

Jeux sans frontieres:
Effects of Cross-Border Workers on Local Economies
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Cross-Border Workers: a worldwide phenomenon

Cross-Border Worker (CBW): *a worker who is resident in a different country to that in which they work, and crosses a national border as part of their regular commute.*

Commuting **between** and **within** nations

- CAN-MEX-USA [400m-year]; Malaysia-Singapore [350k-day]; CH-EU [500k - day]

Destination vs. Home communities

Special tax regimes:

- Influence fiscal preferences, local policy choices, political outcomes

What do we know?

- **Migration and spillovers on labor market outcomes:** Card (1990), Dustmann et al. (2016), Beerli et al. (2021), Dicarilo (2022), Dodini et al. (2023) Chodorow-Reich (2019), Corbi et al. (2019), Serrato and Wingender (2016)
- **Local policy choices:** Tiebout (1956), Wilson (1991), Agrawal et al. (2021)
- **Political effects of local shocks:** Author et al. (2020)

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No evidence on CBWs and local policy

Preview of results

- **Migration and spillovers on labor market outcomes**

Increase in number of CBWs, no positive spillovers, no sorting at the threshold

- **Local policy choices**

Lower tax rates, lower revenues and spending

- **Political effects of local shocks**

Voting preferences *against* incumbent

This paper

Does CBWorking impact local governments?

Natural experiment: CBW discontinuity

- Advantageous fiscal regime
- Implementation of free labor market

		Distance discontinuity (from Swiss border)	
		< 20 km	> 20 km
Intensity discontinuity CBW	< 1999	Restriction Work Mobility	Pay PIT in IT
	>1999	Liberalization Labour Market	

This paper

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Table: Timeline of Labor Market Integration

<i>Period</i>	before 1998	from 1999 to 2003	from 2004
<i>Phase</i>	Pre-Reform	Implementation	Post-Reform
<i>Effect</i>	Full Restrictions	Reduced Restrictions	No Restrictions in CBWs location

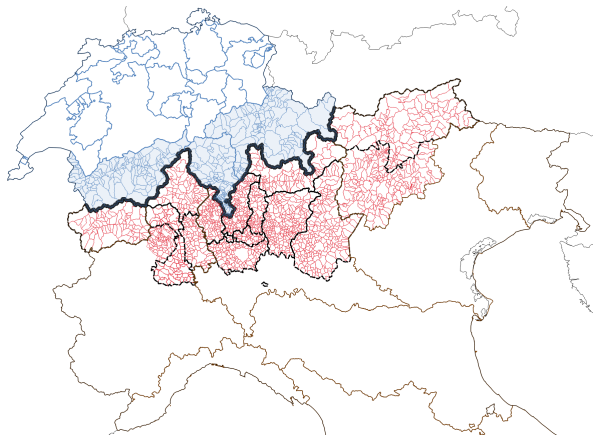
Coming up

- 1 Institutional setting
- 2 Data & identification
- 3 Preliminary results

Institutional setting: Italy and Switzerland

Cross-border workers (CBWs): citizens living in EU working in Switzerland

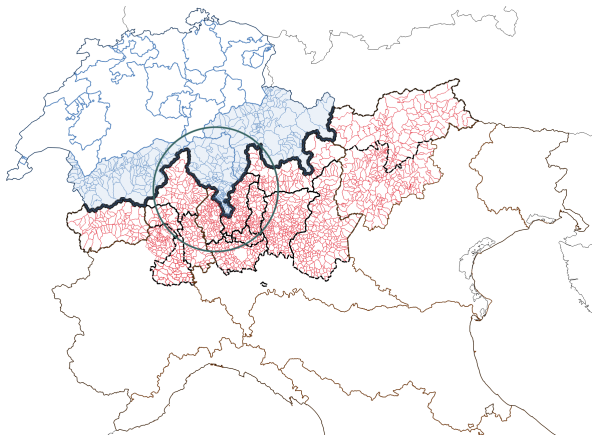
Figure: Bordering municipalities



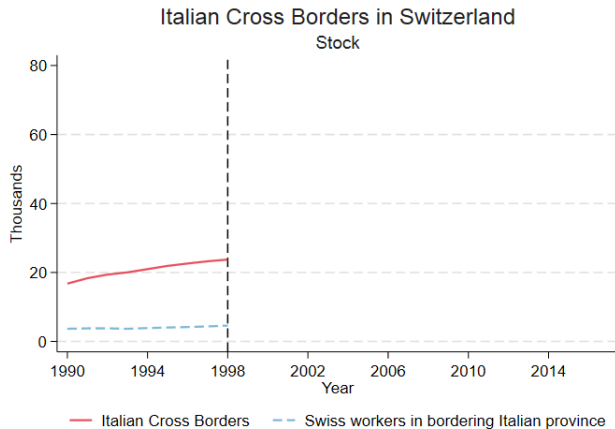
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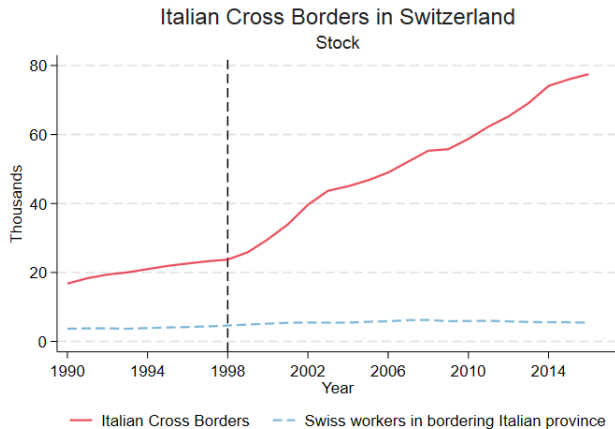
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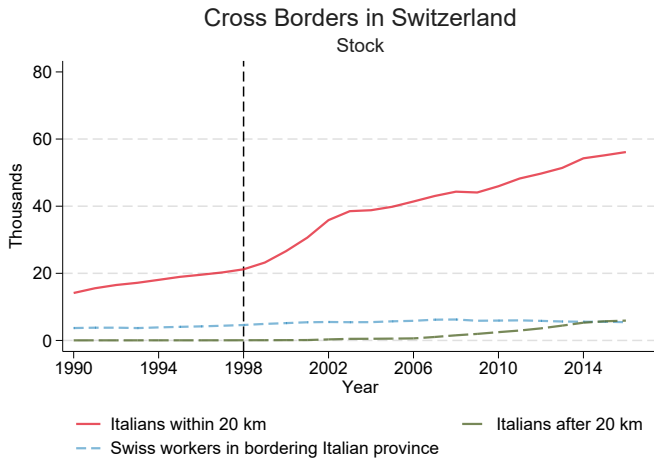
Volume of cross-border workers



Volume of cross-border workers



Volume of cross-border workers



Institutional setting: Italy and Switzerland

Fiscal rules I

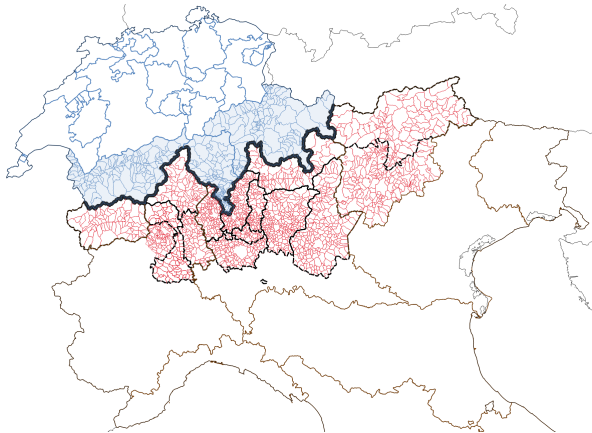
No double taxation on same income: Italian-Swiss agreement 1979

- General rule: pay taxes **both** in Italy and Switzerland
- CBW special status “frontaliere”: < 20km from Swiss border

Residence (distance from CH border)	Personal Income Tax
<20 km	Only in CH (direct deduction at source)
>20 km	CH and IT - E 7'500 franchise - Tax credit

Tax rule: where

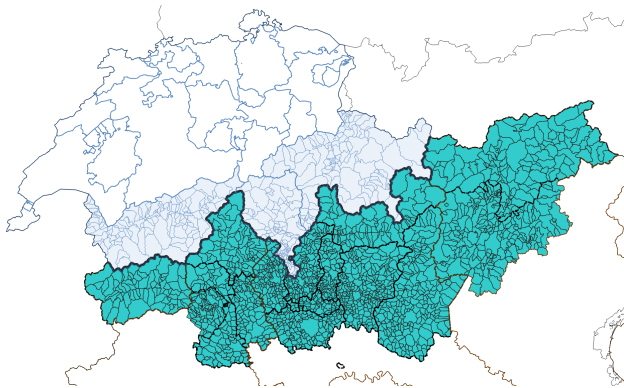
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● < 20 km

Tax rule: where

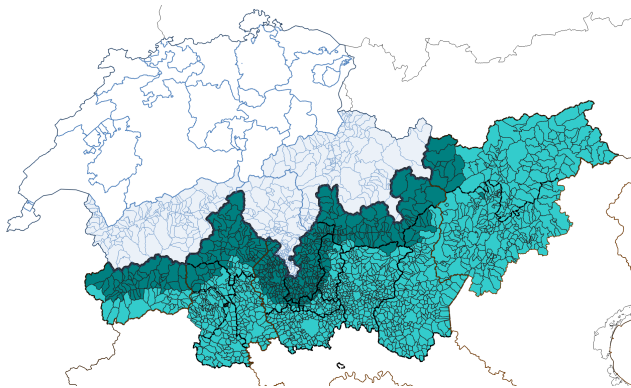
Figure: Bordering municipalities



● < 20 km

Tax rule: where

Figure: Bordering municipalities



● < 20 km

Data

Social security data - BFS - Zemis [1993-2015]

- Universe of immigrants in Switzerland
- Municipality of origin of CBW

Balance sheet data - Ministry of the Interior [1990-2015]

- Revenues, spending, tax rates, number of taxpayers, taxable income

National elections' data - Ministry of the Interior [from 1994]

Distance data - ISTAT

- Air distance from Swiss border

Identification & Assumptions

Discontinuity at 20 km - Δ pre vs. post

$$Y_{mt} = \alpha + \gamma_t + \beta_1 Elig_{mt} + \beta_2 (Dist_{mt} - 20) + \beta_3 Elig_{mt} \times (Dist_{mt} - 20) + \mathbf{X}_m + \epsilon_{mt} \quad (1)$$

- Control functions of distance from border continuous at threshold
- No manipulation around the threshold
- No jump of other covariates around the threshold

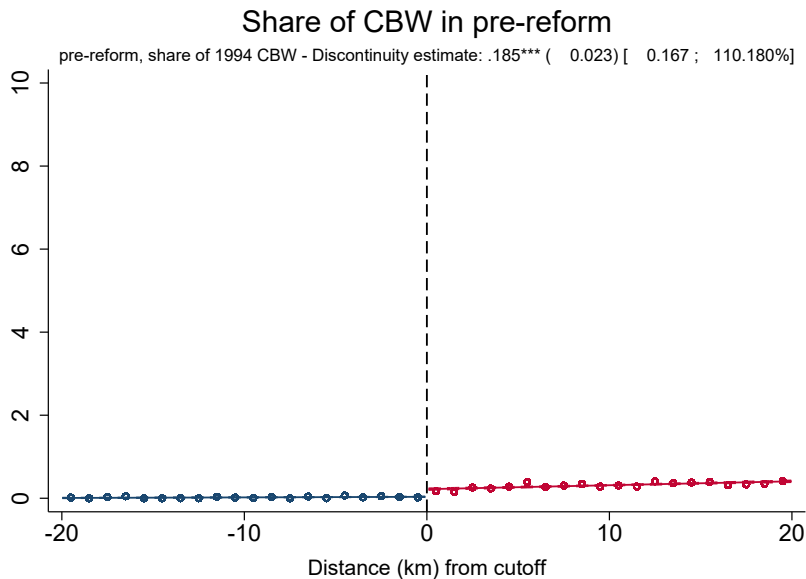
► selection

Recap

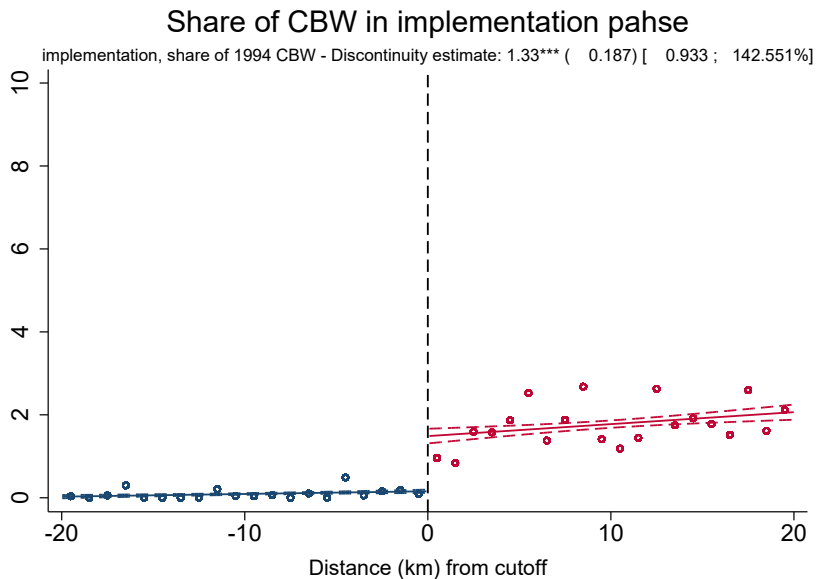
Understand the effect of CBWs on local governments

- 1 Change in CBWs
- 2 Tax base, Nr. Taxpayers
- 3 Property Tax rates
- 4 Revenue and spending composition
- 5 Elections

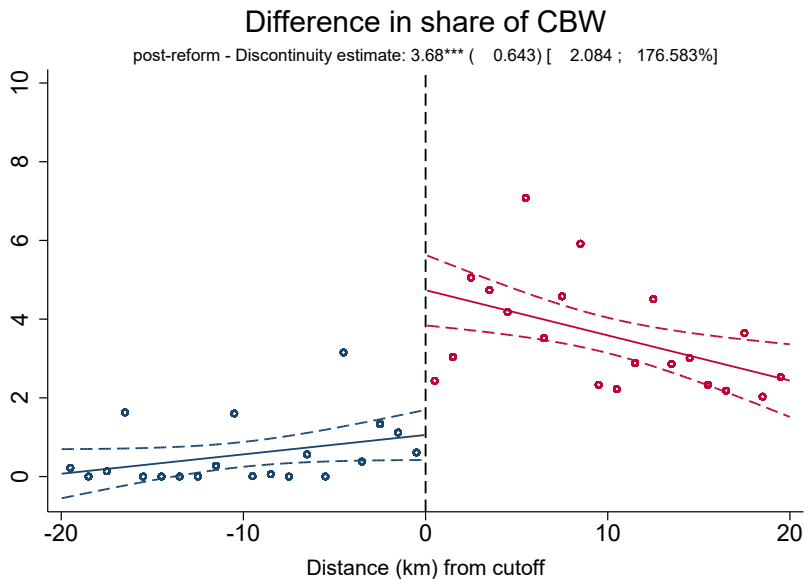
Change in CBWs



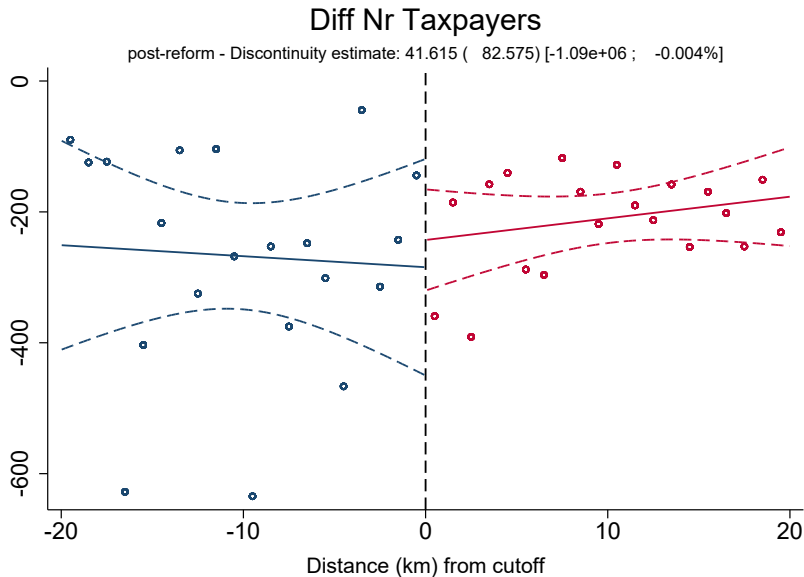
Change in CBWs



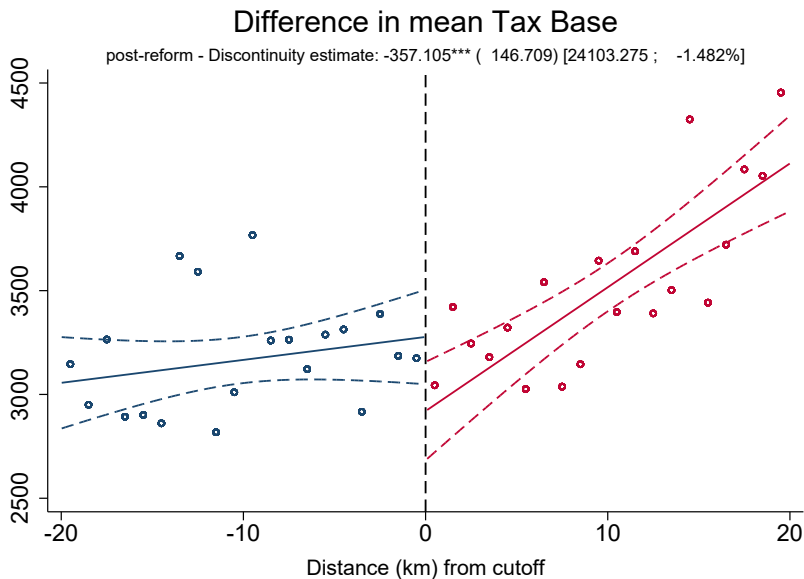
Change in CBWs



Taxpayers & tax base



Taxpayers & tax base

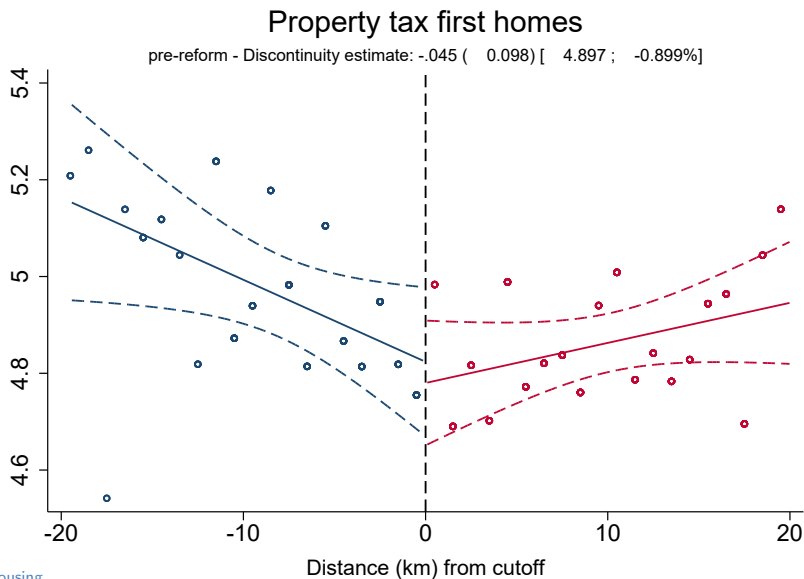


Recap

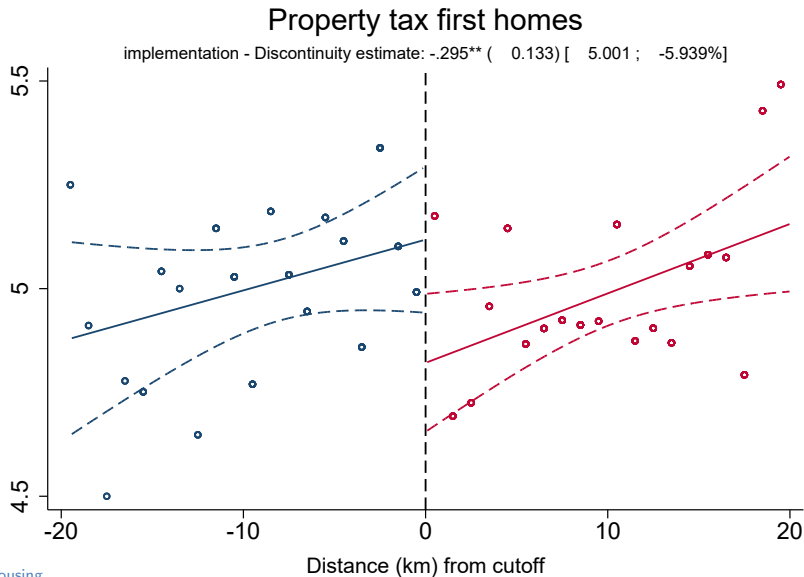
Understand the effect of CBWs on local governments

- 1 Change in CBWs \Rightarrow **3.7 times higher**
- 2 Tax base, Nr. Taxpayers \Rightarrow **no positive spillovers**
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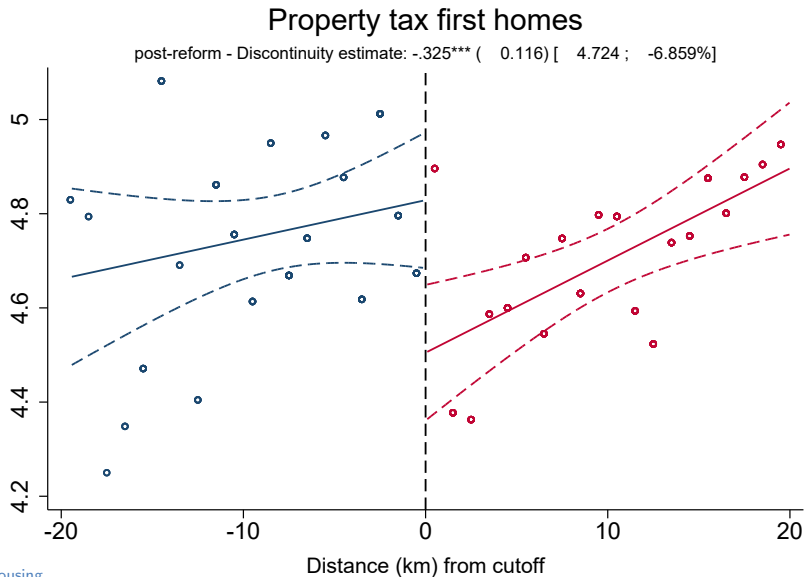
Property Tax Rates



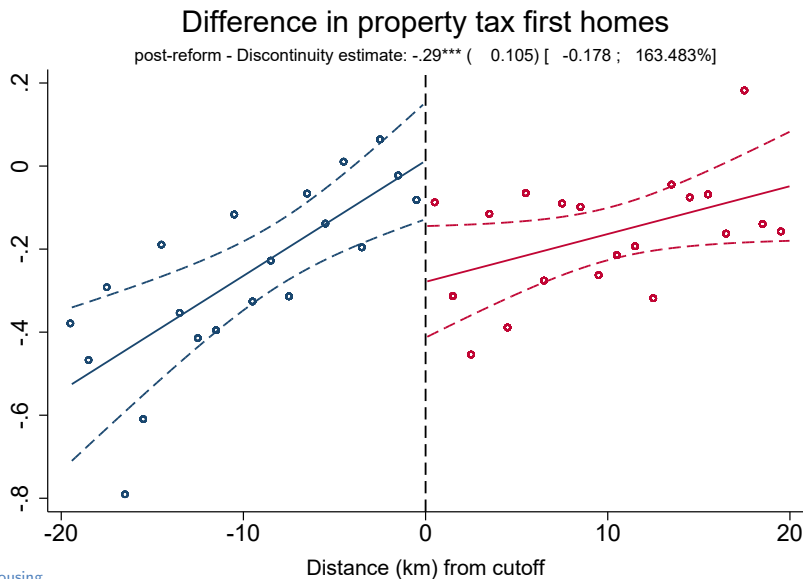
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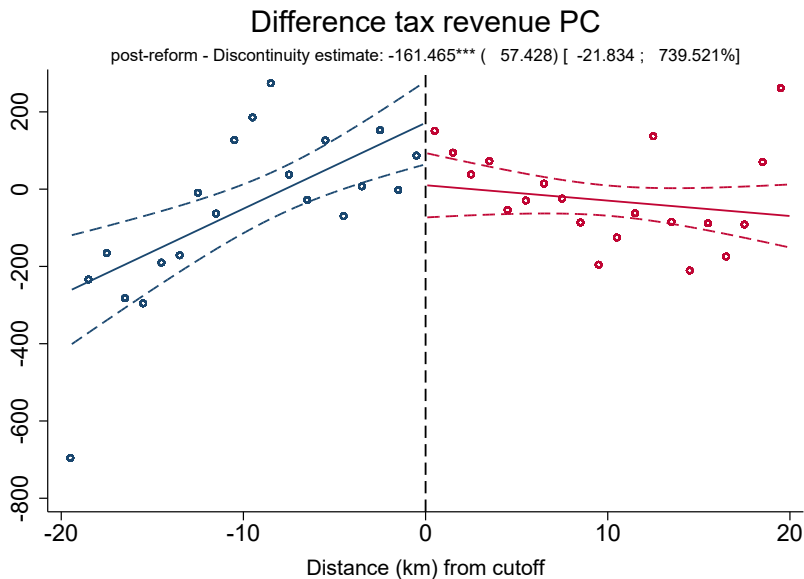
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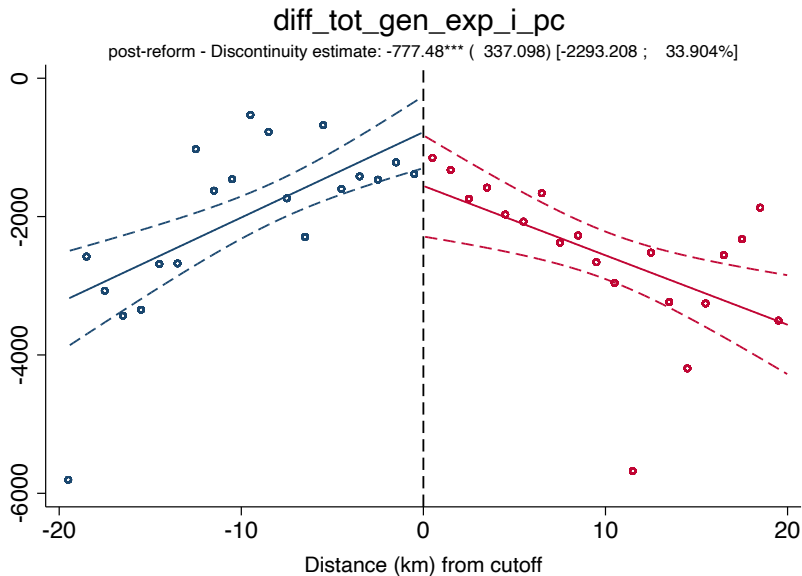
Property Tax Rates



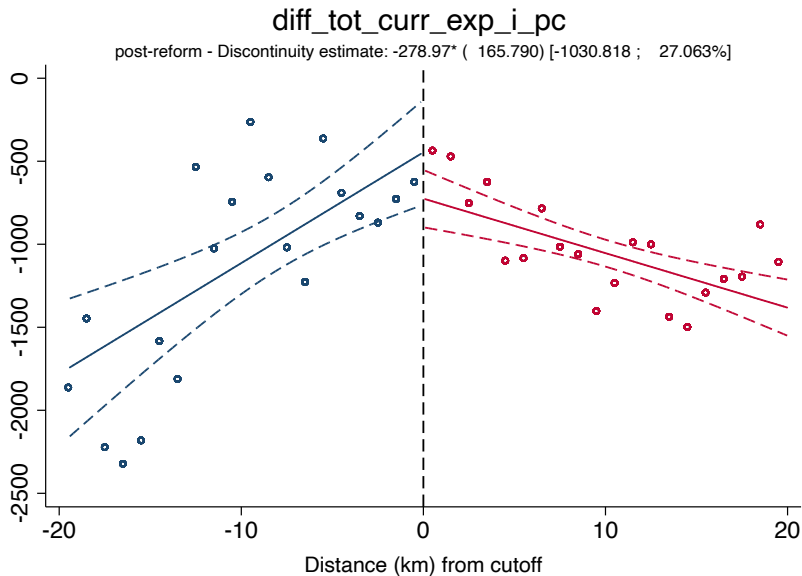
Budget composition: Revenues



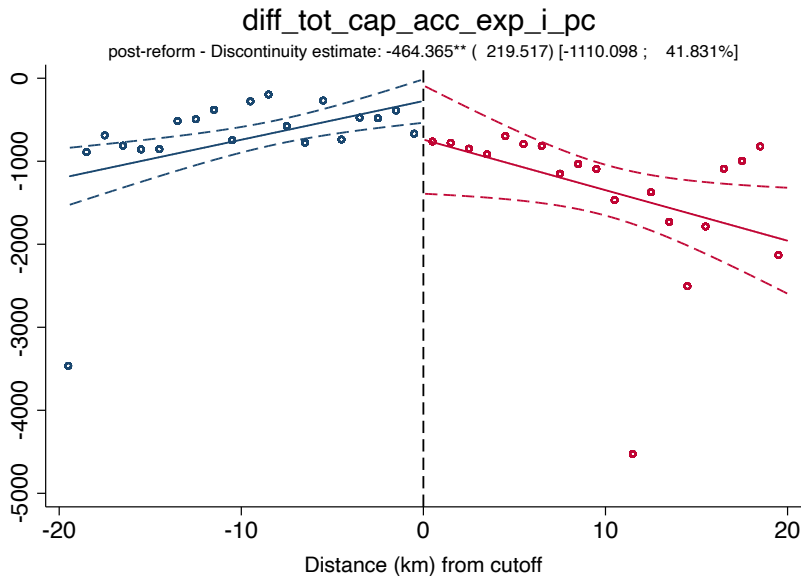
Budget composition: Spending



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Budget composition: Spending



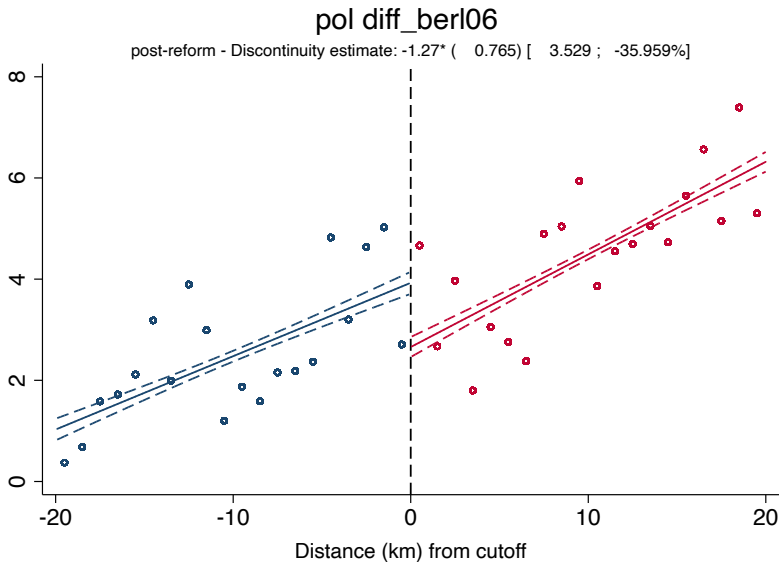
Recap

Understand the effect of CBWs on local governments

- 1 Change in CBWs \Rightarrow **3.7 times higher**
- 2 Tax base, Nr. Taxpayers \Rightarrow **no positive spillovers**
- 3 Property Tax rates \Rightarrow **lower rates**
- 4 Revenue and spending composition \Rightarrow **lower revenues & spending**
- 5 Elections

Political outcomes

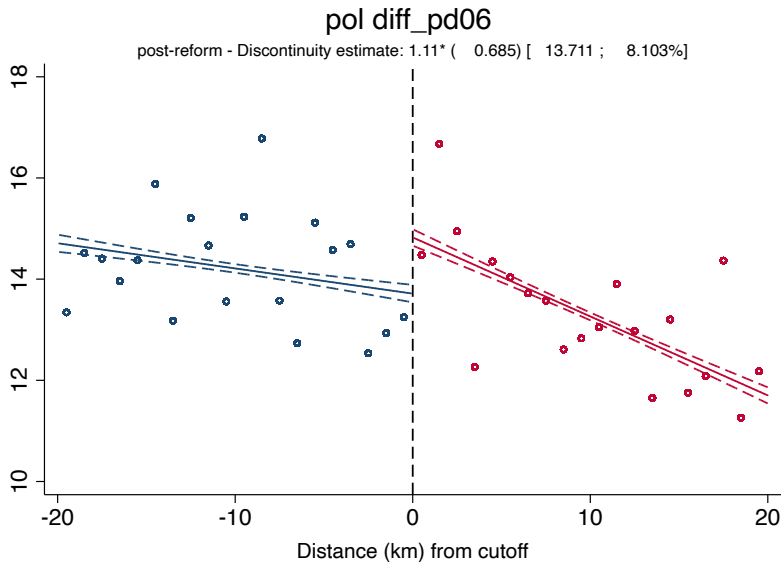
Center-right vs. center-left 2006



► post-reform 2013

Political outcomes

Center-right vs. center-left 2006



Conclusions

Understand the effect of CBWs on local governments

- 1 Change in CBWs \Rightarrow **3.7 times higher**
- 2 Tax base, Nr. Taxpayers \Rightarrow **no positive spillovers**
- 3 Property Tax rates \Rightarrow **lower rates**
- 4 Revenue and spending composition \Rightarrow **lower revenues & spending**
- 5 Elections \Rightarrow **vote against incumbent party**

► Regression table

Thank you!

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Regression results on CBW growth

	(1)	(2)
	CBW growth	CBW growth
Elig	3.680*** (0.643)	
<i>dist</i>	-0.102 (0.134)	
Elig \times <i>dist</i>	-0.164*** (0.046)	
RD_Estimate		1.755* (1.054)
Constant	1.057*** (0.380)	
Method	LLR	RD
r2_a	0.023	
N	945	1763

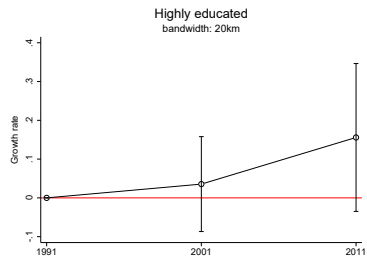
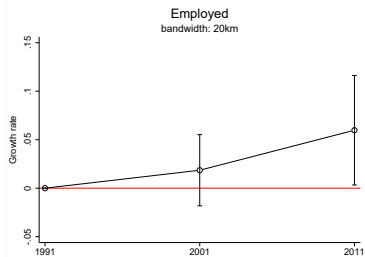
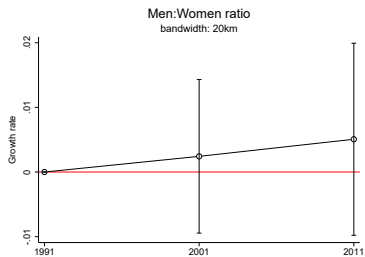
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Regression results

	(1) Avg tax base	(2) Taxpayers	(3) Tax rate firsr homes	(4) Tax rate other buildings	(5) Tax revenue per capita	(6) Total spending pc	(7) Current spending pc	(8) Capital spending pc	(9) Sales	(10) Rents	(11) Vote share centre-right	(12) Vote share centre-left
Elig	-433.750** (148.875)	32.324 (80.409)	-0.291** (0.105)	-0.114 (0.131)	-161.467** (57.428)	-777.482* (337.098)	-278.969* (165.790)	-464.364** (219.517)	-19.455 (55.668)	-0.111 (0.214)	-1.269* (0.765)	1.111* (0.685)
<i>dist</i>	20.003* (9.069)	1.673 (6.124)	0.028*** (0.007)	0.006 (0.011)	22.231*** (5.137)	123.437*** (35.652)	66.736*** (14.692)	46.647 (25.411)	9.823** (3.799)	0.019 (0.015)	0.145** (0.049)	-0.050 (0.036)
Elig × <i>dist</i>	38.090** (13.782)	-0.273 (7.199)	-0.016 (0.010)	-0.006 (0.013)	-26.212*** (6.934)	-223.777*** (43.134)	-99.584*** (16.738)	-107.559*** (31.296)	-6.211 (5.485)	-0.016 (0.020)	0.038 (0.069)	-0.106 (0.054)
Constant	3266.990*** (104.092)	-258.122*** (63.708)	0.013 (0.065)	2.210*** (0.100)	171.634*** (41.311)	-779.328** (249.522)	-446.049** (136.100)	-274.735 (151.538)	1331.803*** (39.648)	4.440*** (0.168)	3.927*** (0.586)	13.714*** (0.487)
Method	LLR	LLR	LLR	LLR	LLR	LLR	LLR	LLR	LLR	LLR	LLR	LLR
r ² _a	0.054	0.001	0.034	0.004	0.039	0.068	0.085	0.039	0.020	0.000	0.070	0.039
N	820	820	391	391	391	391	391	391	827	827	19136	19136

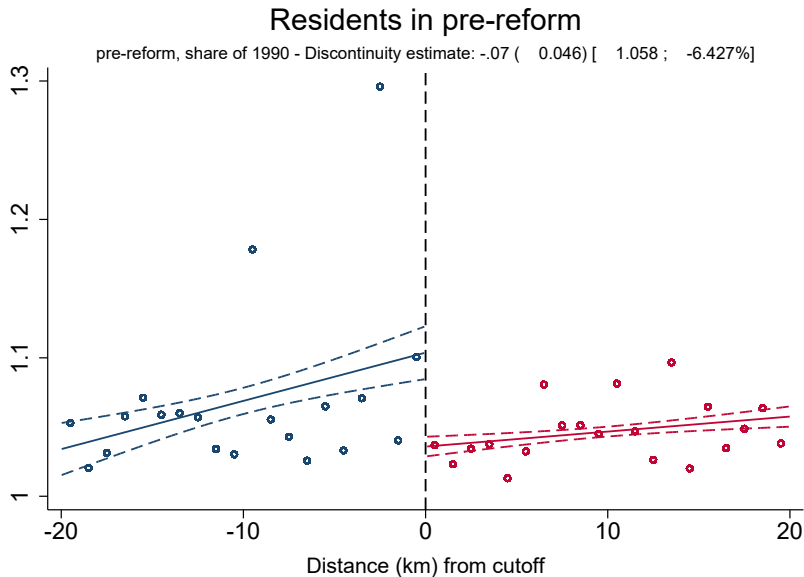
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Selection

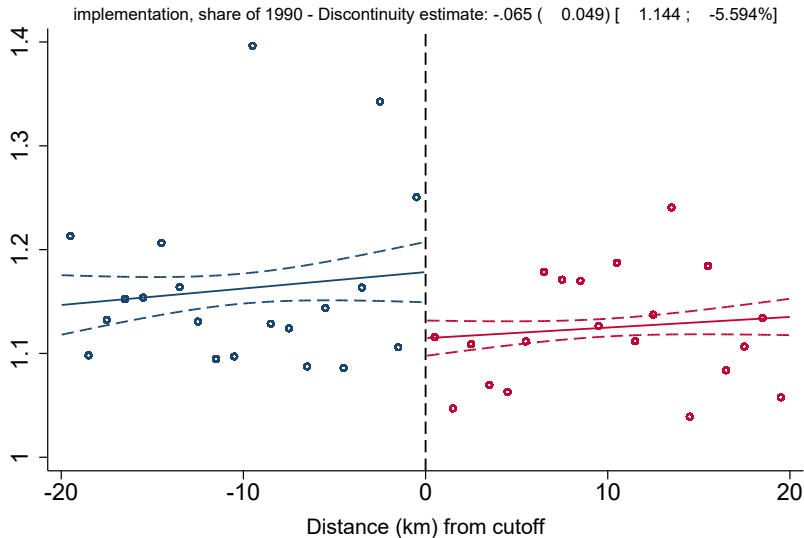


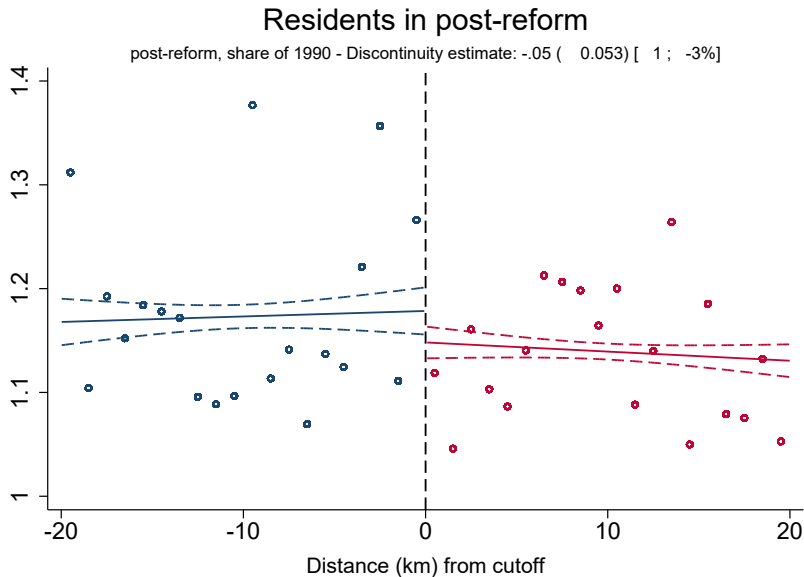
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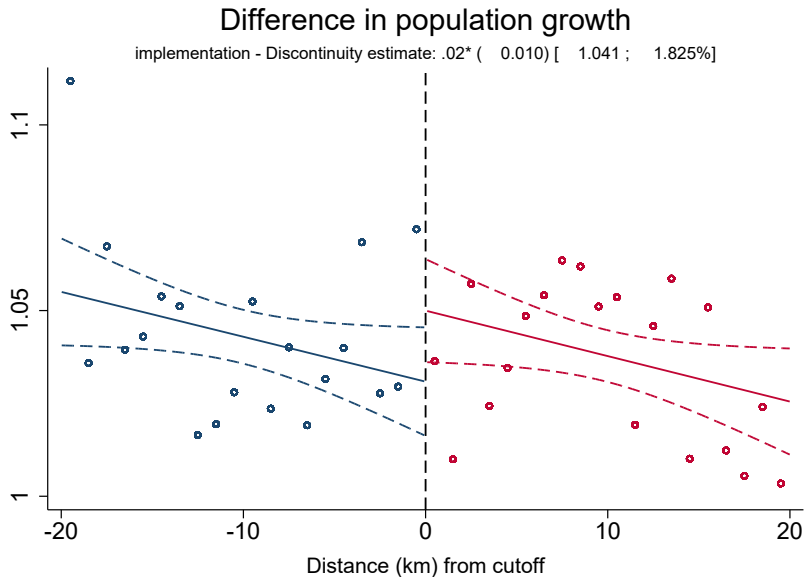
Population



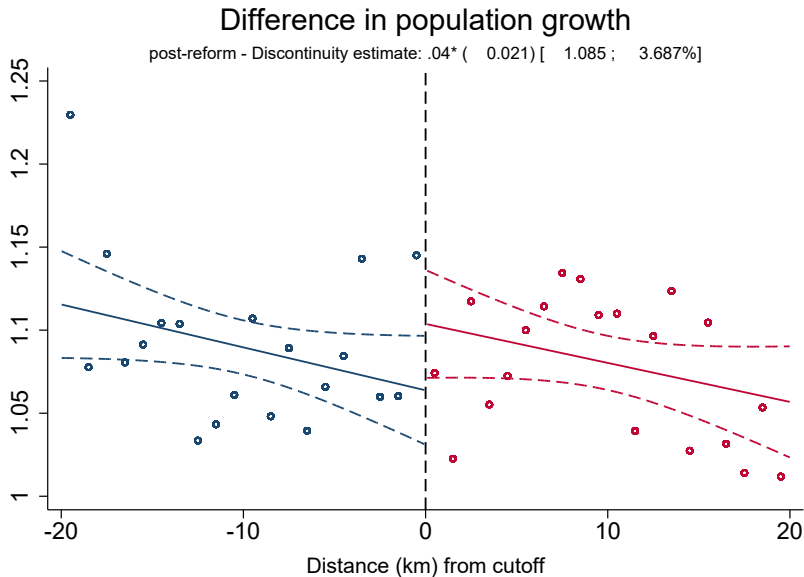
Residents in implementation pahse



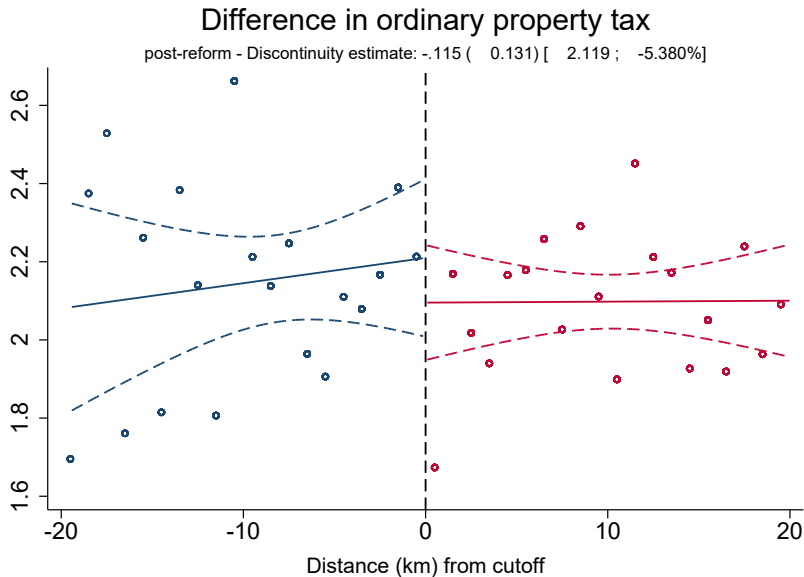


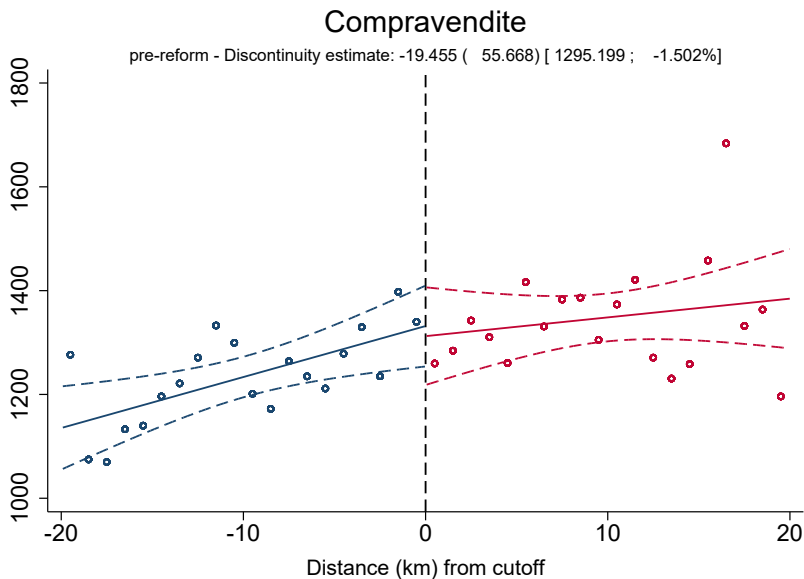


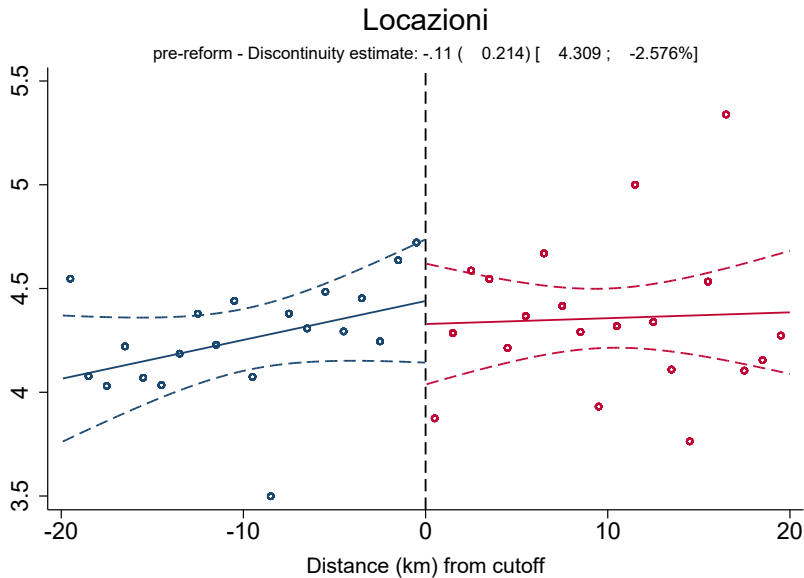
Population



Second homes

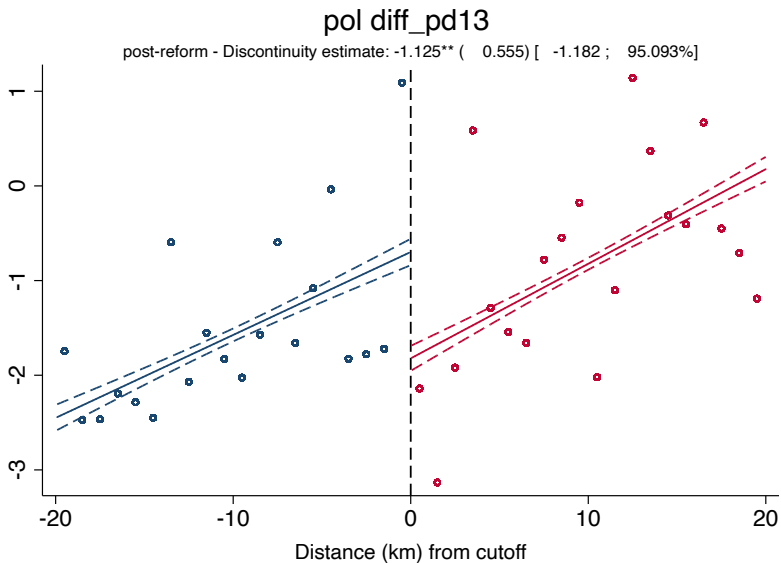






Political outcomes II

Center-right vs. center-left 2013



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