

Discussion of “Caught with the Hand in the Cookie Jar”

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Introduction

- Authors study how corruption impacts the allocation of resources in the economy
- Anti-corruption audits on municipal spending in Brazil allow the authors a nice setting to study how actual changes in corrupt practices impact firm behavior

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- Anti-corruption audits on municipal spending in Brazil allow the authors a nice setting to study how actual changes in corrupt practices impact firm behavior
- Authors find that following an audit, firms that are found to have gotten illegitimate contracts have lower employment growth than their non-corrupt peers
- Firm size distribution (within industry) seems to become smaller suggesting (in a Syverson (2010) sense) that resource allocation is better

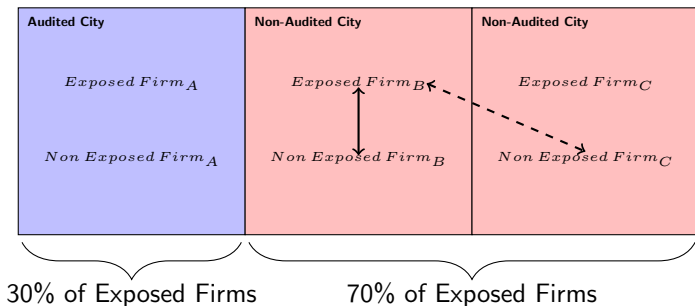
Corruption measurement

- Existing literature tends to measure using two methods
 - ① Across countries variation (usually measured as *perceptions* of corruption)
 - E.g. Durnev and Favuer (2010), Caprio, Faccio and McConnel (2013) firms in more corrupt countries have worse governance and invest more in harder to expropriate assets
 - ② Within country variation (usually measured as prosecution rates of corruption)
 - Glaeser and Saks (2006) — Corruption is more prevalent in lower income and less educated areas, does not seem to have a robust effect on local economic outcomes
 - Smith (2016), Ellis and Smith (2017), Brown, Smith, White, Zutter (2017) — Firms in more corrupt areas have higher leverage, are less innovative, and have lower valuations

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- Both approaches are useful, but rely on ex-ante equilibrium outcomes
- Using audit results allows the authors to combine the ex-ante behavior with ex-post changes in behavior — a stronger test than the literature that uses the prosecution rates of corruption

Experiment Graphically



- Authors currently compare firms located outside of the audited city in their analysis
 - I.e. *Exposed Firm_B* to *Non Exposed Firm_B* or *Exposed Firm_B* to *Non Exposed Firm_C*
 - Attempt to reduce general equilibrium effects

Main Results — Employment Growth

Control Group	10% Random	Sector & Municipality Match
$I_i^{exposed} \times \text{Post}$	-0.00777*** (0.0000472)	-0.00380** (0.00167)
Post	-0.0180*** (0.00172)	-0.0169*** (0.0000956)
Firm Fixed Effects	Yes	Yes
Time Fixed Effects	Yes	Yes
Municipality x Time Fixed Effects	Yes	Yes
Industry x Time Fixed Effects	Yes	Yes
Observations	59,491,951	24,329,302
R-squared	0.124	0.086
Mean Employment Growth	0.0180	0.0129
Std. Dev. Employment Growth	0.173	0.163

- *Post* effects are surprisingly strong — Why?
 - Particularly because the effects are estimated on municipalities that were *NOT* audited

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- Some thoughts on why there might be a post effect
 - Could be due difficulty in classifying Exposed Firms — unlikely because the effect is larger than the TE
 - Is this still a multiplier effect?
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- Can you see if these effects are transmitted along the supply chain?
 - It is possible that some of the *Post* impact is that related firms are hit with spillover effects?

Geography

- Dataset is extremely rich with what seems to be a lot of geographical variation — maybe leverage this more
 - 70% of the exposed firms are not located in the audited city
- Estimate the effect for firms within municipalities
 - Compare the effect of the audited city to other cities
 - Is the effect different for non-audited cities that are farther away?
- This type of analysis will help to understand the role of local connections to the government vs. other types of corruption
- More minor, but authors may want to cluster by municipality instead of by firm — particularly if they want to use municipal distances

Political Connections

- Brazil seems to have very good data on political connections (e.g. Claessens, Feijin, Laeven (2008)), maybe link this data to see whether these are also politically active firms?
 - The political connections literature finds that connected firms benefit from more government contracts (e.g. Goldman, Rocholl, and So (2013)), but can't say much about whether these are "good" or "bad" contracts, maybe you can add to this literature as well

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- Are the effects different in election years?
 - Cavalho (2014, 2017) finds that political uncertainty impacts lending and firm real decisions, maybe there are effects here too

What about levels and dynamics?

- Main analysis is on growth of employment
- What about amount of employment?
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 - Is employment going declining or just increasing at a lower rate?

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- Main analysis is on growth of employment
- What about amount of employment?
 - Harder to think about what the counterfactual growth rate would have been — particularly for small firms
 - Is employment going declining or just increasing at a lower rate?
- Are the effects similar over time? Can you say anything about the corruption equilibrium?
 - Are these long-term contracts? — if so, the impacts may persist for longer
 - Are firms changing their bidding behavior?
 - Are municipalities changing their contract allocation behavior?

Conclusion

- Authors have a great setting to study how corruption impacts resource allocation
- Following randomly assigned municipal audits, firms that are revealed to have had illegitimate government contracts grow at lower rates and industries seem to have a better allocation of resources
- I have made some suggestions that I think will help shed light on the economics of the resource allocations