

Lowering Personal Taxation through Corporations

Wealth and Income Shifting

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 Barcelona, Spain

1 Introduction

- Progressive taxation to tackle inequality in second half of 20th century.
- Economic efficiency considerations dominated the 2000's.
 - Lowering Corporate Income Tax (CIT) rate.
 - Dual Personal Income Tax (PIT) ➔ Capital taxed at a lower rate than labor.
 - Suppression (or alleviation) Wealth/Estate Tax (WT) + Exemptions for business/corporate assets.
- Individuals can affect progressivity of taxation (PIT & WT) by shifting income and wealth to controlled firms ➔ Horizontal equity may be affected.
- What is the magnitude of this tax incentive?
- To which extend these behavioral responses limit the power of the redistribution function?

1 Introduction

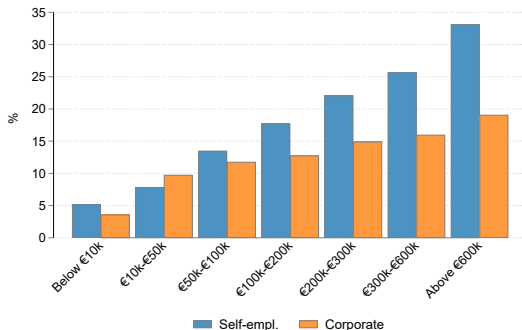
- Limited evidence about the role of controlled firms in reducing taxation.
 - Chetty and Saez (2005), le Maire and Schjerning (2013), López-Laborda et al. (2018), Harju and Matikka (2016), Alstadsæter and Jacob (2016).
 - Bergolo et al. (2022), Miller et al. (2024).
- Two decades of tax reforms in Spain → Decentralization of personal taxation (PIT & WT) + CIT reforms → unique quasi-experimental variation to provide causal evidence (*RDD & bunching*) on shifting mechanisms.
- Novel Spanish micro-data base from 1999 to 2021 with linked labor, income and wealth records from many administrative sources.
- Not only income, but also wealth shifting analyzed. → Integrated framework (PIT + CIT + WT).
- Main results:
 - Large reactions of self-employed taxpayers → 22 p.p. increase in the probability of incorporating once optimal income-shifting threshold is reached.
 - Significant distortion net taxable wealth distribution around the minimum WT-exempt threshold → Sizeable shifting of wealth to controlled firms.

2 Motivation

PIT and CIT generate large incentives to incorporate and **shift income**.

- As unincorp., self-employment or regular labor income is taxed at progressive PIT schedule.
- If incorporated, CIT on corporate profits, and personal income as dividends and convenient salaries.
- Dividends taxed at a (almost) flat-rate PIT schedule.
- Above certain profits-level threshold, combined CIT + PIT burden if incorporated < only PIT burden if unincorporated.

Figure: Effective tax rate on business profits by legal form and turnover level, 2017



Source: Agencia Estatal de Administración Tributaria, AEAT (2024c).

of firms by turnover

By sub-sector

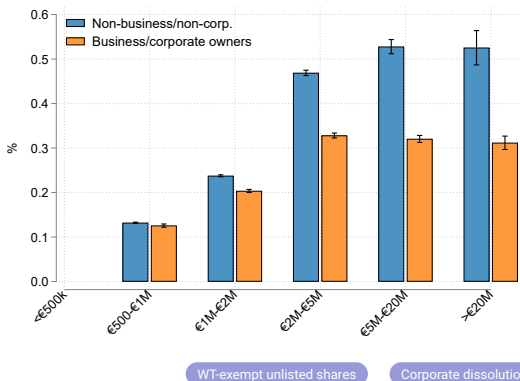
Agg. # of corporations by size

2 Motivation

WT generate large tax incentives for business owners to **shift wealth** from personal to corporate/business accounts.

- WT exemption for corporate shares and business assets.
- Taxpayers must possess effective control over the business (>5% of shareholding).
- Remuneration from the business is at least 50% of the total personal income.
- Business must be economically active (not pure asset-holding entity).

Figure: Effective wealth tax rate by total net wealth level



1. Income shifting

- Tax incentive → (Unincorporated PIT) > (Incorporated PIT + CIT)
- Empirical strategy → Compare similar individuals around the optimal income shifting threshold (*RDD*).
- Exploited variation → PIT & CIT changes over time (1999-2021), across regions, and sectors.

2. Wealth shifting

- Tax incentive → WT (+ PIT)
- Empirical strategy → Compare total vs taxable net wealth of business owners vs non-business individuals around the minimum WT exemption threshold (*bunching*).
- Exploited variation → WT changes across regions.

4 Institutional Setting

Within an integrated [PIT + CIT + WT + regulations] framework, we exploit **12 major reforms** (with different signs, intensities and forms) in Spanish tax figures governing the income and wealth shifting channels.

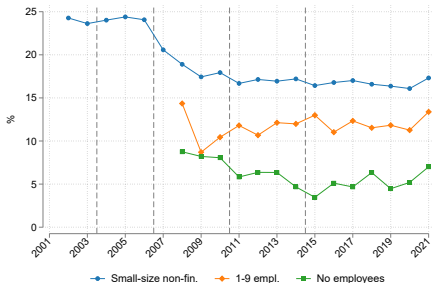
- WT → 1 main reform.
 - 2007 → Suppression.
 - 2011 → Reintroduction + Higher Minimum WT-exemption threshold + Full decentralization → Madrid grants universal WT exemption vs. other regions increase the default schedule.
- Corporate income tax → 4 main reforms: 2004, 2007, 2011, & 2015.
- Linked-operations regulation → 3 main reforms: 2007 & 2015.
- PIT → 4 main reforms: 2004, 2007, 2012, & 2015/2016.

4 Institutional Setting

CIT experiences 4 major reforms from 1999 to 2021.

- 2004 → Incl. in CIT of special professional, sports/arts & asset-holding corporations.
- 2007 → Lower CIT rate for small-sized corps. + Number of new tax credits & deductions.
- 2011 → Cut of many CIT tax credits & deductions, especially compensation of past negative taxable bases carried-forward.
- 2015 → Lower CIT rate for small-sized/newly-created corps. + Taxable base broadening.

Figure: Effective CIT, by corporate size, Spain



Source: Agencia Estatal de Administración Tributaria, AEAT (2024a).

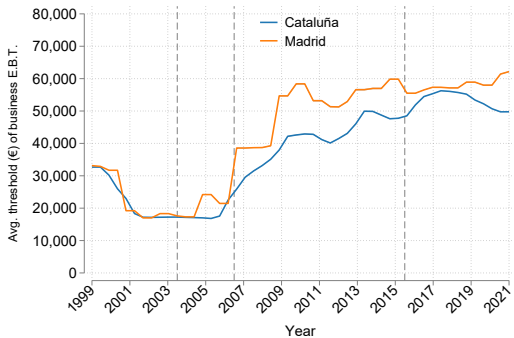
By sector

4 Institutional Setting

PIT experiences 4 major reforms from 1999 to 2021.

- 2004 → Excl. from PIT of special professional, sports/arts & asset-holding corporations.
- 2007 → Dual PIT, financial capital income s.t. almost flat-rate + Start decentralization.
- 2012 → Considerable increase (up to 7 p.p.) in marginal rates + Intense decentralization.
- 2015 → Decrease in marginal rates (specially in savings schedule) + Invoicing obligation for corp.-controlling partners.

Figure: Average income shifting threshold, Cataluña vs Madrid

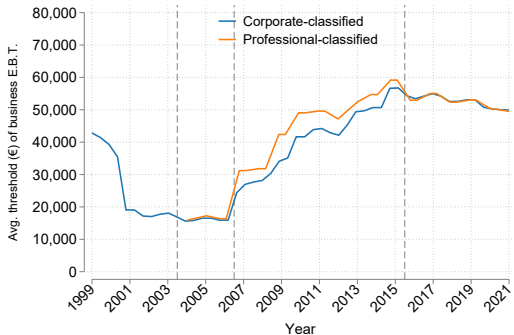


4 Institutional Setting

Linked-operations regulation experiences **3 major reforms** from 1999 to 2021.

- 2004 → Operations (salaries, invoicing, interests) btw. corporation and controlling partners must be proven to be realized at market prices.
- 2007/2008/2009 → Professional corp. must remunerate 85% of their profits to controlling partners + at least 2 times avg. salary.
- 2015 → Exclusion of admin./manager remuneration from this regulation + Decrease from 85% to 75% in professional remun. + at least 5 times IPREM indicator.

Figure: Average income shifting threshold, professional- vs. corporate-classified

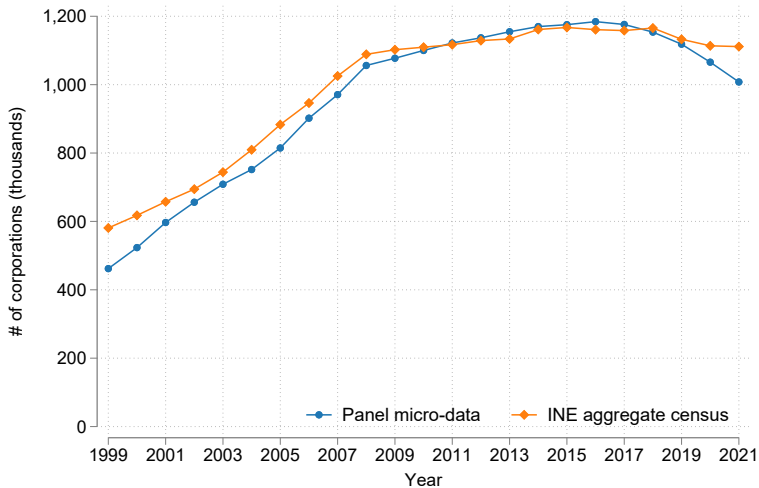


- Spanish administrative panel micro-data ("*Panel de hogares, 2016-2021*"), *Instituto de Estudios Fiscales* (2023).
 - Sampling for 17 regions + 10 household types + 9 income brackets → 772,178 (4.57%) households and 2.15 million (4.85%) individuals.
 - Socio-demographics, 1999-2021 → Fiscal residence, age, educ.
 - PIT returns, 1999-2021 → At individual, asset or self-empl. activity level.
 - Third-party reported individual income, 2008-2021 → Informational forms.
 - Employment history records ("*MCVL*"), 1999-2021 → Social Sec. affiliations.
 - Wealth tax returns, 2016-2021 → Personal + corporate assets and debts.
 - Third-party reported personal wealth, 2016-2021 → Personal assets and liabilities + real estate property detail.
- Aggregate CIT statistics, *Agencia Estatal de Administración Tributaria, AEAT* (2024a) → Disaggregated by region + legal form + turnover + size.

Other aggregate data

- No matched individual-to-corporate micro-data → How to identify individuals with effective corporate control [0,1] in available micro-data?
- Solution → Scoring + Recursive search algorithm.
- Scoring of each individual in typical behaviours of corporate controlling partners.
 - Social Security affiliation registries → Corporate self-employees, incorporated family members, administrator, type of employer.
 - Wealth tax records → WT-exempt shares or business assets.
 - Personal income tax records → Special asset-holding, professional or artistic/sports corporation, PIT withholdings of administrator, manually set salary, typical remunerations.
 - Third-party reported income registries → Remuneration of administrator, type of employer, PIT-exempt income.
- Recursive search algorithm → Search refinement on lags or leads.
- Accurate fitting of actual controlled corporations.

Figure: Total number of effectively controlled corporations



By region

By sector

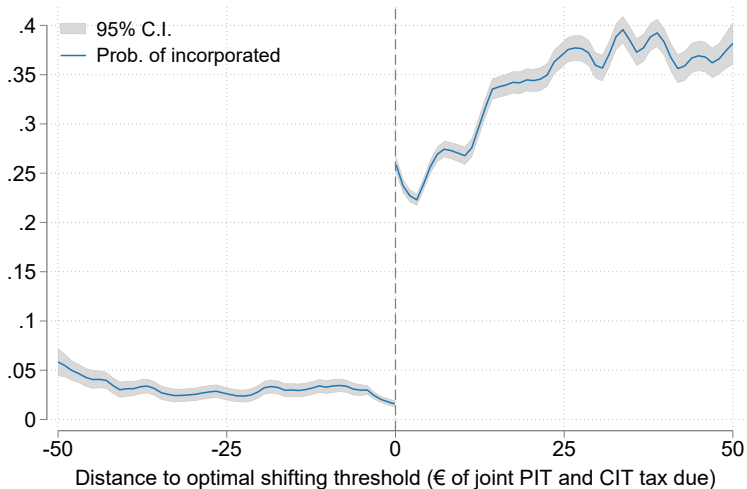
- No matched individual-to-corporate micro-data → Once incorporated, no actual corporate records observable.
- Solution #1 → Estimate effective CIT rate with using aggregate CIT statistics and cell matching: by year, region, legal form, and size.
- Solution #2 → Estimate corporate profits from:
 - Last pre-incorporation self-employment, labor or real estate income.
 - Incorporated remunerations s.t. linked-operations regulation → E.g. Professional-classified corporations must allocate 75% of its pre-tax profits to partners through invoicing.
 - Realized dividends + estimated effective CIT faced.
 - Average corporate profits for entities with certain shareholding capital, location, legal form, sub-sector, size and age.

6 Empirical analysis: income shifting

- How much of the incorporation (& income shifting) is due to income tax incentives? Magnitude of the behavioral response.
- Causal identification → Compare taxpayers around the optimal income-shifting threshold → Preliminary analysis prior to RDD (+ diff-in-diff).
- PIT + CIT simulator to individually compute potential gain or loss from (un)incorporating and shifting income.
- Zoom in potential joint PIT + CIT change between -€50 and +€50.
- Given joint effective tax rate over income changing, at least, 1 p.p.
- Considerable reaction of self-employment income around the income shifting threshold → Probability of incorporating increases by 22 p.p. once tax incentive is activated.
- Run simple heterogeneity correlation analysis with all taxpayers with tax incentive to incorporate.

6 Empirical analysis: income shifting

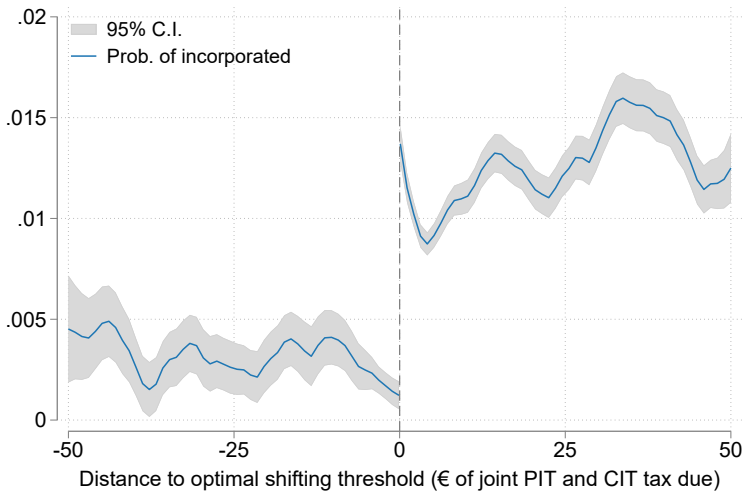
Figure: Self-employment income shifters



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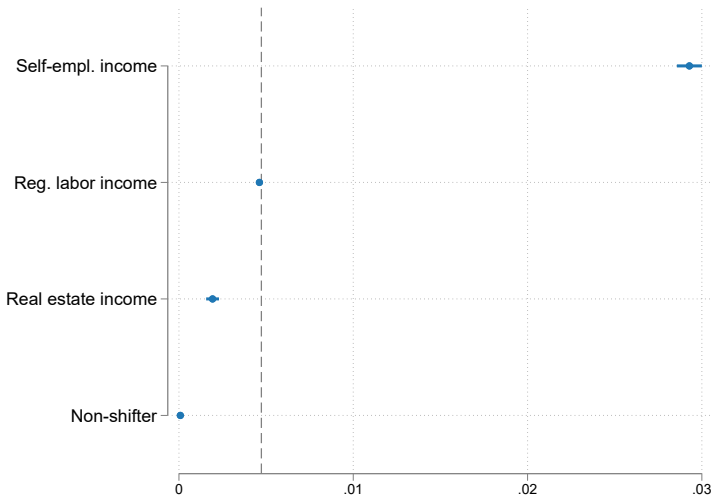
6 Empirical analysis: income shifting

Figure: Regular labor income shifters



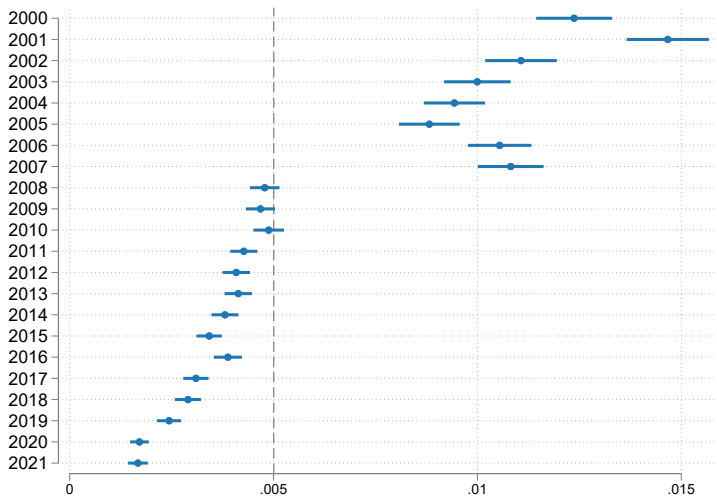
6 Empirical analysis: income shifting

Figure: Prob. of income shifting reaction, by potential shifter type



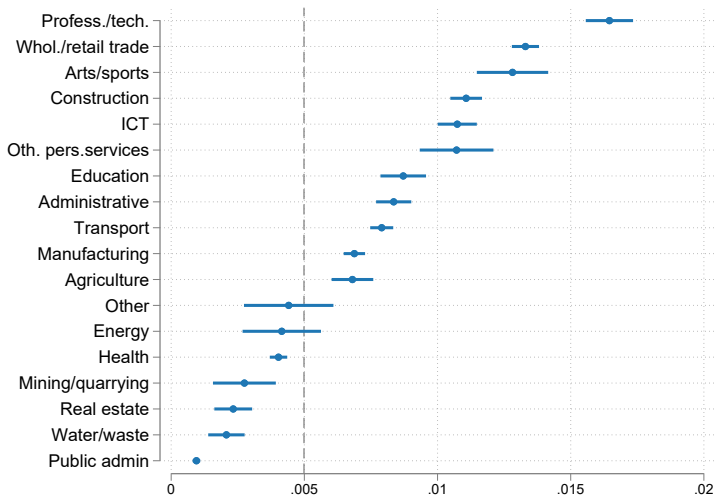
6 Empirical analysis: income shifting

Figure: Prob. of income shifting reaction, by year



6 Empirical analysis: income shifting

Figure: Prob. of income shifting reaction, by NACE09

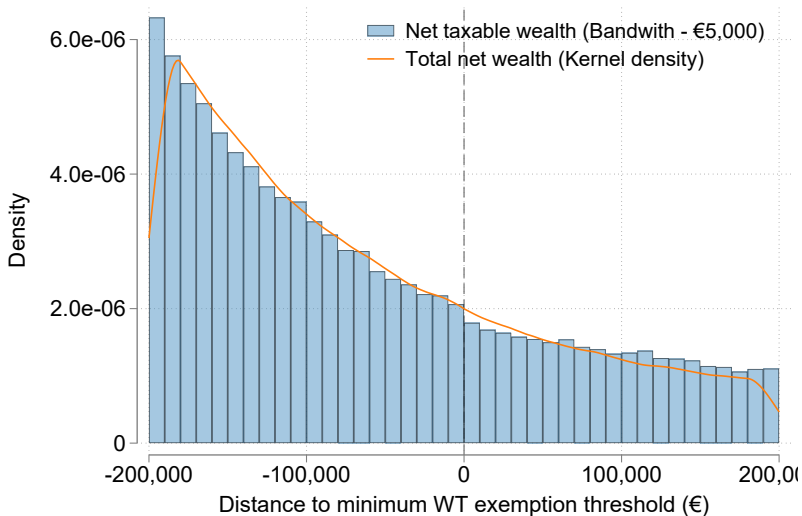


7 Empirical analysis: wealth shifting

- How much of the wealth shifting from personal to corporate/business accounts is due to wealth tax incentives?
- Zoom in individuals around the minimum WT exemption threshold → Preliminary analysis prior to bunching estimation setup.
- Distance to minimum WT exemption threshold → [-€200k,+€200k].
 - Total net wealth (all assets minus liabilities) distance.
 - WT-subject net wealth distance → Business & corporate assets/liabilities are exempted from WT.
- Compare distributions of those with corporate/business assets vs. those with no corporate/business assets.
- Compare distributions of those with corporate/business assets in regions with WT vs. those with corporate/business assets in regions with suppressed WT.
- Considerable reaction to the incentive.

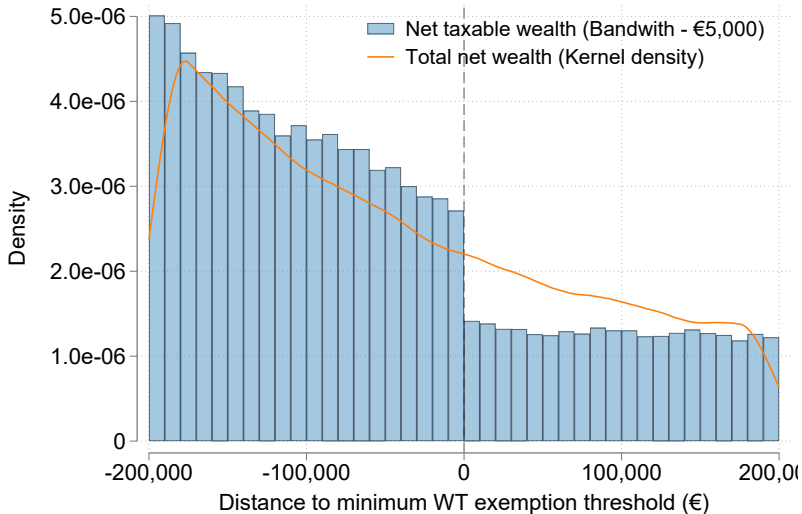
7 Empirical analysis: wealth shifting

Figure: Non-business/non-corporate taxpayers facing positive effective wealth tax



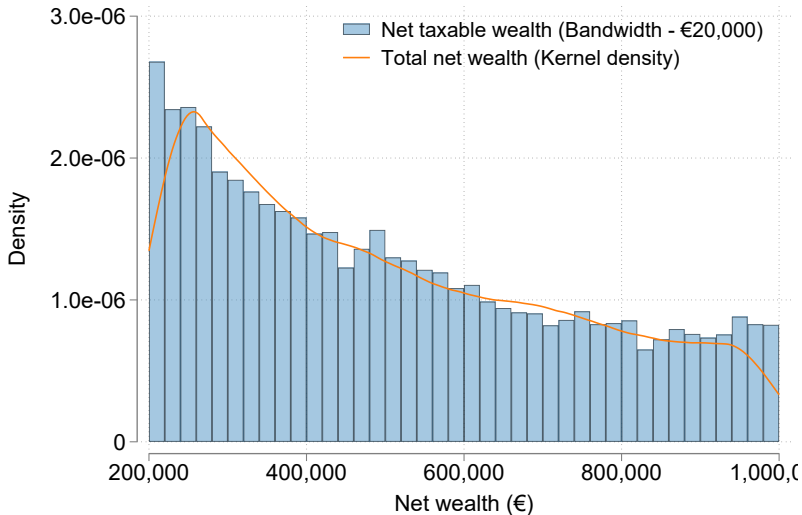
7 Empirical analysis: wealth shifting

Figure: Corporate/business taxpayers facing positive effective wealth tax



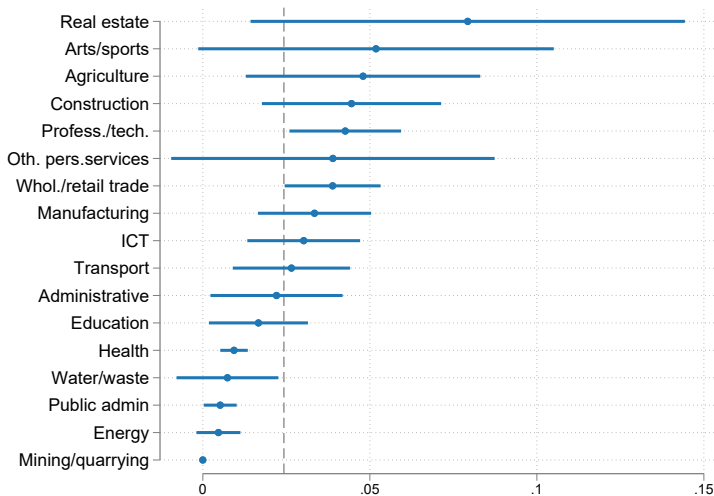
7 Empirical analysis: wealth shifting

Figure: Corporate/business taxpayers facing no effective wealth tax (mainly, Madrid)



7 Empirical analysis: wealth shifting

Figure: Prob. of wealth shifting reaction, by NACE09



8 Partial equilibrium counterfactual

- Simple counterfactual simulation using joint PIT + CIT + WT calculator.
 - All individuals incorporated or with WT-exempt business assets.
 - No possibility to shift income and wealth.
 - Total income s.t. PIT (general/progressive base) & Total net wealth s.t. WT (without business/corporate assets WT-exemption)
- No G.E. effects allowed
- Simulate potential scenario if shifting channels are closed
 - How much joint PIT + CIT + WT progressivity is reduced by taxpayers with controlled firms?
 - How much public revenue is lost in these channels?

8 Partial equilibrium counterfactual

Figure: Joint tax progressivity, actual vs. closed-channels, 2016

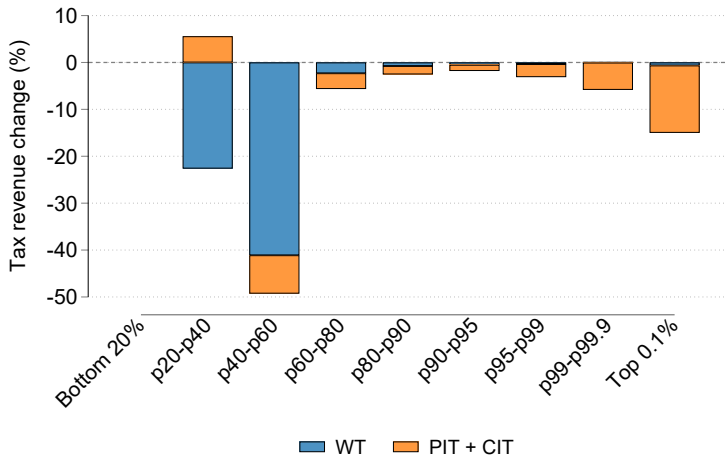


Income inequality

Wealth inequality

8 Partial equilibrium counterfactual

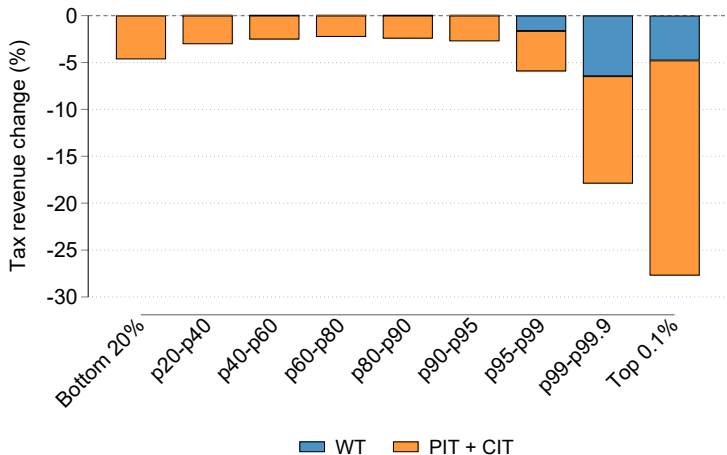
Figure: Tax revenue change, actual vs. closed-channels, by income level, 2016



Business owners in the income distribution

8 Partial equilibrium counterfactual

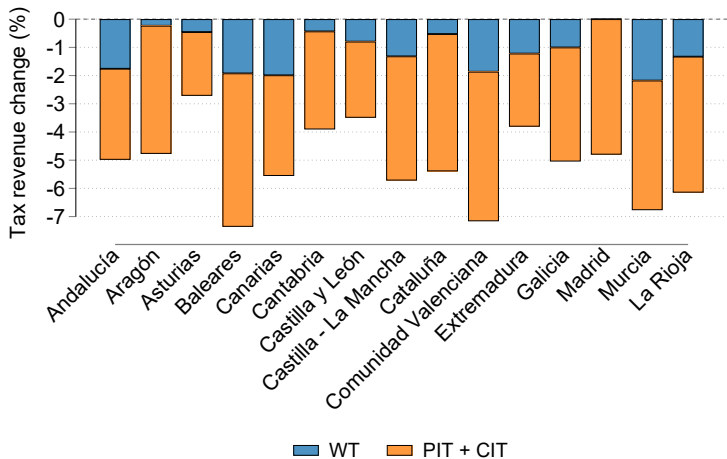
Figure: Tax revenue change, actual vs. closed-channels, by net wealth level, 2016



Business owners in the net wealth distribution

8 Partial equilibrium counterfactual

Figure: Tax revenue change, actual vs. closed-channels, by region, 2016













- Study **magnitude of behavioral responses** of **business owners** to tax incentives.
- Not only income shifting, but also **wealth shifting**.
- Integrated framework of **PIT + CIT + WT**.
- Not only one reform, but a **2-decade period of reforms** with different signs, sizes, and forms.
- Causal identification (*RDD* + *bunching*) with **quasi-experimental** variation from **Spanish decentralized** setup.
- Sizeable **wealth and income shifting reaction**.
- Horizontal equity damaged by **role of firms in lowering personal taxation**.
- Business owners **escape nominal progressivity**, limiting the power of the redistribution function, through important **tax revenue losses**.



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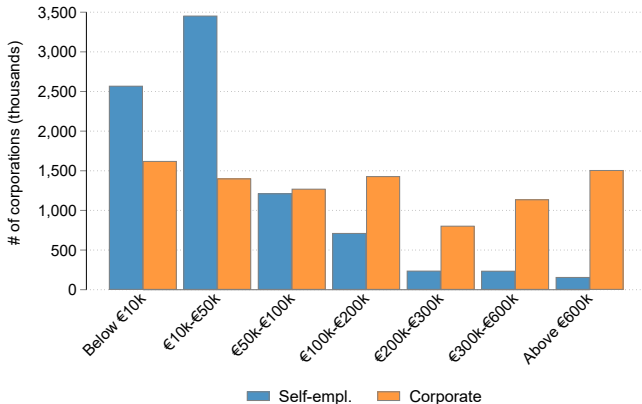
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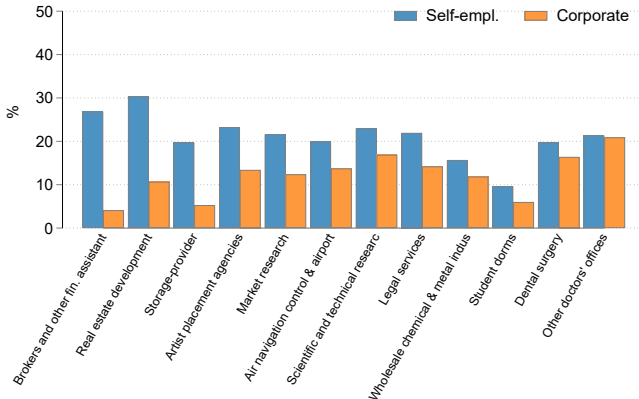
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Figure: Number of firms by legal form and turnover level, 2017



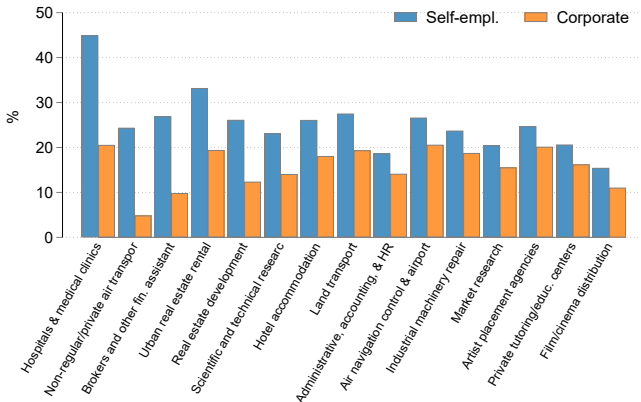
Source: Agencia Estatal de Administración Tributaria, AEAT (2024c).

Figure: Effective business profit taxation by legal form and sub-sector, no employees, 2017



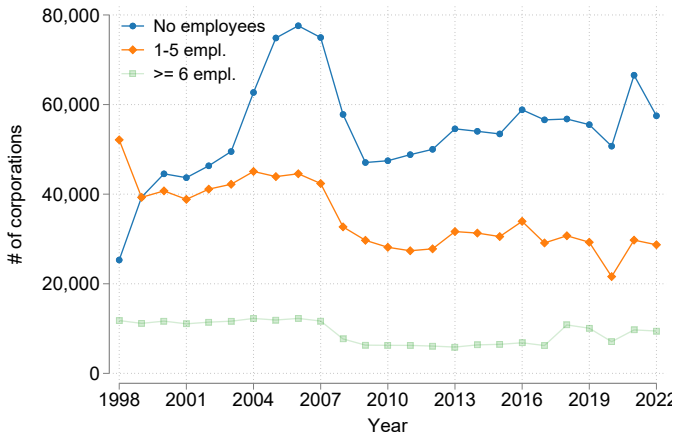
Source: Agencia Estatal de Administración Tributaria, AEAT (2024c).

Figure: Effective business profit taxation by legal form and sub-sector, employees, 2017



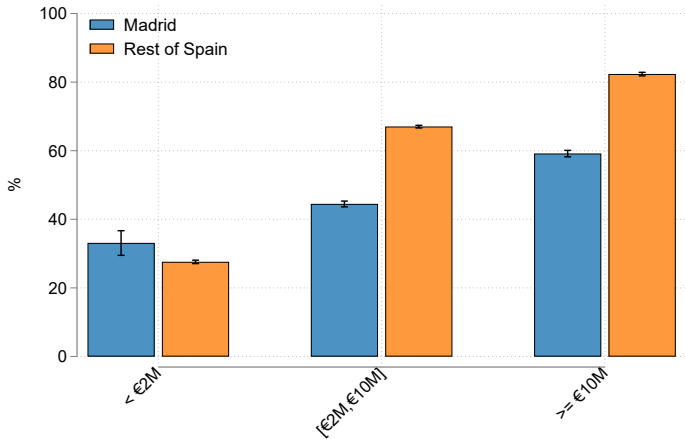
Source: Agencia Estatal de Administración Tributaria, AEAT (2024c).

Figure: Absolute number of newly created corporations by size



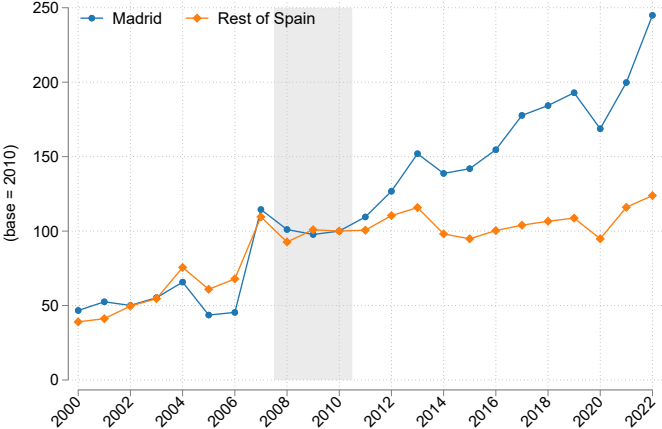
Source: Instituto Nacional de Estadística, INE (2024c).

Figure: Unlisted shares benefiting from WT exemption by region and total asset level



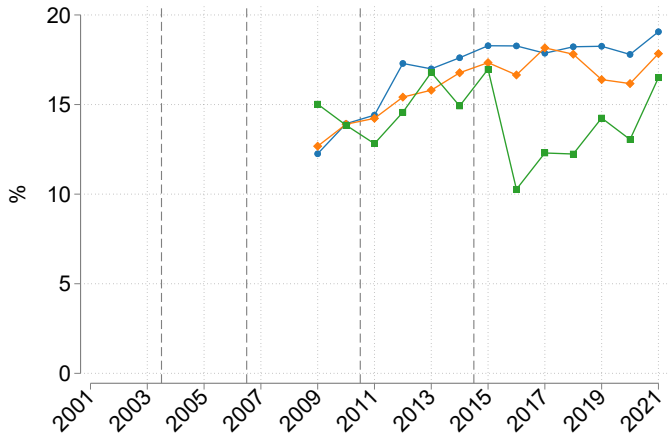
A1 Motivation

Figure: Voluntary dissolution of corporations by region over time



Source: Instituto Nacional de Estadística, INE (2024a).

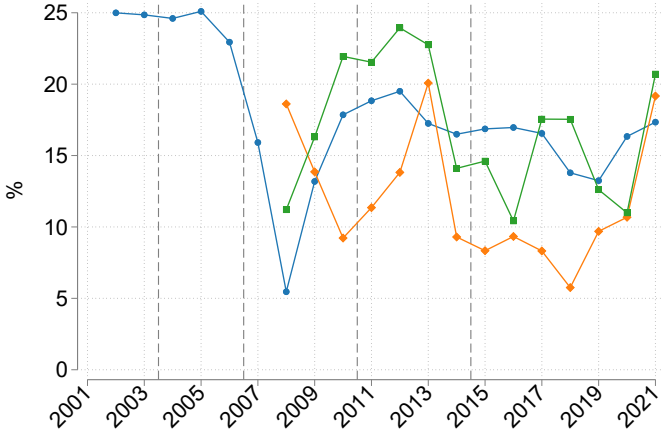
Figure: Effective CIT, by corporate size, Agriculture, Spain



Source: Agencia Estatal de Administración Tributaria, AEAT (2024a).

A2 Institutional Setting

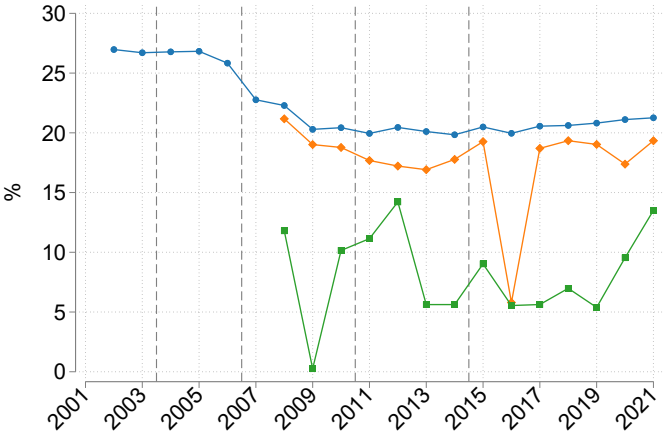
Figure: Effective CIT, by corporate size, Energy & water, Spain



Source: Agencia Estatal de Administración Tributaria, AEAT (2024a).

A2 Institutional Setting

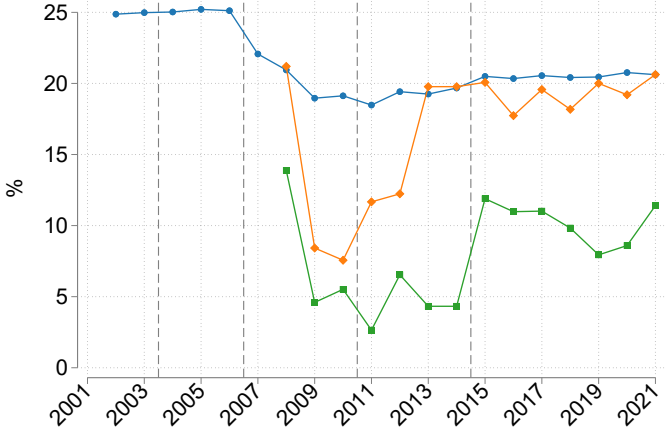
Figure: Effective CIT, by corporate size, Industry & Manufacture, Spain



Source: Agencia Estatal de Administración Tributaria, AEAT (2024a).

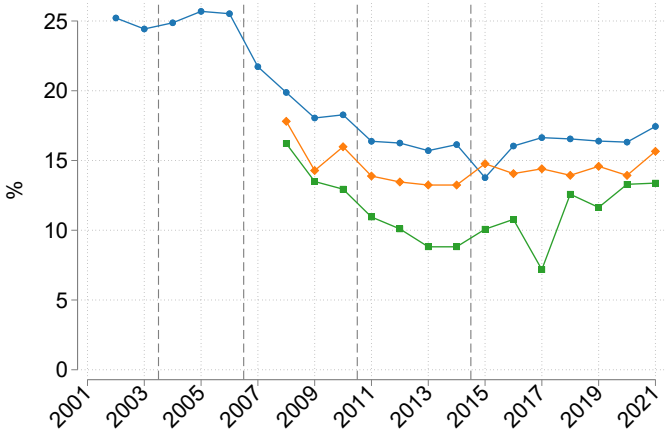
A2 Institutional Setting

Figure: Effective CIT, by corporate size, Wholesale, retail & transp., Spain



Source: Agencia Estatal de Administración Tributaria, AEAT (2024a).

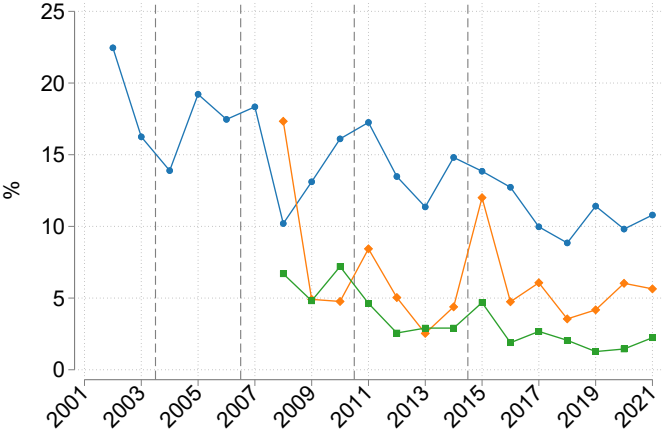
Figure: Effective CIT, by corporate size, Real estate & constr., Spain



Source: Agencia Estatal de Administración Tributaria, AEAT (2024a).

A2 Institutional Setting

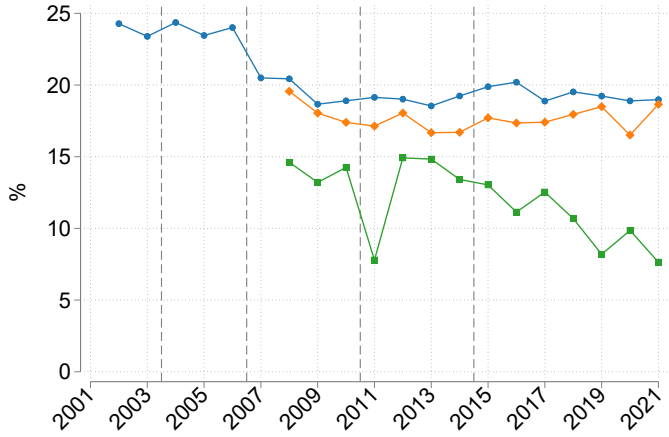
Figure: Effective CIT, by corporate size, Finance-related serv., Spain



Source: Agencia Estatal de Administración Tributaria, AEAT (2024a).

A2 Institutional Setting

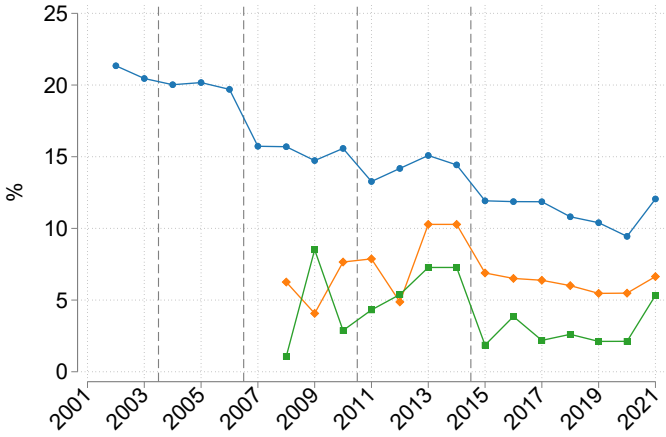
Figure: Effective CIT, by corporate size, Education & health, Spain



Source: Agencia Estatal de Administración Tributaria, AEAT (2024a).

A2 Institutional Setting

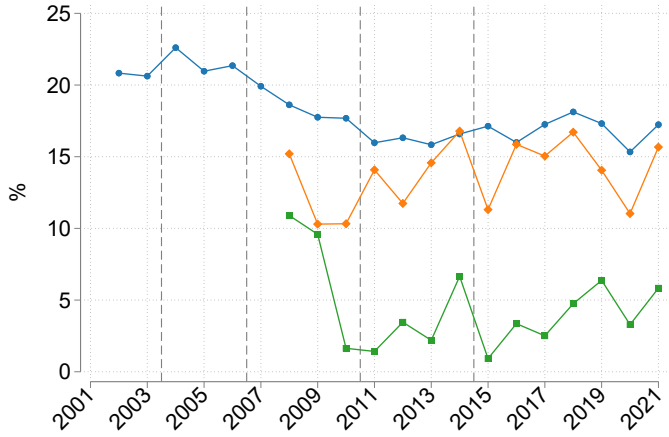
Figure: Effective CIT, by corporate size, Prof., technical & admin., Spain



Source: Agencia Estatal de Administración Tributaria, AEAT (2024a).

A2 Institutional Setting

Figure: Effective CIT, by corporate size, Accom., food/bever., ICT & arts, Spain



Source: Agencia Estatal de Administración Tributaria, AEAT (2024a).

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Figure: Distribution of effectively controlled corporations by region, 2016

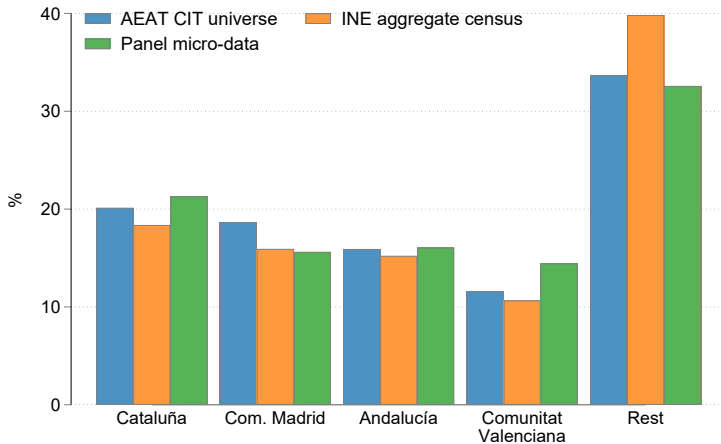
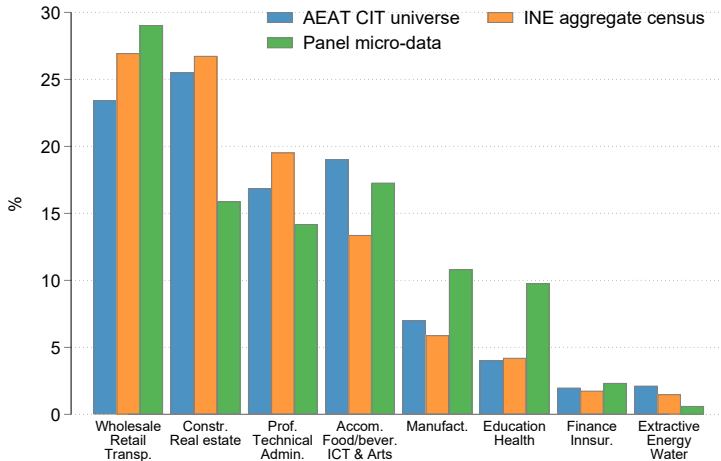


Figure: Distribution of effectively controlled corporations by sector, 2016



A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Agriculture, forestry and fishing

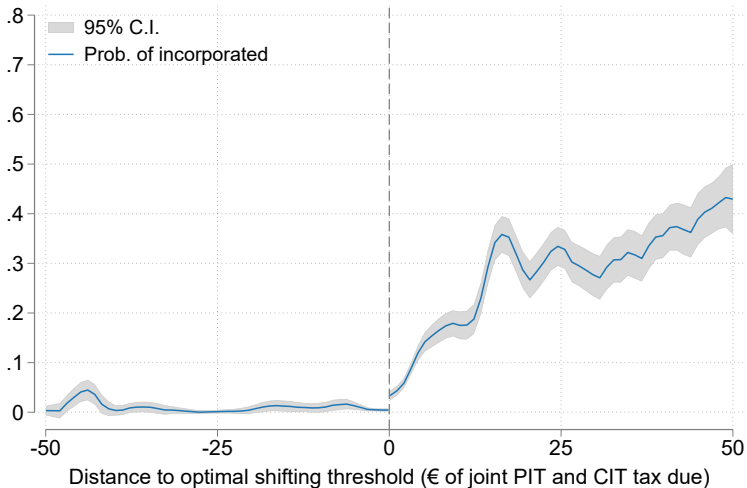
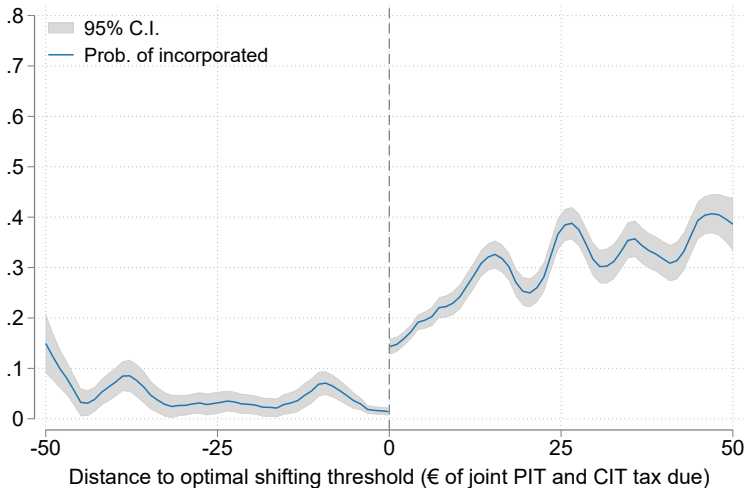
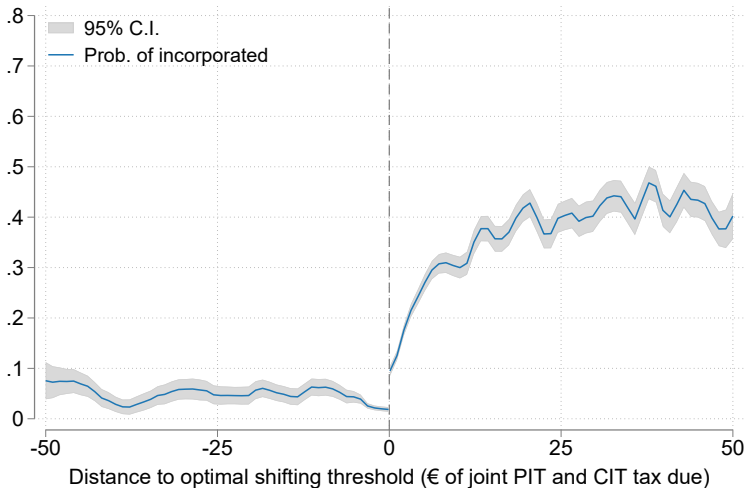


Figure: Self-employment income shifters: Construction



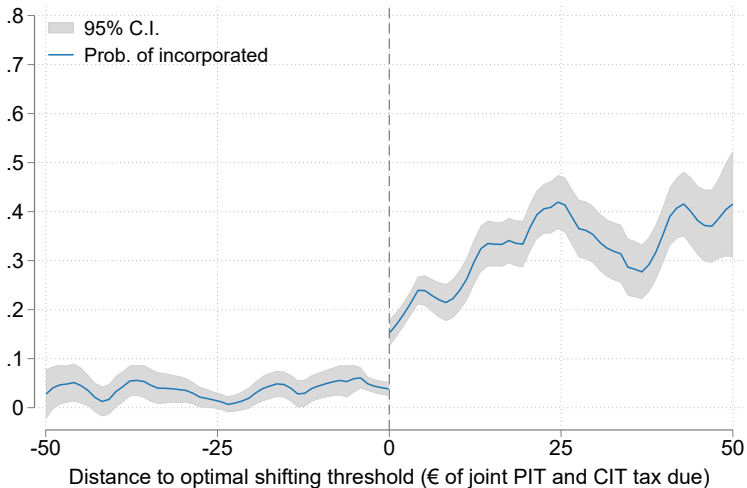
A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Wholesale and retail trade



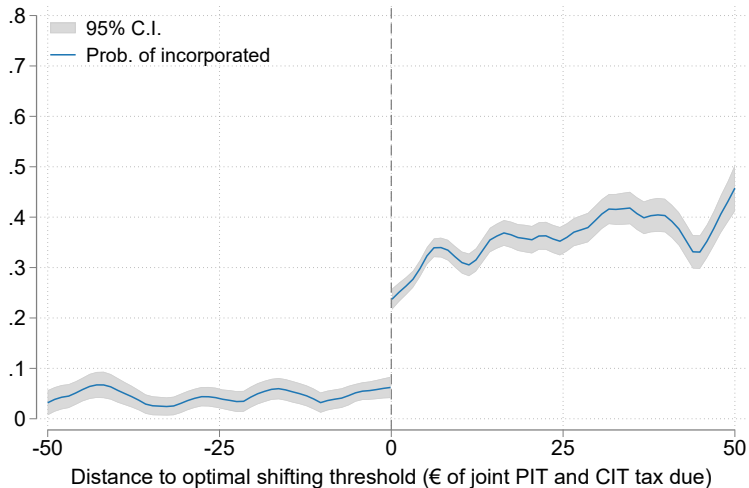
A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Transport and storage



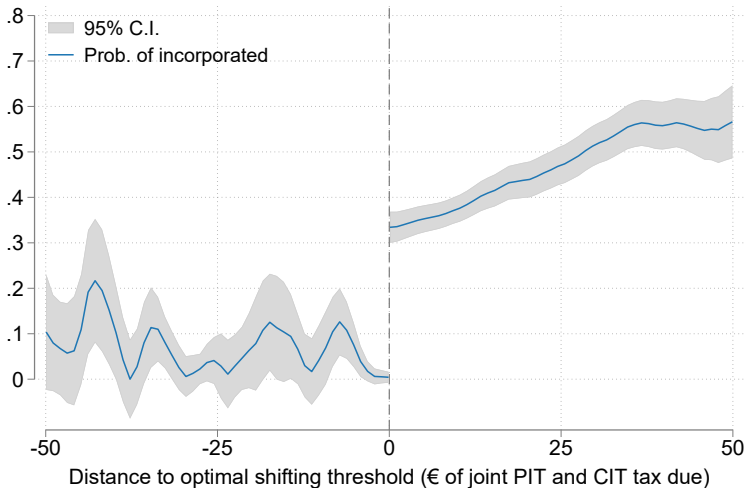
A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Accommodation and food/beverage service



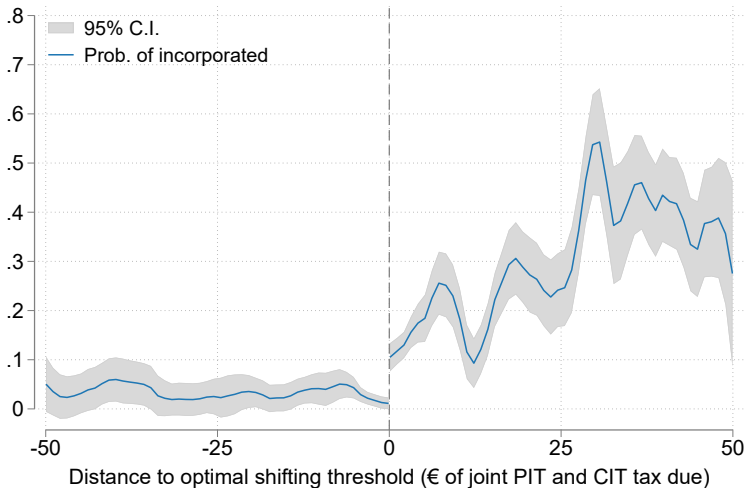
A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Information and communication



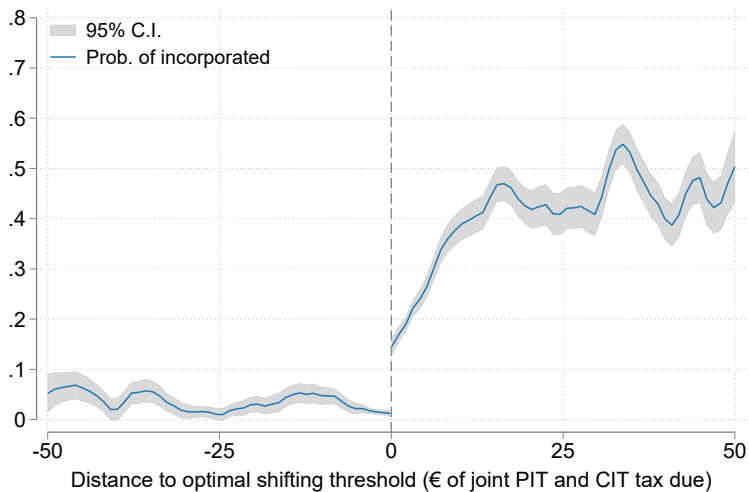
A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Financial and insurance activities



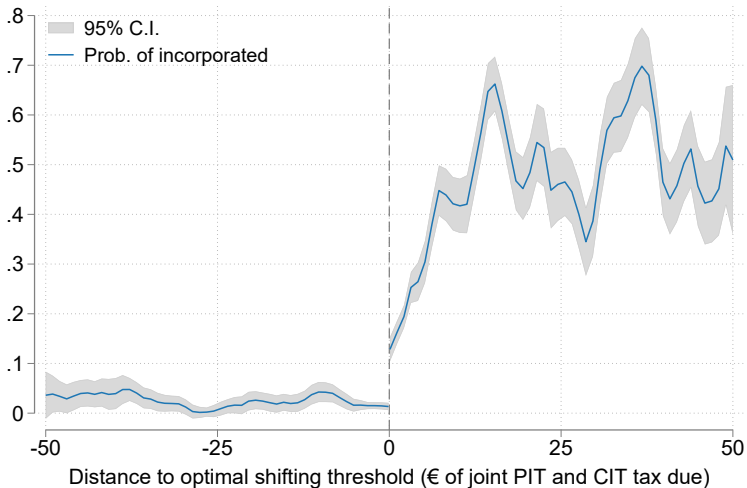
A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Legal, architectural and engineering, and other prof. activities



A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Legal activities



A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Administrative and support services

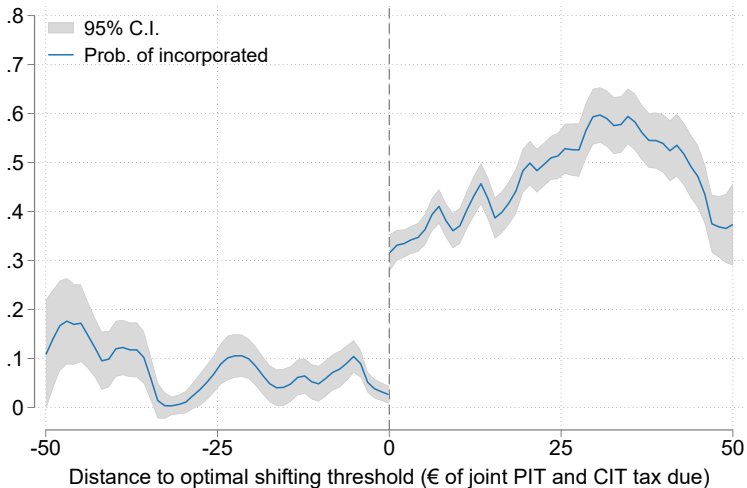
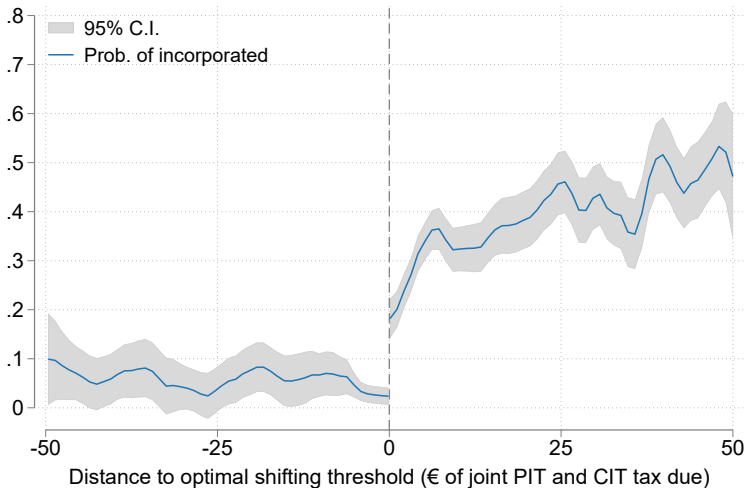
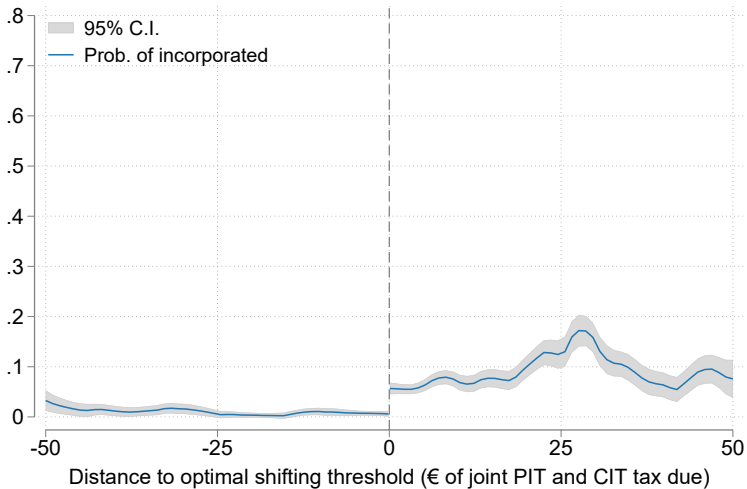


Figure: Self-employment income shifters: Education



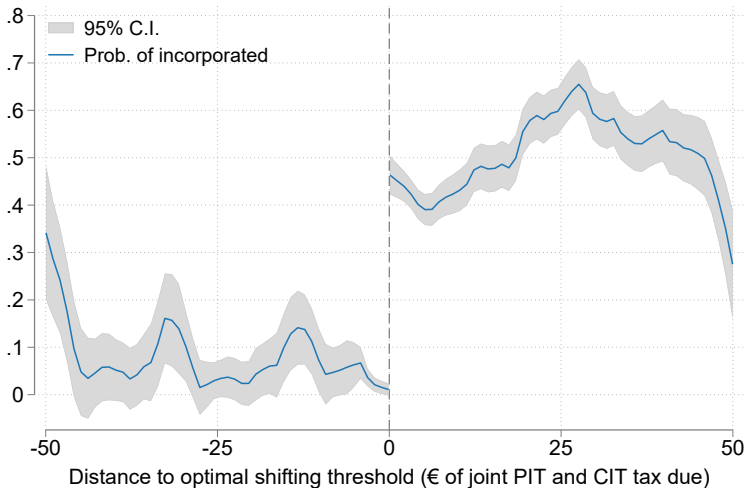
A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Human health and social work



A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Arts, entertainment and recreation



A4 Empirical analysis: income shifting

Figure: Self-employment income shifters: Other personal services

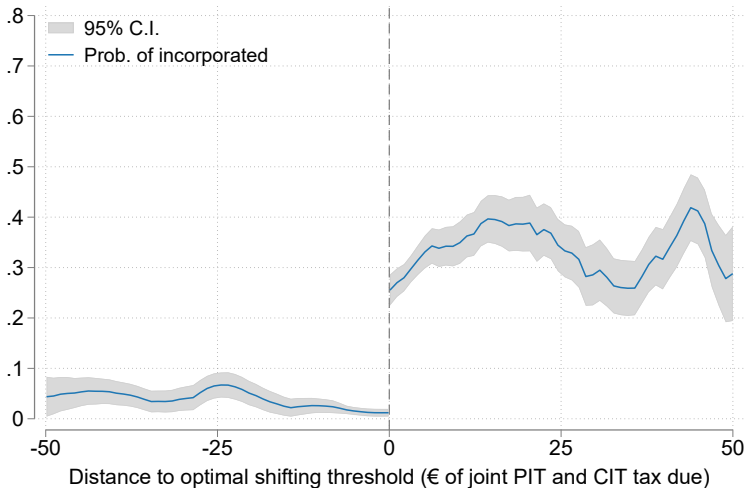


Table: Income inequality, actual vs. closed-channels, 2016

	Actual	Potential
p90/p10	98.415	98.934
p90/p50	2.567	2.568
p10/p50	.026	.026
p75/p25	3.841	3.829
Gini	.496	.493

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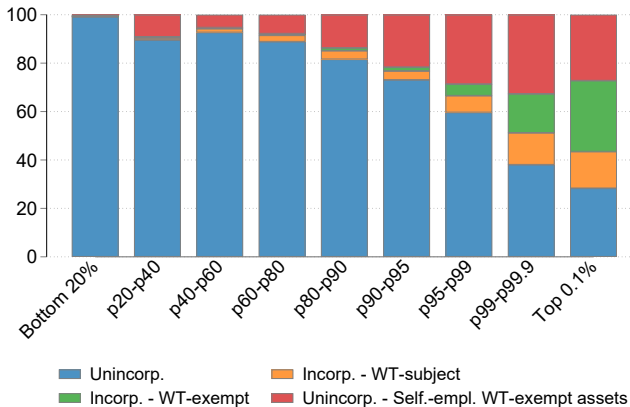
Table: Asset inequality, actual vs. closed-channels, 2016

	Actual	Potential
p90/p10	438.228	438.189
p90/p50	5.503	5.503
p10/p50	.013	.013
p75/p25	20.321	20.256
Gini	.782	.782

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A5 Partial equilibrium counterfactual

Figure: Total pre-tax income (personal + corporate) distribution, 2018



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A5 Partial equilibrium counterfactual

Figure: Total pre-tax net wealth distribution, 2018

