Large and Influential: Firm Size and Governments' Corporate Tax Rate Choice*

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Abstract

Theory suggests that large firms are more likely to engage in lobbying behaviour and have better bargaining positions against their host governments than smaller entities. Conditional on jurisdiction size, public policy choices are thus predicted to depend on the shape of a jurisdiction's firm size distribution, with more business-friendly policies being implemented if economic activity is concentrated in a small number of entities. We assess this prediction in the context of the German local business tax. The results indeed point to an inverse relationship between the concentration of economic activity and communities' local business tax choices. The effect is statistically significant and quantitatively relevant, suggesting that the rising importance of large businesses may trigger shifts towards a more business-friendly design of statutory tax policies.

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1 Introduction

The importance of large corporations has steadily grown over recent decades (e.g. Pyror (2001), UNCTAD (2002), Cefis et al. (2009), Poschke (2014)). Many observers eye this development with scepticism and have raised concerns that the increasing fraction of economic activity concentrated in big businesses may foster the corporate sector's influence over government policies (e.g. Business Week (2000), Roach (2007), Crouch (2009), Forbes (2011), The Guardian (2014)). The purpose of our paper is to empirically assess the importance of these concerns. Using corporate tax policy as a testing ground, we will investigate whether a jurisdiction's firm size structure determines its government's business tax rate choice.

The paper starts out with a discussion of theoretical mechanisms why governments' (tax) policy choices may change if a jurisdiction's economic activity becomes concentrated in less and larger firms, conditional on aggregate jurisdiction size (in the following referred to as 'firm concentration').[1] Firstly, aggregate lobby spending for business-friendly policies is predicted to increase as incentives to free-ride on the lobbying of other corporates are reduced[2] and more firms take the size threshold to participate in lobbying activity in the presence of fixed costs. Secondly, jurisdictions may become more dependent on large employers within their borders, whose relocation would impose a shock to local labor markets and jurisdictional welfare. For both reasons, policy design is predicted to become more sensitive to corporate interests.

In the following, we will empirically test this hypothesis. Our analysis is based on data for the German local business tax, which is set autonomously by German municipalities. The setting is unique and ideal to assess the question of interest. Firstly, tax issues belong to the most pressing policy concerns of the corporate sector (see e.g. the lobbying statistics of the US NGO *Open Secrets*). Secondly, using subnational data offers the advantage that our sample localities, while autonomously choosing the local business tax rate, operate in an otherwise homogenous institutional setting. The business tax furthermore significantly contributes to the tax burden on corporations in Germany, making up around 40% of their corporate tax payments on average. The focus on policy choices of subnational government tiers finally also allows us to construct consistent measures for the firm size structure of our sample localities, exploiting

[1]We focus on *jurisdictions'* firm size structures, as opposed to *industry* or *spatial* concentration.

[2]Decentralized corporate lobbying for business-friendly common government policies exerts a positive externality on other firms in the jurisdiction which is not internalized by the individual firm.

unique data on the population of German plants.[3]

The theoretically predicted link between firm concentration of economic activity and local business tax choices is assessed in static and dynamic empirical models that control for observed and unobserved differences between municipalities and host regions. In line with the theoretical considerations, increased firm concentration is found to be associated with significantly smaller local business tax choices. The quantitative effect varies with locality size and turns out economically relevant for large jurisdictions, especially if the community's local council is dominated by conservative parties. For the latter localities, an increase in the herfindahl index by one standard deviation reduces level and growth of the business tax rate by around 20% of a standard deviation. Quantile regressions moreover suggest that quantiles at the lower end of the local business tax distribution are more responsive to changes in firm concentration.

This result prevails in a number of robustness checks. Firstly, we account for potential reverse causality bias and run specifications which instrument for firm concentration of the jurisdiction's economic activity with information on lagged size and age of the firms hosted by the locality. Secondly, we assess whether endogenous controls that correlate with firm concentration may bias our results. Most importantly, we instrument for community size with long-lagged information on the localities' population size and infrastructure provisions. The qualitative and quantitative results turn out to be insensitive to these modifications. We also show that our findings are not driven by concentration of economic activity at the industry or spacial level and that the findings are not sensitive to controlling for the overall size of the communities' tax base.

To the best of our knowledge, our paper is the first to establish a link between the jurisdictions' firm size distribution and corporate tax policy choices. The paper contributes to a flourishing literature that aims to identify the determinants of corporate tax rate choices. Recent papers have mainly addressed strategic interaction in the corporate tax setting behaviour of jurisdictions. Several studies have presented empirical evidence in favour of tax competition behavior, supporting the notion of a race-to-the-bottom in corporate tax rates (see e.g. Devereux et al. (2008), Overesch and Rinke (2011)). A recent strand of the literature qualifies this race-to-the-bottom prediction though by showing that corporate tax competition is mitigated by agglomeration rents and that larger jurisdictions choose higher corporate tax rates (see e.g. Ludema and Wooton (2000), Baldwin and Krugman (2004), Jofre-Monseny and Sole-Olle (2012), Koh et al. (2013), Brülhardt et al. (2013), Luthi and Schmidheiny (2014)). Our pa-

[3]We are not aware of consistent data on countries' firm size structures.

per adds to this literature by showing that, beyond effects related to the aggregated size of corporate activity, intra-jurisdictional firm size heterogeneity also impacts on governments' corporate tax rate choices.

This may help to explain differences in observed governments' tax policy design, given that firm concentration varies significantly across countries and sub-national government tiers with taxing power (see e.g. Garcia-Santana and Ramos (2012)). Our findings moreover suggest that recent decades' merger and acquisition waves and the general trend towards more concentration of economic activity (particularly in emerging markets and the developing world, see e.g. Poschke (2014)) are not neutral in terms of governments' tax policy choices and may lead to a shift towards more favourable tax conditions for the corporate sector.

The remainder of the paper is structured as follows: Section 2 provides a theoretical motivation for our empirical analysis. Sections 3 and 4 describe our data set and the estimation strategy. The results are presented in Section 5. Section 6 concludes.

2 Theoretical Considerations

As sketched in the Introduction, the economic literature has provided evidence that the *aggregated* size of economic activity affects jurisdictions' corporate tax rate choices, while it, in tun, has largely ignored the potential role of firm size *heterogeneity* in driving governmental tax setting behaviour. A theoretical link between jurisdictions' firm size structures and corporate (tax) policy may be established through at least two channels.

The first channel is related to corporate lobbying activities and thus to the direct attempt of the corporate sector to influence government policy. The effect of lobbying on government behaviour has been analysed extensively in the economic literature (see e.g. Olsen (1965) and Grossman and Helpman (2001)) and growing empirical evidence confirms the effectiveness of lobbying activities in influencing policy choices (see, among others, Goldberg and Maggi (1999) for trade protection, Facchini et al. (2011) for immigration policy, Blau et al. (2013) for bank bailouts and Salamon and Siegfried (1977) and Richter et al. (2009) for tax policy choices).

While most papers link aggregate lobby spending to the size of interest groups, Bombardini (2009) emphasizes the role of firm heterogeneity in driving lobby formation and aggregate lobby spending. In particular, she argues that in the presence of a fixed cost of making political contributions, i.e. initial expenses necessary to play an active role in lobbying activities, only the largest firms participate in lobby formation since the initial fixed costs of organizing for political activity may be spread over a larger asset base. It follows that, conditional on the aggregate size of the jurisdiction[4], lobby spending gets larger if the firm size distribution is skewed and economic activity is concentrated in relatively large entities.

An analogous prediction derives from the observation that firms benefit from favorable common business policies enforced by the lobbying of other corporates. Lobby involvement is thus affected by free-riding incentives (see e.g. Olsen (1965)), making aggregate lobby spending inefficiently small from the perspective of the corporate sector. If a jurisdiction's economic activity becomes more concentrated, the positive lobbying externality on other firms is partly internalized, lowering the free-rider problem and enhancing overall corporate lobbying activity and thus the influence of the corporate sector over government policy.

In a world in which firms are mobile across borders, a jurisdiction's firm size structure may moreover also *indirectly* impact on governments' tax policy choices.[5] Imagine for example that firms obtain shocks to their location preferences each period and communities lose and win firms that relocate across borders. In such a setting, welfare costs of firm turnover are plausibly higher if communities lose relatively large entities as the lost economic activity and jobs may not be compensated in the short run by the attraction or foundation of new firms, causing unemployment and related welfare losses. Even if communities can make up for the lost economic activity, search frictions in the labor market may induce high welfare losses (in the short-run) when large employers relocate. If communities (e.g. for historic reasons) depend on large firms, they may thus be more inclined to implement business-friendly policies to avoid relocations, which again predicts a positive relationship between firm concentration and policies favourable to the corporate sector.

In the following, we will confront this hypothesis with the data and will empirically assess this link between the firm size distribution and corporate tax rate choice in the

[4]Contrary to lobbying for *industry-specific* public policies, we are interested in lobbying for policies that affect all corporates located in the same jurisdiction. Note that, if given the choice, firms wanted to lobby for private firm-specific benefits (instead of common policies), as this avoids free rider problems (see next paragraph of the main text) and may provide advantages over competitors. Policy design at the firm or industry level is, however, often infeasible to implement for governments due to administrative and legal constraints (the European non-discrimination law e.g. prohibits state aid for specific firms (Articles 101 and 107, Treaty on the Functioning of the EU)).

[5]See Han and Leach (2008) for a theoretical model on corporate tax rate choices if firms and communities bargain over corporate tax rates.

context of the German local business tax.[6]

3 Data

Our testing ground is the local business tax in Germany ('Gewerbesteuer') which is set autonomously by around 12,000 German localities. The definition of the tax base is determined by federal law and is thus homogenous across municipalities. The business tax rate is levied on business earnings of all incorporated and non-incorporated firms located within the communities' borders and follows the corporate and income tax law. It represents the most important revenue instrument at the communities' own discretion (see e.g. Büttner (2003) for further legal background).[7] There is no upper bound for the tax rate, but a lower bound was introduced in 2004. The majority of the local business tax revenues remains directly with the municipalities. A small share has to be transferred to the central and regional level though, as an element of the German federal equalization scheme (see also Foremny and Riedel (2014)).

Our sample period comprises the years 2000 to 2007. The data accounts for all municipalities in West German states. We disregard communities in Eastern Germany which joined the Federal Republic of Germany in the reunification of 1990 as a major fraction of those communities was subject to mergers and local government reforms after the German reunification. Furthermore, we exclude West German municipalities which were subject to a merger and those belonging to a municipal union in Lower Saxony. As explained below, our main analysis will furthermore exclude small communities that host less than 20 plants. Our final sample comprises 5,348 municipalities and 39,676 municipality-year-observations.

The average tax rate set by our sample communities is 16.9%, varying between 10% and 25% (cf. Table 1). Note that the tax rate legislation defines the local business tax in business tax points, not percentage points (average in our data: 338 tax points). To arrive at the local business tax rate in percentage points, the tax points have to be multiplied by a base rate of 5%.[8]

[6]Moreover, if profitability rates increase with firm size, so does the tax-sensitivity of corporate investments (Baldwin and Okube (2009)). Complementary to the arguments sketched in the main text, this also establishes an inverse relationship between firm concentration and corporate tax choices.

[7]A major fraction of communities' revenues comes from state grants and redistributed tax revenues. German communities moreover also autonomously set the local property tax rate ('Grundsteuer'). The local business tax rate is the far more important revenue source though, collecting around 70% of municipalities' own tax revenues.

[8]For corporations, a proportional base rate of 5% applies. Within our sample period (until 2007),

Our sample period is furthermore characterized by an upward trend in local business tax rates. While 57.1% of our sample communities raised their local business tax rate at least once within our time frame, only 5.5% of the communities enacted a tax decline at least once. On average, local business taxes grew by 0.33% per year. This pattern may on the one hand reflect increased funding needs of local municipalities as rising social costs and reforms which shifted additional obligations to the local level put pressure on community finances. Examples are the law for the provision of additional kindergarten capacities by the local level ('Gesetz zum Ausbau der Kindergartenbetreuung') and additional social security payments for the elderly and the unemployed (see e.g. Deutsche Bundesbank (2002, 2007)). On the other hand, in 2001 and 2008 the German federal government enacted a decline in the headline federal corporate tax rate ("Körperschaftssteuer"), which might - in a vertical tax competition framework - increase the communities' incentive to raise their local business tax rate.

One major advantage of using the German business tax as a testing ground is that municipalities in Germany operate in a homogenous institutional environment. First and foremost, they have exactly the same fiscal policy tools at hand. In all communities, a change in the local business tax rate is furthermore enacted by a simple majority of votes in the local council. Localities also face the same main responsibilities, including the construction and maintenance of roads, sewerage, kindergartens and primary schools as well as the provision of certain social benefits to the unemployed and the poor. Other responsibilities, such as the maintenance of cultural or sport facilities, tourism, and public transport are optional.

The subnational context furthermore allows us to yield reliable and consistent measures for the firm size structure of our sample jurisdictions.[9] The baseline analysis draws on information for the universe of German plants provided by the German Employment Agency (GEA) between 2000 and 2007. The data comprises more than 2 million plants per year and includes information on the host community and the number of employees subject to social security contributions (see also Koh and Riedel (2014)).[10] In the following, we will make use of a Herfindahl index H_{it} constructed from this data in previous research, which captures the firm concentration of ju-

sole proprietorships and partnerships owned by natural person were subject to a step tariff on income below EUR 48,000 (base rates of 1% to 4%). For income above EUR 48,000, a base rate of 5% applied (Par. 11 Local Business Tax Act). Moreover, the current corporate tax rate at the national level ('Körperschaftssteuer') is 15%.

[9]This is infeasible at the cross-national level as consistent data for the size distribution of entities is, to the best of our knowledge, not available for nation states.

[10]Plants with a least one employee subject to social security contributions are included in the data.

risdiction i's economic activity in year t: $H_{it} = \sum_k (EMP_{ikt}/\sum_k EMP_{ikt})^2$, with EMP_{ik} denoting the employment of plant k located in community i at time t and $0 \leq H_{it} \leq 1$ (see Koh and Riedel (2014) for further details). In robustness checks, we will assess the sensitivity of our findings to the use of alternative concentration measures, namely the standard deviation of the jurisdiction's firm size distribution $S_{it} = \sqrt{\frac{1}{K}\sum_{k=1}^{K}(EMP_{ikt} - \overline{EMP_{it}})^2}$ (following Bombardini (2009)) and the employment share of the largest firm $M_{it} = \max EMP_{ikt}/\sum_k EMP_{ikt}$, where $\overline{EMP_{it}}$ depicts the average plant employment in community i at time t ($\overline{EMP_{it}} = \frac{\sum_k EMP_{ikt}}{K}$). Intuitively, higher values of H_{it}, S_{it} and M_{it} indicate stronger firm concentration of a jurisdiction's economic activity.

Note that these concentration measures will be large by definition if communities host a small number of entities only. We thus restrict our main sample to communities with at least 20 plants. The sensitivity of our results to this sample restriction and the choice of the particular cut-off value will be analysed in Section 5. Descriptive statistics for the concentration measures are depicted in Table 2. The average community in our sample observes a Herfindahl index of .09, varying strongly across localities.

Additionally, we augment our data by rich information on the socio-economic, budgetary and political characteristics of our sample municipalities. We account for the size of economic activity as measured by the number of employees in the host community and economic conditions as measured by the localities' unemployment rate and the net income per capita. We furthermore add information on the level of public good provision, precisely on the municipality's number of railway stations, airports, seaports and high-way connections. We moreover include information on public good preferences and financing needs as indicated by the fraction of the community's population aged below 15 and above 65 as well as indicators for the municipalities' fiscal performance, namely public borrowing defined as the share of revenues that is generated by new credits, less amortization of debts, total outstanding debt in per capita terms[11] and grants per capita received from higher government tiers. Finally, we include information on the seat shares of the political parties in the municipal council. We directly observe the share of the four main parties, which also run for national or regional elections. These are the center-right conservative party (CDU), the center-left social democrats (SPD), the liberal party (FDP), and the Green party (Gruene). We furthermore create an aggregated value for all remaining political parties which mainly are locally operating civil parties.

[11]This value is obtained at the county level, but it also includes municipality-specific information on debt of hospitals and other city owned companies like transportation or sewage.

The associated descriptive statistics are reported in Table 1. All described variables show a considerable cross-sectional and longitudinal variation as indicated by large standard deviations. The information on inhabitant net income, the communities' budget and demographic variables is retrieved from the German Federal Statistical office and its publication *Statistik Lokal.* Information on the infrastructure variables is obtained from the Bundesamt für Kartographie und Geodäsie. Information on the partisan composition of local councils was retrieved from German State Statistical offices, information on the community's overall number of employees from the GEA.

As the GEA-data lacks detailed firm information, we furthermore augment the analysis by firm-level data in Bureau van Dijk's DAFNE database (wave July 2012), which comprises information on baseline characteristics and financial statements of firms in Germany. Main source for the data is the registrar of companies in Germany. From 2006 onwards, the data covers nearly all companies with limited liability in Germany. Due to poor firm coverage, we discard data prior to 2006. A comparison with the local business tax statistics 2007 shows that the firms covered in the DAFNE database account for almost 85% of the taxable local business tax income. DAFNE's firm-level data is linked to our sample localities via post code information. The data is used to control for the industry affiliation, profitability and legal form of firms located in our sample jurisdictions and will, complementary to the GEA data, be employed to reconstruct the firm concentration measures.

4 Empirical Methodology

To assess the impact of firm concentration $C_{irt} \in \{H_{irt}, S_{irt}, M_{irt}\}$ in municipality i of region r at time t on its local business tax choice b_{irt}, we estimate the following model

$$b_{irt} = \alpha_0 + \alpha_1 C_{irt} + \alpha_2' X_{irt} + \rho_t + \mu_r + u_{irt}. \tag{1}$$

The theoretical considerations suggest that a higher concentration of firm activity is associated with lower local business tax choices and hence $\alpha_1 < 0$.

The estimation approach controls for observed and time-constant unobserved heterogeneity across municipalities and host regions. In particular, we account for the size of the community's aggregate economic activity (as measured by the logarithm of the jurisdiction's overall number of employees), the economic condition (as measured by the unemployment rate), the demographic structure (as measured by the fraction of young and old inhabitants below the age of 15 and above the age of 65), public infrastructure provision (as measured by the number of highway accesses, train stations, sea and airport as well as an indicator variable whether the community is located in a rural or urban area), the communities' budgetary situation (as measured by its overall debt per capita, newly issued debt per capita and grants received from higher government tiers per capita). The approach furthermore accounts for the partisanship of the community's local council (as measured by the seat shares of the major political parties in Germany) and includes a control variable for the spatial lag of the local business tax set by neighbouring jurisdictions (which models strategic interaction in tax choices identified in previous papers, see e.g. Devereux et al. (2008) and Overesch and Rincke (2011)).[12] We also make use of the DAFNE data to control for the competitive environment, profitability and legal form of the firms located in our sample jurisdictions and augment the data by control variables for spatial concentration of firms and the jurisdictions' aggregated tax base (see Section 5 for details).

A full set of year fixed effects furthermore captures common shocks ρ_t to all sample municipalities over time. Unobserved heterogeneity across hosting regions is absorbed by including regional fixed effects μ_r for the German states, counties and commuting areas ("*Raumordnungsregionen*", see Bundesamt für Bauwesen und Raumordung) respectively.[13] We will furthermore experiment with models that control for region-year fixed effects and municipality fixed effects. In the baseline specifications, we account for clustering of errors at the municipality level. In robustness checks, we also assess the sensitivity of our findings to clustering at more aggregated levels.

We estimate Equation (1) using standard ordinary least squares (OLS) procedures as well as quantile regression. While OLS regression approximates the conditional mean of the outcome variable distribution, quantile regression models the qth quantile of the outcome distribution as a (linear) function of explanatory variables. Specifically, the OLS regression coefficients $\hat{\beta}$ are defined as

$$\hat{\alpha} = \arg\min_{\alpha} \sum_{t=1}^{T} \sum_{i=1}^{N} (b_{irt} - \alpha_0 - \alpha_1 C_{irt} - \alpha_2' X_{irt})^2,$$

whereas the qth quantile regression estimator $\hat{\alpha}_q$ can be obtained as

$$\hat{\alpha}_q = \arg\min_{\alpha_q} \sum_{t=1}^{T} \sum_{i=1}^{N} c_q(b_{irt} - \alpha_0 - \alpha_1 C_{irt} - \alpha_2' X_{irt}),$$

[12] The spatial lag of community i's local business tax is calculated based on distance weights: $\bar{b}_{irt} = \sum_j W_{jt} b_{jrt}$ with $W_{ij} = \frac{1/dist_{ij}}{\sum_j 1/dist_{ij}}$ and $i \neq j$.

[13] Note that county fixed effects nest state fixed effects. German counties are furthermore small geographical units, which in our sample comprise 17 municipalities on average.

with

$$c_q(u_{irt}) = \big(q1(u_{irt} \geq 0) + (1-q)1(u_{irt} \leq 0)\big)|u_{irt}|.$$

The main benefit of quantile regressions is that they are robust to outliers and provide a more complete picture of the relationship between firm concentration and local business tax choices.[14] In robustness checks, we also assess the sensitivity of our results to underlying functional form assumptions of the described models by including higher order polynomials of the controls and making use of non-parametric propensity score matching estimators (see our discussion in Section 5).

To address potential concerns related to simultaneity bias, we will furthermore assess the sensitivity of our results to running dynamic estimations which model the determinants of local business tax rate growth g_{irt}. Formally,

$$g_{irt} = \alpha_0 + \alpha_1 C_{irt} + \alpha_2' X_{irt} + \rho_t + \mu_r + \epsilon_{irt} \tag{2}$$

where C_{irt} again denotes the community's firms size structure and the control variables correspond to Equation (1). The dynamic model specification follows the idea that our sample communities are hit by random budgetary shocks that increase the propensity for upward or downward adjustments of the local business tax rate. How the shock transmits into local business tax choices depends on community characteristics, in particular the locality's firm size structure as pointed out by our theoretical considerations in Section 2. To see this, imagine a community that is hit by a positive spending shock. One option to balance the budget is to increase the local business tax rate (under the assumption that the community is on the upward sloping arm of the Laffer-Curve). If the community's employment is concentrated in a small number of firms, our theoretical considerations predict that the locality is more likely to refrain from that option than with a more even firm size distribution, implying $\alpha_1 < 0$.

The coefficient α_1 is consistently estimated if, conditional on all variables that might potentially correlate with the locality's firm size structure and local business tax choice, the firm size distribution in period t is unaffected by the tax rate growth in period $t+1$. For this to be violated, local business tax growth firstly had to trigger heterogenous investment responses across small and large firms; and secondly, it required that communities can credibly commit on a future tax growth path, i.e. that they can attract (large) firms today by promising low local business tax growth tomorrow. The latter

[14] Precisely, it allows to assess potential heterogeneity of the effect of firm concentration on different quantiles of the local business tax distribution. Governments in high-tax communities (with e.g. tight budgetary situations or specific voter preferences) may for example not have any leeway or willingness to reduce the local business tax rate even if they host large employers.

is unlikely as will be discussed in Section 5. We, nevertheless, mitigate the concern by running instrumental variables (IV) regressions where the firm size structure C_{it} is instrumented with deeper lags and with an asset-weighted average age of all firms hosted in a locality (obtained from DAFNE).[15]

On top, we run specifications which account for potential endogeneity of control variables that may correlate with the community's firm size distribution. Most importantly, we treat the jurisdiction's aggregate size as endogenous as it may correlate with the locality's firm size distribution and may be directly determined by local business tax choices as suggested by a flourishing empirical literature (see e.g. DeMooij and Ederveen (2003) and Devereux and Maffini (2007)). Specifically, we follow previous work by Koh et al. (2013) and use long-lagged information from a population census in 1910[16] and long-lagged information on the number of train connections through our sample municipalities between 1835 and 1935[17] to construct instruments for today's firm size: firstly, the natural logarithm of the population density of our sample localities in 1910 and secondly, the natural logarithm of the number of all train connections through the sample localities prior to 1935.

5 Empirical Results

The estimation results are presented in Tables 2 to 9. The observational unit is the German municipality. Heteroscedasticity robust standard errors that account for clustering at the municipality level are depicted in brackets below the coefficient estimates.

Table 2 presents baseline estimates of Equation (1). In Specifications (1) and (2), we regress the local business tax rate on the localities' firm size structure as measured by the herfindahl index H_{it}, controlling for jurisdiction size and a full set of year fixed effects in the latter model. In line with our theoretical presumptions, the findings suggest that high firm concentration increases the corporate influence over municipalities' tax policy choices and significantly reduces local business tax rates. Quantitatively,

[15]The idea of the latter instrument relates to the observed positive correlation between firm age and firm size (see e.g. Situm (2014)). Also note that Amadeus does not cover the universe of German firms, especially small non-incorporated firms may be missing. This adds noise to the data and reduces the instrumental variable's relevance.

[16]Kaiserliches Statistisches Amt (1915), Die Volkszählung im Deutschen Reiche am 1. Dezember 1910, Kaiserliches Statistisches Amt, Berlin.

[17]The data is obtained from "Handbuch der deutschen Eisenbahnstrecken (1984): Eröffnungsdaten 1835-1935, Streckenlängen, Konzessionen, Eigentumsverhältnisse, Dumjahn, Mainz" and matched to the communities in our data set based on historic maps.

an increase in the herfindahl index by one standard deviation (= .094, cf. Table 1) lowers the local business tax rate by 2.8 business tax points, corresponding to around 8.7% of a standard deviation (cf. Specification (2)). Specification (3) augments the baseline model by control variables for the municipalities' socio-economic conditions, public good provision, governments' budget, partisan composition of the local council as well as state and commuting area fixed effects. The coefficient estimate of interest is significantly reduced in absolute terms, suggesting that an increase in the herfindahl index by one standard deviation lowers the local business tax rate by 0.9 business tax points or 2.7% of a standard deviation only. This result is robust to including higher polynomials and interactions between control variables (not presented) as well as state-year and commuting area-year fixed effects (Specification (4)). Specifications (5) and (6) furthermore control for (time-varying) regional differences in local business tax choices on the more refined geographical units of German counties.[18] While still statistically significant, the coefficient estimate for the herfindahl index again loses in size. An increase in the index by one standard deviation is now suggested to lower the local business tax rate by 0.5 business tax points or 1.6% of a standard deviation (cf. Specification (6)). Note that non-parametric propensity score matching estimations yields comparable results (available from the authors upon request).

While statistically significant, the quantitative effect hence turns out moderate in the baseline model. This may relate to the fact that German communities have a limited set of policy instruments at hand. Especially small jurisdictions often restrict themselves to the provision of mandatory public goods and services (e.g. social benefits to the unemployed and poor) and refrain from additional voluntary public good provisions (of e.g. recreational and cultural facilities or infrastructure) - likely reflecting prohibitively high per capita provision costs (see e.g. Alesina and Spolaore (1997) referring to economies of scale in public good provision). As German communities, on top, have only limited options to take on debt[19], small localities often face no room for strategic policy choices and adjust their local business tax rate such that it balances their mandatory spending. Large communities, on the contrary, have leeway to respond to the business preferences and needs by opting for low local business tax rates while simultaneously adjusting their set of public goods and service provisions.[20] The

[18] In our sample, the median (average) county comprises 13 (18) sample communities only.

[19] Municipality codes e.g. firstly limit new borrowings to investment spending and the conversions of debt and there are, secondly, mandatory assessments by supervisory authorities.

[20] While some public good and service provisions (e.g. related to public infrastructure) may also directly benefit (some) corporates, this does not hold true for all public goods and services. Communities may, hence, for example decide to simultaneously cut local business tax rates and spending that

sensitivity of tax policy choices to changes in firm size structure is thus expected to increase with locality size. Specifications (7) to (10) reestimate our baseline model, restricting the sample to larger localities hosting more than 100 firms (Specifications (7) and (8)) and 250 firms (Specifications (9) and (10)) respectively. In line with the intuition spelled out above, this, in absolute terms, yields larger coefficient estimates for the herfindahl index. Specification (10) suggests that, for localities with more than 250 firms, a rise in firm concentration by one standard deviation lowers business tax choices by 3.4 local business tax points or 10.3% of a standard deviation.

Specification (11) furthermore reestimates the model in Column (10), restricting the sample to communities where the conservative and liberal parties hold the majority of seats in the local council.[21] The sample restriction follows the presumption that right-wing parties may be more open to business lobbying and business needs than their left-wing or civil party counterparts, implying a higher sensitivity of local business tax choices to changes in firm concentration. In line with this notion, we find that the effect of interest almost doubles in size. Precisely, an increase in the herfindahl index by one standard deviation lowers the local business tax by 5.9 business tax points or 18.2% of a standard deviation. Specifications (12) and (13) moreover rerun the model for the subgroup of small jurisdictions with less than 100 firms and, in line with the above intuition, yield small and statistically insignificant estimates.[22]

In Table 3, we moreover refine the analysis using quantile regressions. The top panel presents results for the baseline sample, the subjacent panels restrict the sample to large municipalities with more than 100 and 250 firms respectively and a right-wing majority in the local council. All specifications suggest that the responsiveness of local business taxes to changes in firm size structure is particularly pronounced at the lower end of the local business tax distribution. Wald tests indicate that the responsiveness of the 10th quantile is significantly larger than the responsiveness of higher quantiles of the tax distribution. For the subgroup of large communities (hosting more than 250 firms) and a right-wing council majority, we find that an increase in the herfindahl index by one standard deviation lowers the 10th quantile of the local business tax distribution by a large 10.5 business tax points or 32.1% of a standard deviation, while responses of quantiles at the upper end of the local business tax distribution turn out statistically insignificant. GRAPH

is mainly targeted to households (e.g. for cultural and recreational goods and services).

[21]Note that the local council is the body that decides on changes in the local business tax rate.

[22]While, analogous to the baseline sample, Specification (12) limits the set of jurisdictions to localities with more than 20 firms, Specification (13) includes all jurisdictions in West Germany.

As stressed in Section 4, we furthermore assess the sensitivity of our findings to dynamic model specifications. Table 4 thus presents models where we regress the growth rate of the local business tax on the jurisdictions' firm concentration. The baseline model in Specification (1) suggests that an increase in the herfindahl index by one standard deviation lowers local business tax growth by 0.02 percentage points or 1.3% of one standard deviation, which qualitatively and quantitatively resembles our baseline findings. As depicted in Specifications (2) and (3), this result remains unchanged when we augment the set of regressors by county and county-year fixed effects respectively. Specifications (4) to (7) moreover restrict the sample to municipalities with more than 100 and 250 plants respectively. Similar to the previous findings, the coefficient estimates for the herfindahl index increase in size. Specification (8) further limits the sample to localities with a right-wing majority in the local council. In line with the above intuition, this further raises the coefficient estimate of interest, implying that an increase in the herfindahl index by one standard deviation lowers local business tax growth by 0.34 percentage points or 18.4% of a standard deviation. Specifications (9) and (10) rerun the baseline model, restricting the sample to small jurisdictions with less than 100 firms. Again, the coefficient estimates for the herfindahl index turn out to be small (and in case of Specification (9) also statistically insignificant).

Table 5 presents a number of robustness checks. Specifications (1) and (2) assess whether our results are confounded by an underlying correlation between industry affiliation and firm size structure, which might e.g. affect our results if industry profitability (and hence the local business tax *base*) systematically varied with firm size (e.g. driven by differences in market concentration or geographic agglomeration). We account for this by augmenting the vector of regressors with a full set of industry variables that capture the share of community firms which operate in a given two-digit NACE industry (constructed from DAFNE). The coefficient estimates for the herfindahl index turn out to be insensitive to this modification.[23] Along the same lines, Specifications (3) and (4) directly augment the set of regressors by information on the communities' local business tax base (obtained from the German Federal Statistical Offices), which again does not alter our results. Specifications (5) and (6) acknowledge

[23]Note that the absolute increase in the size of estimates is driven by the sample reduction (DAFNE is available for the years 2006 and 2007 only). We furthermore ran estimation models which specifically control for firms' *market* and *industry* concentration, constructed from DAFNE as an asset-based herfindahl index accounting for all firms in Germany per 4-digit industry. This yields results comparable to the ones reported in the paper. Moreover, we ran specifications, which proxy for geographic localisation of industries and associated localisation rents following Koh et al. (2013). Again, our main findings remain unchanged. The results are available from the authors upon request.

that the German local business tax imposes an effective tax burden on incorporated firms only since non-incorporated entities can credit local business taxes paid against their personal income tax due. Communities thus have an incentive to set high local business taxes if they host a large number of non-incorporated firms as this shifts revenue from the federal government that levies the personal income tax to local communities without triggering negative investment responses by non-incorporated firms. Information on the share of non-incorporated firms was obtained from tax return data in the Local Business Tax Statistics 2004, but was, for confidentiality reasons, aggregated to the county level. We hence reran the robustness check with a community-level share of non-incorporated firms constructed from information on firms' legal status in DAFNE[24] (available upon request). In both models, the coefficient estimate for the herfindahl index remains qualitatively and quantitatively unchanged. Moreover, we indeed find evidence that a high fraction of non-incorporated firms is associated with large local business tax choices.

Specification (7) moreover adds the lagged level of the local business tax as an additional control variable.[25] The coefficient estimate for the lagged variable turns out to be negative, pointing to mean reversal in local business tax choices. The coefficient estimate for the herfindahl index is again not sensitive to this modification. Specifications (8) to (11) moreover acknowledge that a significant number of localities do not change their local business tax at all within our sample frame and hence present results of logit models that assess whether firm size structures impact on the binary decision to raise or lower the business tax. Similar to the baseline findings, Specifications (9) and (11) suggest that an increase in the herfindahl index by one standard deviation increases (lowers) a community's propensity to raise (reduce) its local business tax rate by 0.2 (0.3) percentage points or 1.2% (1.9%) of a standard deviation.

Specifications (1) to (6) of Table 6 moreover assess the sensitivity of our results to using alternative measures for communities' firm size structure, namely the standard deviation of the firm size distribution and the employment share of the largest firm, as constructed from DAFNE (see also Section 3). Specifications (1) and (2) moreover rerun the baseline model with a herfindahl index calculated from DAFNE. In line with

[24]Precisely, as DAFNE's coverage of small firms, which are also often not incorporated, tends to be poor, we approximate the number of non-incorporate firms by the difference between the overall number of entities per community (retrieved from GEA) and the number of incorporate firms per community (retrieved from DAFNE).

[25]Note that the specifications include state and commuting area fixed effects only. Each of these groups comprises a large number of localities, rendering potential concerns related to Nickell bias (Nickell (1981)) negligibly small.

previous findings, the coefficient estimates turn out negative and statistically significant in all specifications. Note that the quantitative effects are also comparable to the baseline findings, suggesting that an increase of the herfindahl index/standard deviation/maximum employment share by one standard deviation lowers the local business tax rate by 2.3%/5.7%/2.0%. Specifications (7) to (10) finally show that the results are not sensitive to accounting for clustering of the errors at larger geographic units.

In Table 7, we moreover rerun the sketched robustness checks for the subsample of large communities (with a right-wing majority in the local council). Specifications (1) and (2) limit the sample to communities which host more than 100 plants but augment the baseline model by information on the locality's tax base, share of non-incorporated firms and the lagged level of the local business tax. Specifications (3) reruns the same specification in the subsample of communities with more than 250 firms, Specification (4) additionally restricts the sample to communities with a right-wing majority in the local council. The inclusion of the additional control variables about doubles the absolute size of our effect of interest. Including two-digit control variables for the community's industry composition further raises the estimate, suggesting that an increase in the herfindahl index by one standard deviation lowers local business tax growth by 0.38 percentage points or 20.2% of a standard deviation (see Specification (5)). Specifications (6) to (11) reestimate the logit models presented in Table 5 for the subset of large communities (with a right-wing council-majority) and yield comparable results.

To further mitigate potential reverse causality concerns, we additionally run models which instrument for the community's herfindahl index with information on the locality's lagged firm size structure and average firm age. Firstly, we restrict the sample to the years 2004 to 2007 and use the locality's herfindahl index in 1999 (constructed from the GEA data) as an instrument. Secondly, we draw on information on the firm's year of incorporation provided in DAFNE to calculate the average age of firms hosted in a locality. As described in Section 4, the rationale for the instrument is a positive correlation between firm age and firm size postulated by previous research (see e.g. Situm (2014)). To assess whether our sample restriction to the sub period 2004 to 2007 alters our baseline findings, Specifications (1) of Table 7 reruns the baseline OLS model (Column (1) of Table 3) on the restricted sample, yielding a similar (in absolute terms slightly larger) coefficient estimate for the herfindahl index. In Specification (2), the herfindahl index is instrumented with its 1999-lag and the average firm age in the locality. This leaves the coefficient estimate for the herfindahl index qualitatively and quantitatively unchanged. Note that the Cragg-Donald Wald F Statistic and Hansen J Statistic suggest that the instruments are relevant and valid. Specification (3) additionally instruments for community size using information on lagged population and railway connections in the early 20th century as described in Section 4. Specification (4) furthermore augments the set of control variables by the average tax rate of neighbouring communities, which is instrumented with the average population size of the neighbours, following previous studies (see e.g. Devereux et al. (2008)). Both modifications leave the coefficient estimate for the herfindahl index qualitatively and quantitatively unchanged.

Specification (5) moreover indicates that the results are not sensitive to excluding the set of time-varying socio-economic and political community characteristics. Following our robustness checks in Table 5, Specification (6) furthermore reruns the model in Column (4), additionally controlling for the municipality's local business tax base (instrumented with its average at the county level), the share of non-incorporated firms (at the county level) and the lagged level of the local business tax. This increases the coefficient estimate for the herfindahl index, suggesting that a rise in firm size concentration by one standard deviation lowers the local business tax rate by 0.09 percentage points or 4.6% of a standard deviation. Moreover, restricting the sample to large localities with more than 100 and 250 firms (Specifications (8) and (9)) respectively and a right-wing council-majority (Specification (10)) again raises the coefficient estimate of interest. Specification (10) suggests that, for the latter communities, an increase in the herfindahl index by one standard deviation lowers the local business tax growth by 0.75% or 41% of a standard deviation.

Note again that the dynamic model specifications make it unlikely that our results are driven by reverse causality. Firstly, controlling for the lagged level of the local business tax rules out findings that reflect reverse causality related to the *level* of the business tax. Secondly, for reverse causality to confound the findings in the IV models, future local business tax *growth five or more years from now* had to impact on *today's* localities' firm size distribution, e.g. by systematically pushing out firms with above average size. Even with heterogenous tax responses of small and large firms, communities will find it hard to commit on a future tax growth path. Specifically, in the presence of high corporate relocation costs, municipalities have an incentive to highly tax (expropriate) locked-in firms and can hardly commit on any other strategy (see e.g. Janeba (2000)). This commitment problem is additionally exacerbated by the fact that the composition of the political decision making body, the local council, likely changes in the course of a 5-year period due to local elections. With moderate relocation costs, communities might find it easier to commit to low future business tax growth if this implied relocation of (large) firms (assuming that those are indeed more mobile than their smaller counterparts). The causality then, however, again runs from the firm size structure to the tax growth path as discussed in our paper.

Finally, our analysis accounted for observed heterogeneity across sample localities by a rich set of regressors including socio-economic, budgetary and political municipality characteristics and for time-constant unobserved heterogeneity across host regions by accounting for state, commuting area and county fixed effects. Table 8 additionally presents robustness checks which augment the specifications by a full set of community-fixed effects. On the upside, this allows us to control for time-constant heterogeneity at the community level. On the downside it comes at the cost of significantly reducing the variation in the herfindahl index that can be exploited for empirical identification. Specifically, while the standard deviation of the herfindahl index is 0.094 in the baseline sample, its longitudinal counterpart amounts to 0.020 only. Specification (1) reestimates the baseline model, Specifications (2) and (3) limit the sample to communities with more than 100 and 250 firms respectively. Specification (4) additionally restricts the sample to localities with a right-wing council-majority. In Specifications (1) and (2), the point estimates for the coefficient of the herfindahl index resemble the baseline findings, but are less precisely estimated and standard errors turn out to be inflated. In Specifications (3) and (4), the coefficient estimates gain statistical significance and turn out quantitatively relevant. This result is robust to controlling for the locality's local business tax base in Specification (5).

Concluding, the analysis indeed points to an inverse relation between jurisdictions' firm size distribution and local business tax choices, with high firm concentration being associated with small tax rate (growth). The results confirm anecdotal evidence suggesting that middle-sized and large cities that depend on one or few large employers (Focus (2014)) choose moderate local business tax rates. Three often-named examples are the German cities of Wolfsburg, Ingolstadt and Ludwigshafen, which host the headquarters of the car-manufacturers Volkswagen and Audi and the chemical company BASF respectively. Local employment of Audi and BASF amounts to around 35,000 individuals relative to an overall city employment of around 90,000 individuals. Volkswagen headquarters even employ around 50,000 workers, relative to an overall city employment in Wolfsburg of 100,000 individuals. All three cities are characterised by very moderate local business tax rates relative to cities of comparable size. In line with the evidence presented, BASF moreover is reported to have achieved a reduction in Ludwigshafen's local business tax rate from 30 business tax points (or 1.5 percentage points) in 2002 by threatening to relocate production (Neue Lu (2002)).

One important question is whether our results carry over from the local level to tax setting behaviour (and other policy choices) of higher government tiers. On the one hand, effects of firm concentration on policy choices may be smaller at the national level as firm concentration tends to decline with jurisdiction size, making it less likely that jurisdictions depend on a few large employers. Assigning taxing rights to higher government tiers might thus reduce the corporate sector's influence over statutory tax policies. Higher government tiers, on the other hand, commonly have a larger set of policy instruments at hand, which may make it easier to implement policy adjustments that benefit the corporate sector and may reinforce the effect determined in this paper. Finally, our paper assessed the impact of firm concentration on *statutory corporate tax* policy choices. Benefits might also respond along the lines of other statutory policy instruments (e.g. targeted public spending). Governments may moreover - within boundaries of administrative and legal restrictions (see Footnote 4) - grant private benefits to large firms located within their borders. If such benefits responded to changes in firm size structure, our estimates are a lower bound to the overall effect.

6 Conclusion

The purpose of this paper was to empirically test for a link between firm size structure and governments' corporate tax rate choices. We assessed this question in the context of the German local business tax, determining whether municipalities' firm size structures significantly impact on their chosen local business tax (growth). The empirical specifications control for observed and unobserved heterogeneity across regions and communities. Instrumental variables models account for endogeneity of the firm size distribution and other control variables. In line with our theoretical presumptions, we find a negative link between firm concentration and business tax growth (conditional on aggregate municipality size). The effect, in absolute terms, increases with jurisdiction size and turns out especially large for municipalities with a right-wing majority in the local council. Quantile regressions moreover suggest that it is especially quantiles at the lower end of the local business tax distribution that react sensitively to changes in jurisdictions' firm size structures.

To the best of our knowledge, we are the first to provide evidence for a link between a jurisdiction's firm size structure and its local business tax choice. The findings may have important policy implications. Specifically, they may help to explain differences in (tax) policy choices across jurisdictions as firm concentration varies significantly across countries and sub-national tax-setting tiers. The findings moreover suggest that recent decades' merger and acquisition waves and the general trend towards more concentration of economic activity (especially in emerging markets and the developing world) are not neutral in terms of governments' tax policy choices and may lead to more favourable tax conditions for the corporate sector.

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8 Tables

Table 1: Descriptive Statistics

Variable	No. of Obs.	Mean	Std. Dev.	Min	Max
Local Business Tax					
Local Business Tax (LBT)	39,676	337.995	32.657	200	500
Local Business Tax (Perc. Points)	39,676	16.900	1.633	10	25
Local Business Tax Growth	39,676	.329	1.864	-61.224	28.571
Local Business Tax Increase	39,676	.078	.268	0	1
Local Business Tax Decrease	39,676	.009	.093	0	1
Concentration Measures					
Herfindahl (GEA)	39,676	.088	.094	.002	.840
Herfindahl (DAFNE)	10,096	.219	.182	.006	1
Std. Deviation (DAFNE)	10,053	1.242	6.725	.001	187.959
Empl. Share Largest Firm (DAFNE)	10,096	.352	.202	.034	1
Other Community Characteristics					
Log Size (No Employees)	39,676	6.843	1.514	3.401	13.453
Population Share > 65	39,676	.176	.032	.056	.415
Population Share < 15	39,676	.167	.022	.057	.279
Income pC	39,676	17,638.24	1828.494	13,222	28,872
Unemployment Rate	39,676	.030	.012	0	.112
New Credit	39,676	-.0001	.067	-.691	.643
Debt pC	39,676	2.192	.846	.491	6.831
Investment Grant pC	39,676	76.591	116.762	-133.775	7038.835
Administration Grant pC	39,676	194.373	112.927	-67.357	2035.584
Party Seat Shares Local Council					
Christian Democrats	39,676	.332	.214	0	1
Social Democrats	39,676	.212	.173	0	1
Liberals	39,676	.015	.036	0	.455
Green Party	39,676	.020	.040	0	.375
Farleft Share	39,676	.0002	.003	0	.118
Farright Share	39,676	.001	.006	0	.226
Infrastructure					
Infrastructure	39,676	.212	.662	0	21
Railway Stations	39,676	.762	1.045	0	13
Airports	39,676	.071	.268	0	2
Seaports	39,676	.029	.186	0	4
Rural Community	39,676	.721	.448	0	1

Variable	No. of Obs.	Mean	Std. Dev.	Min	Max
Other Community Characteristics					
Instrumental Variables					
Founded before 1990	39,676	.078	.149	0	1
Log Population Density 1910	39,289	7.749	1.061	3.689	13.359
Log Count Railway Con. $<$1936	36,687	.247	.519	0	4.357

Table 1: Descriptive Statistics, Continued

'Local Business Tax (LBT)' indicates the local business tax in business tax points, 'Local Business Tax (Perc. Points)' indicates the local business tax in percentage points, 'Local Business Tax Growth' is the growth rate of the local business tax in percent, 'Local Business Tax Increase' and 'Local Business Tax Decrease' depict indicator variables for tax increases and decreases respectively. 'Herfindahl', 'Std. Deviation' and 'Empl. Share Largest Firm' indicate the concentration measures defined in Section 3, specifically the herfindahl index, the standard deviation of the firm size distribution and the employment share of the largest firm hosted by a locality. 'GEA' indicates that the concentration measure is calculated based on data for the population of German plants provided by the German employment agency, 'DAFNE' indicates that the concentration measure was calculated based on information in Bureau van Dijk's DAFNE database. 'Log Size' is the natural logarithm of the community's overall number of employees. 'Population Share $>$ 65' and 'Population Share $<$ 15' indicate the share of a locality's inhabitants older than 65 and younger than 15. Income pC indicates average income at the level of German counties. 'New Credits' depicts public borrowing, defined as the share of revenues that is generated by new credits, less amortization of debts. 'Debt pC' stands for the total outstanding debt in per capita terms. This value is obtained at the county level, but it also includes municipality-specific information on debt of hospitals and other city owned companies like transportation or sewage. 'Investment Grant pC' and 'Administration Grant pC' depict investment and administration grants in per capita terms, 'Christian Democrats', 'Social Democrats', 'Liberals', 'Farleft Share', 'Farright Share' indicate the seat shares in the local councils for the respective parties and party groups. Note that the shares do not sum up to one as a significant share of local council seats is held by civil parties that are difficult to classify in the traditional left-right-spectrum. 'Infrastructure' moreover indicates a community's number of highway accesses, 'Railway Stations', 'Airports' and 'Seaports' the number of stations, airports and seaports respectively.

Table 2: Baseline - Dependent Variable: Local Business Tax Rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Herfindahl Index	-65.060***	-30.265***	-9.252***	-9.156***	-5.854**	-5.645**	-28.371***	-24.286***	-41.702***	-35.933***	-64.711**	-4.399	0.447
	(4.848)	(4.139)	(3.072)	(3.089)	(2.686)	(2.766)	(7.190)	(5.890)	(15.181)	(12.107)	(26.359)	(2.971)	(1.128)
Log Size		9.177***	3.031***	3.132***	1.677***	1.745***	8.213***	5.140***	10.807***	5.839***	6.366***	0.624	-0.025
		(0.328)	(0.382)	(0.386)	(0.306)	(0.318)	(0.709)	(0.603)	(1.090)	(0.999)	(1.445)	(0.446)	(0.202)
Control Variables		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Commuting Area FE			Yes				Yes		Yes		Yes		
State FE			Yes				Yes		Yes		Yes		
Commuting Area Year FE				Yes									
State Year FE				Yes									
County FE					Yes			Yes		Yes	Yes	Yes	Yes
County Year FE						Yes							
Firm Number		>20	>20	>20	>20	>20	>100	>100	>250	>250	>250	<100	<100
											Right Wing	>20	
Observations	39,676	39,676	39,676	39,676	39,676	39,676	19,659	19,659	9,795	9,795	3,558	19,913	36,313
R-squared	0.035	0.212	0.663	0.671	0.748	0.758	0.748	0.823	0.776	0.857	0.886	0.510	0.539

Table 3 - Quantile Regression					
Quantiles	10th	25th	50th	75th	90th
Firmnumber >20 - Baseline					
Herfindahl	-10.603***	-5.904***	-4.781***	-6.031***	-2.153***
	(1.363)	(1.196)	(.803)	(1.411)	(2.161)
Log Size	.544***	.756***	1.733***	2.799***	2.845***
	(.133)	(.111)	(.110)	(.165)	(.213)
Wald Test vs. 10th P.		0.00	0.00	0.00	0.00
(p-value)					
Firmnumber >100					
Herfindahl	-34.101***	-22.670***	-20.096***	-17.437***	-26.764***
	(5.688)	(2.887)	(3.507)	(3.220)	(4.223)
Log Size	3.240***	4.532***	6.529***	8.299***	8.502***
	(.343)	(.207)	(.319)	(.259)	(.448)
Wald Test vs. 10th P.		0.03	0.03	0.00	0.23
(p-value)					
Firmnumber >250					
Herfindahl	-48.454***	-46.758***	-27.952***	-22.687***	-30.378***
	(3.285)	(6.045)	(6.150)	(6.075)	(8.510)
Log Size	5.947***	7.584***	8.859***	10.747***	10.560***
	(.506)	(.509)	(.550)	(.652)	(.762)
Wald Test vs. 10th P.		0.82	0.03	0.00	0.02
(p-value)					
Firmnumber >250 & Right Wing					
Herfindahl	-111.613***	-33.913**	-11.424	-11.525	15.906
	(26.760)	(15.811)	(7.723)	(14.427)	(17.921)
Log Size	5.324***	5.633***	8.084***	9.136***	10.520***
	(.894)	(.751)	(.846)	(.777)	(1.059)
Wald Test vs. 10th P.		0.00	0.00	0.00	0.00
(p-value)					
Community Controls			Yes		
State FE			Yes		

Notes: LBT (LBT Growth) indicates that the outcome variable in the respective specification is the level (growth rate) of the community's local business tax rate. ***, **and *indicates significance at the 1%, 5% and 10% level. Average treatment effect on the treated reported.

Table 4: Baseline Results - Dependent Variable: Local Business Tax Rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Herfindahl Index	-0.252***	-0.253***	-0.231**	-0.590***	-0.540**	-0.881**	-0.906**	-3.519***	-0.137	-0.138***
	(0.093)	(0.091)	(0.094)	(0.218)	(0.221)	(0.408)	(0.456)	(1.067)	(0.106)	(0.051)
Log Size	-0.037***	-0.030***	-0.024**	-0.080***	-0.059***	-0.101***	-0.101***	-0.168***	-0.012	-0.013
	(0.011)	(0.011)	(0.012)	(0.018)	(0.021)	(0.029)	(0.035)	(0.058)	(0.019)	(0.009)
Commuting Area FE	Yes			Yes		Yes		Yes		Yes
State FE	Yes			Yes		Yes		Yes		Yes
County FE		Yes			Yes		Yes		Yes	
Yes	Yes	Yes	Yes							
County Year FE			Yes							
Firm Number	>20	>20	>20	>100	>100	>250	>250	>250	<100	<100
								Right Wing	>20	
Observations	39,676	39,676	39,676	19,659	19,659	9,795	9,795	3,558	19,913	36,313
R-squared	0.022	0.032	0.153	0.043	0.055	0.060	0.084	0.125	0.025	0.028

Notes:

Notes: All regressions include a full set of year and commuting area fixed effects as well as the full set of control variables described in Sections 3 and 4. Heteroscedasticity robust standard errors adjusted for clustering at the municipality level are presented in parentheses. *, **, ***indicate significance at the 10%, 5%, 1% level.

Table 5: Robustness Checks - Dependent Variable: Local Business Tax Rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Dependent Var.	LBT Growth	LBT Growth	LBT Growth	LBT Growth	LBT Growth	LBT Growth	LBT Growth	LBT Incr.	LBT Incr.	LBT Decr.	LBT Decr.
Herfindahl Index	-0.583**	-0.684***	-0.377***	-0.367***	-0.271***	-0.267***	-0.386***	-0.325	-0.492**	1.792***	2.126***
	(0.246)	(0.243)	(0.091)	(0.091)	(0.094)	(0.092)	(0.114)	(0.205)	(0.247)	(0.493)	(0.551)
Log Size	-0.091***	-0.073***	0.071***	0.070***	-0.027**	-0.023*	0.012	-0.073***	0.002	0.396***	0.291***
	(0.024)	(0.024)	(0.019)	(0.020)	(0.012)	(0.013)	(0.013)	(0.022)	(0.026)	(0.092)	(0.107)
Log LBT Base			-0.113***	-0.106***							
			(0.016)	(0.016)							
Share Non-Incorp. Firms					0.364**	0.275*					
					(0.144)	(0.143)					
Lag LBT							-0.015***		-0.034***		0.024***
							(0.001)		(0.002)		(0.003)
Observations	10,096	10,096	39,600	39,600	39,676	39,676	35,061	39,676	35,061	36,684	31,100
R-squared	0.052	0.071	0.024	0.034	0.023	0.032	0.047	–	–	–	–
Community Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Shares	Yes	Yes									
Commuting Area FE	Yes		Yes		Yes		Yes	Yes	Yes	Yes	Yes
State FE	Yes		Yes		Yes		Yes	Yes	Yes	Yes	Yes
County FE		Yes		Yes		Yes					
Observations	10,096	10,096	39,668	39,668	39,676	39,676	35,061	39,676	35,061	36,684	31,100
R-squared	0.052	0.071	0.024	0.034	0.023	0.032	0.047				

Notes:

Notes: All regressions include a full set of year and commuting area fixed effects as well as the full set of control variables described in Sections 3 and 4. Heteroscedasticity robust standard errors adjusted for clustering at the municipality level are presented in parentheses. *, **, ***indicate significance at the 10%, 5%, 1% level.

Table 6: Robustness Checks - Dependent Variable: Local Business Tax Rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Herfindahl (DAFNE)	-0.233**	-0.240**								
	(0.100)	(0.102)								
Std.Dev. (DAFNE)			-0.009*	-0.016*						
			(0.005)	(0.009)						
Emp. Share Largest Firm (DAFNE)					-0.180**	-0.188**				
					(0.091)	(0.092)				
Herfindahl (GEA)							-0.252**	-0.253***	-0.252**	-0.253**
							(0.095)	(0.081)	(0.101)	(0.099)
Log Size	-0.088***	-0.064**	-0.068***	-0.042	-0.085***	-0.062**	-0.037***	-0.030**	-0.037**	-0.030*
	(0.026)	(0.028)	(0.025)	(0.028)	(0.026)	(0.028)	(0.013)	(0.012)	(0.015)	(0.017)
Community Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Commuting Area FE	Yes		Yes		Yes		Yes		Yes	
State FE	Yes		Yes		Yes		Yes		Yes	
County FE		Yes		Yes		Yes		Yes		Yes
Clustering	Municipality	Municipality	Municipality	Municipality	Municipality	Municipality	Commuting Area	Commuting Area	State-Year	State-Year
Observations	10,096	10,096	10,053	10,053	10,096	10,096	39,676	39,676	39,676	39,676
R-squared	0.023	0.043	0.024	0.044	0.023	0.043	0.022	0.032	0.022	0.032

Notes:

Notes: All regressions include a full set of year and commuting area fixed effects as well as the full set of control variables described in Sections 3 and 4. Heteroscedasticity robust standard errors adjusted for clustering at the municipality level are presented in parentheses. *, **, ***indicate significance at the 10%, 5%, 1% level.

Table 7: Robustness Checks - Dependent Variable: Local Business Tax Rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Dependent Var.	LBT Growth	LBT Growth	LBT Growth	LBT Growth	LBT Growth	LBT Incr.	LBT Decr.	LBT Incr.	LBT Decr.	LBT Incr.	LBT Decr.
Lag LBT	-0.017***	-0.024***	-0.026***	-0.039***	-0.010**	-0.034***	0.023***	-0.032***	0.024***	-0.037***	0.016
	(0.001)	(0.001)	(0.002)	(0.006)	(0.005)	(0.002)	(0.004)	(0.002)	(0.005)	(0.004)	(0.012)
Herfindahl Index	-1.401***	-1.313***	-2.232***	-6.966***	-9.436***	-1.698***	3.565***	-2.896***	4.458***	-4.475	3.660
	(0.273)	(0.289)	(0.598)	(1.631)	(2.438)	(0.644)	(0.992)	(1.035)	(1.682)	(2.984)	(4.713)
Log Size	0.254***	0.207***	0.298***	0.307**	-0.250	0.235***	-0.774***	0.397***	-0.515*	0.183	0.380
	(0.034)	(0.036)	(0.065)	(0.126)	(0.248)	(0.062)	(0.218)	(0.108)	(0.292)	(0.198)	(0.543)
Share Non-Incorp. Firms	0.989***	0.786**	1.690***	2.029*	3.982**	1.228*	-3.022	1.890*	-2.663	0.567	-12.746***
	(0.293)	(0.345)	(0.601)	(1.136)	(1.795)	(0.662)	(2.062)	(1.013)	(3.445)	(1.779)	(4.585)
Log LBT Base	-0.153***	-0.168***	-0.260***	-0.269***	0.237	-0.238***	1.009***	-0.346***	0.956***	-0.377**	0.119
	(0.025)	(0.026)	(0.050)	(0.088)	(0.214)	(0.036)	(0.166)	(0.067)	(0.217)	(0.148)	(0.379)
Community Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Commuting Area FE	Yes					Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes					Yes	Yes	Yes	Yes	Yes	Yes
County FE		Yes	Yes	Yes	Yes						
Firm Number	>100	>100	>250	>250	>250	>100	>100	>250	>250	>250	>250
				Right Wing	Right Wing					Right Wing	Right Wing
Observations	17,300	17,300	8,643	3,150	837	17,300	12,021	8,643	5,088	2,969	1,316
R-squared	0.075	0.086	0.118	0.161	0.390						

Notes:

Notes: All regressions include a full set of year and commuting area fixed effects as well as the full set of control variables described in Sections 3 and 4. Heteroscedasticity robust standard errors adjusted for clustering at the municipality level are presented in parentheses. *, **, ***indicate significance at the 10%, 5%, 1% level.

Table 8: Robustness Checks - IV

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Herfindahl Index	-0.455***	-0.498***	-0.563***	-0.564***	-0.538***	-0.934***	-1.894***	-3.068***	-8.363***
	(0.148)	(0.186)	(0.196)	(0.196)	(0.194)	(0.311)	(0.554)	(1.076)	(2.402)
Log Size	-0.070***	-0.070***	-0.028	-0.028	-0.049***	0.218	0.641**	0.671**	0.915**
	(0.017)	(0.017)	(0.027)	(0.027)	(0.011)	(0.194)	(0.268)	(0.276)	(0.464)
Avg. LBT Neigbor				0.001	0.008	0.003	-0.006	-0.020	-0.032
				(0.008)	(0.008)	(0.009)	(0.012)	(0.019)	(0.036)
Log LBT Base						-0.152	-0.428*	-0.439*	-0.742*
						(0.180)	(0.223)	(0.233)	(0.447)
Lag LBT						-0.014***	-0.016***	-0.014***	-0.017***
						(0.001)	(0.002)	(0.002)	(0.003)
Share Non-Incorp. Firms						1.069***	1.500***	2.321***	1.686
						(0.254)	(0.515)	(0.866)	(1.474)
Community Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Commuting Area FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cragg-Donald Wald F Statistic		2.3e+04	2125.142	1661.746	4385.935	32.571	26.854	24.943	7.990
Hansen J Statistic		0.4934	0.6791	0.6783	0.5335	0.4099	0.7973	0.9091	0.5496
Firm Number	>20	>20	>20	>20	>20	>20	>100	>250	>250
									Right Wing
Observations	20,075	20,075	18,479	18,479	18,479	18,420	8,785	4,239	1,497
R-squared	0.025	0.025	0.025	0.025	0.022	0.048	0.057	0.074	0.033

Notes:

Notes: All regressions include a full set of year and commuting area fixed effects as well as the full set of control variables described in Sections 3 and 4. Heteroscedasticity robust standard errors adjusted for clustering at the municipality level are presented in parentheses. *, **, ***indicate significance at the 10%, 5%, 1% level.

Table 9 - Robustness Checks - Municipality Fixed Effects					
	(1)	(2)	(3)	(4)	(5)
Herfindahl Index	-0.593	-1.313	-5.130***	-15.944**	-15.800**
	(0.549)	(1.315)	(1.820)	(7.237)	(7.324)
Log Size	-0.163	-0.372	-0.068	2.267**	2.185**
	(0.139)	(0.355)	(0.525)	(0.924)	(0.939)
Log LBT Base					0.115
					(0.105)
Community Controls	Yes	Yes	Yes	Yes	Yes
State-Year FE	Yes	Yes	Yes	Yes	Yes
Community FE	Yes	Yes	Yes	Yes	Yes
Firm Number	>20	> 20	>100	>250	>250
					Right Wing
Observations	39,676	19,659	9,795	3,558	3,558
R-squared	0.171	0.211	0.233	0.289	0.289

Notes: LBT (LBT Growth) indicates that the outcome variable in the respective specification is the level (growth rate) of the community's local business tax rate. ***, **and *indicates significance at the 1%, 5% and 10% level. Average treatment effect on the treated reported.

Appendix

The following tables A1 and A2 present the coefficient estimates for the control variables in Specifications (3) to (13) of Table 2 and Specifications (1) to (10) of Table 3.

Table A1: Coefficient Estimates, Control Variables Table 2 - Dependent Variable: Local Business Tax Rate

	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Population Share > 65	-24.723**	-25.253**	11.271	10.902	-71.236***	-16.938	-133.030***	-97.730***	-5.109	30.326**	17.754***
	(12.325)	(12.466)	(11.664)	(12.122)	(19.903)	(20.704)	(30.940)	(33.827)	(52.070)	(13.538)	(5.940)
Population Share <15	-92.945***	-93.228***	-63.111***	-61.554***	-161.166***	-112.400***	-247.626***	-255.863***	-77.253	-18.119	-0.611
	(17.777)	(18.037)	(16.770)	(17.563)	(31.316)	(31.028)	(52.949)	(58.269)	(90.347)	(19.354)	(7.169)
Unemployment Rate	107.610***	97.761***	151.000***	153.145***	76.513*	174.857***	19.958	188.215***	222.328**	49.439	35.688*
	(31.801)	(33.463)	(28.262)	(32.146)	(46.470)	(41.853)	(66.517)	(59.222)	(92.532)	(37.234)	(20.620)
Rural Community	-2.276***	-2.292***	-3.790***	-3.734***	0.063	-2.270***	-0.176	-2.912**	-1.144	-1.789	-2.716*
	(0.800)	(0.804)	(0.702)	(0.723)	(0.968)	(0.834)	(1.559)	(1.331)	(1.895)	(1.543)	(1.516)
Infrastructure	2.044*	2.005*	1.557**	1.549**	0.299	0.666	-0.709	0.878	-1.330	-1.193	-0.682
	(1.123)	(1.121)	(0.614)	(0.631)	(0.982)	(0.668)	(1.010)	(0.840)	(1.225)	(1.365)	(1.260)
Railway Stations	0.110	0.069	0.299	0.280	-0.506	-0.083	-0.748	-0.141	0.465	0.024	0.256
	(0.357)	(0.359)	(0.282)	(0.290)	(0.390)	(0.334)	(0.487)	(0.466)	(0.648)	(0.500)	(0.435)
Airports	2.614**	2.701**	0.900	0.919	0.293	0.038	0.138	0.708	-0.236	-2.565	-1.593
	(1.134)	(1.137)	(1.017)	(1.039)	(1.119)	(1.027)	(1.310)	(1.353)	(1.761)	(2.432)	(2.139)
Seaports	8.595***	8.729***	4.866***	4.863**	4.863**	2.681	2.445	2.037	-3.440	10.324***	7.679**
	(2.253)	(2.245)	(1.875)	(1.917)	(1.927)	(1.885)	(1.943)	(2.225)	(2.720)	(2.268)	(3.650)
Income pC	-0.001**	-0.001*	-0.003***	-0.001***	-0.003***	-0.001*	-0.002***	-0.003**	-0.002***	-0.002***	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	
Seat Share Social Democrats	4.726**	5.109***	2.768	3.213*	15.331***	9.610***	32.201***	19.042***	31.150***	3.537*	3.349**
	(1.894)	(1.917)	(1.731)	(1.799)	(3.292)	(2.940)	(6.457)	(5.789)	(11.514)	(2.089)	(1.378)
Seat Share Liberal Party	-3.417	-7.725	-2.825	-6.052	5.113	6.536	34.583**	20.200	7.940	-6.679	3.503
	(7.135)	(7.265)	(6.127)	(6.417)	(9.432)	(8.396)	(13.985)	(12.796)	(17.254)	(8.931)	(7.614)
Green Party	48.578***	45.849***	32.820***	31.941***	38.376***	31.089***	35.265***	28.479**	23.397	20.879	25.699*
	(8.203)	(8.325)	(7.470)	(7.857)	(8.827)	(8.239)	(12.097)	(11.470)	(22.474)	(17.135)	(14.633)
Farleft, Farright	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table A1: Coefficient Estimates, Control Variables Table 2 - Dependent Variable: Local Business Tax Rate, Continued

	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Investment Grants pC	0.003**	0.002*	0.004***	0.003***	0.001	0.004	0.009**	0.011***	0.015**	0.004***	0.002***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)	(0.002)	(0.004)	(0.003)	(0.006)	(0.001)	(0.001)
Administration Grants pC	0.028***	0.030***	0.020***	0.022***	0.032***	0.019***	0.046***	0.027***	0.018**	0.020***	0.015***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.006)	(0.005)	(0.009)	(0.003)	(0.003)
Credits pC	-6.422***	-6.143***	-3.832***	-3.455**	-8.883***	-3.332	-10.073*	0.359	2.511	-4.011***	-2.562***
	(1.646)	(1.668)	(1.421)	(1.512)	(3.211)	(2.654)	(5.341)	(4.025)	(5.490)	(1.540)	(0.987)
Debt pC	2.749***	2.765***	1.019**	6.890***	0.717	8.870***	0.815	-0.317	2.047***	3.047***	
	(0.629)	(0.657)	(0.428)	(0.852)	(0.553)	(1.068)	(0.764)	(1.677)	(0.714)	(0.499)	

Table A2: Coefficient Estimates, Control Variables Table 3 - Dependent Variable: Local Business Tax Growth

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Population Share > 65	0.265	0.256	0.103	0.607	0.289	0.871	0.351	2.725	-0.253	-0.056
	(0.459)	(0.481)	(0.494)	(0.698)	(0.736)	(1.094)	(1.183)	(2.077)	(0.687)	(0.312)
Population Share < 15	-0.924	-0.840	-1.030	-2.188*	-2.730**	-2.718	-5.196**	1.155	-0.040	0.214
	(0.633)	(0.637)	(0.645)	(1.132)	(1.237)	(2.151)	(2.467)	(3.581)	(0.780)	(0.363)
Unemployment Rate	-2.640**	-3.029**	-2.710**	-2.570	-3.681**	-4.040*	-3.535	6.341	-1.722	-1.455
	(1.243)	(1.282)	(1.306)	(1.600)	(1.724)	(2.399)	(2.755)	(4.952)	(1.951)	(1.075)
Rural Community	-0.039*	-0.043*	-0.035	-0.035	-0.026	-0.060	-0.056	-0.049	-0.107*	-0.113**
	(0.023)	(0.023)	(0.023)	(0.028)	(0.027)	(0.048)	(0.049)	(0.064)	(0.055)	(0.052)
Infrastructure	-0.038***	-0.019	-0.020	-0.029**	-0.013	-0.020	-0.014	0.045	-0.028	0.009
	(0.014)	(0.019)	(0.019)	(0.015)	(0.021)	(0.017)	(0.024)	(0.037)	(0.048)	(0.046)
Railway Stations	-0.009	-0.005	-0.005	-0.008	-0.002	-0.012	0.003	-0.021	-0.004	-0.013
	(0.008)	(0.009)	(0.009)	(0.010)	(0.010)	(0.013)	(0.015)	(0.025)	(0.018)	(0.016)
Airports	0.008	0.002	-0.004	0.033	0.017	0.072*	0.046	0.005	-0.062	-0.087
	(0.031)	(0.033)	(0.034)	(0.033)	(0.035)	(0.038)	(0.042)	(0.070)	(0.092)	(0.077)
Seaports	-0.003	0.052	0.061	0.005	0.031	-0.006	0.009	-0.104	0.214	0.206
	(0.047)	(0.061)	(0.062)	(0.049)	(0.063)	(0.054)	(0.071)	(0.091)	(0.205)	(0.187)
Income pC	-0.000***	-0.000		-0.000***	-0.000**	-0.000***	-0.000*	-0.000*	0.000	0.000***
	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Seat Share Social Democrats	0.135*	0.156**	0.114	0.275**	0.322***	0.167	0.362	0.885	0.033	0.054
	(0.072)	(0.074)	(0.076)	(0.114)	(0.121)	(0.213)	(0.252)	(0.538)	(0.105)	(0.068)
Seat Share Liberals	-0.420	-0.466	-0.126	-0.531	-0.569*	-0.722	-1.012*	-1.424*	-0.416	-0.334
	(0.347)	(0.362)	(0.376)	(0.326)	(0.345)	(0.513)	(0.558)	(0.836)	(0.841)	(0.574)
Seat Share Green Party	-0.301	-0.311	-0.249	-0.426	-0.456	-0.558	-0.622	-2.415***	0.952	0.697
	(0.254)	(0.260)	(0.268)	(0.274)	(0.286)	(0.384)	(0.411)	(0.874)	(0.767)	(0.678)
Farleft, Farright	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes										

Table A2: Coefficient Estimates, Control Variables Table 3 - Dependent Variable: Local Business Tax Growth, Continued

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Investment Grant pC	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.002***	0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Administration Grant pC	-0.000	-0.000	0.000*	-0.000*	-0.000*	-0.000	-0.000	-0.001	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Credit pC	0.593***	0.579***	0.483***	1.116***	1.081***	1.684***	1.575***	1.535**	0.325*	0.271**
	(0.155)	(0.156)	(0.157)	(0.271)	(0.276)	(0.376)	(0.381)	(0.743)	(0.191)	(0.126)
Debt pC	-0.003	0.024		-0.026	0.076	-0.054*	0.076	0.142	-0.005	0.027
	(0.015)	(0.048)		(0.021)	(0.056)	(0.029)	(0.067)	(0.134)	(0.085)	(0.059)