

Regional Capital No More

How the Reform of the Territorial Government has Marginalized Polish Middle-sized Cities

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Plan of the presentation

1. Background & research questions
2. Research design & methodology
3. Findings
4. Conclusion

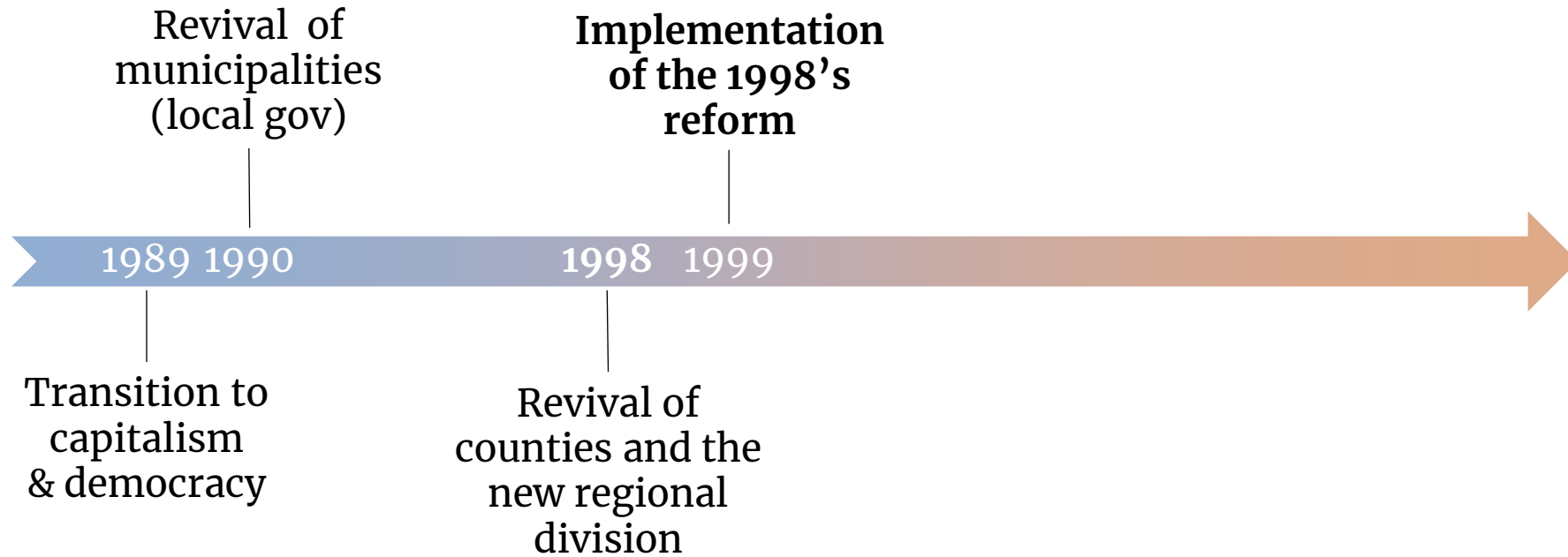
Presentation in three sentences

- 1 Did the reform of 1998 which removed the seats of regional governments from middle-sized cities negatively affect their development?
 - 2 Why did no one use difference-in-differences models to check it?
 - 3 Yes, it did.
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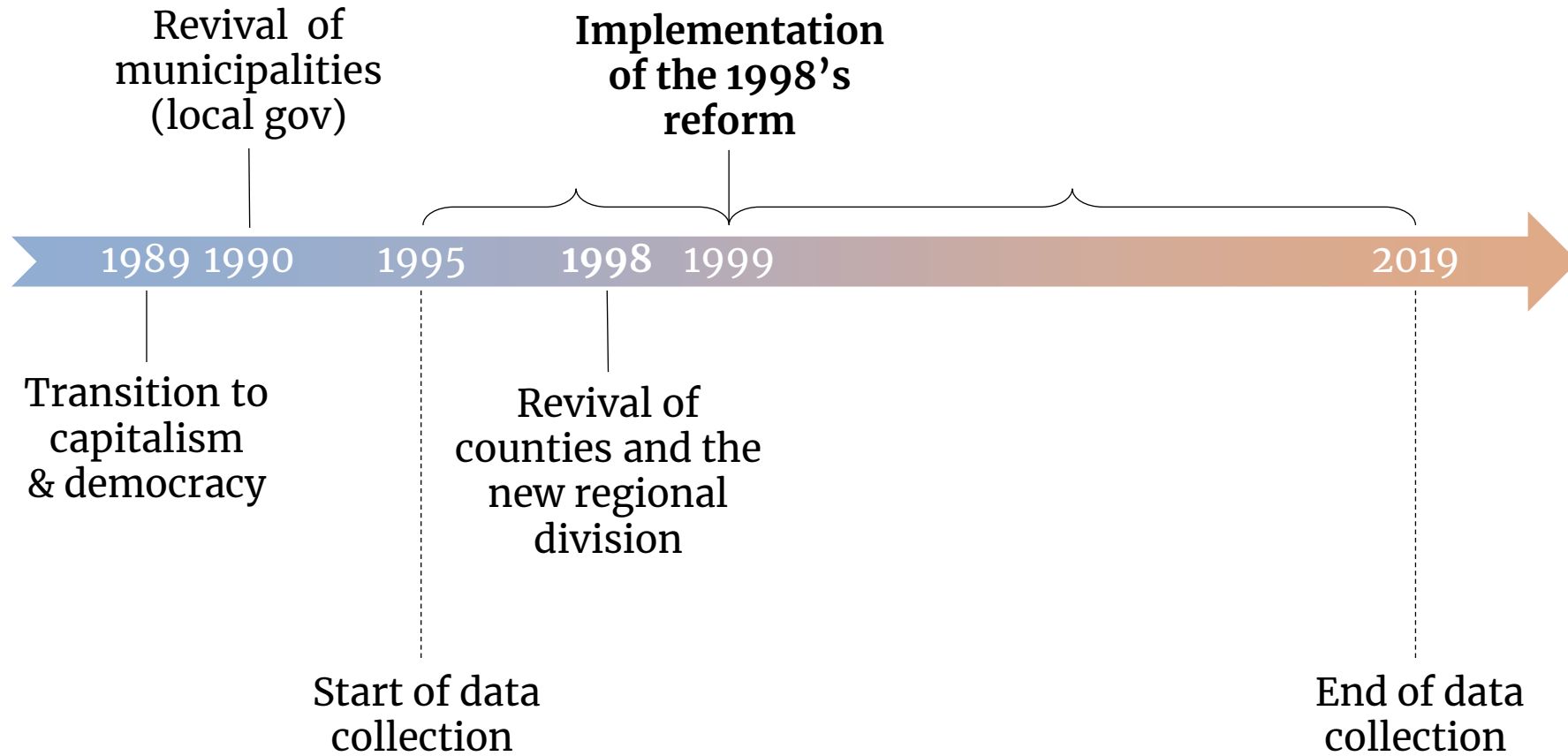
1.

Background & research questions

1. Background and research questions



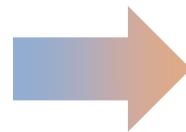
1. Background and research questions



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Voivodships: 1975 to 1998



Voivodships: as of 1999

Figure 1 Voivodships before and after the reform

Authors: Map of 1975 division - Swohmeck ([CC BY-SA 2.5](#)); Map of 1999 division - Hiuppo ([GNU Free Documentation License](#))

1. Background and research questions

Rationale of the reform:

- Devolution
- Improvements in public sector's efficiency (Stasiak & Miros, 1997)
- Focusing investment in potentially competitive biggest cities (Gilowska et al., 1998)
- Spatial trickle down of growth stimulus
- Regions of size suitable for EU's Cohesion Policy

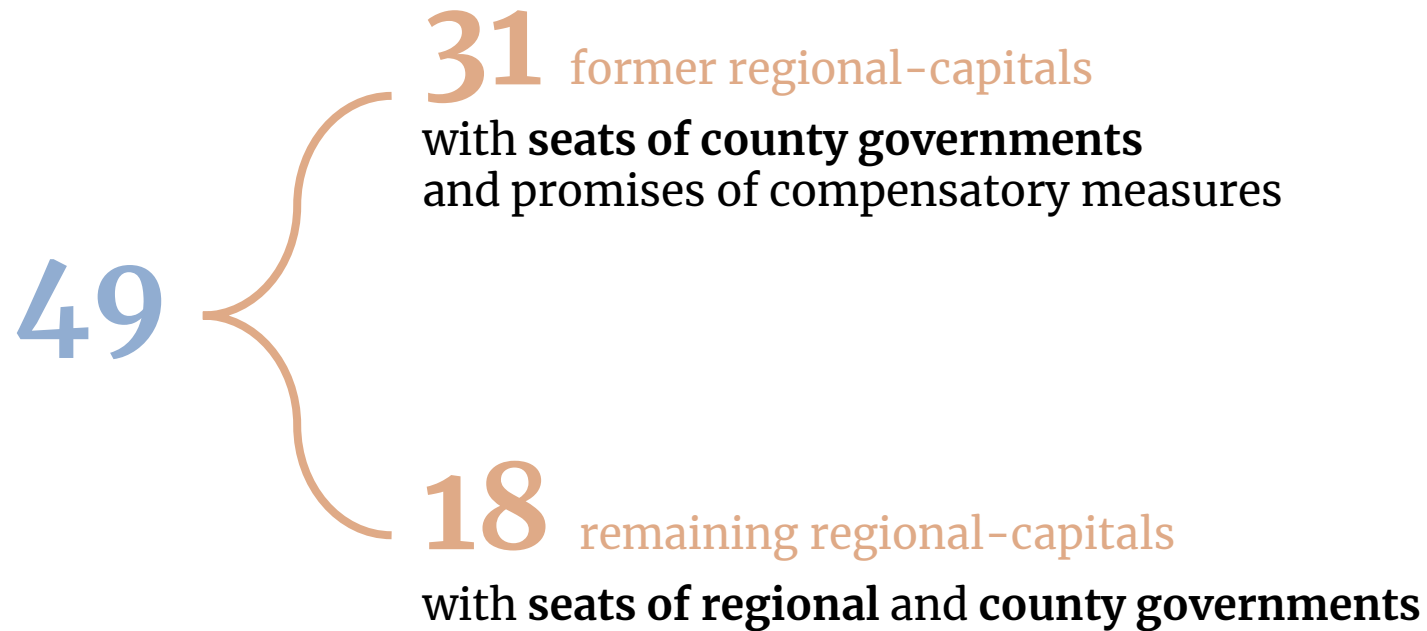
Counterarguments:

- Risk of increased polarization (Struzik, 1997)
- Destruction of social structures which emerged around the hitherto regional-capitals (Struzik, 1997)

Choose a city → form a region

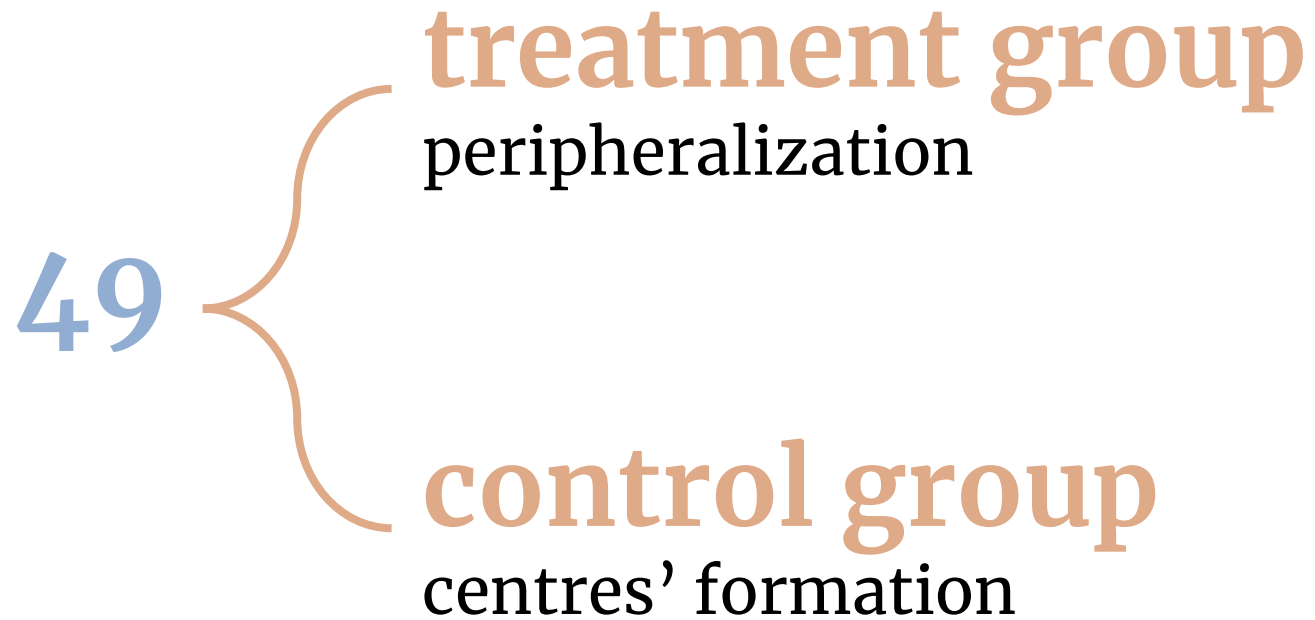
1. Background and research questions

What happened to the affected cities?



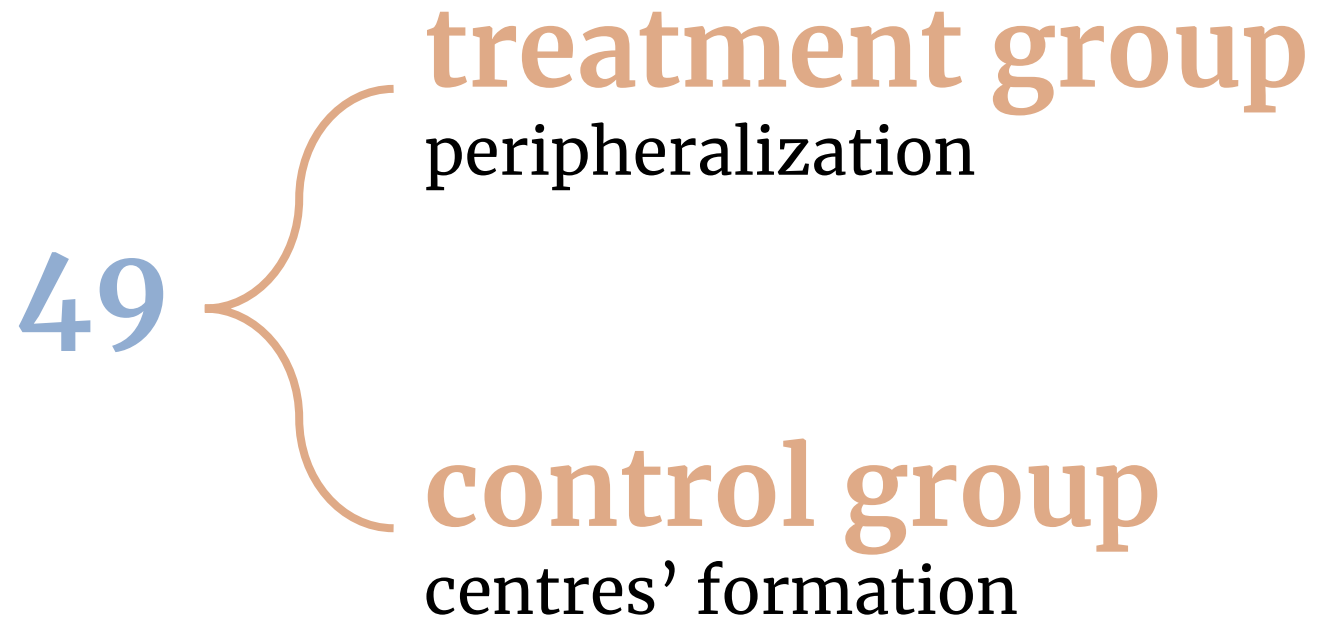
1. Background and research questions

What happened to the affected cities?



1. Background and research questions

What happened to the affected cities?



Random
assignment?

1. Background and research questions

Unclear determinants of regional-capital status

1. Gilowska et al. (1998):
 1. metropolitan functions of the biggest cities
 2. their chances in international competition
 3. ability to manage regional development
2. Zaborowski (2010): no consistent criteria
3. Majchrowski (2011): political bargaining and links with the president

1. Background and research questions

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Research question 1:

Did the size of a city, its economic base, or political alignment with the president drive the assignment of regional-capital status?

1. Background and research questions

Condition of Polish middle-sized cities:

- **Polycentric** settlement structure has become deeply differentiated (Śleszyński, 2018)
- Small and medium-sized cities slide into **economic decay and depopulation** (Śleszyński, 2019)
- Pockets of growing **unemployment**, decay and **abandonment** of the urban fabric (Śleszyński, 2018; Wichowska, 2021)
- **Fiscal pressure** & increasingly **difficult to reproduce demographics** (Śleszyński, 2018; Wichowska, 2021)

1. Background and research questions

Dwellers of Kalisz claim that the reduction of the number of administrative regions and stripping their city of the regional-capital status contributed to its demise (Krysiński, 2013).

But is it a “phantom pain or a real loss^{*}”?

^{*} Kurniewicz & Swianiewicz (2016)

1. Background and research questions

Literature so far:

- **Qualitative:** negative perception of the reform
(Dziemianowicz, 2000; Krysiński, 2013)
- **Quantitative:** inconclusive, siding on a negative influence;
mainly **descriptive**, employing **synthetic development
indexes and post-treatment data** (Komorowski, 2012;
Kurniewicz & Swianiewicz, 2016*; Kisiała, 2017,
Tomaszewski, 2019)

* Kurniewicz & Swianiewicz (2016) use also pre-treatment data.

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Research question 2:

To what extent did the 1998's reform contribute to the growing disparities between middle-sized cities and the biggest agglomerations?

* Kurniewicz & Swianiewicz (2016) use also pre-treatment data.

2.

Research design & methodology

2. Research design and methodology

Identification strategy

RQ1: treatment assignment

- Probit model using pre-treatment data (year before the reform); variables identified in the political debate (population, economic base, political alignment)

RQ2: impact of the loss of regional-capital status

- Quasi-experiment
- Panel data spanning the period of 1995-2019 (1995-1998 pre-treatment years)
- Difference-in-differences regressions with unit and time fixed effects and unit clustered std. errors
- Parallel trend assumption (groups can be systematically different before treatment)
- 5, 10, 20 years periods
- Control for population

2. Research design and methodology

Possible channels of influence



2. Research design and methodology | Dataset

Dimension	Indicator
Economic	<ul style="list-style-type: none">• Newly built flats per 1000 dwellers• Total area of newly built flats per 1000 dwellers• Number of public entities per 1000 dwellers• Number of private entities per 1000 dwellers• Number of private entities in various sectors (manufacturing, construction, retail, tourism...) per 1000 dwellers• Share of working population in total population
Fiscal	<ul style="list-style-type: none">• General subsidy per capita• Local government own revenues per capita• Asset-related investment per capita• Asset-related investment as a share of total expenditure
Demographic	<ul style="list-style-type: none">• Population• Migration rates• Share of children under the age of 14 in total population• Share of post-productive age group in total population
Cultural	<ul style="list-style-type: none">• Cinema visits per capita• Libraries per 1000 dwellers• Share of libraries' visitors in total population• Museums per 1000 dwellers

3. Findings

3. Findings

RQ1: treatment assignment | Probability of losing regional-capital status

	(1)	(2)	(3)	(4)	(5)
ln population	-0.44*** (0.10)	-0.31*** (0.06)	-0.28*** (0.07)	-0.31*** (0.10)	-0.61* (0.35)
net migration	-0.22** (0.09)	-0.15 (0.10)	-0.11 (0.11)	-0.12 (0.15)	-0.01 (0.12)
subsidy	-0.01* (0.00)				
own rev	-0.00** (0.00)	-0.00* (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
firms priv	-0.01** (0.00)	-0.00 (0.00)			
children		0.00 (0.02)			
firms construction			0.01 (0.02)		
firms services			-0.03*** (0.01)	-0.02*** (0.01)	-0.05 (0.03)
AWS				-0.04 (0.07)	
SLD					-0.21 (0.16)
N	49	49	49	49	49

- Five specifications
- Variables identified in previous literature
- Variables that are significantly different between both groups
- Variables that are sensible to consider

→ City size significant in all regressions

3. Findings

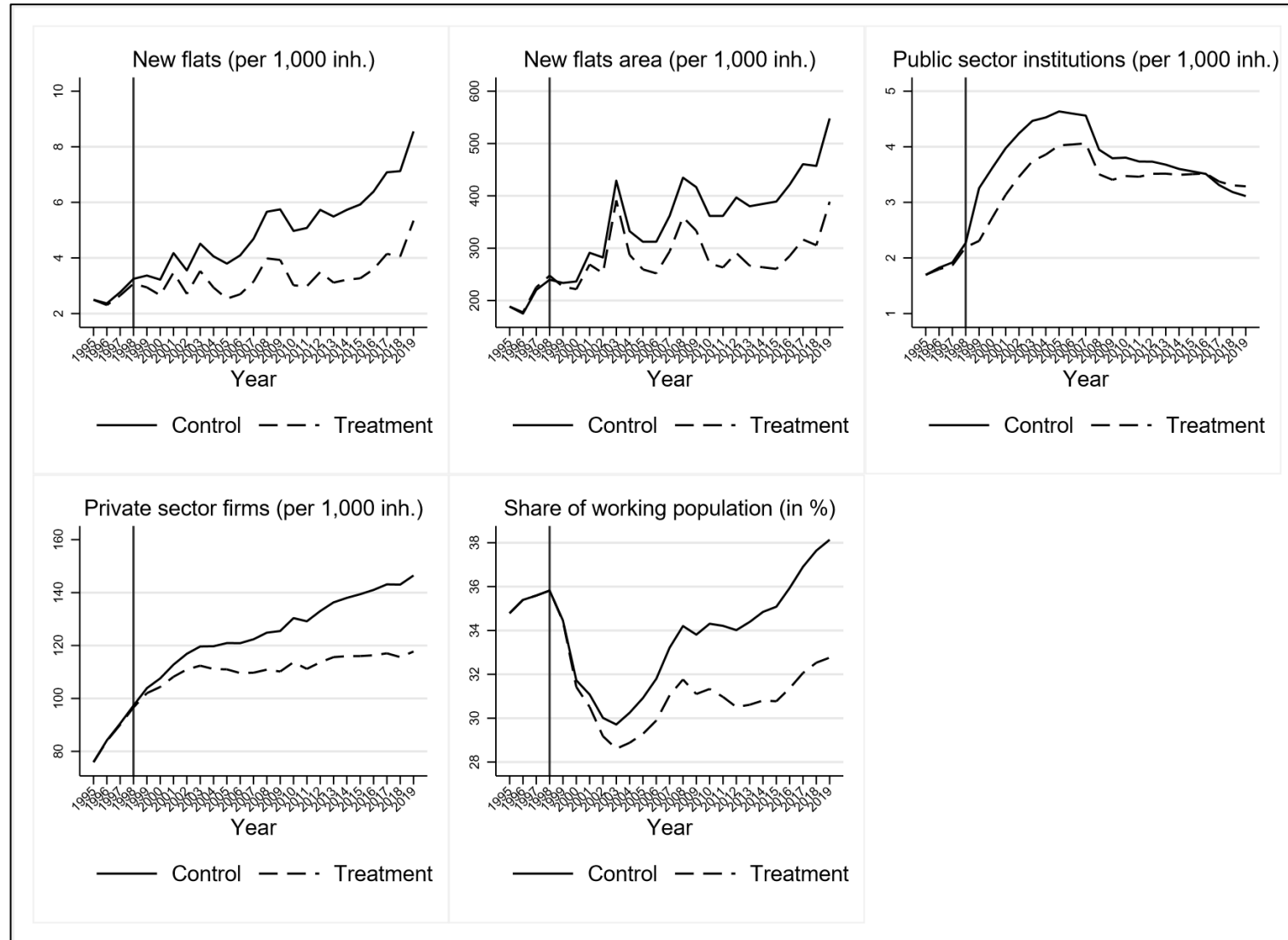
RQ2: impact of the loss of regional-capital status | Economic dimension

	(1)	(2)	(3)	(4)	(5)
	new flats	new flats area	firms pub.	firms priv.	working pop.
ATET					
20 years	-1.644*** (0.529)	-82.252** (31.651)	-0.383 (0.435)	-14.132*** (3.685)	-2.539*** (0.631)
10 years	-1.173*** (0.434)	-54.254* (28.249)	-0.800* (0.478)	-8.926*** (3.093)	-1.345** (0.516)
5 years	-0.885** (0.395)	-36.515 (26.369)	-1.184** (0.477)	-5.879** (2.718)	-1.022** (0.487)
Controls					
(ln)population	16.730*** (5.889)	1014.193*** (337.505)	-7.085* (4.052)	24.994 (32.316)	-1.408 (5.774)
ptrends	0.647	0.765	0.772	0.815	0.995
N	1,225	1,225	1,225	1,225	1,225

- All proxies significant and negative except public firms (after 20 years)
- Impact increases over time
- Private firms: reform explains approximately half (48%) of the discrepancy in 2019

3. Findings

RQ2: impact of the loss of regional-capital status | Economic dimension



3. Findings

RQ2: impact of the loss of regional-capital status | Private firms by sector

	(1) manufact.	(2) construction	(3) wholes., retail	(4) trans. and tourism
ATET				
10 years	-0.741** (0.367)	-1.014*** (0.342)	0.289 (1.318)	-0.483 (0.299)
5 years	-0.652* (0.352)	-0.963*** (0.332)	0.779 (1.166)	-0.314 (0.268)
Controls				
(ln)population	-7.932* (4.507)	-7.445 (4.494)	-35.198* (18.202)	0.264 (5.398)
ptrends	0.329	0.055	0.023	0.646
	(5) finance	(6) hsk. services	(7) education	(8) health care
ATET				
10 years	-0.418** (0.163)	-4.823*** (0.880)	-0.309*** (0.076)	-0.664*** (0.244)
5 years	-0.175 (0.146)	-3.602*** (0.683)	-0.189*** (0.062)	-0.404* (0.220)
Controls				
(ln)population	-1.382 (2.399)	-19.252 (19.575)	0.388 (1.409)	-0.776 (3.133)
ptrends	0.009	0.002	0.358	0.824
<i>N</i>	735	735	735	735

Note: Controls and *N* reported for 10 years only.
Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

- No particularly affected sector – the influence seems to be dispersed across sectors
- Impact has increased over time
- Negative impact on education and healthcare (foundational sectors)
- Wholesale and tourism seem unaffected
- Parallel trends not always present

3. Findings

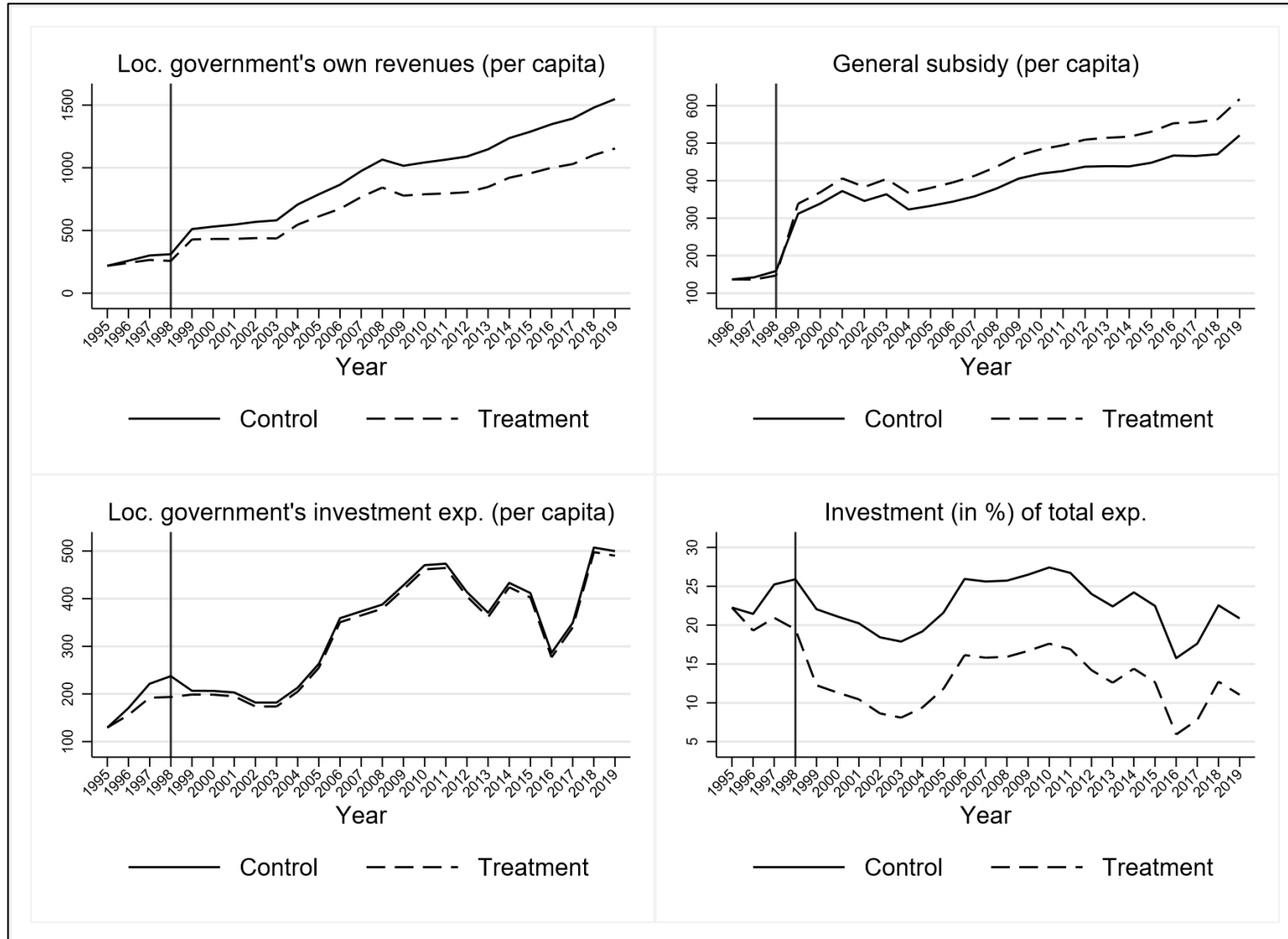
RQ2: impact of the loss of regional-capital status | Fiscal dimension

	(1) own rev.	(2) subsidy	(3) investment	(4) investm.(%)
ATET				
20 years	-202.118*** (43.961)	65.134*** (23.606)	13.148 (30.110)	-6.599*** (1.665)
10 years	-139.200*** (35.444)	55.544*** (19.605)	-0.694 (22.239)	-6.748*** (1.716)
5 years	-84.140*** (22.993)	45.434** (18.433)	-1.968 (19.689)	-7.154*** (1.917)
Controls				
(ln)population	248.001 (347.815)	90.184 (120.153)	230.416 (219.087)	-5.385 (11.405)
ptrends	0.020	0.093	0.121	0.027
<i>N</i>	1,225	1,176	1,225	1,225

- Significant results for three proxies, but parallel trends not present, probably due to simultaneous changes in public finance
- We cannot attribute the discrepancies to the reform

3. Findings

RQ2: impact of the loss of regional-capital status | Fiscal dimension



3. Findings

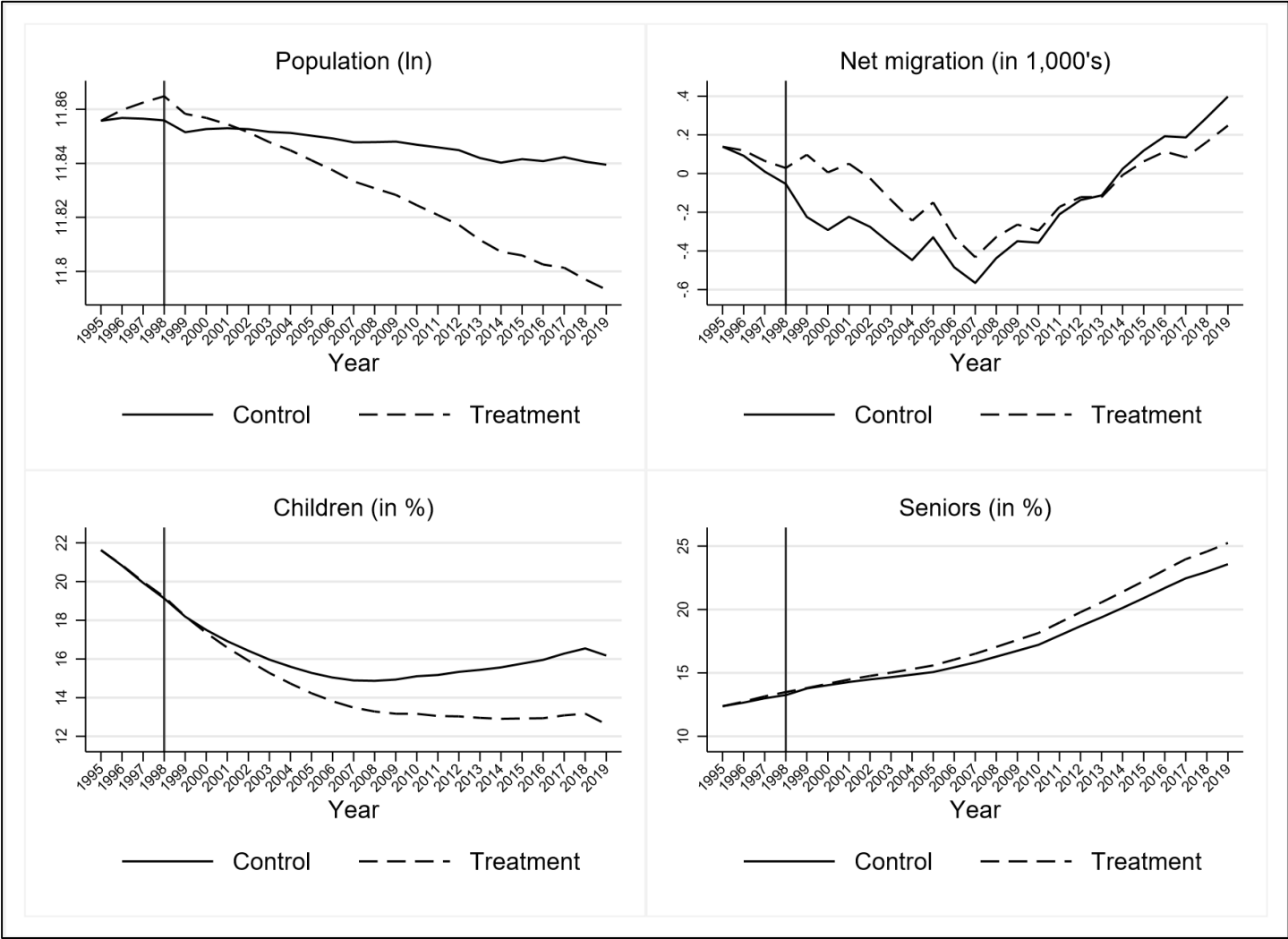
RQ2: impact of the loss of regional-capital status | Demographic dimension

	(1)	(2)	(3)	(4)
	(ln)population	net migration	children	seniors
ATET				
20 years	-0.024*	0.060	-1.694***	0.683**
	(0.014)	(0.270)	(0.504)	(0.319)
10 years	-0.011	0.194	-1.042***	0.321
	(0.009)	(0.235)	(0.381)	(0.219)
5 years	-0.009	0.094	-0.601**	0.218
	(0.008)	(0.174)	(0.297)	(0.166)
Controls				
(ln)population		4.968*	7.145	-8.140*
		(2.284)	(4.155)	(3.692)
ptrends	0.013	0.393	0.704	0.104
N	1,225	1,225	1,225	1,225

- Population trend diverged before the reform: treated cities were growing faster
- Share of children and of seniors (in the longest period) are affected → results suggest increasing age-dependence ratio

3. Findings

RQ2: impact of the loss of regional-capital status | Demographic dimension



Mean share of children under 14 in total population is 15.65%; ATET coefficient of – 1.694 pp is sizeable.

3. Findings

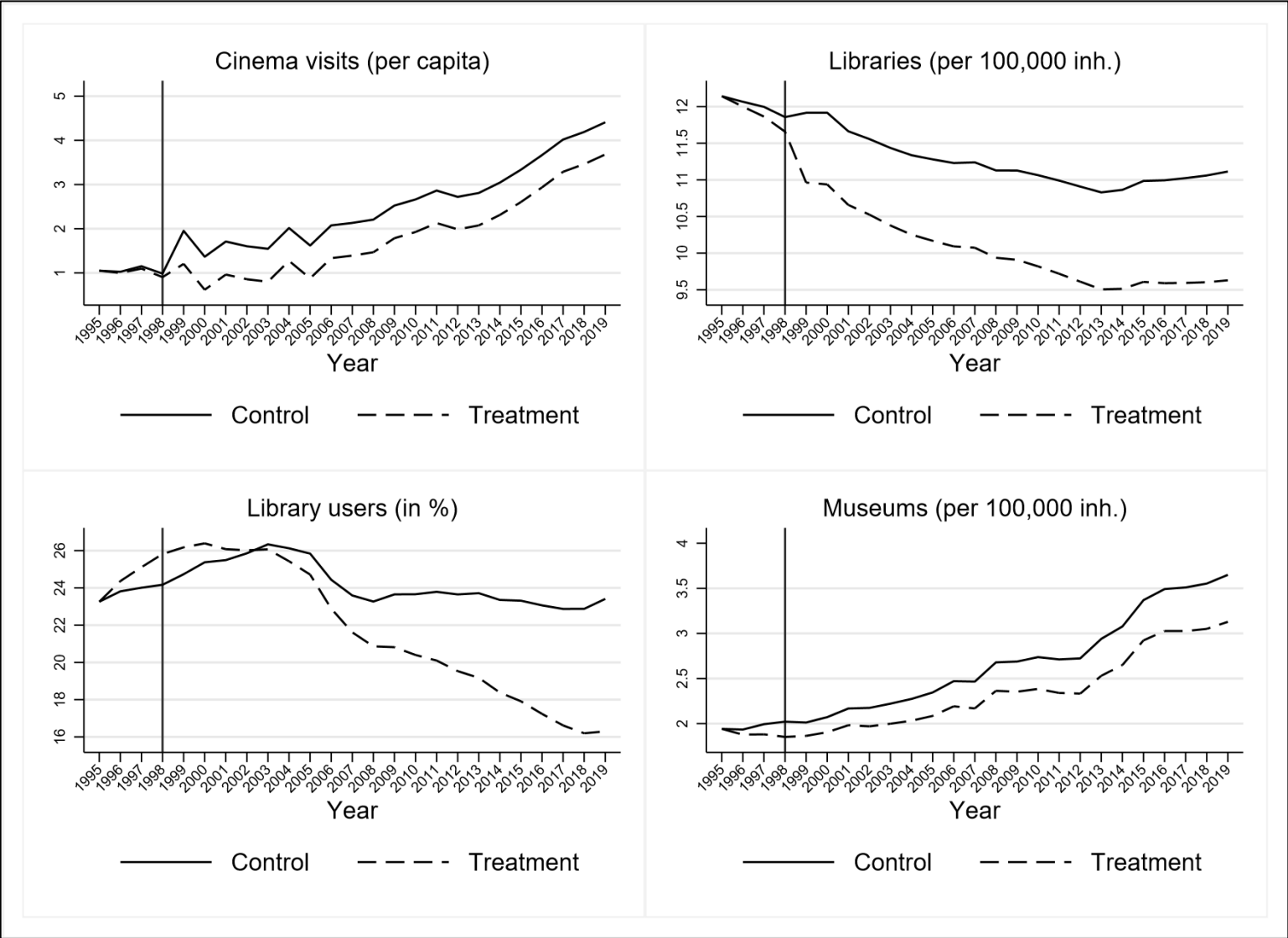
RQ2: impact of the loss of regional-capital status | Cultural dimension

	(1) cinema vis.	(2) libraries	(3) library users	(4) museums
ATET				
20 years	-0.699*** (0.179)	-1.103** (0.538)	-3.389*** (1.244)	-0.239 (0.156)
10 years	-0.865*** (0.160)	-1.088** (0.422)	-1.397 (1.274)	-0.169 (0.124)
5 years	-0.466*** (0.130)	-0.944** (0.360)	-0.340 (1.042)	-0.141 (0.103)
Controls (ln)population	1.447 (1.580)	0.962 (4.026)	11.226 (11.457)	0.260 (2.399)
ptrends	0.324	0.443	0.048	0.150
<i>N</i>	1,225	1,225	1,225	1,225

- Significant, negative results for cinema visits (\bar{x} =1.95), libraries (\bar{x} =10.69) and library users (\bar{x} =22.72)
- Although ‘library users’ does not satisfy the parallel trends assumption, the results overall suggest a discrepancy of availability and usage of some cultural amenities

3. Findings

RQ2: impact of the loss of regional-capital status | Cultural dimension



3. Findings

Robustness checks

We do not run models with anticipated or postponed placebo treatment due to the short pretreatment period and constant treatment after 1998.

Instead, we used:

- Placebo treatment group: cities with county status that never had the regional capital status and are similar in population size (mean and distribution)
- Models with EU funds
- Models excluding the three biggest cities

→ All robustness checks support our main results

4. Conclusion

Denial of the administrative status seems to have:

1

- Compromised economic potential
- Affected availability and usage of cultural amenities
- Contributed to demographic problems
(increased age-dependency)

2 Spatial trickle down is yet to be seen

3 Argument for deglomeration?

Broader applicability

- Our findings shed light on potential consequences of reforming administrative units into larger ones & on the consequences of the loss of administrative roles and privileges by cities.
- Amalgamation reforms are common in Europe, e.g., Albania in 2015, Denmark in 2007, Greece in 1998 and 2011, Latvia in 2009 (Swianiewicz et al., 2017) and more recently in France and Norway.

Thank you for your attention!

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