



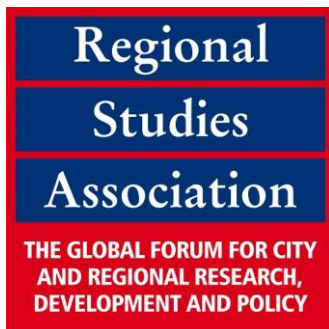
# The electoral bias: distributive politics and local development in Brazil, Mexico, Chile and Colombia

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# Introduction

- How are investment transfers distributed to municipalities? Do political concerns drive the allocation of investment from the central or state government to the local level, rather than efficiency or spatial equity goals?
- In the past decades, Latin American countries experienced major institutional reforms
  - Decentralization
  - From patronage social assistance programs to formula-based conditional transfers
- Four countries with different spatial/institutional organization
  - Mexico and Brazil: Federal state
  - Colombia: Unitary and decentralized
  - Chile: Unitary and centralized
- In the four countries decentralization increased local expenditure but local revenues remain centralized



# Distributive politics and local development

- The academic literature on political science has documented how politicians use their control over intergovernmental transfers to reinforce their electoral prospects (Ansolabehere & Snyder, 2006; Brollo & Nannicini, 2012; Golden & Min, 2013; Tavits, 2009; Veiga & Pinho, 2007; ...).
- More recent attention within the regional studies disciplines (Livert & Gainza, 2018; Luca & Rodríguez-Pose, 2015, Psycharis, Zoi and Iliopoulou (2016))
- Major political interferences:
  - Political budget cycles: variations on budget expenditure (or taxes) along the electoral cycle. Usually, expenditure increases prior to elections
  - Pork barreling: arbitrary territorial allocation of grants as a way to increase re-election chances



# Distributive politics and local development (cont.)

- Key themes:
  - When is investment likely to increase? **During local or national election years?**  
How is timing likely to affect different areas?
  - Which areas will mainly benefit from tactical redistributions, **core** or **swing**?
  - Is political influence exerted **top-down** (for the benefit of the central government) or **bottom-up** (due to strong local mayors lobbying efforts)?
- Significant implications for local development if grant allocations follows electoral criteria



# Aim and research hypotheses

- **Aim: to test the existence of electoral motivations in the distribution of investment transfers from the central to the local level in Brazil, Mexico, Chile and Colombia**
  - Hypotheses
- H1: The central government distributes investment funds to its local strongholds
- Expected result: Municipalities where the incumbent party won in federal/national elections are over-financed
  - Expected result: Municipalities ruled by mayors belonging to the incumbent coalition in the federal/national government are over-financed
- H2: The central government considers the local and the national (federal) electoral cycle when transferring investment to municipalities
- Expected result: investment increases during local and national (federal) election years



## Aim and research hypotheses (cont.)

H3: National (local) electoral results are considered in fund assignments

- The federal/national government over finances loyal areas where the incumbent party won by a narrow margin in federal/national elections (the **central swing** hypothesis)
- The federal/national government over finances loyal areas where the incumbent party won by a wide margin in federal/national elections (the **central core** hypothesis)
- The federal/ national government over finances loyal areas where the mayor won by a narrow margin in local elections (the **mayor swing** hypothesis)
- The federal/ national government over finances loyal areas where the mayor won by a wide margin in local elections (the **mayor core** hypothesis).

Dimension	Country	Variables	Years
Investment transfer from central to local (dependent variable)	Mexico	FISM	2000-2015
	Brazil	Capital transfers (transferências de capital)	1996-2011
	Colombia	SGP	2002-2015
	Chile	FNDR	2004-2014
Political (independent variables)	All	Mayor-President (dummy) Mayor-Governor (dummy, just for Mexico) Fed. elections in municipality (dummy) PBC $t_t$ (dummy) Margin victory, municipal elections (%) Margin victory, federal elections (%)	2000-2013 (Mexico) 1997-2012 (Brazil) 2004-2015 (Colombia) 2004-2014 (Chile)
Demographic (control variables)	All	Population	2000-2015 (Mexico) 2000-2017 (Brazil) 2004-2014 (Colombia) 2004-2014 (Chile)
Socioeconomic (control variables)	Mexico		
	Brazil	GDP per capita	2000(2)-2010(5)
		Homicide rate (%)	1996-2009
		IFDM-general (%)	2000-2013
		IFDM-employment/income (%)	2000-2013
	Colombia	GDP per capita	2000-2009
		Infant mortality rate (%)	2000-2013
Low birth weight (%)		2000-2013	
Chile	Poverty rate (%)	2004-2014 (Chile)	
Education (control variables)	Mexico	Secondary school academic progress index (%)	2000-2015
		High school academic progress index (%)	2000-2013
	Brazil	IFDM education)	2000-2013
	Colombia	Secondary school global evaluation results (%)	2000-2014
		Secondary school mathematics evaluation results (%)	
Chile		2004-2014 (Chile)	
Municipal finance (control variables)	All	Municipal autonomy (municipal taxes/total income) (%)	2000-2013 (Mexico)
		Municipal dependence (total transfers/total income) (%)	1996-2011(Brazil)
		Salaries spending (salaries spending/total income) (%)	2000-2013 (Colombia)
			2004-2014 (Chile)

# Methodology

- Fixed-effects heteroscedasticity and autocorrelation robust estimation
  - Municipal and year time effects.
  - Robust standard errors clustered at the municipality level to control for serial and spatial correlation

$$\text{Log}(\text{Investment per capita}_{it}) = \alpha + \beta \mathbf{X}_{it} + \gamma \mathbf{Z}_{it} + \delta \mathbf{W}_{it} + \mathbf{Y} \mathbf{V}_{it} + \sigma_i + \tau_t + u_{it}$$

Where  $I$  represents investment transfer and  $\mathbf{X}_{it}$ ,  $\mathbf{Z}_{it}$ ,  $\mathbf{W}_{it}$ ,  $\mathbf{V}_{it}$  are vectors that group political, socioeconomic, education and municipal finance variables

- Robustness checks: GMM to control for endogeneity



# Results

Variables	Mexico	Brazil	Colombia	Chile
Mayor_president_coalition (dummy)	813,308*** (277,249)	0.308*** (0.0365)	0.125*** (0.00962)	0.103*** (0.0337)
T0 (municipal election year)	-1.785e+06** (767,685)	0.167*** (0.0334)	0.0181*** (0.00424)	0.102*** (0.0196)
Socioeconomic var. (control)	YES	YES	YES	YES
Education var. (control)	YES	YES	YES	YES
Municipal finance var. (control)	YES	YES	YES	YES
Observations	20,765	18,807	10,200	3,776
Number of id	1,990	5,085	1,099	345
Municipal FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES

Mayor\_president\_coalition (dummy): 1 if the mayor belongs to the ruling coalition of the national (federal) government

T0: municipal election years

## Results (cont.)

Variables	Mexico	Brazil	Colombia	Chile
Mayor_president_coalition (dummy)	1.347e+06*** (378,469)	In progress	0.0595* (0.0331)	0.0988*** (0.0334)
T0 (municipal election year)				0.102*** (0.0197)
Municipal election, vote margin (%)	16,394* (9,087)	In progress	-0.00180** (0.000867)	-0.132 (0.166)
Municipal election, vote margin x coalition (% x dummy)	-54,820*** (17,250)	In progress	0.00247** (0.00121)	0.540** (0.221)
Socioeconomic var. (control)	YES	YES	YES	YES
Education var. (control)	YES	YES	YES	YES
Municipal finance var. (control)	YES	YES	YES	YES
Observations	20,966		10,186	3,776
Number of id	2,007		1,099	345
Municipal FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES

## Results (cont.)


Variables	Mexico	Brazil	Colombia	Chile
Mayor_president_coalition (dummy)	397,000 (343,854)	In progress	In progress	0.0916*** (0.0340)
T0 (municipal election year)				0.102*** (0.0196)
National election, vote margin (%)	2,126 (12,421)	In progress	In progress	0.165 (0.132)
National election, vote margin x coalition (% x dummy)	5,029 (18,686)	In progress	In progress	-0.148 (0.226)
Socioeconomic var. (control)	YES	YES	YES	YES
Education var. (control)	YES	YES	YES	YES
Municipal finance var. (control)	YES	YES	YES	YES
Observations	20,100			3,776
Number of id	1,998			345
Municipal FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES



## Some preliminary results

Mayors' political alignment and the electoral cycle seem to influence investment distribution

- H1✓: Mayors belonging to the central government incumbent parties receive higher investment transfers in Brazil, Colombia and Chile
  - In Mexico the effect is very small and (probably) further tests will yield it non-significant
- H2 ✓: In municipal election years, investment to municipalities increases in Brazil, Colombia and Chile, whereas it decreases in Mexico
  - Further research: Consider the effect of national election years
  - Further research: Characterize the investment cycle beyond election years
  - Further research: Consider the interaction between coalition and the electoral cycle
- H3a ✓: Local electoral results are considered in fund assignments
- H3b ×: National electoral results are considered in fund assignments
  - Further research: Bottom-up political influence?



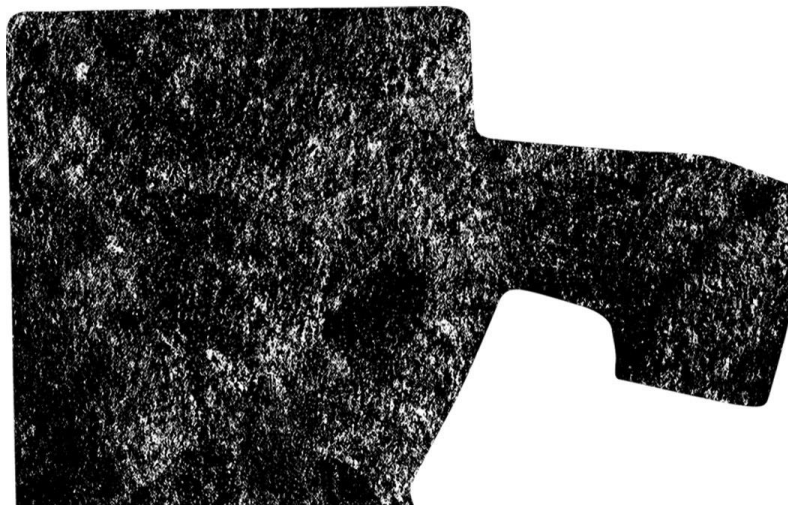
## Discussion and concluding remarks

- The transition from discretionary social programs to formula-based investment transfers has been a major reform to alleviate poverty and reduce discretion (Diaz-Cayeros et al., 2016). Nevertheless, our research reveals there is margin for electoral targeting
- How is tactical distribution exercised under formula-based allocation?
- What are the social and the territorial impacts?
- What is the relationship between decentralization and distributive politics? i.e. Does fiscal decentralization reduce the margin for tactical distribution?



Thank you!!!

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