

Corruption under Austerity

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Summary

- Suppose a country or city is subject to a new budget constrain: fiscal rules due to **austerity**
- How will politicians accordingly change public spending? What about **corruption**?
- Does accountability matters?
- Is there a change in public services provision?

Summary

- Evidence from extension of **fiscal rules** to small Italian municipalities in the period 2004-2014
- **Corruption** investigations **reduced** when fiscal rules are binding
 - Due to reduction in discretionary spending
 - No effect in the presence of high EU transfers (fiscal rules not binding)
- **Accountability** matters
- Local Public services probably not affected

Outline

- Fiscal rules
- Corruption
- EU Funds
- Empirical analysis
- Discussion and Contribution

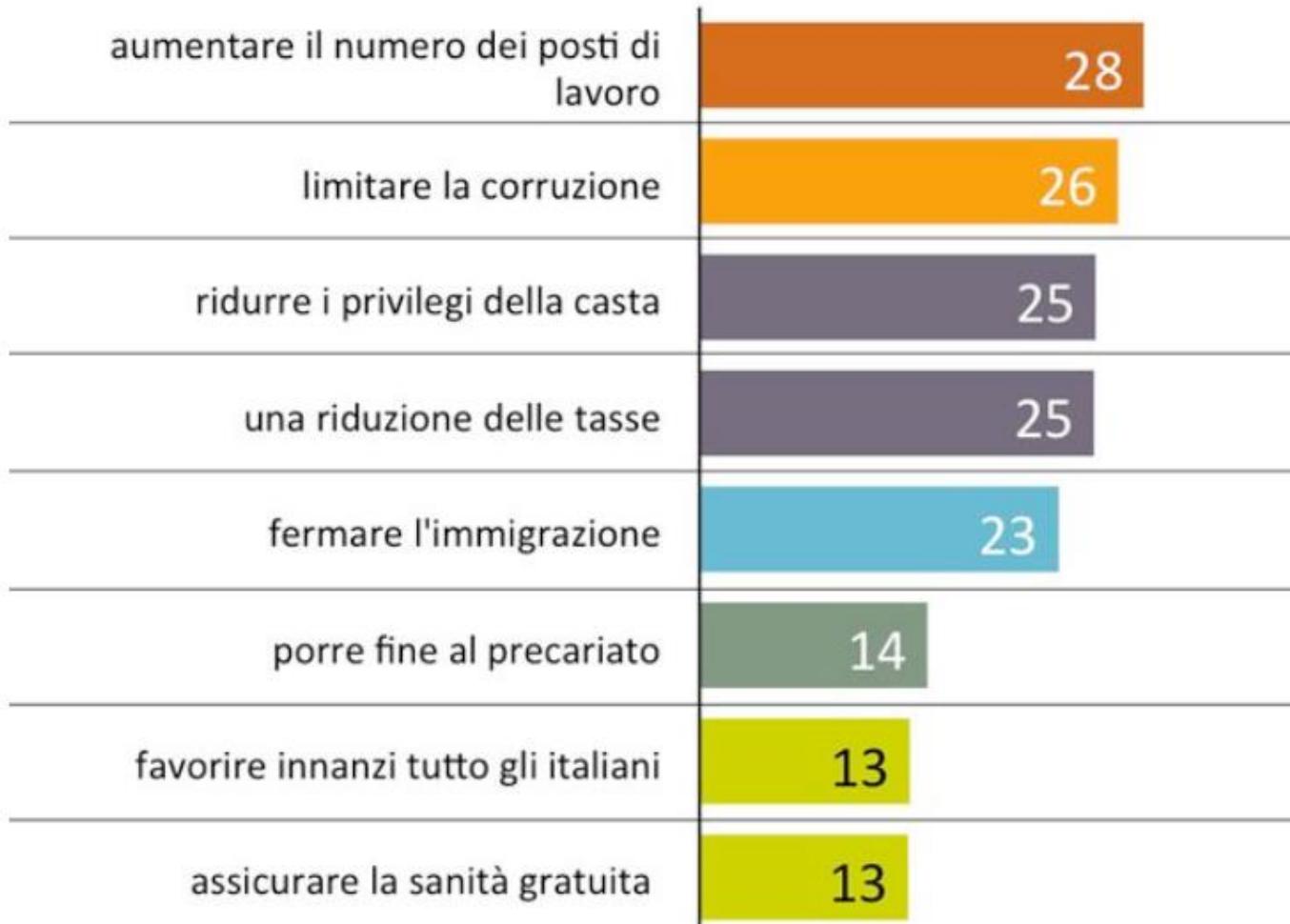
Fiscal rules: Domestic stability pact (DSP)

- Following the Stability and Growth Pact in 1997, EU countries enforced fiscal rules to keep local governments accountable
- Domestic stability pact (DSP): Set of budgetary policies aimed at containing spending and reducing public deficits of local governments
 - budget balance had to be proportional to a (moving) average of balances obtained in previous years in the same municipality
- Natural experiment: before 2013 only in cities above 5,000; starting in 2013, also in cities from 5,000 to 1,000 inhabitants

Fiscal rules: Domestic stability pact (DSP)

- Application of the policy to 3,721 new cities (out of about 8,000)
- Sanctions for those that do not comply (e.g. decrease in transfers, no new hiring, local politicians' wage curbed)
- Items excluded: EU-funded projects

Which should be the government priority?

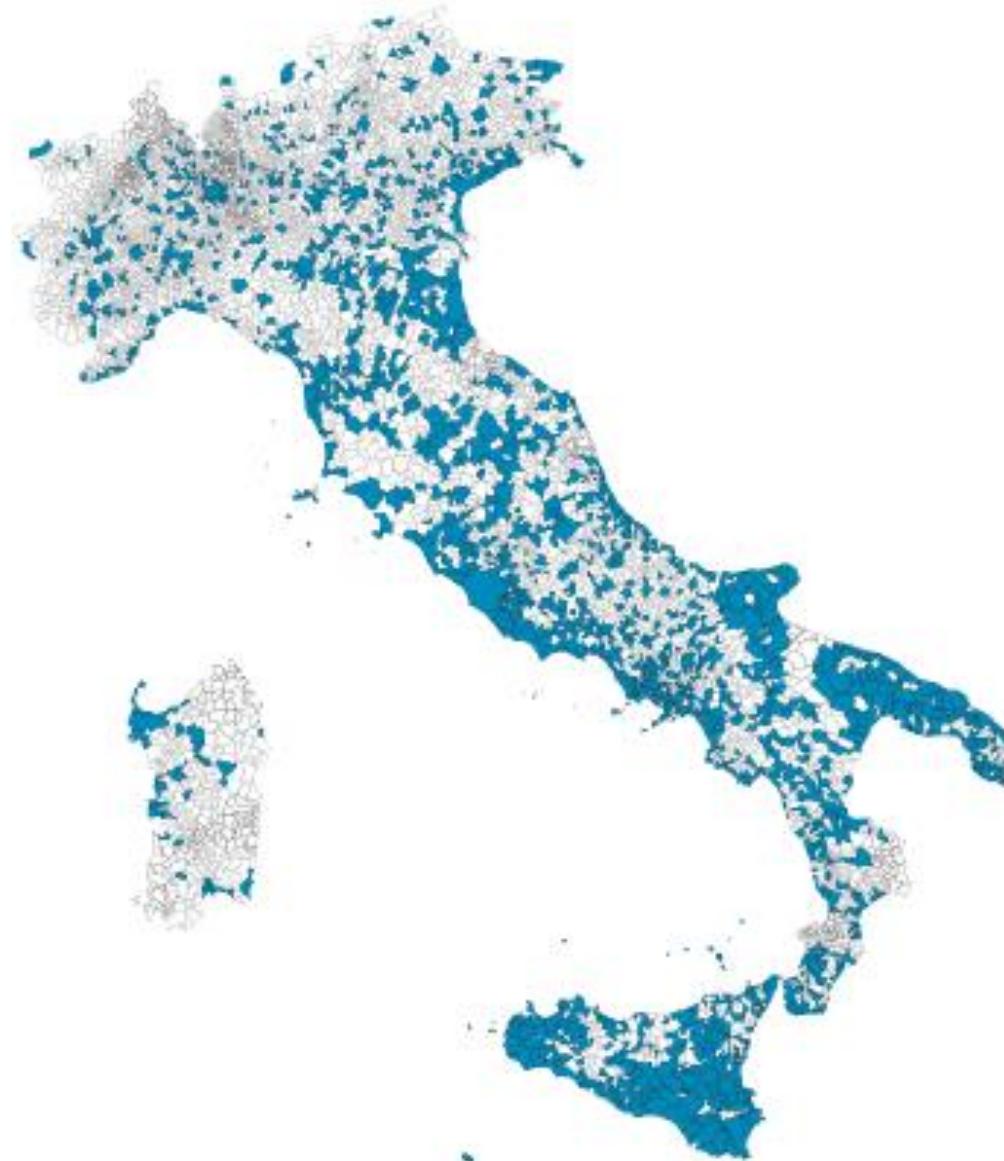


Source: SWG; Italy, June 2018

Corruption data

- Administrative data (Ministry of the Interior) on corruption crimes
- Number of events for which a judiciary procedure was activated, for each municipality and year (2004-2014)
- We cannot link to sentencing but for 1 investigation, 0.9 sentences in 2004-2014

Cities with at least one corruption charge in 2004-2014



Fiscal rules and corruption

- *Hypothesis:* if accountability is at work, fiscal rules might pressure politicians to reduce inefficient expenditures, resulting in a decrease in rent-seeking
 - If no accountability: “life as usual”, reduction in local public services, increase in local taxes
- **Trade-off** cut inefficient expenditures and reduce rent seeking OR cut local public services (or increase taxes) without reduce rent seeking?

Fiscal rules and corruption

Feasible in the Italian context?

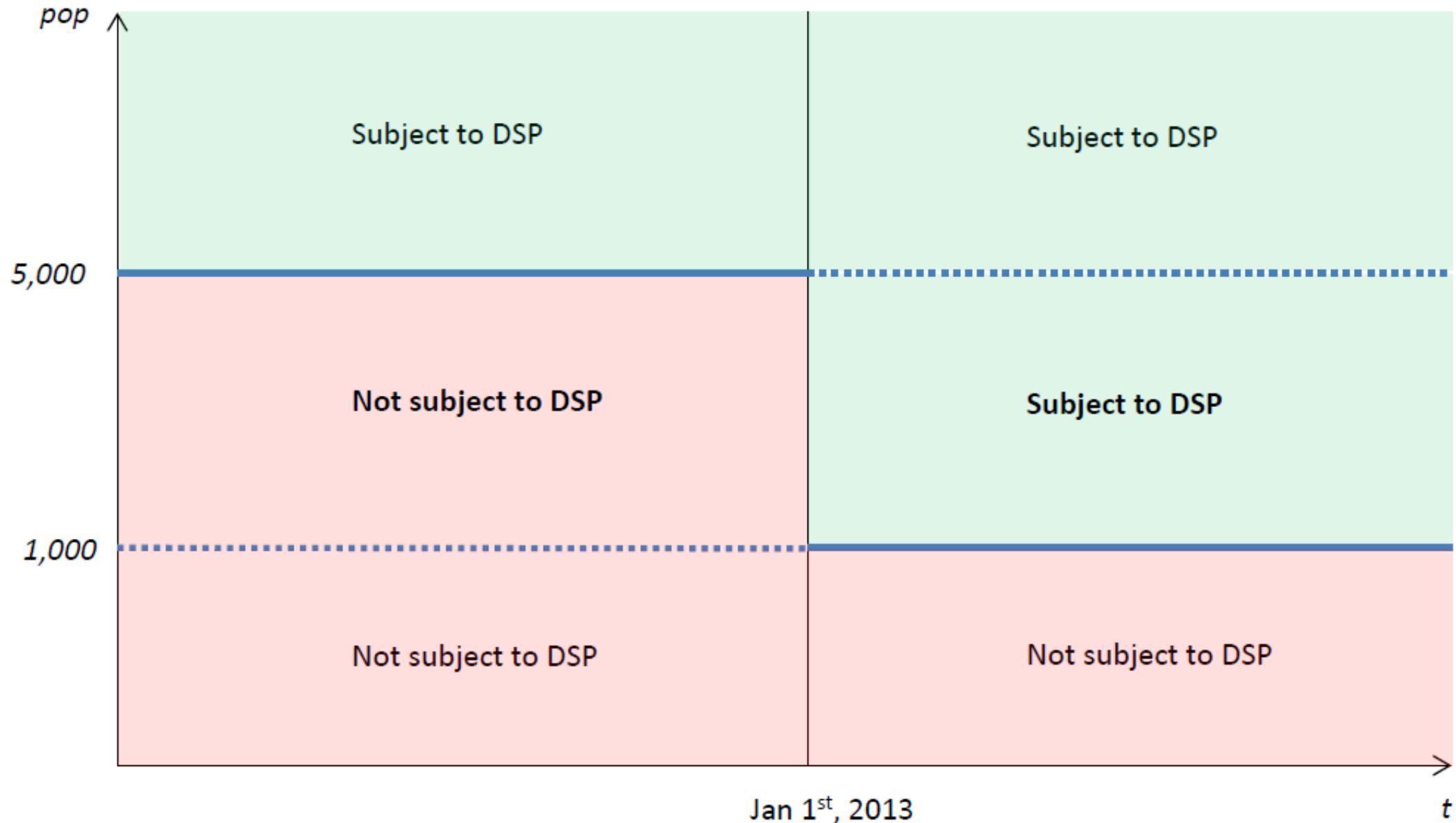
- **Accountability** is possible as mayors are directly elected and monitoring is facilitated by municipalities' small size
- Both municipal current and capital expenditures can be modified
 - 1/3 of total expenditure are considered not “rigid” [Grembi et al. \(2016\)](#); substantial variation in both current and capital expenditures on yearly basis
- Local taxes can be modified (e.g. tax on housing, waste management)

European funds

- Regional Policy: EU funds for investment programs were excluded from the DSP restrictions
- Six Southern regions eligible for extra EU funds (convergence regions) with a GDP < 75% of EU average, hereafter High-Funds Regions (HFR)
 - On average, Low-Funds Resions (LFR) spend 228 millions per year, compared to the 618 millions spent by HFR

European funds

- In the period 2013–2015,
 - Municipalities in HFRs received every year 226 Euros per capita of EU funds = 57% of their capital expenditure
 - Municipalities in LFRs received every year 22 Euros per capita = 11% of their capital expenditure budget
 - HFRs municipalities still respect fiscal rules without changing their spending patterns thanks to extra EU funds
- EU transfers are not constrained by the DSP: therefore fiscal rules are less binding in HFR → we focus on low funds regions (LFR)



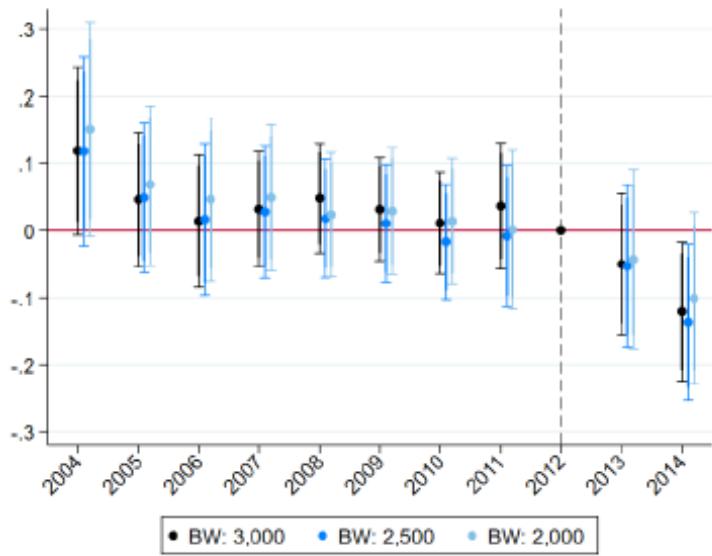
Estimation

$$y_{it} = \beta_0 + \beta_1 S_{it} + \beta_2 S_{it} \cdot T_t + \beta_3 P_i^* \cdot T_t + \zeta' X_{it} + \delta_t + \gamma_i + \epsilon_{it}$$

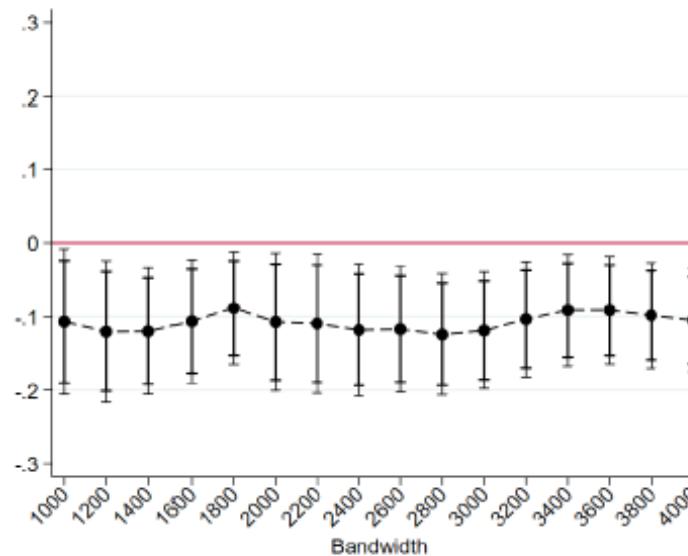
- y_{it} indicates standardized corruption charges per capita in city i in year t , S_{it} is a dummy indicating cities below the 5,000 threshold and T_t an indicator for the post-reform period
- $P_i^* = P_i - P_c$ indicates the distance from the 5,000 threshold. X_{it} , δ_t and γ_i represent, respectively, controls, year and city fixed effects
- The sample of cities is restricted to those in a distance h to the threshold: interval $P_i \in [P_c - h; P_c + h]$. We test our findings with many h bandwidths.
- The effect of introducing the DSP is captured by β_2 , the local diff-in-diff estimator

	Corruption per-capita			Corruption over spending		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel a: LFRs						
Stability pact (T^*S)	-0.094** (0.041)	-0.090** (0.040)	-0.112** (0.045)	-0.200** (0.084)	-0.180** (0.080)	-0.215** (0.091)
N	16607	16287	16287	16574	16255	16255
R^2	0.226	0.229	0.230	0.230	0.237	0.238
Panel b: HRFs						
Stability pact (T^*S)	0.059 (0.058)	0.062 (0.059)	0.097 (0.063)	-0.006 (0.068)	0.001 (0.069)	0.042 (0.073)
N	7464	7102	7102	7429	7072	7072
R^2	0.261	0.259	0.261	0.265	0.266	0.269
Panel c: Italy						
Stability pact (T^*S)	-0.045 (0.033)	-0.041 (0.033)	-0.049 (0.037)	-0.138** (0.061)	-0.122** (0.059)	-0.136** (0.068)
N	24071	23389	23389	24003	23327	23327
R^2	0.238	0.238	0.239	0.237	0.242	0.243
City, year FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	Yes	No	Yes	Yes
Controls* T	No	No	Yes	No	No	Yes
Bandwidth	2,500	2,500	2,500	2,500	2,500	2,500

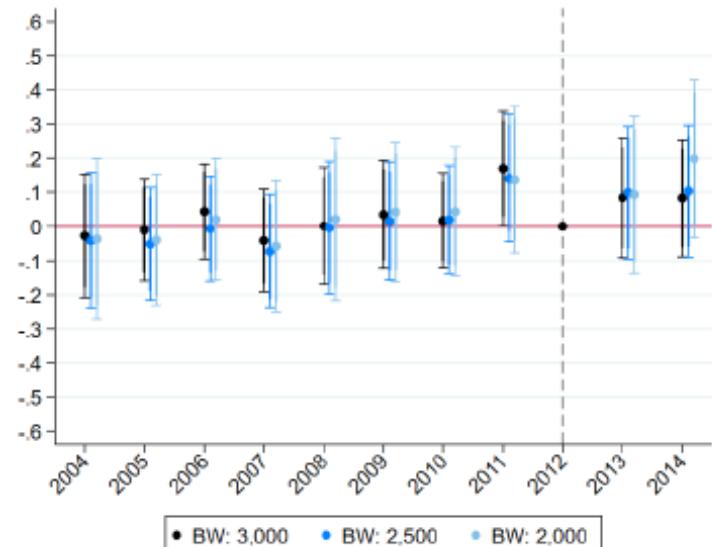
(a) Event-study: LFRs



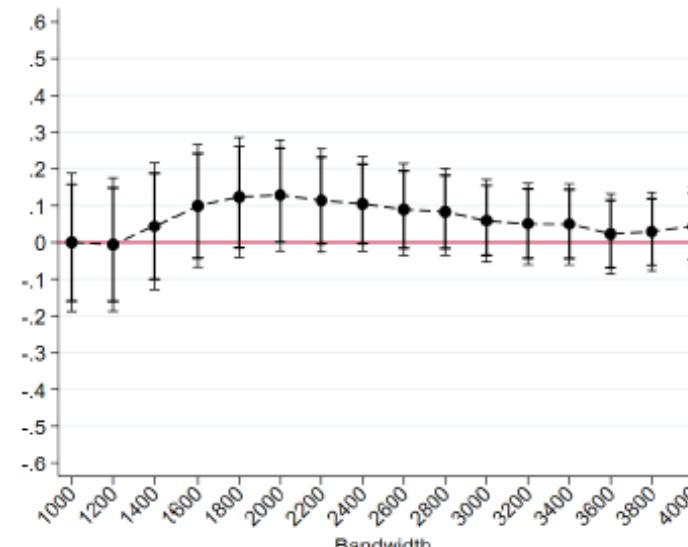
(b) DiD: LFRs



(c) Event-study: HFRs

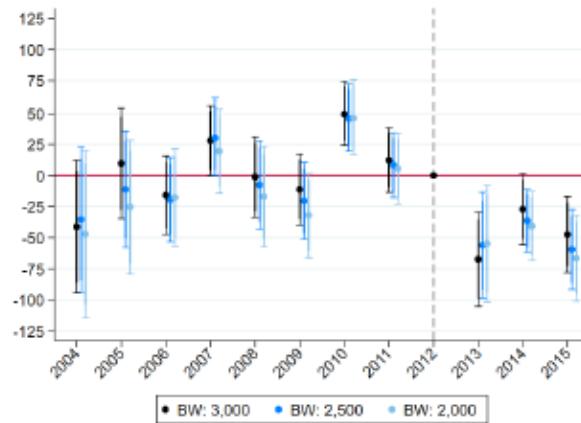


(d) DiD: HFRs

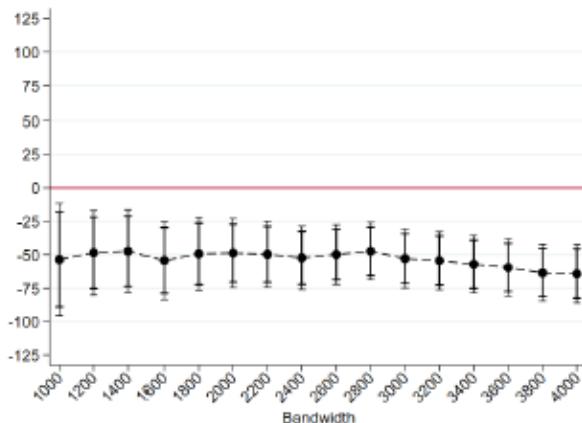


	Total revenues (PC) (1)	Current spending (PC) (2)	Capital spending (PC) (3)	Procurement spending (PC) (4)
Panel a: LFRs				
Stability pact (T^*S)	-4.409 (5.272)	-20.359*** (6.533)	-50.138*** (11.623)	-174.955*** (57.578)
N	17633	17652	17652	10193
R^2	0.900	0.923	0.395	0.227
Panel b: HRFs				
Stability pact (T^*S)	8.031 (7.769)	-10.257 (8.901)	-10.409 (25.235)	81.064 (134.710)
N	7577	7613	7613	4393
R^2	0.902	0.890	0.349	0.355
Panel c: Italy				
Stability pact (T^*S)	-0.806 (4.371)	-17.203*** (5.282)	-38.234*** (11.073)	-96.402* (57.683)
N	25210	25265	25265	14586
R^2	0.906	0.914	0.391	0.361
City, year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Bandwidth	2,500	2,500	2,500	2,500

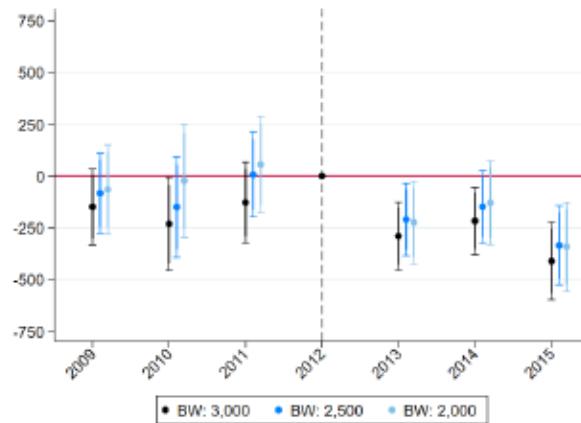
(e) Event-study: Capital spend. (PC)



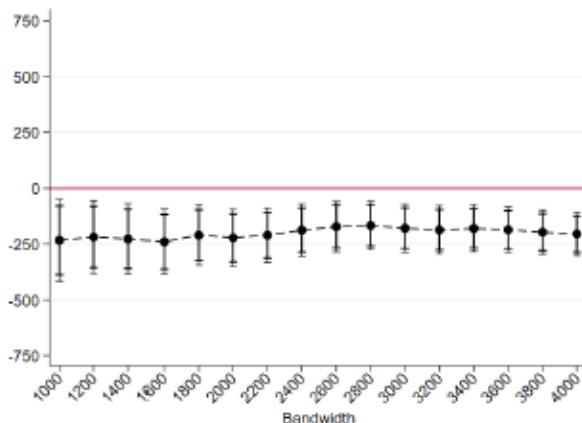
(f) DiD: Capital spending (PC)



(g) Event-study: Procurement (PC)



(h) DiD: Procurement (PC)



- Spending in LFRs: Big reduction in capital expenditures and procurement; small reduction in current exp.; No effect on revenues
- No effect in HFRs
- Text analysis on local news: most corruption investigations (70% of about 2000 articles) concern capital spending procedures

Interaction term:

	EU funds (spent)					
	Whole Italy				HFRs	HFRs+ Abruzzo and Molise
	Corruption (PC) (1)	Current spending (PC) (2)	Capital spending (PC) (3)	Procurement spending (PC) (4)	Corruption (PC) (5)	Corruption (PC) (6)
Post-reform (T)*Treatment group (S)	-0.100*** (0.028)	-18.417** (8.446)	-59.902*** (15.010)	-259.820*** (92.689)	-0.462*** (0.161)	-0.341*** (0.116)
Post-reform (T)*interaction	-0.318 (0.206)	5.123 (35.619)	-165.463 (101.644)	1479.792*** (531.035)	-0.871*** (0.293)	-0.724*** (0.268)
Treatment group (S)*interaction	-0.292** (0.130)	-22.411 (54.787)	18.486 (119.102)	-1271.910 (1042.354)	-0.759** (0.350)	-0.331 (0.260)
Post-reform (T)*Treatment group (S)*interaction	0.344** (0.137)	4.275 (22.384)	99.623 (60.890)	427.780 (344.112)	1.033*** (0.327)	0.837*** (0.266)
<i>N</i>	23174	25028	25028	14487	7118	7988
<i>R</i> ²	0.040	0.262	0.109	0.093	0.047	0.047
City, Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Bandwidth	2,500	2,500	2,500	2,500	2,500	2,500

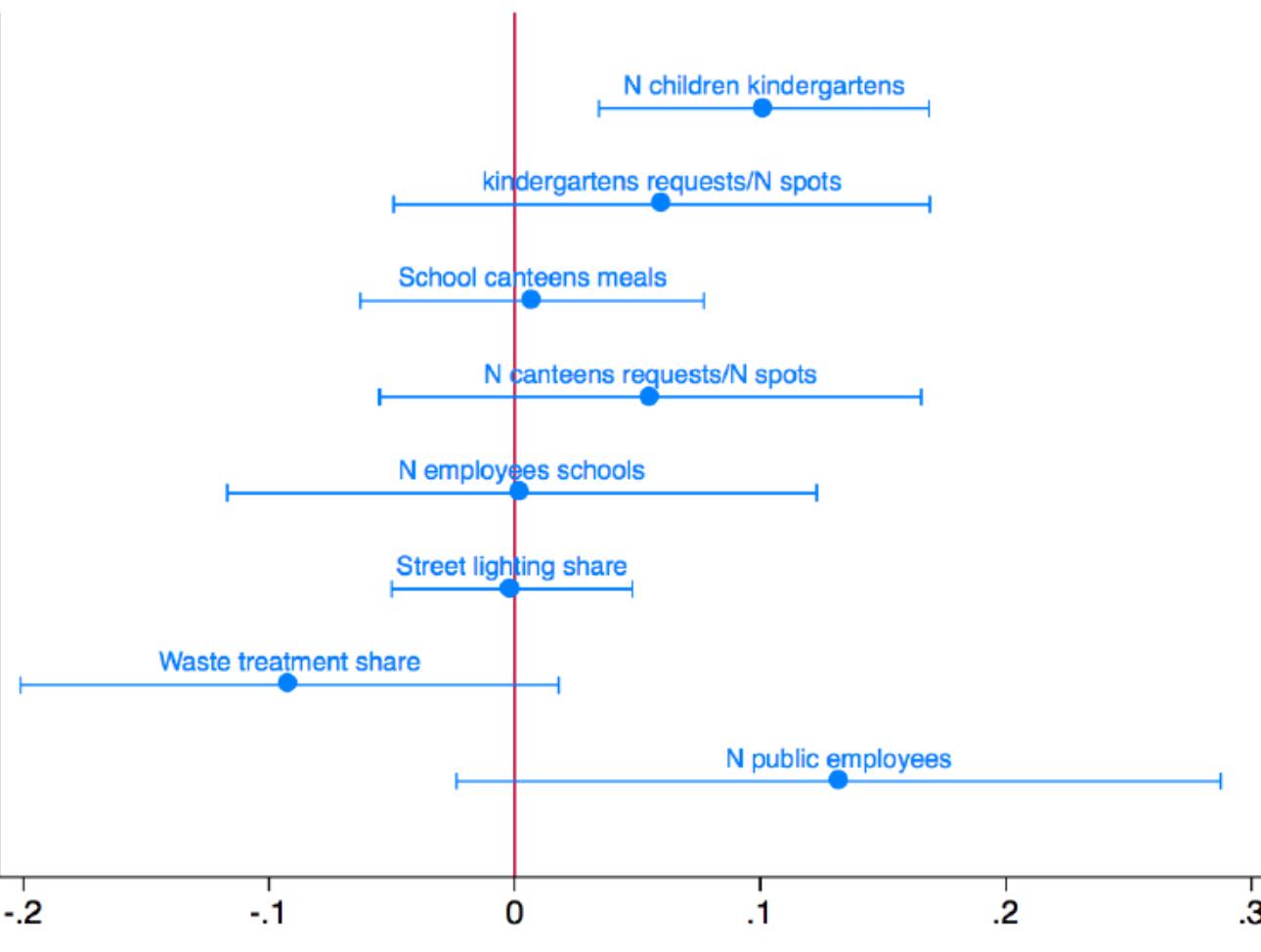
- Triple interaction approach
 - Provincial allocation of EU funds drive corruption and spending reduction
 - Results robust to restrict the sample to Southern municipalities

Interaction term:	Electoral period		Mayor term limited				Mayor high education	
	Dependent variable:	Corruption	Corruption max	Corruption	Corruption max	Corruption	Corruption max	
		(PC)	(PC)	(PC)	(PC)	(PC)	(PC)	(PC)
				pre-DSP ES		pre-DSP ES		
		(1)	(2)	(3)	(4)	(5)	(6)	(8)
Stability pact ($S*T$)		0.013	0.053	-0.125**	-0.118***	-0.121**	-0.112***	0.138
		(0.073)	(0.070)	(0.049)	(0.044)	(0.049)	(0.043)	(0.103)
Stability pact ($S*T$)*interaction		-0.156**	-0.193**	0.103*	0.095*	0.100*	0.090	-0.256**
		(0.079)	(0.084)	(0.059)	(0.057)	(0.059)	(0.056)	(0.108)
<i>N</i>		16287	16189	16287	16189	16287	16189	16287
<i>R</i> ²		0.229	0.223	0.229	0.229	0.222	0.223	0.223
City, Year FE		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bandwidth		2,500	2,500	2,500	2,500	2,500	2,500	2,500

- LFRs: Exogenous Accountability shocks driving corruption reduction: pre-electoral years and term-limits
- LFRs: Effect driven by educated mayors

	Perc. tenders <40K (1)	Perc. amount <40K (2)	Amount PC <40K (3)	N council resolutions (4)	N government resolutions (5)
Stability pact (S^*T)	-0.0102 (0.00910)	-0.00679 (0.00820)	-2.832 (1.084)***	4.424 (1.270)***	7.656 (3.664)**
Dep. var. average value	0.044	0.031	12.45	46.19	122.08
Observations	11,185	11,185	10,954	10,263	10,268
Adjusted R^2	0.003	0.003	0.005	0.035	0.037
City, year FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Bandwidth	2,500	2,500	2,500	2,500	2,500

- LFRs: No spending displacement towards discretionary procurements
- LFRs: Higher productivity in the city council



- LFRs: No effect on measurable local public goods and services
- LFRs: No effect on local income and inequality
- LFRs: No aggregate effect on province GDP and labor outcomes

Additional findings

- LFRs: stronger effect in cities in which fiscal rules are more binding: corruption decrease up to 50% of SD in top20% bound municipalities
- LFRs: No displacement effects in nearby cities
- LFRs: No effect on other types of crimes (Placebo); no change in police spending
- LFRs: No effect on mayors re-election
- LFRs: No effect at 1,000 threshold due to lack of corruption investigations
- LFRs: Control for simultaneous policies: gender quota – change N councillors
 - drop cities having elections in 2012-2013; «horse race» between policies

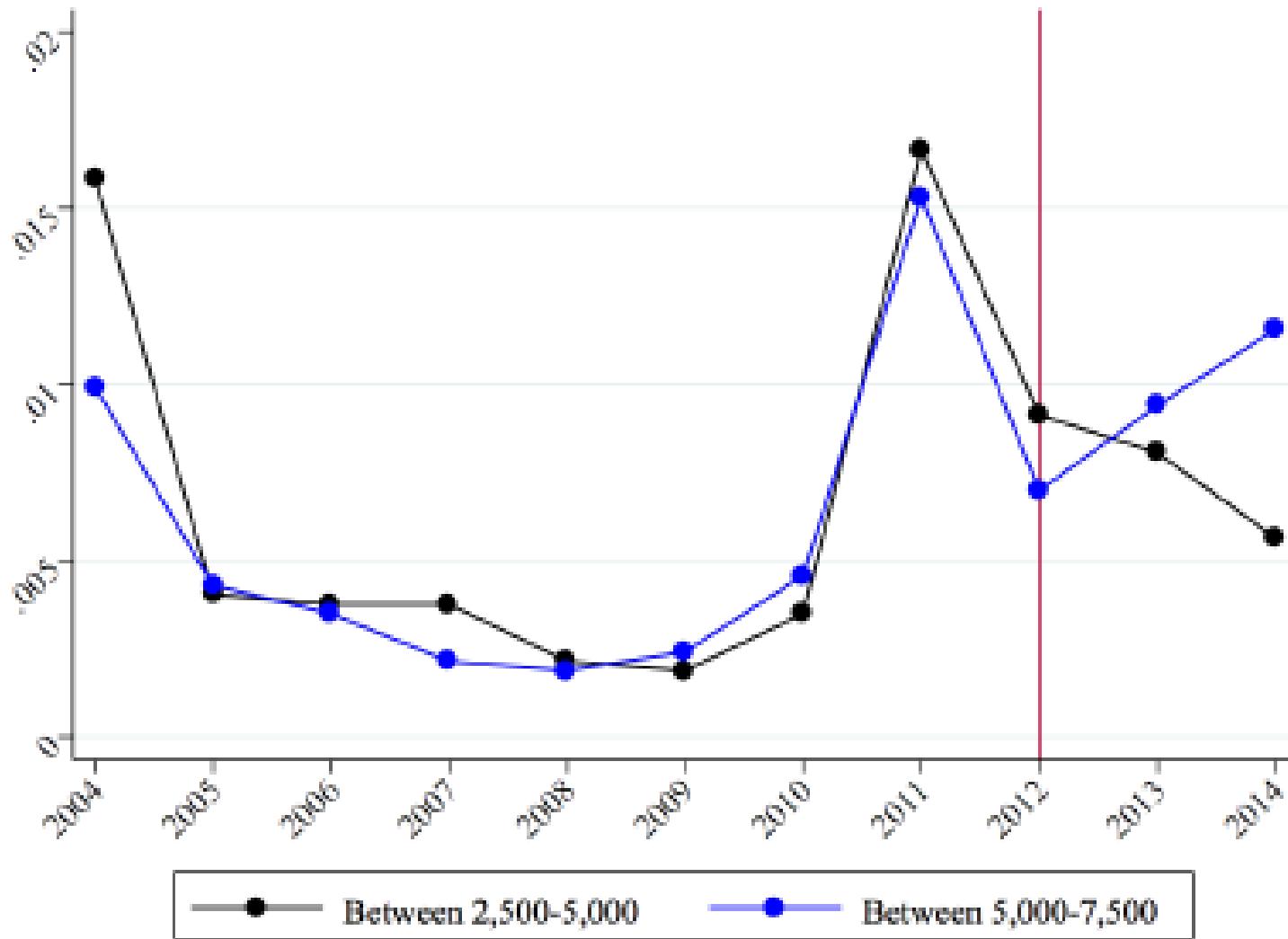
Discussion and Contribution

- Effects of **austerity**: we show the causal effect of austerity at the local level, in terms of corruption
 - Fiscal rules (mostly effective in reducing deficit) [Grembi et al. 2016; Asatryan et al. 2018; Heinemann et al. 2018](#)
- On **anti-corruption** policy: fiscal rules might also represent a cost/effective way to reduce corruption:
 - Standard anti-corruption policies involve huge costs, e.g. authority, auditors salaries and on-site controls ([Avis et al. 2017](#))
 - The Domestic Stability Pact (DSP) involves little public spending and there's limited margin for manipulation
- On **EU Integration**: we test the local effects of a restrictive (DSP) and of an expansionary policy (European transfers)

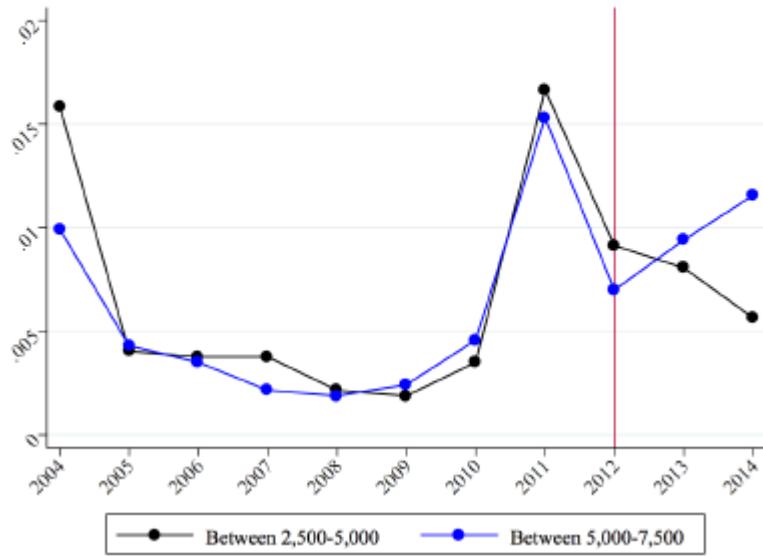
Discussion and Contribution

- For external interest, consider:
 - Binding Fiscal rules (sanctions)
 - Accountability (small municipalities, direct election)
 - Mayors can manipulate current/capital expenditure and revenue side

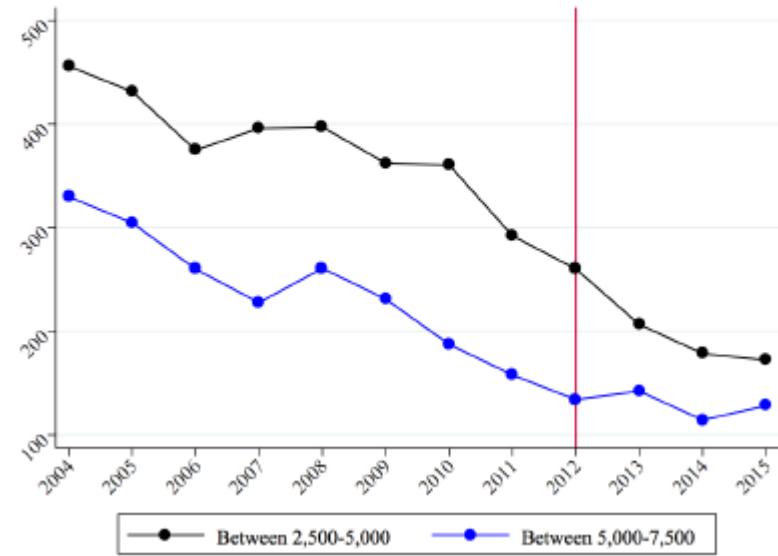
(a) Corruption (PC)



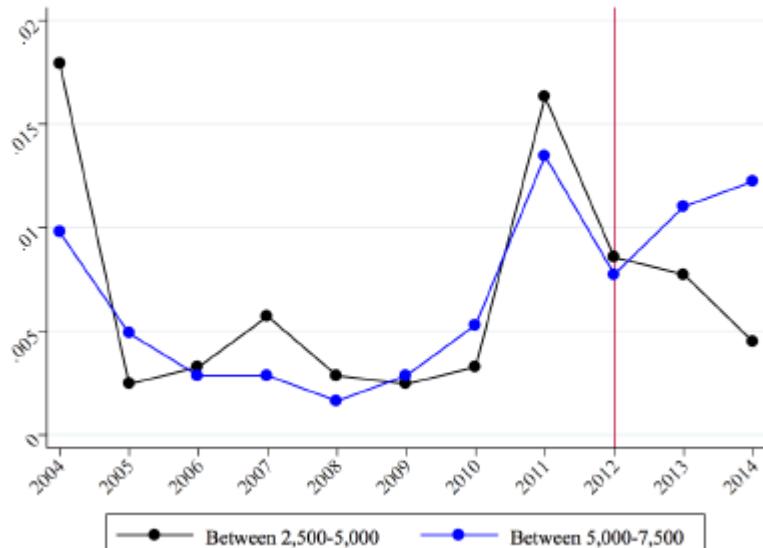
(a) Corruption (PC)



(b) Capital spending (PC)



(c) Corruption (PC) - non term limited



(d) Corruption (PC) - term limited

