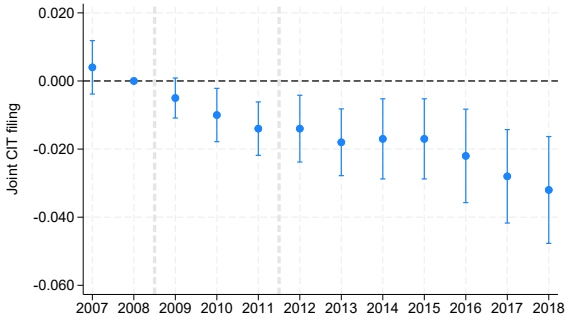
Table 2: Overall effect of the reform on firm splits

	(1) Joint CIT filing	(2) Firms per owner
$T_i \times \text{Post}_t$	-0.018***	0.004**
	(0.004)	(0.001)
Observations	198,595	202,569
R-squared	0.862	0.640
Treatment group pre-reform mean	0.561	0.036
Firm FEs	Yes	Yes
Industry-by-year FEs	Yes	Yes
Differential trends by number of firms	Yes	Yes
Controls	Yes	Yes

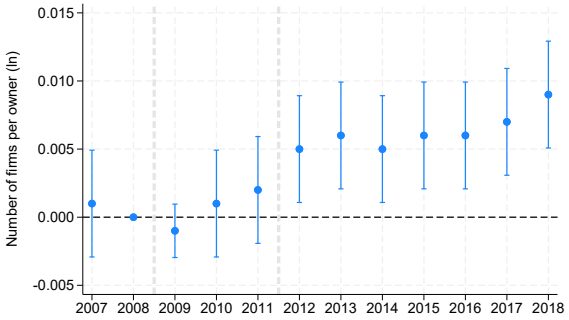
Notes: The table displays results obtained estimating equation 1. Treated firms are those reporting pre-reform taxable income between €175,000 and €300,000 in any year before 2009; control firms reported between €100,000 and €175,000 but never above €175,000. Joint CIT filing is an indicator variable equal to one if the firm is filing tax return as a fiscal unit. Total number of firms per owner is the natural logarithm of the maximum number of firms owned by the owner-managers of each firm in a given year. Standard errors are clustered at the firm level. I indicate in the table whether the regression equation includes controls, namely deciles of 2008 assets growth and of the natural logarithm of firm equity interacted with year dummies. I also indicate whether the regression equation allows for differential trends between firms whose owners in 2008 own one or more firms. This is achieved by interacting a dummy indicating whether there is one or more than one firm per owner in 2008 with year dummies.

Figure 2: Effect of the reform on firm splitting

(a) Joint CIT filing



(b) Number of firms per owner



Notes: The figures display results obtained from estimating equation 2. Treated firms are those reporting pre-reform taxable income between €175,000 and €300,000 in any year before 2009; control firms reported between €100,000 and €175,000 but never above €175,000. Joint CIT filing is an indicator variable equal to one if the firm is filing tax return as a fiscal unit. Total number of firms per owner is the natural logarithm of the maximum number of firms owned by the owner-managers of each firm in a given year. Standard errors are clustered at the firm level. The regression equation includes deciles of firm growth and of the natural logarithm of firm equity interacted with year dummies, measured in 2008. I also include industry-by-year fixed effects and allow for differential trends between firms whose owners in 2008 own one or more firms. Table A.1 reports the underlying coefficients.

reform, nor in the years immediately after the introduction of the tax kink at €200,000. Significant differences arise however starting from 2012, the year in which the Flex-

BV reform enters into effect and minimum capital requirements are abolished. This suggests that once the costs of opening a new company drop and the kink is perceived as permanent, entrepreneurs that are more exposed to the kink are more likely to open a new firm. As there are no differences between treated and control firms up to and including 2011, I re-estimate equation 1 by setting Post_t to equal one over 2012-2018 and zero otherwise. I find that number of firms per owner increase by 0.6 percent as reported in column 3 of table A.2.

Figure 3 shows the sensitivity of results to alternative definitions of treated and control firms. In the baseline specification, treated firms report taxable income above €175,000 and never above €300,000 at least once, while control firms report taxable income between €100,000 and €175,000 at least once but never above €175,000. In figure 3a I show that results are robust to parting groups between treated and control firms using €150,000 or €195,000 rather than €175,000 as the thresholds. In figure 3b, I show that results are robust to varying the maximal pre-reform taxable income of treated firms between €250,000 and €400,000. Finally, in figure 3c, I define treated firms by requiring that as long as they are observed in the data, their taxable income is comprised between €175,000 and €300,000 in both 2007 and 2008. Similarly, firms are assigned to the control group if they report taxable income between €100,000 and €175,000 both in 2007 and 2008, as long as they are observed. All in all, figure 3c suggests that results are robust to alternative definitions of the treatment and control group.

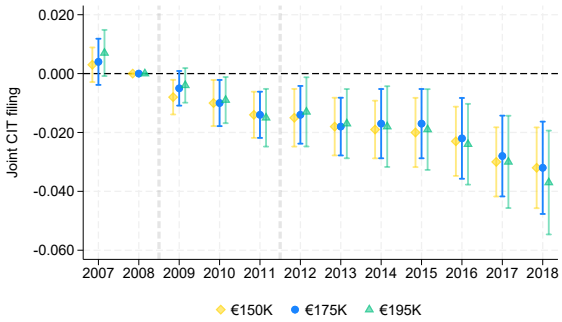
Overall, the results obtained so far suggest that a company's organizational structure is sensitive to corporate taxation. The introduction of a kink in the tax schedule, combined with lower costs of establishing new firms, appear to have increased firm splits. Next, I examine whether these organizational responses had any discernible effects on firm outcomes. Theoretically, a positive effect on firm outcomes could indicate that tax savings from firm splits were productively reinvested or that expansion was driven by factors other than taxation. Conversely, tax-motivated reorganizations might entail efficiency losses or simply enable income shifting without affecting underlying economic activity. To investigate this, I focus on total assets and employment, aggregating these annually at the owner-manager level and, for multi-owner firms, taking the maximum value of each variable. Results reported in columns 1 and 2 of table 3 show no effect of the reform on total assets or employment.

Beyond firm size, I also examine whether the reform affected industry diversification. If new firms are opened in entirely different industries, this may reflect new business opportunities rather than tax-motivated splits. Column 3 in table 3 shows estimates obtained estimating equation 1 and using as outcome variable an indicator equal to one if the owner-manager is active in only one industry, and zero if her firms operate across different industries – measured at the 2-digit level. For firms with multiple owners, I take

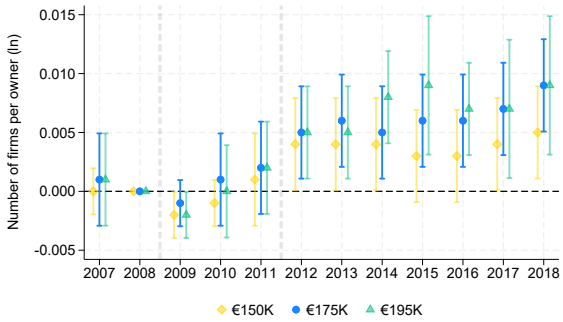
Figure 3: Robustness to the definition of treatment and control firms

(a) Robustness to the threshold choice

(i) Joint CIT filing

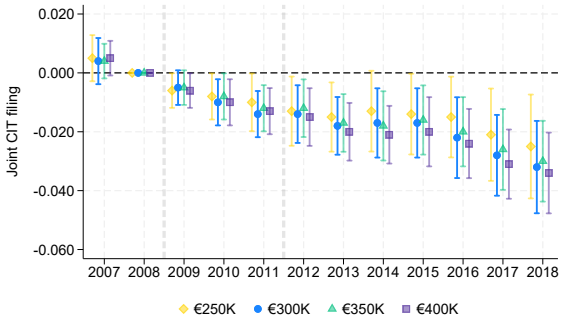


(ii) Number of firms per owner

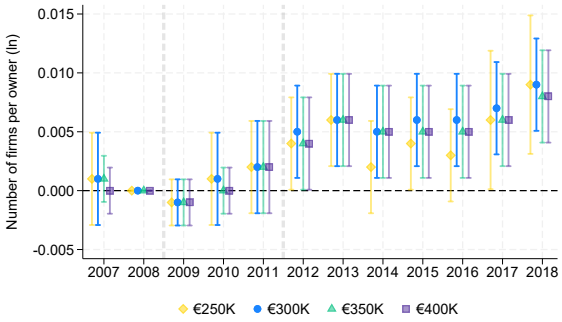


(b) Robustness to the maximal pre-reform taxable income

(i) Joint CIT filing

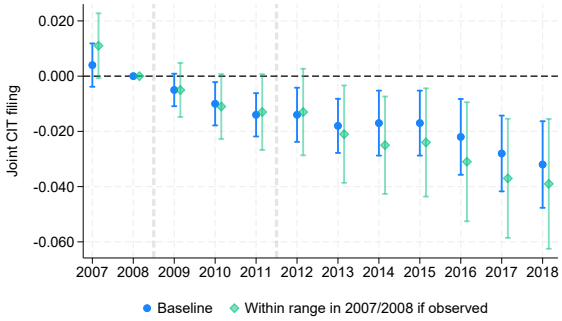


(ii) Number of firms per owner

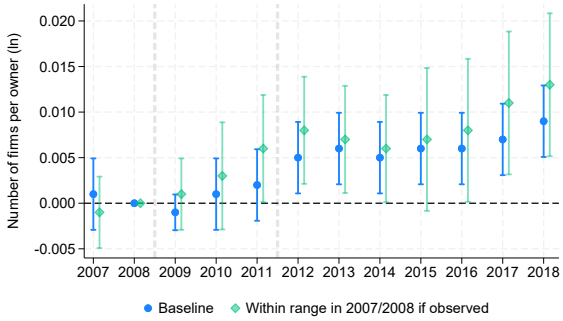


(c) Taxable income in range if observed in 2007/2008

(i) Joint CIT filing



(ii) Number of firms per owner



Notes: The figure depicts results obtained by estimating equation 2, but varying the the definition of treatment. In the baseline estimate, treated firms are those reporting taxable income between $k^- =$ €175,000 and $k^+ =$€300,000 in any year before 2009 and control firms those reporting income between €100,000 and €175,000 but never above k^-. In panel (a) I vary k^+ and in panel (b) I vary k^-. In panel (c) I require that the baseline definition of treatment and control firms applies to taxable income in both 2007 and 2008 as long as the firm is observed. Joint CIT filing is an indicator variable equal to one if the firm is filing tax return as a fiscal unit. Total number of firms per owner is the natural logarithm of the maximum number of firms owned by the owner-managers of each firm in a given year.

the minimum of this indicator in each year. A significant decline in this outcome may suggest that entrepreneurs diversify into new business areas. However, the results show

Table 3: Firm-level response

	(1) Total assets	(2) Employees	(3) Same industry
$T_i \times \text{Post}_t$	-0.006	0.233	-0.001
	(0.008)	(0.365)	(0.001)
Observations	200,944	202,569	202,569
R-squared	0.876	0.679	0.327
Treatment group pre-reform mean	14.225	8.220	0.988
Firm FEs	Yes	Yes	Yes
Industry-by-year FEs	Yes	Yes	Yes
Differential trends by number of firms	Yes	Yes	Yes
Controls	Yes	Yes	Yes

Notes: The table displays results obtained estimating equation 1. In columns 1 and 2, the outcome variables are total assets and total number of employees, which are first aggregated at the owner-manager level each year. Next, I take the maximum of these variables at the firm-year level in presence of multiple owners. In column 3 the outcome variables is an indicator for whether the companies owned by an entrepreneur are in the same 2-digit industry. For firms with multiple owners, I take the minimum of this indicator in each year. Treated firms are those reporting pre-reform taxable income between €175,000 and €300,000 in any year before 2009; control firms reported between €100,000 and €175,000 but never above €175,000. Standard errors are clustered at the firm level. I indicate in the table whether the regression equation includes controls, namely deciles of 2008 assets growth and of the natural logarithm of firm equity interacted with year dummies. I also indicate whether the regression equation allows for differential trends between firms whose owners in 2008 own one or more firms. This is achieved by interacting a dummy indicating whether there is one or more than one firm per owner in 2008 with year dummies.

no such effect. Taken together, these findings indicate that while the reform altered firm organization, it did not translate into measurable changes in firm size or scope – at least in the short run.

6 Conclusions

This paper provides novel evidence on how corporate taxation influences the organization of business activity. Using twelve years of Dutch administrative data and a two tax reforms that altered both the benefits and costs of splitting firms into multiple legal entities, I show that firms' organizational choices are responsive to fiscal incentives.

Three main findings emerge. First, a temporary increase in the tax advantage of splitting reduces the share of firms filing jointly for CIT purposes. Second, when this advantage becomes permanent and minimum capital requirements are abolished, the number of firms per entrepreneur rises persistently. Third, despite documented changes in organizational structures, there are no effects on total assets, employment, or industry diversification. These results indicate that reorganizations are primarily tax-motivated and, at least in the short run, do not affect firm outcomes.

Taken together, these findings demonstrate that the extensive margin of business formation – whether entrepreneurs operate through one or several firms – is responsive to tax incentives. This mechanism complements existing evidence on intensive-margin responses and highlights firm splits as a previously underexplored channel of tax adjustment to organizational structure.

These results have relevant implications for tax policy and the measurement of firm entry and entrepreneurship. In settings where progressivity at the top of the income distribution relies on nonlinear corporate income tax schedules, my findings highlight an organizational margin that can attenuate the intended redistributive effects of such policies. Progressive CIT schedules and reduced rates for small firms are often intended to support entrepreneurship and ease financing constraints for SMEs. Yet these results suggests that they may also encourage strategic firm splitting, weakening the intended effects of the policy. Moreover, because these tax-induced reorganizations inflate the number of legal entities without corresponding increases in productive capacity, standard indicators of firm entry and entrepreneurship may overstate true economic dynamism. Recognizing these behavioral margins is essential for designing effective corporate tax systems and accurately interpreting patterns of firm formation, productivity, and competition.

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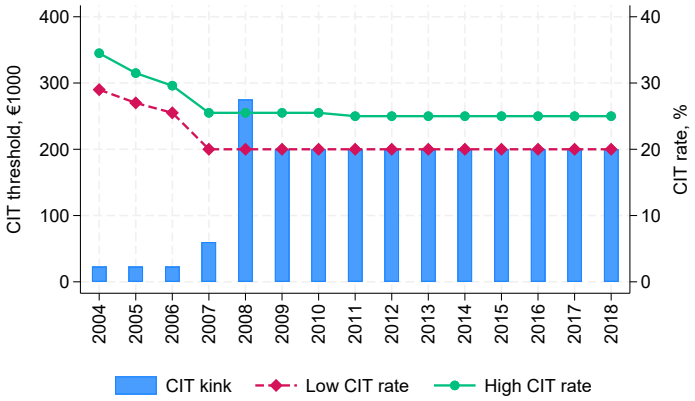
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Appendix

Figure A.1: Evolution of the Dutch CIT system



Source: van Essen et al. (2024). *Notes:* The figure shows the evolution of the Dutch CIT system over 2004-2018. The middle bracket at €25,000 and the intermediate rate of 23.5% in 2007 are not displayed.

Figure A.2: Timeline of reforms

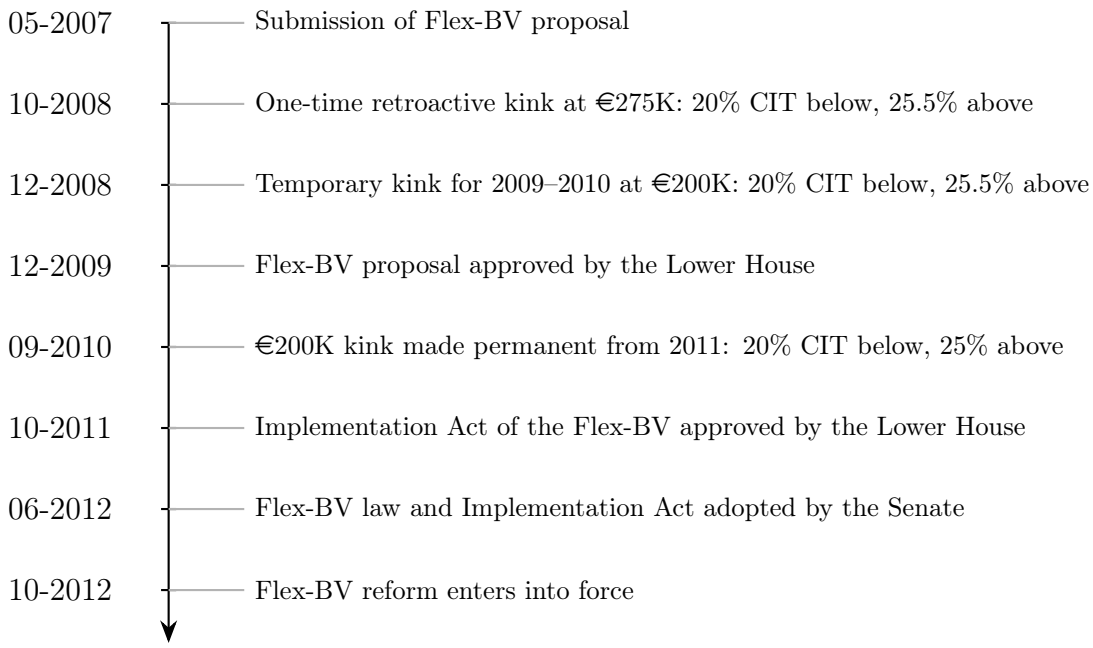
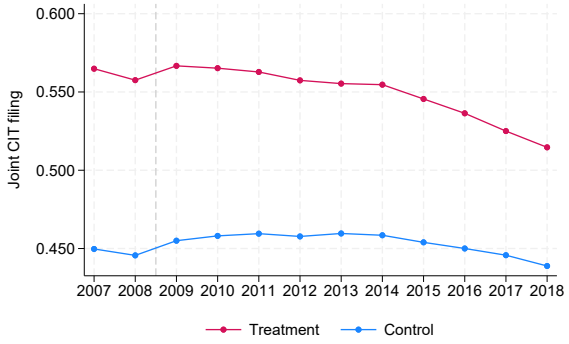


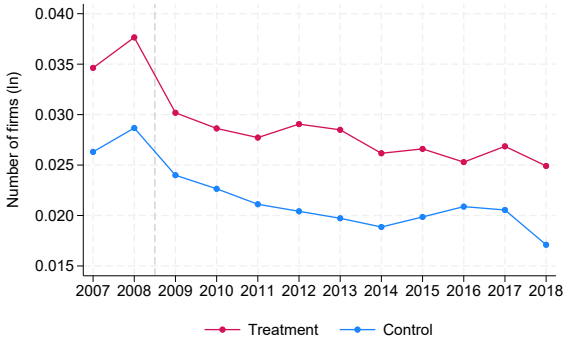
Figure A.3: Average outcomes over time by ownership structure

(a) All firms

(i) Joint CIT filing

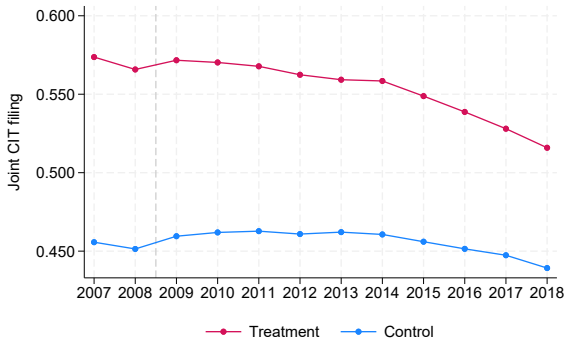


(ii) Number of firms per owner

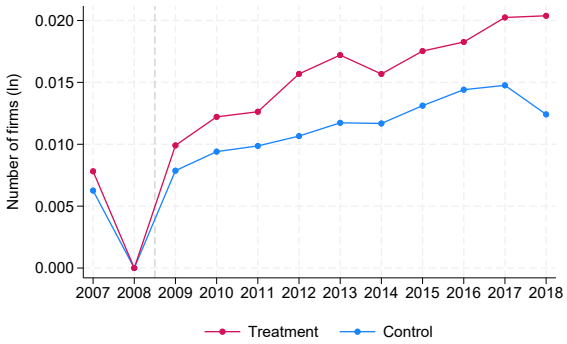


(b) Maximum one firm per owner in 2008

(i) Joint CIT filing

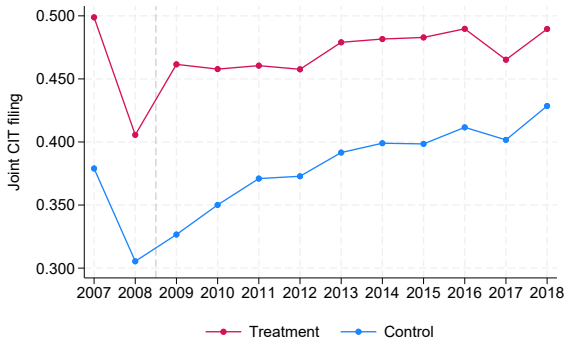


(ii) Number of firms per owner

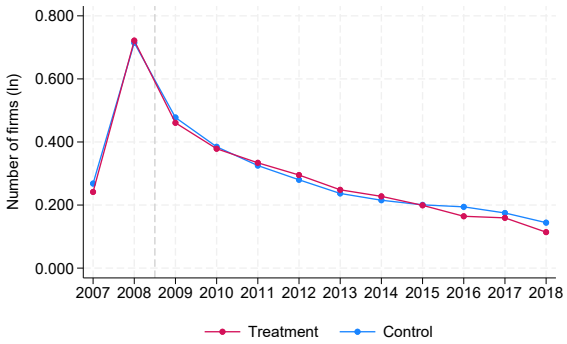


(c) More than one firm per owner in 2008

(i) Joint CIT filing



(ii) Number of firms per owner



Notes: This figure reports the evolution of average outcome variables over time for the treatment and the control group. Treated firms are those reporting pre-reform taxable income between €175,000 and €300,000 in any year before 2009; control firms reported between €100,000 and €175,000 but never above €175,000. Joint CIT filing is an indicator variable equal to one if the firm is filing tax return as a fiscal unit. Total number of firms per owner is the natural logarithm of the maximum number of firms owned by the owner-managers of each firm in a given year. Panel (a) shows the figure for all firms, panel (b) for those firms whose owners have at most one firm in 2008, panel (c) those firms whose entrepreneurs own more than one firm in 2008.

Table A.1: Dynamic difference-in-difference results

	(1) Joint CIT filing	(2) Number of firms per owner
T_i*2007	0.004	0.001
	(0.004)	(0.002)
T_i*2008	0	0
	0	0
T_i*2009	-0.005	-0.001
	(0.003)	(0.001)
T_i*2010	-0.010**	0.001
	(0.004)	(0.002)
T_i*2011	-0.014***	0.002
	(0.004)	(0.002)
T_i*2012	-0.014***	0.005***
	(0.005)	(0.002)
T_i*2013	-0.018***	0.006***
	(0.005)	(0.002)
T_i*2014	-0.017***	0.005***
	(0.006)	(0.002)
T_i*2015	-0.017***	0.006**
	(0.006)	(0.002)
T_i*2016	-0.022***	0.006***
	(0.007)	(0.002)
T_i*2017	-0.028***	0.007***
	(0.007)	(0.002)
T_i*2018	-0.032***	0.009***
	(0.008)	(0.002)
Observations	198,595	202,569
R-squared	0.862	0.640
Treatment group pre-reform mean	0.558	0.038
Firm FEs	Yes	Yes
Industry-by-year FEs	Yes	Yes
Differential trends by number of firms	Yes	Yes
Controls	Yes	Yes

Notes: The table displays results obtained from estimating equation 2. Treated firms are those reporting pre-reform taxable income between €175,000 and €300,000 in any year before 2009; control firms reported between €100,000 and €175,000 but never above €175,000. Joint CIT filing is an indicator variable equal to one if the firm is filing tax return as a fiscal unit. Total number of firms per owner is the natural logarithm of the maximum number of firms owned by the owner-managers of each firm in a given year. Standard errors are clustered at the firm level. I indicate in the table whether the regression equation includes controls, namely deciles of 2008 assets growth and of the natural logarithm of firm equity interacted with year dummies. I also indicate whether the regression equation allows for differential trends between firms whose owners in 2008 own one or more firms. This is achieved by interacting a dummy indicating whether there is one or more than one firm per owner in 2008 with year dummies.

Table A.2: Effect on the number of firms per owner, alternative baseline years

	(1) 2010-2018	(2) 2011-2018	(3) 2012-2018
$T_i \times \text{Post}_t$	0.005***	0.005***	0.006***
	(0.001)	(0.001)	(0.001)
Observations	202,569	202,569	202,569
R-squared	0.640	0.640	0.640
Treatment group pre-reform mean	0.034	0.033	0.032
Firm FEs	Yes	Yes	Yes
Industry-by-year FEs	Yes	Yes	Yes
Differential trends by number of firms	Yes	Yes	Yes
Controls	Yes	Yes	Yes

Notes: The table displays results obtained estimating equation 1, but altering the definition of Post_t. In column 1, Post_t equals one over 2010-2018 and zero otherwise; in column 2 over 2011-2018 and in column 3 over 2012-2018. Treated firms are those reporting pre-reform taxable income between €175,000 and €300,000 in any year before 2009; control firms reported between €100,000 and €175,000 but never above €175,000. Joint CIT filing is an indicator variable equal to one if the firm is filing tax return as a fiscal unit. Total number of firms per owner is the natural logarithm of the maximum number of firms owned by the owner-managers of each firm in a given year. Standard errors are clustered at the firm level. I indicate in the table whether the regression equation includes controls, namely deciles of 2008 assets growth and of the natural logarithm of firm equity interacted with year dummies. I also indicate whether the regression equation allows for differential trends between firms whose owners in 2008 own one or more firms. This is achieved by interacting a dummy indicating whether there is one or more than one firm per owner in 2008 with year dummies.