Paraísos Fiscales, Wealth Taxation, and Mobility

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NBER Summer Institute

Wealth Taxation, Fiscal Decentralization, and Mobility

- The rise in wealth and income inequality in many countries has spurred new interest in the taxation of wealth. Critical to this debate is whether states should be allowed to levy wealth taxes when global (Piketty 2014) or federal taxes are politically infeasible.
- A central question in public finance concerns the "tenable range" of local government redistributive policies. Classic wisdom: mobility undermines redistribution, and for this reason, redistribution is intrinsically a "national policy" (Stigler 1957; Musgrave 1959).
- How large are the mobility responses to wealth taxation? Are these responses large enough to threaten the "tenable range" of local wealth taxation?

$\rightarrow$ **New evidence on the effect of decentralized wealth taxation on mobility and the implications for regional revenue and inequality dynamics.**

Our Paper

- **Context**: Unique decentralization of the Spanish wealth tax system in 2011, after which all regions levied positive tax rates except from Madrid. A setting where decentralized taxation least likely to be tenable.

- **Data**: Our setting allows us to link administrative wealth tax records and personal income tax records, providing us with the ability to follow the fiscal residence of individuals before and after decentralization.

Preview of Results

- **Aggregate mobility analysis:** Madrid's wealthy increases by 9% after 5 years, but other regions only see a 2% decline. Decentralized redistribution is possible in SR.
- **Individual choice analysis:** Exploits progressivity of the tax schedule. Only tax differentials with Madrid matter.
- **Theory:** Corner solution of aiming for lowest tax rate is consistent with evasion.
- **Revenue analysis:** Federal interventions can improve the design of the tax system. Minimum tax rates revenue dominate harmonization.
- **Wealth inequality analysis:** The growth in the top 1% wealth share in Madrid was double absent mobility. Political forces may destabilize local redistributive policy in LR.

▸ Result in Raw Data ▸ Transition Matrices ▸ Wealthy Are Rentiers

Contributions to Literature

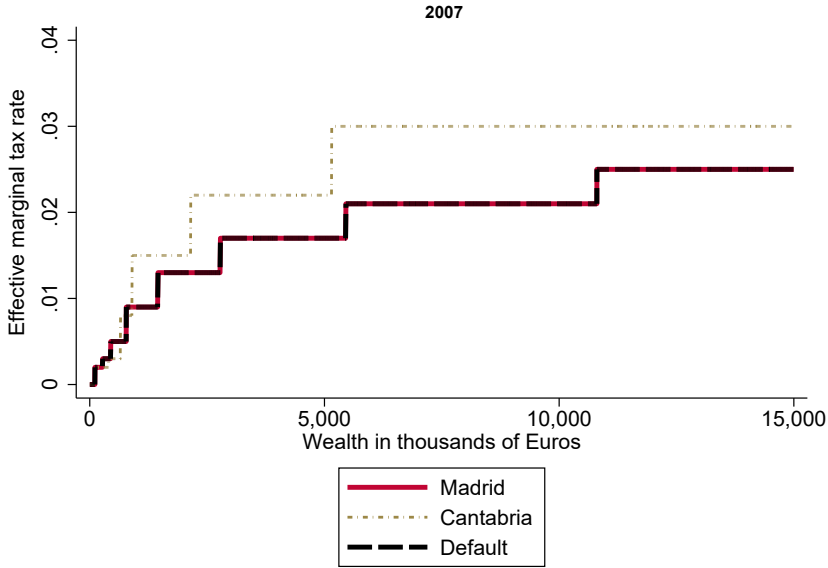
- **Wealth taxation** (Scheuer and Slemrod 2021, JEP): Wealth-taxed induced mobility to zero tax regions under the residence-principle — extensive margin! Implications for inequality from a novel subnational wealth decomposition.
- **Mobility/enforcement response to taxes** (Kleven et al. 2020, JEP; Slemrod 2019, JEL): Where an individual "lives" can change due to evasion—Boris Becker, Shakira.
- **Local taxation and spatial misallocation** (Agrawal et al. 2021, JEL): Empirically quantify the fiscal externality of a tax haven on non-zero tax states.
- **Fiscal federalism** (Oates 1999, JEL): Empirically quantify whether minimum tax rates revenue-dominate tax harmonization.

Institutions and Data

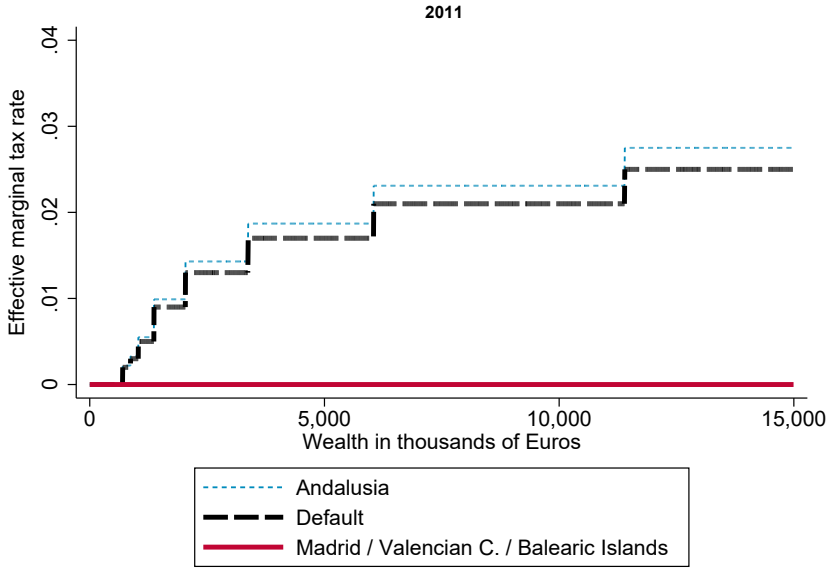
The Setting of the Spanish Wealth Tax

- Annual progressive tax on the sum of all individual wealth components net of debts (individual filing).
- Levied if net taxable wealth (i.e. taxable assets - liabilities) above 700,000 Euro since 2011.
  - 130,216 wealth tax filers in 2011 (0.3% of the adult population).
- Fiscal residence is where the individual spent the majority of days in a fiscal year.
  - Fiscal residence can be simply changed in the tax form (legally: change of job, divorce, etc.).
  - Voting in regional elections is implicitly linked to fiscal residence.
- If regions do not exercise their right to change the wealth tax, the default national tax schedule prevails.
  - Sourcing rules: entirely based on the residence principle!

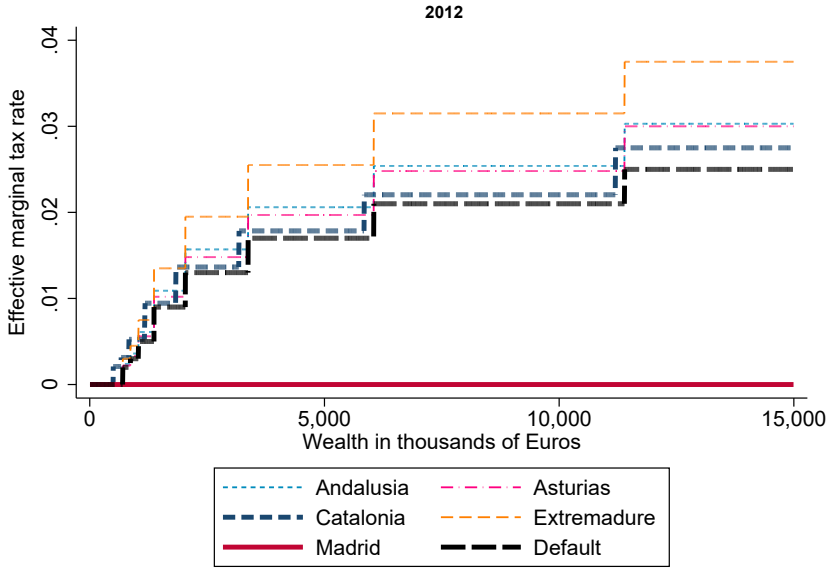
Wealth Tax Schedule



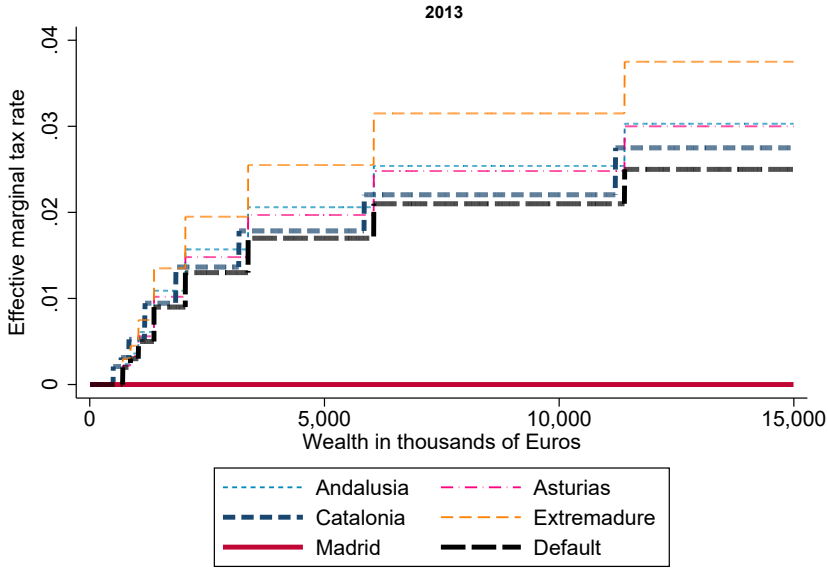
Wealth Tax Schedule



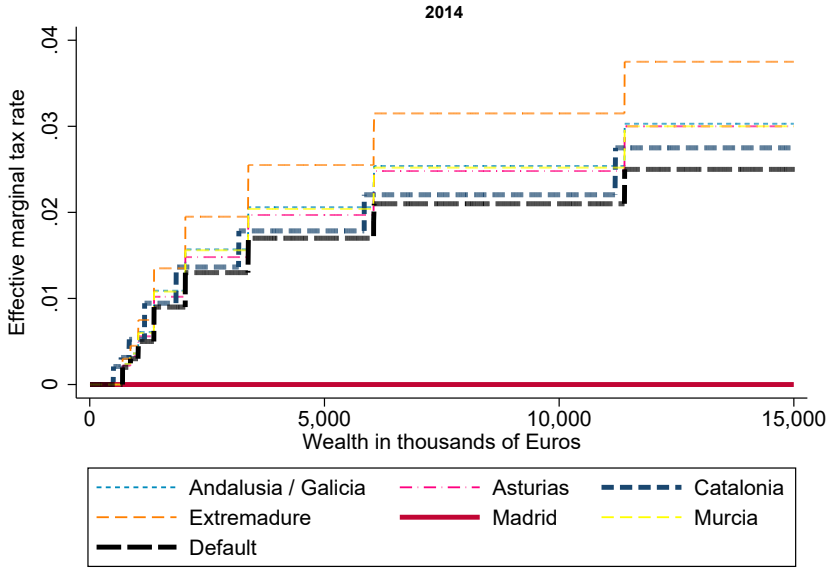
Wealth Tax Schedule



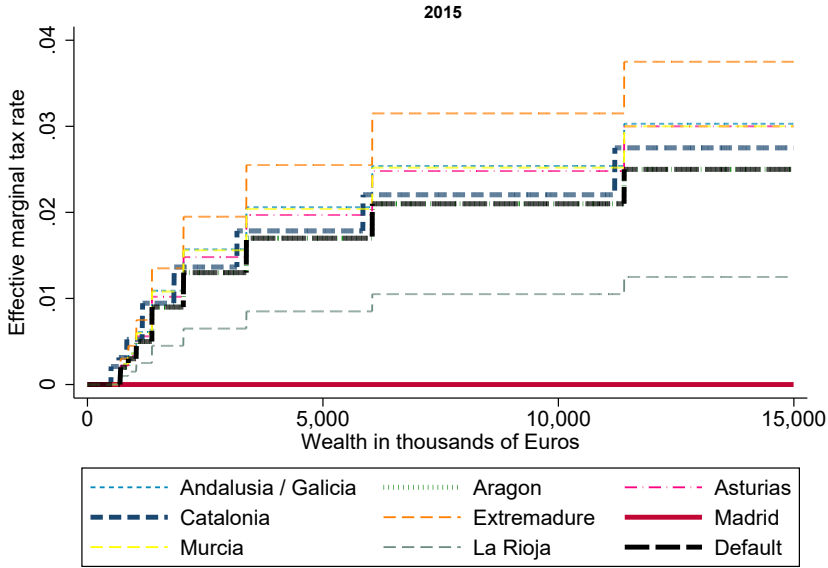
Wealth Tax Schedule



Wealth Tax Schedule



Wealth Tax Schedule



Data Sources

- Domestic variation in tax rates and the presence of a zero-tax region facilitates data linking that would be problematic at the international level.

- **Main sources:** longitudinal wealth tax records for individuals filing the wealth tax (2005-2007) linked to personal income tax records for both wealth tax filers/non-filers (2005-2015).
  - Fiscal residence reported in the income tax returns as the legal definition for both taxes.
  - Wealth variables not available from 2008 onward due to the suppression of the wealth tax. Extrapolate forward for simulations.

- **Tax simulator**: Research requires knowing the tax liabilities an individual pays in their region of residence and all possible counterfactual regions of residence.
  - Build our own wealth tax simulator for every region from 2005-2015

▸ Comparing Data to Regional Aggregates ▸ Comparing Data to Catalan Micro Data ▸ Verifying Tax Simulator

Aggregate Analysis

Event Study

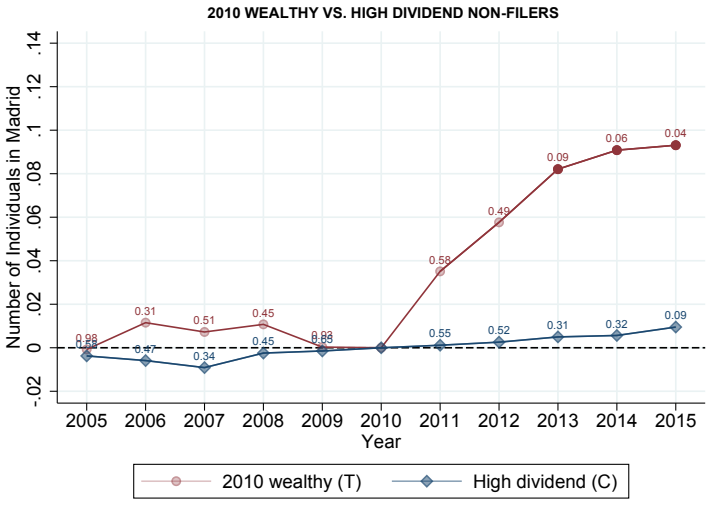
$$\ln N_{rt} = M_r \cdot \left[\sum_{y=-5}^{-2} \theta_y \cdot 1(y = t - 2011) + \sum_{y=0}^{4} \beta_y \cdot 1(y = t - 2011) \right] + X_{rt}\alpha + \zeta_r + \zeta_t + \nu_{rt}$$

where,

- N_{rt}: number of wealthy individuals in region r in year t
- M_r: indicator equal to 1 for the region of Madrid, 0 for the rest of regions
- θ_y: evolution of wealthy individuals in Madrid relative to other regions prior to 2010
- β_y: evolution of wealthy individuals in Madrid relative to other regions following the reform
- percentile-t wild cluster bootstrap

$\rightarrow$ **Easily extended to include a comparison group**

Madrid's Relative Population of the Wealthy Increases by 9% Five Years Later



Tax Elasticity w.r.t. Net-of-Average Wealth Tax

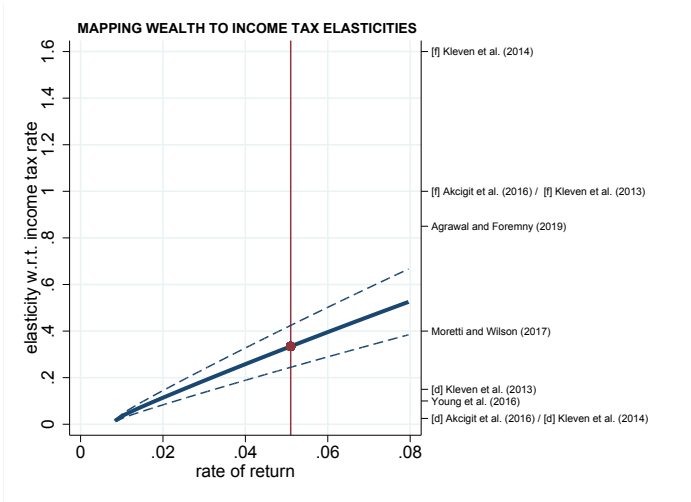
$$\ln(N_{rt}) = \varepsilon \cdot \ln(1 - \tau_{rt}) + \zeta_r + \zeta_t + X_{rt}\alpha + \nu_{rt}$$

	Number of Wealthy Filers			
	All			w/o Mad.
	(1a)	(1b)	(1c)	(1d)
$\ln(1 - atr_{rt})$	5.364	5.119	7.526	2.236
Uncorrected SEs	(1.103)	(1.065)	(1.032)	(0.979)
Bootstrap p-values	0.004***	0.004***	0.000***	0.080*
Controls	yes	yes	yes	yes
OLS	yes	no	no	no
Simulated IV with Fixed Wealth	no	yes	no	yes
Madrid x Post IV	no	no	yes	no

▸ Alternative Event Studies ▸ Elasticity of Wealth

How Big Are These Estimates?

- Let T denote to capital income tax, τ denote a wealth tax and R denote the rate of return. We convert to a income tax elasticity using $T = \frac{(1+R)\tau}{R}$ and $\varepsilon_{1-T} = \varepsilon_{1-\tau}\frac{d\ln(1-\tau)}{d\ln(1-T)}$.



Individual Analysis

Individual Choice Model

Location choice model exploiting progressivity of tax code:

$$d_{itj} = \beta \cdot ln(1 - \tau_{itj}) + \omega_{it} + \zeta_j z_{it} + \rho_{jt} + \varepsilon_{itj}$$

where:

- d_{ijt}: =1 if individual i chooses alternative j in year t
- $\zeta_j z_{it}$: individual characteristics (age, gender, income) that are allowed to have different effects in each alternative
- ω_{it}: fixed effects for each individual by year
- ρ_{jt}: alternative region fixed effects

Effect of Tax Differentials on Probability of Choosing a Region

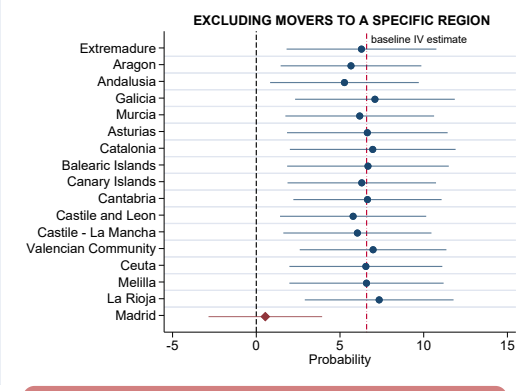
	All Regions				w/o Madrid
	(2a)	(2b)	(2c)	(2d)	(2e)
$\ln(1-\tau_{i,t,j})$	6.203***	6.658***	7.665***	7.787***	0.890
	(0.898)	(1.088)	(1.307)	(1.382)	(0.559)
mean ATR	0.237				0.310
baseline probability	22.3				
# obs	5,546,981				4,241,500
FE	yes	yes	no	no	no
alternative-year FE	no	no	yes	yes	yes
individual controls	no	yes	no	yes	yes
alternative region controls	no	yes	no	no	no

- Compare to aggregate: $\approx \frac{7.787 \times 0.237}{22.3} \times 100 = 8.3\%$ increase in Madrid's stock or 2.3% decline elsewhere. ▸ Choice Model Event Study ▸ Heterogeneity by Wealth

Theory: Fraudulent vs. Real Moves

Evidence on the Special Role of Madrid

$$d_{itj} = \beta \cdot ln(1 - \tau_{itj}) + \zeta_j z_{it} + \omega_{it} + \rho_{jt} + \varepsilon_{itj}$$



▸ Of 136 Region Pairs, Only Pairs Involving Madrid Matter

Theory: Evasion vs. Real Moves

- In our setting, taxpayers are aiming for the lowest possible tax rate. The theory suggests that our findings reflect reporting/shifting responses and not real migration.
- Intuition: evasion differs from migration in that a false change of fiscal residence still allows you to consume amenities/services in the home region.
- Here I present the results of a simplified version of the model.

▸ Model Notation/Setup ▸ Audit Rates in Spain

Standard Migration Model

- Individual i chooses the region j that yields the highest utility accounting for after-tax consumption, moving costs ϕ^i_{hj}, and amenities z^i_j:

$$u(c^i(1-T^i_j)-\phi^i_{hj},z^i_j)=\arg\max_{j'}\left\{u(c^i(1-T^i_{j'})-\phi^i_{hj'},z^i_{j'})\right\}$$

- A decrease in the tax rate of any one region, relative to the home region h will induce added migration to that region.

Basics of the Model: Evasion

- With tax evasion, the individual can stay living in the home region h and consume home-region amenities, z^i_{ht}, while fraudulently declaring another region.
- But committing tax evasion comes with some probability of being caught p^i and a fine f^i.
- Evading in Madrid is preferred to evading in any other region or truthfully reporting the home region if

$$p^i < 1/(1+f^i).$$

- When $p^i \to 0$, the individual will simply evade in the region that affords them the largest benefit from tax savings.
- Choice over both migration and evasion. Focusing on the case $p^i \to 0$, evading via Madrid will be preferable to moving to Madrid if moving costs are larger than amenity differences.

$$\phi^i_{hm} > g(z^i_m) - g(z^i_h)$$

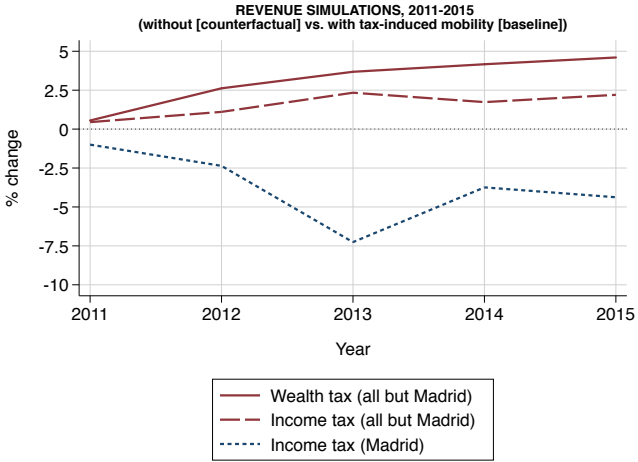
Counterfactual Exercises

Revenue Analysis

- The decentralization of the wealth tax has important consequences for tax revenue. What federal interventions can make local taxation more tenable?
- Use of wealth tax simulator, an income tax simulator and our empirical estimates to carry out revenue counterfactuals on both wealth and income tax revenue.
  1. Wealth tax decentralization without tax-induced mobility to Madrid
  2. Wealth tax with harmonization or minimum tax rates
- It abstracts from spillovers, other behavioral responses, new evasion strategies, and other GE effects. Given we have show mobility arises from evasion, these GE responses are less of a concern than if responses were real.

  $\rightarrow$ **Revenue analysis simply identifies the direct effect of improving enforcement or centralization on wealth tax revenue.**

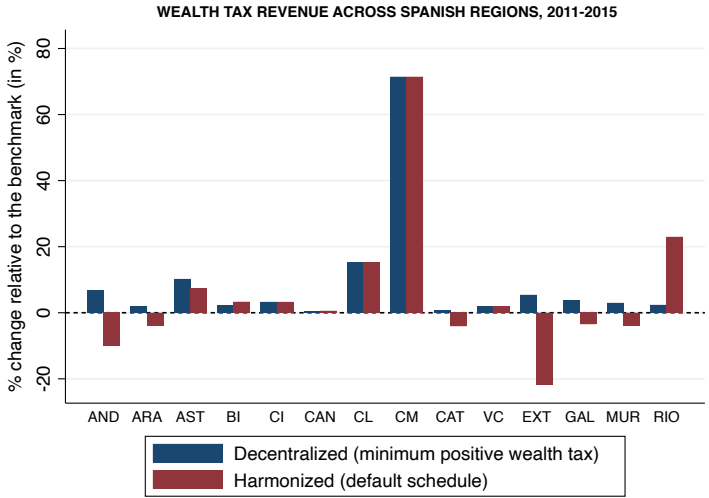
Spain Foregoes 5% of Wealth Tax Revenues Because of Mobility



→**but, fiscal externality to income taxes are transfers between Madrid & rest of Spain.**

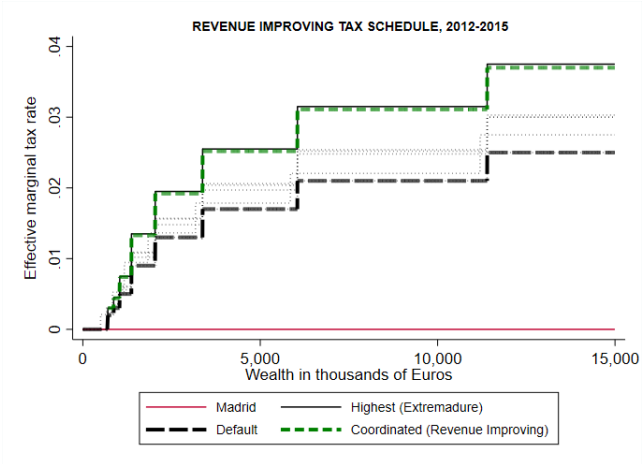
▸ Revenue Effects by Region

Federal Interventions: Harmonization vs. Minimum Tax Rates



→**Regions disagree over the rate to harmonize. Min rates raise revenue everywhere.**

What Harmonized Tax Schedule Improves Revenue in All Regions?

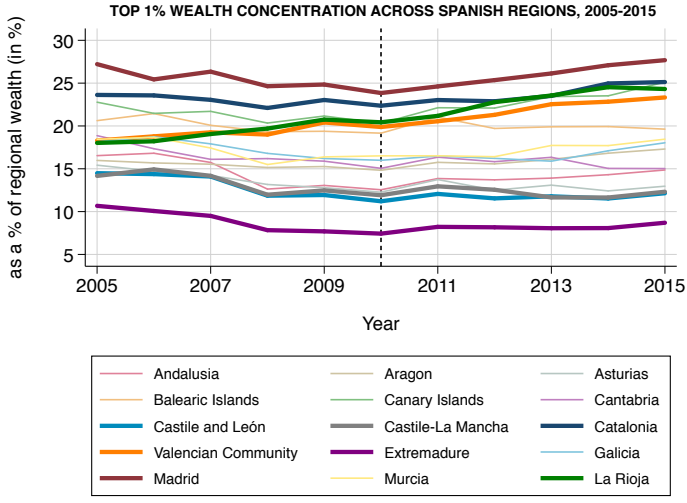


→**Hard to reach a political consensus on harmonization ⇒ Minimum tax rates likely to be more politically feasible.**

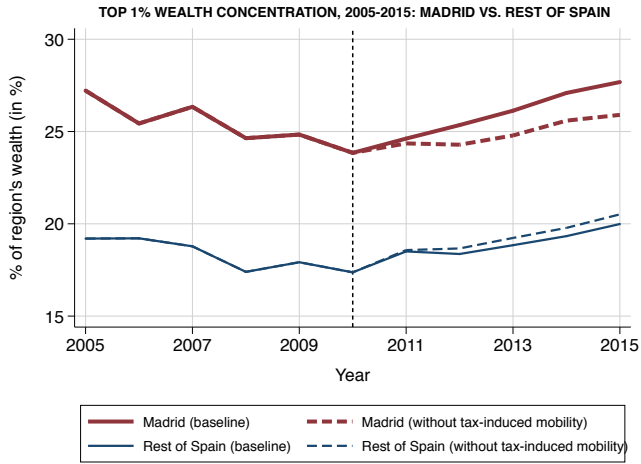
Wealth Inequality Analysis

- The decentralization of the wealth tax might shape regional and national wealth inequality dynamics.
  - Build new top national and regional wealth distribution series using personal income and wealth tax records over 2005-2015
  - Complements spatial evidence on equality of opportunity, income inequality, and poverty.
- Many concerns of local rising wealth inequality are linked to the fiscal residence.
  - Fiscal residence is linked to voting and likely political lobbying.
  - High-wealth individuals using Madrid for tax sheltering are unlikely to support tax/spending policies aligned with residents.

Regional Wealth Inequality



The Growth in the Top 1% Wealth Share in Madrid Was Almost Double the Growth Absent Mobility



▸ Inequality Effects by Region

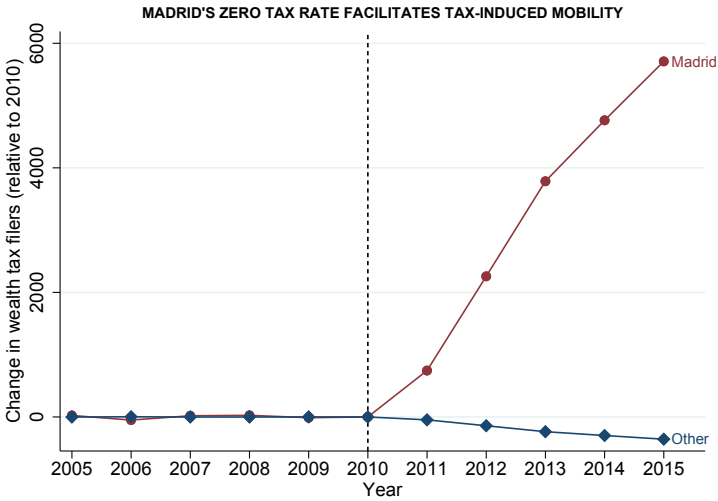
Discussion

Policy Implications

- Contrary to the conventional wisdom on local capital taxation, local redistributive policy seems to be feasible at raising revenue in the SR.
  - Although the effect on Madrid's tax base is large, the effect on any one other region is small.
- Nonetheless, the rise in wealth concentration might lead to increased political influence in the capital city, which raises concerns about the viability of decentralization in the LR.
- Federal interventions can mitigate some of these problems.
  - Tax harmonization is politically difficult. Minimum tax rates are likely to be more feasible and effective.
- The choice of a purely residential tax may amplify mobility concerns because a change of fiscal residence also moves fixed assets across regions.
  - This implies, counter to the conventional view, that tax competition may be more intense under the residence (rather than source) principle.

Bonus Slides

The Effect of Madrid on Mobility: Raw Data



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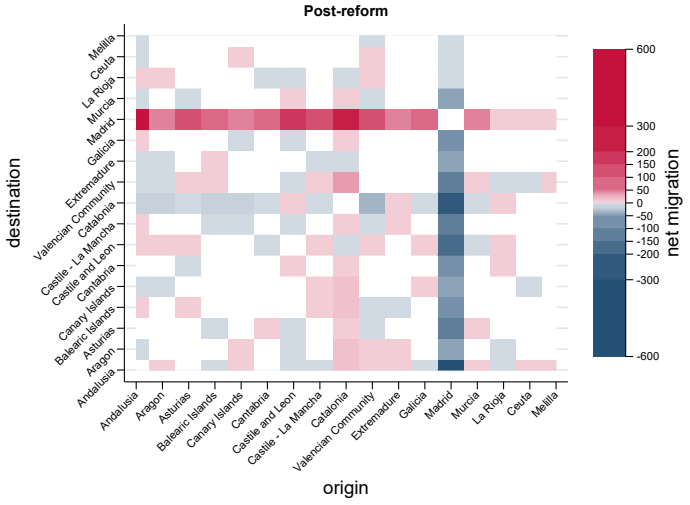
Transition Matrices



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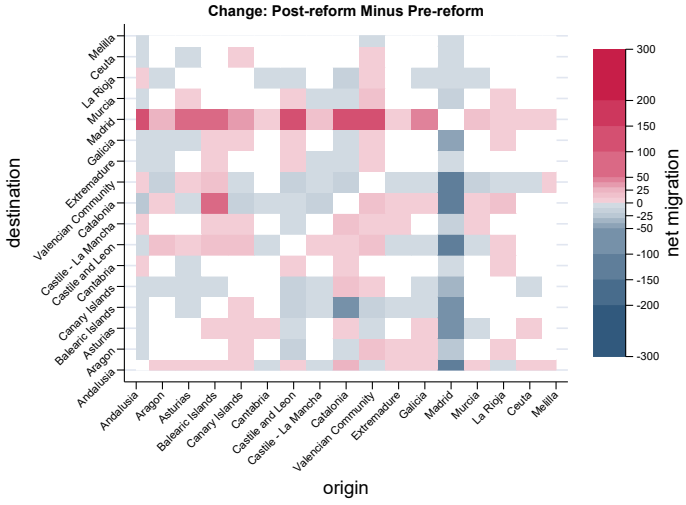
Transition Matrices



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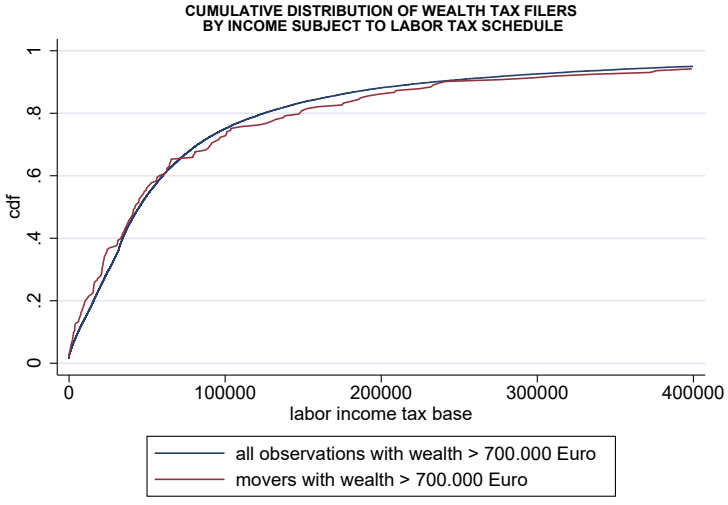
Most High Wealth Individuals Are Rentiers



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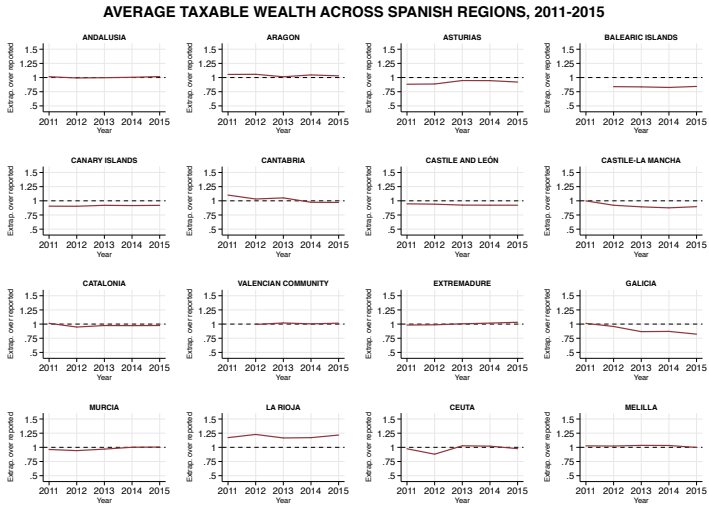
Comparing Extrapolated Wealth with Reported Aggregates



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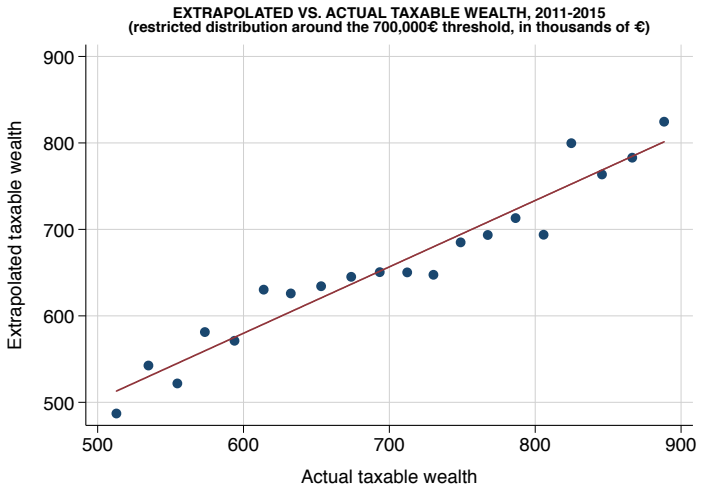
Comparing Extrapolated Wealth with Individual Data from Catalan Records



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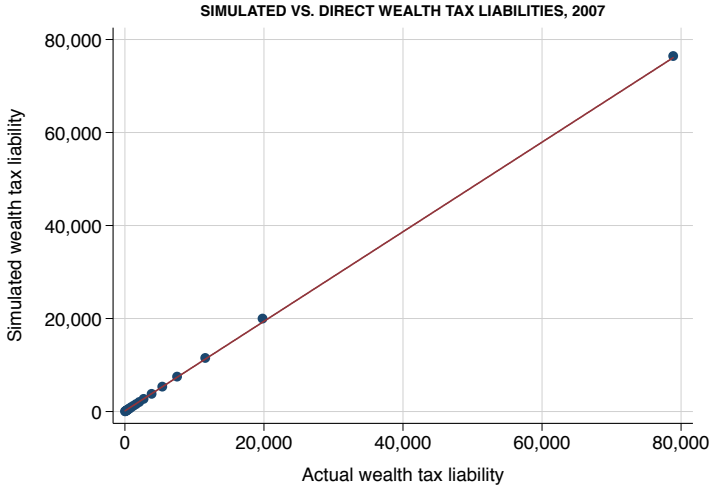
Comparing Simulated Tax Liability with Actual Records



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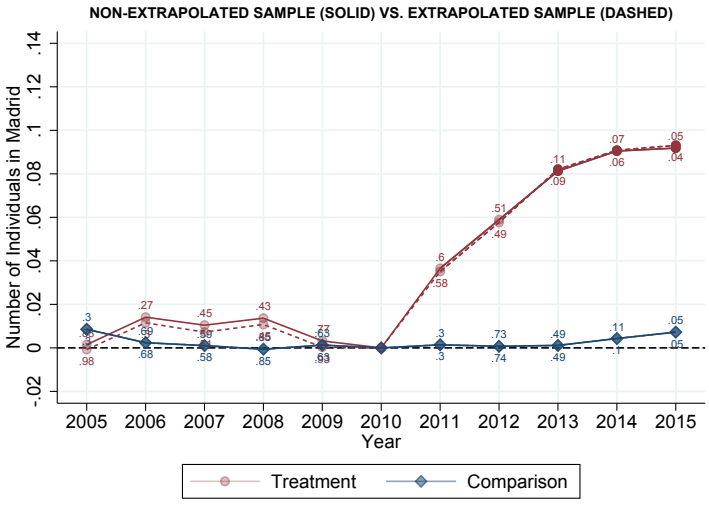
Event Study Using 2007 Wealth Data



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Elasticity of Wealth

$$\ln(W_{rt}) = \varepsilon \cdot \ln(1 - \tau_{rt}) + \zeta_r + \zeta_t + X_{rt}\alpha + \nu_{rt}$$

	Number of Wealthy Filers			
	All			w/o Mad.
	(1a)	(1b)	(1c)	(1d)
$\ln(1 - atr_{rt})$	5.626	5.358	7.816	2.086
Uncorrected SEs	(1.335)	(1.291)	(1.019)	(1.391)
Bootstrap p-values	0.022**	0.024**	0.000***	0.182
Controls	yes	yes	yes	yes
OLS	yes	no	no	no
Simulated IV with Fixed Wealth	no	yes	no	yes
Madrid x Post IV	no	no	yes	no

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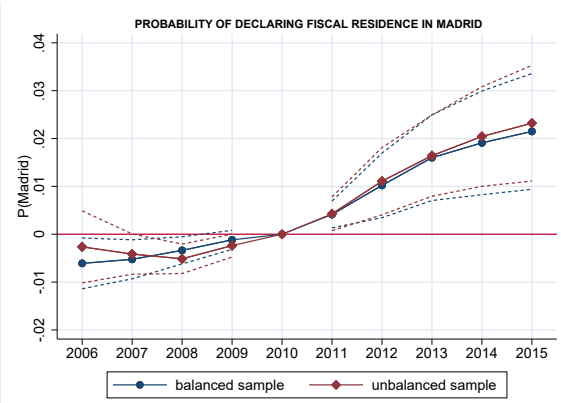
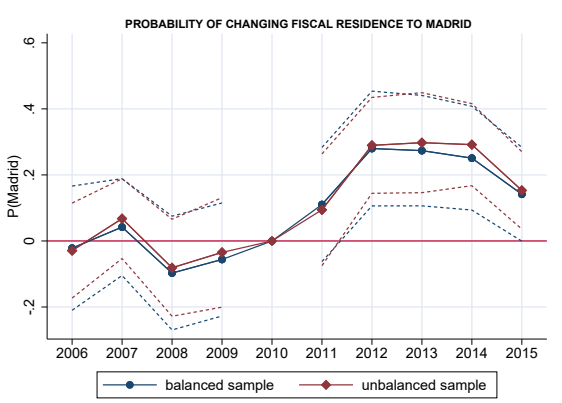
Individual Choice Event Study





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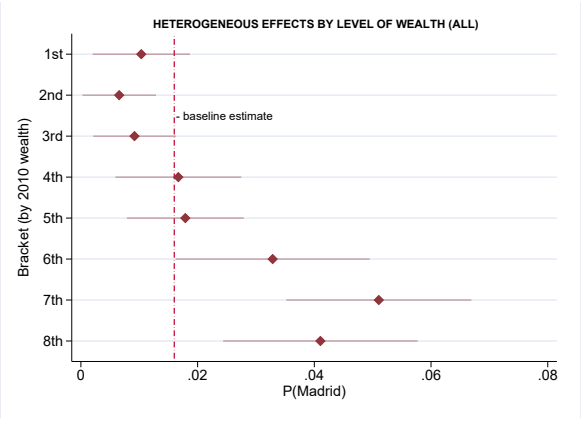
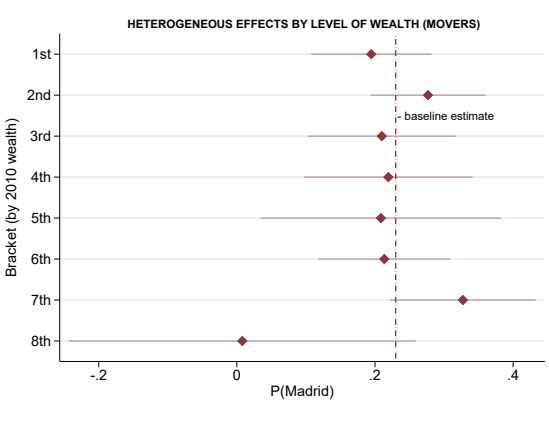
Individual Choice Event Study





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Basics of the Model

- Given a a world rate of return, R_t, a rentier with wealth W_i has pre-tax consumption $c_t^i = R_t W^i$, and amenities z_{jt}^i with a quasi-linear utility function:

$$u(c_t^i(1-T_{jt}^i), z_{jt}^i) = c_t^i(1-T_{jt}^i) + g(z_{jt}^i)$$

- Assuming no idiosyncratic costs of evasion, the utility of declaring one's home region is

$$c_t^i(1-T_{ht}^i) + g(z_{ht}^i)$$

- and the utility declaring any other region $j \neq h$ is

$$(1-p^i)c_t^i(1-T_{jt}^i) + p^i\left[c_t^i(1-T_{ht}^i) - f^i(T_{ht}^i - T_{jt}^i)c_t^i\right] + g(z_{h^i t}^i)$$

- Evading in Madrid is preferred to truthfully reporting the home region or any other region if

$$p^i < 1/(1+f^i).$$

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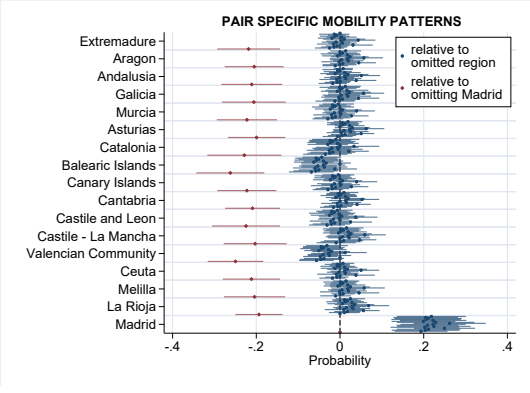
Of 136 Region Pairs, Only Pairs Involving Madrid Matter

$$d_{itj} = \theta_j \cdot \iota_{j \neq \hat{j}} \cdot Post_t + \iota_j + \omega_{it} + \zeta_j z_{it} + X_{tj}\alpha + \varepsilon_{itj}$$



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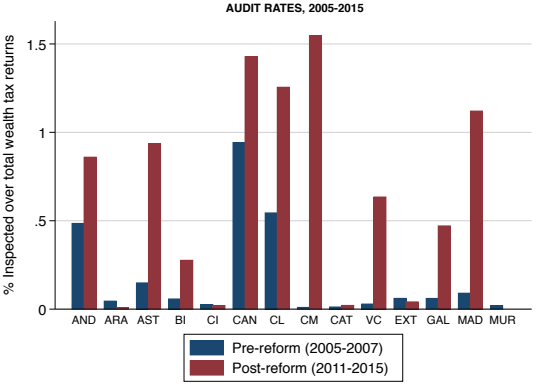
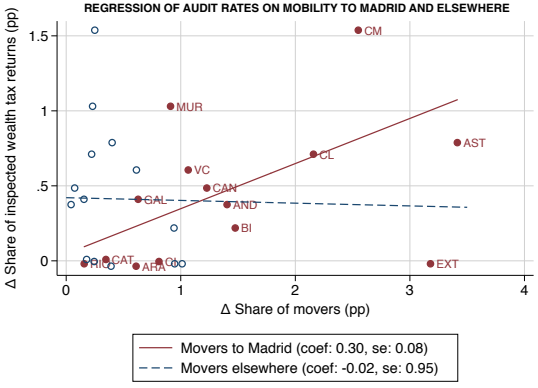
Audit Rates





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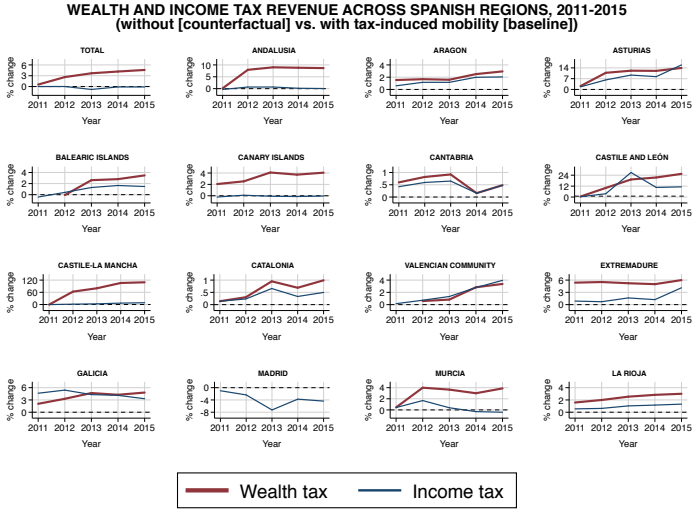
Revenue Effects by Region



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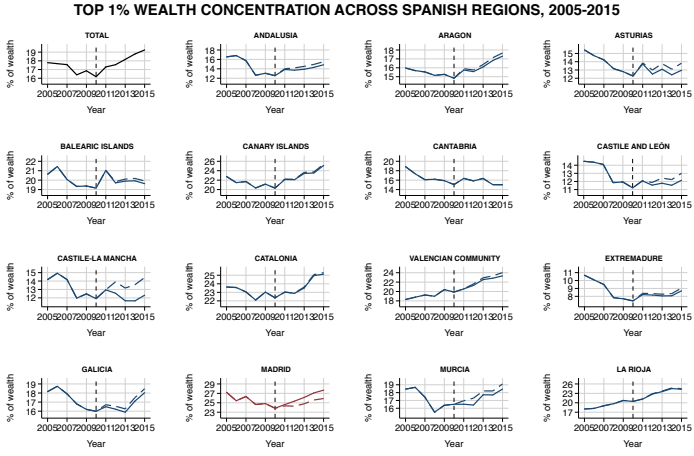
Inequality Effects by Region



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