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Corruption and Firms

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We estimate the causal real economic effects of a randomized anti-corruption crackdown on local governments in Brazil using rich micro-data on corruption and firms. After anti-corruption audits, municipalities experience an increase in the number of firms concentrated in sectors most dependent on government relationships and public procurement. Through the estimation of geographic spillovers and additional tests, we show that audits operate via both a direct detection effect as well as through indirect deterrence channels. Politically connected firms suffer after the audits. Our estimates indicate the anti-corruption program generates significant local multipliers which are consistent with the presence of a large corruption tax on government-dependent firms.

Key words: Corruption, Firms, Brazil, Audits, Public procurement, Political connections, Misallocation, Development.

JEL Codes: D72, D73, G38, H57, H38, K00, L22, O10, O43.

1. INTRODUCTION

Corruption is at the centre of international policy debate, as epitomized by World Bank Group President Jim Yong Kim's 2013 statement defining it as "public enemy number one." Since the late 1990s, a number of resources and a tremendous amount of effort have been devoted to fighting corruption, ranging from international transparency initiatives and regulations to numerous national anti-corruption programs. One of the main goals of these policies is to spur private sector development, yet their effectiveness remains a controversial topic as some argue such policies may backfire.[1]

In this article, we ask: how does a national anti-corruption crackdown affect local economic activity? Answering this question is not only important from a policy perspective, but can allow us to shed light on the mechanisms linking government corruption to firm growth and resource allocation.

1. See, for example, When corruption is good for the economy (Fortune, 2014), Why corruption is a messy business (Financial Times, 2014), and Where do you turn when the anti-corruption crusaders are dirty? (The New York Times, 2019).

The editor in charge of this paper was Nicola Gennaioli.

Although an active body of theoretical and empirical literature has investigated the interplay between economic development and corruption—commonly defined as the (illegal) abuse of public office for private gain—establishing causality has proven extremely difficult due to the equilibrium nature of corruption.[2] As a result, both cross-country and firm-level studies typically suffer from endogeneity issues that make it difficult to pin down specific channels. Anti-corruption initiatives also tend to present similar challenges as they are often anticipated, and at times manipulated, by the corrupt agents they target in the first place.

We circumvent these obstacles by focusing on the unique context of Brazil, where the federal government randomly audited local public spending to crackdown on corruption in local governments from 2003 to 2014.[3] These audits are randomized across municipalities and have been shown to have a lasting ability to reduce corruption (Avis *et al.*, 2018). By exploiting exogenous spatial and time variation, we identify the causal impact of the audit program on various outcomes at the level of the local economy and the firm.

As a first step toward understanding how corruption affects local government-firm relationships, we create and gather data from various sources. To construct our primary outcome measures at the municipality and firm level, we use matched employer-employee administrative data for the entire Brazilian formal sector from the period 2002–17. We also rely on a number of confidential datasets (such as the administrative censuses of retail and service sector firms), and publicly available ones (such as data on politicians and campaign contributions as well as surveys of informality and data on public procurement contracts).

In the first part of this paper, we estimate the impact of Brazil's anti-corruption crackdown on firms. In a staggered difference-in-differences framework, we compare outcomes in a municipality that was randomly drawn to be audited (treatment) to those in municipalities that were eligible but were either randomly chosen to be audited later or were never audited (control). We confirm the validity of our research design by showing that a range of local economic, demographic, and political characteristics cannot predict audits, and we illustrate parallel trends in the outcome variables prior to the audit. After an anti-corruption crackdown, treatment municipalities experience higher levels of economic activity relative to control municipalities. On average, we observe a 0.9% increase in the number of firms and business establishments operating in treated municipalities in the three years after the audit.[4]

The information contained in the detailed audit reports describing all irregularities uncovered by the auditors indicate that most corruption cases involve either theft of local funds by politicians, or irregularities and bribes in public procurement. As a result, a direct implication of our analysis is that the effects of the anti-corruption audits should primarily affect the economic sectors that most rely on government relationships and local spending. Indeed, we show that our effects are larger and fully concentrated in those sectors. We do so by adopting two primary definitions of government dependence: (i) sectors that are highly represented in government procurement and (ii) sectors that are identified as corrupt via the manual reading of all irregularities involving firms uncovered by the auditors and reported in the audit reports. We show that while the number of firms operating in government-dependent sectors increases by around 1.4%, there is a zero effect elsewhere.

2. For extensive reviews of the literature, see Bardhan (1997), Jain (2001), Svensson (2005), Hanna *et al.* (2011), Olken and Pande (2012), Banerjee *et al.* (2012), Rose-Ackerman and Palifka (2016), and Fisman and Golden (2017).

3. Audits are one of the most common tools governments adopt to monitor and punish corrupt activities. Supreme Audit Institutions (SAIs), *i.e.*, specific agencies dedicated to anti-corruption audits, are present in almost every country in the world (http://www.intosai.org).

4. We often use the terms "firms" and "business establishments" interchangeably. Results, as shown in this article, are extremely similar both quantitatively and qualitatively across the full analysis.