

Bidding despite corruption: The effect of corruption and connections on perceived fairness and competition in Honduran public procurement

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Abstract

Scandals like Lava Jato in Brazil highlight the pervasiveness of public procurement corruption. In addition to lower value for money and the loss of trust in government, such corruption threatens to produce a vicious cycle whereby honest firms self-select out of public procurements, further increasing corruption and decreasing value for money. This paper explores this vicious cycle hypothesis through a unique survey of businesses in Honduras. I find that experiences with bribery and perceptions of the importance of personal and party connections undermine perceptions of fairness, particularly for firms bidding with Honduras's public works agency. While firms that have not bid recently view the process as less merit-based than those that have, I do not find that perceptions influence intention to bid in the future as the vicious cycle hypothesis would suggest. The one exception to this is concern over grand corruption, which does suppress the intention to bid.

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*Introduction*²

During the 2010s, there were a rash of major corruption scandals throughout Latin America. As exemplified by the Lava Jato scandal in Brazil, in the majority of these cases, corruption occurred through public procurements, either corruption in winning contracts or the use of fraudulent procurements to embezzle funds.

In addition to higher prices, lower quality goods, and the loss of trust in government, public procurement corruption threatens to produce a vicious cycle whereby honest firms self-select out of public procurements, further increasing corruption and decreasing value for money. This paper explores this vicious cycle hypothesis primarily through a unique survey of vendors registered to sell goods and services to the Honduran government. More specifically, I test the impact of perceptions and experiences with grand corruption, administrative corruption, the perceived importance of merit-based, bribery-based, and connections-based factors in winning government contracts on both perceptions of fairness of the procurement process and the intention to bid on public procurements.

This study makes several important contributions to the literature. First, this study highlights the importance of distinguishing between grand and administrative corruption and recognizing that the two are less correlated with one another than often assumed. Honduras offers an interesting case as the evidence suggests that grand corruption is a much larger problem than administrative corruption, and while there are many cases of procurement corruption, the survey of vendors suggests that it does not appear to be generalized across the majority of procurements. This is perhaps due to the extent of patronage in bureaucratic appointments, which allow high level officials control over the bureaucracy and procurements.

Second, I provide confirmatory evidence that perceptions and experiences with bribery and the exploitation of personal and party connections undermine perceptions of fairness. Third, even within one country, I find considerable variation in procurement problems across agencies. In particular, I find lower perceptions of fairness and the importance of merit based factors at Honduras's public works agency than others examined, confirming other studies noting the vulnerability of the public works sector to corruption.

Fourth, I provide a somewhat nuanced understanding of how procurement irregularities influence bid decisions by firms. As hypothesized, I find that concern over grand corruption moderately depresses bidding intentions; however, I do not find a robust relationship between perceptions of merit, fairness, connections, and bribery on one side of the equation and intention to bid on the other. Instead, bidding history, dependence on government revenue, and experience with government procurement offer far better predictors of intention to bid. While firms that have not recently bid on public procurements view the process as less merit based than those that have not, firms that are dependent on government revenues have adapted to the procurement

² The data for this manuscript were collected as part of an evaluation conducted by Social Impact of the Millennium Challenge Corporation's Threshold Program in Honduras.

environment, and they will likely continue to bid despite perceptions of unfairness in the process and despite other challenges (e.g., delays in payments).

The paper begins with an overview of the use of bribery and personnel connections in procurements. This is followed by a theoretical exploration of the effects of these factors on competition and the proposal of several hypotheses. After introducing these challenges in the Honduran context, and explaining the methodology, I use survey data and audit data to provide descriptive inferences about the nature of grand and administrative corruption in Honduran procurement. This is followed by three statistical analyses: an analysis of factors predicting perceptions of fairness, a similar analysis focused on differences across government agencies, and an analysis of predictors of intention to bid in future procurements.

The problem: Procurement corruption

While there is considerable cross-national variation, public procurements make up a large proportion of government budgets and a meaningful proportion of GDP (Kühn and Sherman, 2014). As Kühn and Sherman (2014) note, “With such vast sums at stake, few government activities create greater temptations or offer more opportunities for corruption than public sector procurement.” (pg. 4) The procurement process is frequently divided into several steps, including need identification, design of tenders, potential prequalification or short listing, bidding procedures, contract award, and contract execution with steps added or subtracted depending on the nature of the good or service (see for example OECD, 2007). Corruption can occur at any stage in this process or even prior in rule making (Søreide 2002; Dávid Barret and Fazekas, 2019). Common examples include identifying goods that are not needed, tailoring specifications that favor specific firms, leaking confidential information, limiting competition, manipulating the bidding procedure, or modifying the contract (Søreide, 2002).

Procurement-related corruption can also vary based on who in the government hierarchy benefits, the frequency of exchanges, and amount of money involved. Scholars and practitioners frequently distinguish between grand corruption and petty corruption (Rose-Ackerman, 1999; Langseth, 2006). Grand corruption, also at times referred to as political or wholesale corruption, typically involves high-level officials, large sums of money, and typically a small number of transactions. Administrative corruption, frequently called petty or retail corruption, typically involves low-level officials and smaller sums of money spread over frequent transactions. While an important distinction, not all corruption cases fit neatly in one or the other. For example, proceeds of corruption might be shared up and down the hierarchy and grand corruption can occur over repeated transactions.

There are no shortage of examples of procurement-related grand corruption; however, perhaps the most salient in recent years is Brazil’s Lava Jato case and subsequent revelations of the Brazilian construction firm Odebrecht’s international bribe payments. Odebrecht and other construction firms colluded to divide contracts with the state oil company Petrobras and bribed officials at state owned enterprise in the process (US District Court Eastern District of New York, 2019). Court testimony from the former director of Petrobras indicates that construction

firms paid 1 to 3 percent of the contract value in bribe money (Pacheco, 2019). Another Petrobras official’s accounting listed bribes worth \$US370 million on US\$29.7 billion worth of contracts (1.3%) (Pacheco, 2019). According to prosecuting documentation in the US, to win major construction contracts in Petrobras and elsewhere, Odebrecht was accused of paying bribes amounting to approximately US\$349 million in Brazil alone and US\$786 million all together, mostly to Latin American governments (US District Court Eastern District of New York, 2019). (See Table 1.)

Table 1: Bribes paid by Odebrecht as reported in US court

Country	Estimated Bribe amounts (US\$ millions)
Brazil	\$349
Venezuela	\$98
Dominican Republic	\$92
Panama	\$59
Angola	\$50
Argentina	\$35
Ecuador	\$34
Peru	\$29
Guatemala	\$18
Colombia	\$11
Mexico	\$11
Mozambique	\$1
Total	\$786

Source: US District Court Eastern District of New York

In some ways we know less about administrative corruption, as it is both more diverse and less news worthy. Administrative corruption is frequently measured through victimization or experiential survey-based measures (Morris, 2008). The World Bank’s enterprise survey provides a sense of comparative administrative corruption from the perspective of firms. Participating firms that have secured or attempted to secure a government contract, are asked, “When establishments like this one do business with the government what percent of the contract value would be typically paid in informal payments or gifts to secure the contract?” Aggregating to the country level and then looking across countries, in the median country, 21 percent reported that a bribe payment was expected, but there is considerable variation across countries.

Despite the salience of the grand and administrative corruption, reducing corruption in procurement has proven to be challenging. Several scholars have noted the risk of corruption when public officials have discretion to select providers (Klitgaard, 1988; Rose-Ackerman, 1999); however, some discretion is often necessary and desirable, particularly in the case of complex goods, when needs are not fully understood, or when there are few bidders (Bijari, McMillan, and Tadelis, 2008; Rose-Ackerman, 1999). Overly rigid procurement measures may reduce costs but they frequently do so at the price of performance (Cameron, 2000; Decarolis,

2014), and rent-seeking actors are frequently able to adapt to new rules or invest in areas where corruption is harder to detect (Mauro, 1998).

Does corruption and personnel connections push efficient and high value firms out of the market?

An underlying assumption of the public solicitation and competitive bidding process at the heart of public procurement is that competition reduces prices and yields better value for money (Bulow and Klemperer, 1994). Simply having a public solicitation, however, is frequently insufficient to ensure value for money. As Rose-Ackerman (1999) points out, “Although competitive bidding sounds like a good idea, notice that bidding does not play a role in a truly competitive market. Instead, the market price is set through the multiple interactions of many buyers and sellers.” (65)

Estache and Iimi (2008) review several studies estimating the optimal number of bidders in different industries and find that increased competition decreases costs. For example, in a study of Japan Bank for International Cooperation financed high-value projects in 23 developing countries, Iimi (2006) finds a strong relationship between the number of bidders and price. Gupta’s (2002) study of US highway construction, concludes that this market becomes competitive with around eight bidders. Onur, Özcan, and Tas (2012), in a study of all government procurement auctions from 2004-2006 in Turkey, finds a relationship between competition and lower price with some differences across sectors. As such, outreach and dissemination are needed to actively encourage competition and reduce prices (Coviello and Mariniello, 2014; Kenny and Crisman, 2016). Another policy option is lowering the barrier to bidding. For example, e-procurement is hypothesized to lower the information costs to firms, increasing competition and lowering prices (Kühn and Sherman, 2014).³ As such, competitive bidding mechanisms can lead to lower prices for government but only by attracting substantial, legitimate competition.

If contracts are awarded based on corruption or personal connections rather than merit, then formally competitive bid mechanisms will be insufficient to lower prices and produce value for money. Corruption undermines competitive bid mechanisms in several ways. First, at a minimum, corruption adds the cost of the bribe to the cost of the contract and potentially more. For example, in the Lava Jato case, corruption cost the state both the cost of the bribe and a collusive profit premium. Second, and more importantly, however, corruption will likely prevent the most efficient firm from winning the bid, resulting in additional costs and lower value for those costs (Berguet and Che, 2004). For example, pharmaceutical suppliers might provide substandard or fake drugs (Cohen, 2006) and construction companies might use inadequate concrete in favor of filler (Olken, 2007).

Third, the further fear, of direct concern to this paper, is that corruption will push efficient firms out of the market entirely, and government procurement will become dominated by inefficient

³ See Pavel and Sičáková-Beblavá (2013) for evidence of this across Slovak cities.

firms that win based on corruption or connections. There is some evidence to suggest the existence of just such a vicious cycle. Knack, Biletska, and Kacker (2017) analyze World Bank enterprise survey data from 88 countries and find that firms in countries that score lower on the World Bank's Public Expenditure and Financial Accountability (PEFA) procurement indicators are less likely to bid on public procurements. Ghossein, Islam, and Saliola (2018) conduct a similar analysis using World Bank procurement benchmarking data instead of the PEFA. They also find a statistically significant, albeit relatively small, relationship between the strength of procurement systems and bidding.

Personal and political connections might also supersede merit-based factors in government procurement decisions. The use of personal connections to win procurements might entail a *quid pro quo* in the form of financial benefits of benefits to family, friends, and party, but it might not. For example, government officials might prefer to give contracts to individuals that they feel can be trusted because of a personal relationship. Alternatively, government officials might have limited market information and, when permitted, might only extend invitations to bid to people that they know. Contracts awarded based on personal connections also risks lower value for money and pushing more efficient firms out of the market.

Several innovative studies have clearly documented the importance of having the right connections. Fisman's (2001) seminal study in Indonesia uses a 1995 Suharto Dependency Index produced by a consulting firm that ranked 79 major companies in terms of their dependence on Indonesia's dictator at the time. Fisman (2001) then finds that dependent firms' share price declines *vis a vis* the market as a whole whenever rumors emerge in the press of the dictator's poor health. In the Indonesian case, the value of the firm was determined by its connection to political leadership rather than its true value to the economy.

While personal ties might be used without a financial *quid pro quo*, the two are likely correlated. Faccio's (2006) 47 country study finds a moderate correlation between the percent of politically connected companies and various cross-national corruption indices. Dávid-Barrett and Fazekas (2019) in a comparative study of Hungary and the UK, create a measure of partisan favoritism by determining if the value of contracts won corresponds with the change in government in combination with red flags in the tendering process (e.g., single bidder). They estimate that politically favored companies secure 50-60% of the central government contracting market in Hungary compared to 10% in UK. Similar relationships have been found in Ecuador (Brugués, Brugués, and Giambra, 2018), the United States (Tahoun, 2014), and Turkey (Gürakar, 2016)

Personal connections might be used in administrative corruption (e.g., through ties to procurement officials) or in grand corruption (e.g., through ties to political leaders). Furthermore, business elites might seek out politicians for contracts or politicians might be proactive in seeking rents. In several documented cases, procurement corruption forms an important source of party revenue. In Brazil, according to a former director of Petrobras's testimony in court, as reported by Flávia Pacheco (2019), the state-owned enterprise was divided between three political parties, the incumbent Workers Party and the opposition Brazilian Democratic Movement Party (PMDB) and Progressive Party (PP). The three parties controlled appointments and corruption rents from different divisions within the company, with the incumbent PT

claiming the largest stake. According to the director's testimony, in his division the PT received 60 percent of the bribe money, 26 percent went to money laundering, and 14 percent to the director (Pacheco, 2019).

I put forward two related hypotheses on the effect of corruption and personal and political ties on fairness and competition.

Hypothesis 1 and 2: Potential vendors who have experienced or perceive contracts to be awarded based (1) on bribery or (2) personal and political connections will be less likely to perceive the process as fair.

Hypothesis 3 and 4: Potential vendors who have experienced or perceive contracts to be awarded based (3) on bribery or (4) personal and political connections will be less likely to bid on future procurements.

While the 3rd and 4th hypotheses are logical, there are potential reasons why firms might still invest time and energy on government procurements in countries with salient procurement problems. The first is consistent with the vicious cycle argument: corrupt companies might willingly engage in corruption and seek out personal and political ties in order to win contracts. In this case, hypotheses 1 and 2 might be correct but hypotheses 3 and 4 would not be.

There are also reasons why relatively honest and efficient firms would still participate in public procurement in a less than ideal context. Even in such countries, some, many or even the vast majority of contracts might still be awarded based on merit. In addition, government contracts represent a potentially large and stable source of income. Declining to bid on government procurements – particularly in small economies -- might mean walking away from the biggest buyer in the market. Looking across countries, for 2018 government expenditures accounted for 30 percent of GDP in the median country (22 percent for countries in the 25th percentile and 38 percent for countries in the 75th percentile.⁴ While much of this is non-procurement related expenditures, government procurement represents a major business opportunity. Provided a perception that at least some tenders are awarded based on merit, an honest and efficient firm might find it in their interest to bid even in environments where corruption is pervasive.

Instead, firms might decide not to bid based on more practical factors. Bidding on government procurements might require passing through a lengthy official registration process; bidding processes might take a long time; upon obtaining government contracts, firms might be responsible for extensive reporting on contract execution; and payments might be delayed. In 2020, obtaining a government contract, specifically a road construction contract, was included in the World Bank's (2020) *Doing Business* report. While not yet included in the ranking, the 2020 report found significant variation in bid evaluation periods, ranging from 30 days in China, Georgia, and Norway to six months in Kyrgyz Republic and Lebanon (World Bank, 2020). More importantly, the report finds considerable variation on speed of payment. Obtaining certificate of completion reports took more than six months in Italy and obtaining payment was estimated to take another six months in Lebanon, Mali, and Panama (World Bank, 2020). Many firms might

⁴ Extracted by the author from the International Monetary Fund. 2019. World Economic Outlook Database.

not have the financing or cash management flexibility to tolerate such long delays in payment. Given that barriers to entry are somewhat fixed in single country study of this nature, I focus on the impact of payment wait times, which vary based on industry, government agency, and individual experience.

Hypothesis 5: Potential vendors who have experienced or perceive long waiting times to payment will be less likely to bid on procurements

Procurement context: Country context plays a strong role mediating the relationship between corruption, connections, perceptions of fairness, and bid decisions. As noted above, rules governing public financial management (Knack, Biletska, and Kacker, 2017) and rules governing procurement (Ghossein, Islam, and Saliola, 2018) have an influence on bid behavior. Johnston (2005) lays out a four-category country-based typology, which he refers to as the syndromes of corruption, based on the nature of political and economic participation and capacity of state, society, and economic institutions. The nature of corruption differs considerably across these four groups. For example, in the category with well-developed forms of political and economic participation and strong institutions (referred to as Influence Markets), corruption largely occurs within the system, for example, by attempting to influence the rules and legislation. By contrast, Johnston (2005) describes the category of Oligarchs and Clans, with less developed political and economic participation and weak institutions as a, "...scramble among contending elites seeking to parlay personal resources (e.g., a mass following, a business, a bureaucratic fiefdom, judicial or organized crime connections, or a powerful family) into both wealth and power." (pg. 44). In this latter context, corruption is dominated by elites (i.e., grand corruption); however, depending on diverse factors this might also trickle down throughout the bureaucracy (i.e., administrative corruption).

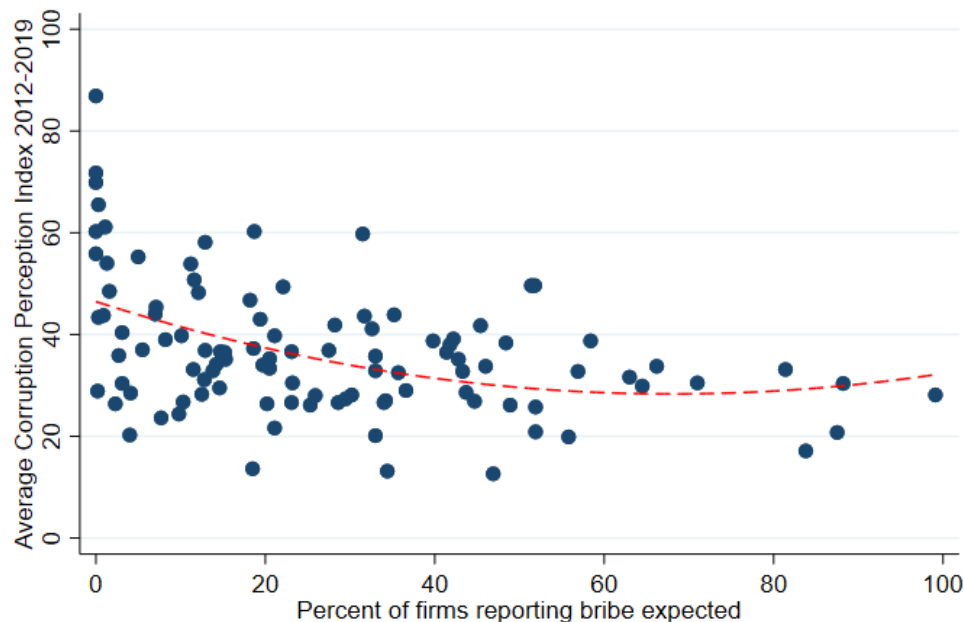
Using the measures of administrative and grand corruption, we can see these two dimensions of corruption visually across countries. As discussed above, surveys of corruption victimization or bribe experiences offer an effective measure of administrative or petty corruption, and the World Bank's enterprise survey finds considerable variation in firm victimization across countries, as shown along the x-axis of

Figure 1. In many countries, zero percent of firms report the need for a bribe to win a government contract, but there are several countries where over 60 percent of firms report that a bribe is needed. The y-axis of

Figure 1 is the average Corruption Perceptions Index (CPI) for the country over a period of time. The CPI is often considered a measure more responsive to grand corruption than administrative corruption (Morris, 2008; Ruhl, 2011). As has been found by other studies, there is a curvilinear relationship between perceptions indices, which are sensitive to grand corruption, and measures more closely related to bribe experiences, which are associated with administrative corruption (Morris, 2008; Ruhl, 2011; Lupu, 2017). As shown in the figure, countries that have a high percentage of firms expecting to pay a bribe to win contracts always have a low CPI (i.e., high corruption perceptions); however, the opposite is not necessarily true. There are many countries

with low expected bribe payments that still have low CPI scores (i.e., high corruption perception).⁵

Figure 1: Scatterplot of countries on average CPI score (2012-2019) and Enterprise Survey percent of potential vendors that say a bribe is expected to win a contract (2012-2019), n=104, r=.41



Note: Enterprise survey data spans from 2012-2019. The Corruption Perception Index scores used are an average over that same period.

For firms operating in countries on the lower right quadrant of this chart, the vicious cycle hypotheses above are more likely to be born out. In such contexts, there is more likely to be a vicious cycle with only firms willing to pay bribes and exploit connections likely to participate in government procurement. However, with countries on the left side of the figure, the calculus is less clear. If the vicious cycle argument is correct, over time these countries will shift to the right in the figure. Interestingly enough, there are several countries with strong CPI scores (i.e., low corruption) that still have high reported procurement corruption. This is not totally surprising given the strong incentives for corruption in procurement. Even in the extreme case of Sweden, consistently in the top five of countries on the CPI, Broms, Dahlström, and Fazekas (2019) finds evidence of proxies for procurement corruption.⁶ Given this discussion, I also put forward separate hypotheses about the importance of grand corruption.

⁵ While I use a procurement specific indicator here, a scatterplot with bribe payments expected across diverse government-business interactions reflects a similar curvilinear relationship.

⁶ Broms, Dahlström, and Fazekas (2019) examine over 80,000 tenders in 290 Swedish municipalities between 2009 and 2015 and finds that parties in power at the local level for decades (entrenched parties) are more likely to have bids with only one bidder and more likely to have international winners based in tax havens.

Hypothesis 6 and 7: Potential vendors who perceive grand corruption in procurement will be less likely to (6) perceive the process as fair and (7) less likely to bid on procurements

There is limited research on why grand corruption trickles down to the bureaucracy in some countries but not in others. One potential factor is the role of patronage and the ability or inability of political leaders to control the bureaucracy (Charron et al., 2016; Broms, Dahlström, and Fazekas, 2019). Charron et al. (2016) compare use a survey of 18,000 public employees across 212 European sub-national regions to measure perceptions of merit-based decision-making and compare this with procurement corruption risks identified in procurement data (e.g., percent of procurements with single bidders). They find that predicted corruption risks at the regional level goes from .12 to .21 as they move from the 25th to the 75th percentile on merit scores.

Nature of the good: In the same way that corruption varies across political contexts it also varies across sectors based on the nature of the good. Rose-Ackerman (1999), for example, argues the procurement approaches have to vary based on the nature of the good, with some goods offered by only a few competitors and others requiring discretion in awarding contracts. While procurement regulations can limit discretion in the purchase of off the shelf projects, many procurements require customized produces or unique skill sets (Rose-Ackerman 1999). This echoes Bajari, McMillan, and Tadelis's (2008) finding that competitive bid auctions perform poorly when projects are complex, need further design inputs, and operate in industries with few bidders. Transparency International's Bribe Payers Index, a cross-national index discontinued in 2011 that measured prevalence of bribery among businesses from countries of origin, provides a sense of industry differences. The highest corruption levels in terms of both administrative (termed "petty") and grand corruption are in public works contracts and construction, followed by utilities, real estate related business, oil and gas, mining, and power generation (Hardoon and Heinrich, 2011). The lowest levels of estimated bribery were in agriculture, light manufacturing, civilian aerospace, and information technology (Hardoon and Heinrich, 2011).

Similarly, the OECD analyzed 427 corruption enforcement actions by OECD member countries involving 263 individuals and 164 entities from 1999 to 2013 (OECD 2014). Almost half of these foreign bribery cases occurred in just three industries, mining and extraction (19 percent), construction (15 percent), and transportation (15 percent) (OECD, 2014). Kenny's (2009) analysis of enterprise survey data in Eastern Europe and Central Asia finds that firms in the construction industry are more likely than other firms to report bribe payments than other firms. Concerns over the construction industry and public works are echoed in several country case studies (Transparency International, 2005; Oiken, 2007; Osei-Tutu, Badu, and Owusu-Manu, 2009) and sectoral studies (Transparency International, 2005)

Hypothesis 8 and 9: Potential vendors in the construction industry producing public works (8) will be less likely to perceive the process as fair and (9) less likely to bid on procurements.

The Honduran procurement context

Honduras offers an interesting case to explore the vicious cycle as it falls in the lower left quadrant of

Figure 1 above with an average CPI score of 28.5, meaning high corruption perceptions or high grand corruption, and low reported administrative corruption with four percent of firms (n=332) expecting to give gifts or informal payments to obtain government contracts. Johnston (2005) places Honduras into his category of Oligarchs and Clans, described above, with weak state and society capacity, weak economic institutions, a transitional political regimes, and nascent markets. Sarah Chayes (2017) further argues that corruption is “the operating system” in Honduras. She contends that elite political, economic, and criminal networks intertwine and cooperate to maximize returns for their members and maintain impunity.

In recent years a number of grand procurement corruption scandals have come to light. In 2015, an investigation by the National Anti-Corruption Council (CNA), a civil society organization operating with public funds, found major corruption in the already highly indebted Honduran Social Security Institute (IHSS). The corruption scandal, which involved operational leadership and IHSS board members, amounted to over US\$300 million and entailed overpriced contracts in exchange for bribes, contracts with phantom companies to embezzle funds, and salary payments to phantom employees to embezzle funds. As of this writing, twelve persons have been indicted or sentenced in the case (Call, 2018).

In 2010, an expedited contract was issued for development of a hydroelectric dam to the company Desarrollos Energéticos S.A. (DESA). Following years of complaints by indigenous and environmental activists, which eventually led to the murder of the activist Bertha Cáceres, investigations found various procurement irregularities designed to ensure DESA was provided the contract. The case was notable as it required the complicity of public officials across a number of government agencies and state owned enterprises. It has resulted in charges against 16 persons (MACCIH, 2019).

Investigations by the CNA found that a pharmaceutical company Astropharma colluded with officials in the Secretariat of Health to win pharmaceutical contracts. Officials divided the contracts up to remain below thresholds for public procurements and provided the company with a total of US\$ 77 million worth of contracts over several years and an artificially high price estimated to be 47 percent over market value. Three-hundred, twenty-nine staff at the Health Secretariat have been implicated (Call, 2018).

Personal and political connections have played an essential role in these cases. Phantom companies with IHSS contracts provided contributions to Hernandez’s presidential campaign. A powerful and well connected family serves in the operational leadership and on the board of DESA (Chayes, 2017). The family of the former vice-president of Congress owns Astropharma (Call, 2019).

The IHSS scandal led to months of popular protest fueled by revelations that the Hernandez campaign benefited from the corruption. The protesters demanded the creation of an

internationally supported investigative and prosecutorial body modeled after the effective United Nations run International Commission against Impunity in Guatemala (CICIG). The controversy eventually led to a somewhat less powerful Mission to Support the Fight against Corruption and Impunity in Honduras (MACCIH), under the auspices of the Organization of American States.⁷

Much like in the Lava Jato scandal in Brazil, MACCIH investigations have revealed the extent to which corruption serves a means to fund Honduras political parties. While not specifically a procurement case, the MACCIH's Pandora Case alleges that approximately US\$12 million was transferred to two nonprofit organizations and eventually ended up in the treasuries of the two main political parties (Ernst, 2019). This paralleled a similar case involving three opposition parties colluding to embezzle public funds, known as the Legislator's Network (Call, 2017).

Clearly there is a problem of grand corruption in Honduras, which fits Johnston's Oligarch and Clan classification. It is less clear that this elite-led, grand corruption has trickled down to permeate the bureaucracy. In terms of administrative corruption, as noted above, the enterprise survey finds a relatively low 4 percent of firms who feel there is an expectation of bribery. This is compared with 19 percent in Latin America and 36 percent in other lower middle-income countries (World Bank, 2017). Corruption was the sixth most commonly identified business constraint, behind access to finance, practices of the informal sector, tax rates, business licenses and permits, and inadequately educated workforce (World Bank, 2017).

The World Bank also conducted a national survey on business victimization of extortion in late 2016 and early 2017 of 357 businesses using a similar methodology to the enterprise survey. While the survey does not ask about corruption in contracting specifically, the survey included three general questions about public corruption, including if the business had been directly solicited by a public official, indirectly solicited on behalf of a public official, or if a public official has insinuated conditions to provide a gift or money. Close to 12 percent of the unweighted sample answered yes to one of these three questions, a larger percentage but still a minority.

To be sure, there is likely measurement error in self-reported figures, which understate the extent of procurement corruption. Nonetheless, these sources suggest that administrative corruption levels are not generalized across all Honduran procurements as they are in countries on the right-hand side of

Figure 1.

Methodology

This study relies on several sources of data, including: (1) a 2019 survey of 834 vendors registered to sell goods and services to the government of Honduras, (2) procurement assessments or audits conducted by the Honduran government procurement regulator (Oficina Nacional de Contratación y Adquisiciones del Estado - ONCAE) in select government agencies, and (3) qualitative interviews and focus group discussions with ONCAE staff, key informants in

⁷ The CICIG and the MACCIH both focused on high level corruption and despite their initial successes, they were both eventually eliminated by national leaders threatened by their activities.

the sector, procurement officials in select agencies, and a sub-sample of vendors. I also briefly draw on (4) a 2018 survey of public employees in three government agencies (n=1,661) and (5) a mini-survey of procurement officials (n= 81). I primarily rely on the survey of government providers to tests the hypotheses outlined above; however, the procurement assessments provide insight on inter-sectoral differences, and the qualitative data aided in interpretation of the findings. These data were collected by Social Impact and its subcontractor Espirállica as part of an independent evaluation of the Millennium Challenge Corporation's Threshold Program in Honduras.

Methodological details of the survey of vendors and the other surveys, including a discussion of sampling and measurement error, the survey instrument, and detailed descriptive statistics can be found in Sabet et al. (2020). This analysis of the vendors survey is based primarily on the second wave of a two-wave study. I use the second wave to take advantage of changes to the survey instrument. The ideal population of firms to answer the research question would be firms that could in theory be selling goods and services to the government; however, this population is difficult if not impossible to identify. A random sample of businesses, like the World Bank's enterprise survey, casts too wide a net, as many firms do not sell the goods that government needs or are otherwise unlikely to sell to the government. This study takes advantage of a peculiarity of Honduran law that requires interested firms and individuals to register with the procurement regulator to be eligible to participate in public procurements, offering a narrower sampling frame. While preferable to a random sample, it excludes firms that could in theory sell to the government but have chosen not to register let alone bid, perhaps for the very reasons proposed in the hypotheses above. As such, I am only able to test the hypotheses above against something of a truncated sample of the larger population of interest.

Survey participants were randomly sampled from this sampling frame to participate in an initial survey in 2016 of 850 firms. Cooperation was a relatively low 45 percent, raising the possibility of sampling bias. The second wave of the survey was conducted in 2019 and attrition was a relatively high 43 percent. While replacements were recruited, the attrition rate adds additional bias concerns. Although cooperation rates are frequently low for enterprise surveys, given the procurement focus of the survey, it is possible and even probable that firms engaged in irregularities might have been less likely to participate in the survey than others.

It seems unlikely that the survey includes a large percentage of firms engaged in grand corruption and the survey is a far better tool for measuring experiences with administrative corruption. Only six percent of participating firms have over 100 employees, while 50 percent are micro businesses with five or fewer employees. Similarly, 54 percent of respondents report an annual revenue of less than HNL2 million (US\$81,000). The average endline respondent is a general manager or administrator (82 percent), 46 years old, male (66 percent), with a college degree (78 percent) and around 9 years of experience in government procurement.

The survey is unique in that it asks about procurement experiences with specific government agencies. As such, in the analysis below I analyze the data both by agency and by pooling experiences across different agencies.

Audit findings

During 2017 and 2018, the procurement regulator in Honduras (ONCAE) conducted assessments of select agencies. While these were functionally audits in their methodology, by Honduran law ONCAE does not have audit authority, and the assessments were conducted solely for learning purposes. A review of assessment findings in four focus agencies, the secretariats of public works, health, education, and security, finds considerable irregularities in audited procurement processes. Among the many concerns identified, the assessors found evidence that public procurement thresholds were avoided by dividing contracts or by other means; many procurements were not posted as required to the public procurement platform; and procurement files lacked evidence of inclusion in annual procurement plans and were often incomplete or in some cases unavailable. There appears to be clear indication that particular bidders were favored to win contracts.

- The Education Secretariat only conducted one public procurement during the five quarters audited in 2015 and 2016. While it made purchases over the public procurement threshold, it illegally used a mechanism called “inverse fairs” designed to benefit micro and small businesses to procure items. The contacts did not go, however, to small businesses and were won by a few large firms (ONCAE, 2017a).
- The public works secretariat only conducted four public procurements over the audited period compared with 194 tenders whereby procurement officials are able to select who they invite for bids (ONCAE, 2016).
- In the health secretariat, medical oxygen purchases were broken up into several procurements all below the public procurement threshold and were all won by the same company. Assessors also found evidence that in non-public procurements invitations were offered to firms that did not produce the goods requested, benefiting other invited bidders (ONCAE, 2017b).

In short, the assessments paint a picture of procurement processes subject to abuse. I use the term “subject to abuse” because the assessments by themselves do not provide adequate evidence of corruption. Officials might avoid public procurements simply to make their work easier, and even if their actions benefit certain firms, there might not be a *quid pro quo*. Interviewed staff involved in the assessments were ambivalent about their own conclusions and felt that the problems were better explained by low capacity than by rent seeking intent.

Vendors survey variable construction and descriptive inferences

The vendors survey has a unique structure that sought to obtain both general information about public procurement and specific experiences with specific government agencies. Below I explain the structure of the survey, subsequent variable construction, and provide summary statistics of key variables of interest.

Dependent variable – Intention to bid and bidding: The survey asked firms if they had bid on government procurements in the last twelve months. Seventy-seven percent of firms had done so.

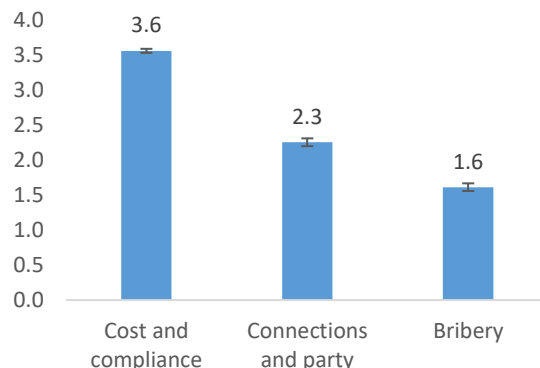
The survey also asks if the firm anticipates submitting a bid for a government procurement in the *next* twelve months. A different 77 percent planned to submit a bid. While past bidders are more likely to plan to bid in the coming year, 41 percent of those that *did not* bid in the previous year planned to bid in the next year and 10 percent of those that *did* bid did not intend to do so in the next year.

Dependent variable – Evaluation of fairness: Firms that had bid within the last twelve months with one of four specific agencies, public works, health, education, and security, were asked a battery of questions about their experiences with that agency. Firms that had bid with other government entities were asked the same battery of questions about the entity they bid with the most. Firms that had not bid within the last twelve months were asked their perceptions about government procurement in general using the same questions. Included in this battery was a five-point assessment of the fairness (*imparcialidad*) of the procurement process. Because individual respondents were asked to answer these questions for up to five different government agencies, this variable was constructed by averaging across experiences producing a continuous variable ranging from one to five. The average response was 3.7 where three is fair, four is good, and five is a very good evaluation.

Perceived importance of merit, connections, and bribery: In the same question batteries, the survey asked if several factors were very important, important, not important, or not at all important to winning government contracts. This include (1) merit-based factors of (a) compliance with the specifications laid out in bidding documents and (b) cost, (2) connection-based factors of (a) knowing the right people and (b) affiliation with political party in power, and (3) corruption-based factors of giving a gift or making an unofficial payment (i.e., a bribe). As above, I constructed variables for each of these factors by averaging across experiences with up to five agencies producing a continuous variable ranging from one to four where four is very important. As seen in

Figure 2, vendors report that cost and compliance are very important, that bribery is relatively unimportant, and that connections and party affiliation falls in between. (I reverse the direction for connections and bribery in the regressions below to make the higher value normatively desirable and facilitate coefficient comparison). While respondents are drawing on their direct experiences with specific government agencies, I consider this to be a perceptive measure, as respondents cannot know the true importance of these factors in contract award decision-making.

Figure 2: Average perceived importance in winning contract where 4=very important and 1=not at all important



Perception of grand procurement corruption: To measure grand procurement corruption, I rely on a simple proxy: respondent perception if corruption is a major, moderate, minor, or non-problem in government procurement. A large majority, 67 percent of respondents felt that corruption was a major problem. While the question does not specifically ask about grand corruption, as will be discussed below, given the dramatic difference in how respondents answer this question and how they answer questions about their own experiences suggests that it is a valid proxy for grand procurement corruption.

Administrative procurement corruption experience: Respondents were asked if a public official had solicited a bribe or informal gift from them in the 12 months prior to the survey; eight percent reported a solicitation and another five percent declined to answer the question, suggesting a value of procurement corruption between eight and 12 percent. Of course, even though the question did ask respondents to admit to paying a bribe, it is reasonable to think that some individuals who had experienced or participated in corrupt exchanges would be uncomfortable answering honestly. To address this, we included a list experiment asking respondents to enumerate the number of actions they had taken to obtain a government contract. Half of the sample was randomly given four possibilities and the other half was given five, one of which include paying a bribe. Such experiments are considered effective at measuring sensitive topics (Glynn, 2013). This experiment had a large standard error given the relatively small sample size; however, it estimates a bribery value of only 2 percent with a confidence range from negative numbers to 17 percent. Focus groups provided a similar picture as does the World Bank enterprise survey figures presented above.

It is somewhat surprising that, on the one hand, 67 percent of respondents consider procurement corruption to be a major problem, but, on the other hand, only eight percent report recent experiences with bribe solicitations and the average respondent views bribery has somewhere between “not at all” and “not very” important in procurement decisions. However, this is consistent with the discussion above distinguishing grand and administrative corruption, which appears particularly important in the Honduran case. I interpret this to mean that respondents view grand procurement corruption, as exemplified by the many recent corruption scandals, as a major problem; however, they experience and report far less frequent administrative corruption

in their own interactions and experiences. As such, in the analysis that follows, these variables offer measures of perceptions of grand corruption (i.e., corruption as a major problem), perceptions of administrative corruption (i.e., importance of bribery), and experiences with administrative corruption (i.e., bribe solicitation).

Practical factors: The number of days to receive payment from government clients averaged 63 days across interactions with agencies with a median of 45 days, the government requirement for payment. This suggests that many firms do have wait over two months after invoicing to receive payment, a waiting time that might be prohibitive for firms without a credit line.

Construction industry: I examine both firms that identify as involved in construction (24 percent) and firms bidding on procurements for the public works agency (13 percent).

Others: Other variables include a dummy variable for if the respondent typically bids on public procurements (43 percent) as opposed to procurements where officials have discretion over who bids, if the firm is based in the capital of Tegucigalpa (69 percent), revenue of the firm in seven categories, percent of revenue in the previous year came from government, years of experience selling to the government (average of 10, median of 8), and the number of permanent employees (average of 28, median of 5).

Explaining variation in perceived fairness and intention to bid

Factors explaining variation in average evaluations of fairness on a 1-5 scale across interactions with different government agencies are presented in three models in Table 2. Different models are presented because of missing data on the corruption perception and revenue questions as evidenced by the changes in sample size. As such, these variables are excluded from the first model; I add the proxy measure of grand corruption perception to the second model; and I add dependence on government revenue in the third.

As can be seen across the models, coefficients for the perceived importance of connections, merit-based factors, and bribery are all statistically significant. These coefficients are comparable and perceptions of merit-based factors appear to offer the most explanatory power, followed by bribery, and then by connections. For example, in Model 3, a one unit change in the perceived importance of cost and compliance score on a one to four scale is associated with a .43 unit change in fairness on a one to five scale compared with a 0.21 change associated with the perceived importance of connections. Experiences with bribery and a perception that corruption is a major problem also correspond with reduced perceptions of fairness. Companies that perform construction are no more likely to perceive the process as more or less fair. With the exception of dependence on government and location in Tegucigalpa, other control variables do not help explain variation in perceptions of fairness. Together the variables explain 30 to 32 percent of the variation in average fairness scores.

Table 2: OLS regression of average perceived fairness across interactions with government agencies, 1-5

Variables	(1)	(2)	(3)
Add. index: Ave. connection & party affiliation (1-4 rev)	0.241*** (0.047)	0.228*** (0.049)	0.213*** (0.053)
Additive index: Ave. compliance and cost (1-4)	0.430*** (0.067)	0.441*** (0.071)	0.430*** (0.075)
Ave. import of paying a bribe (1-4 rev)	0.267*** (0.049)	0.258*** (0.05)	0.271*** (0.053)
Bribe solicited (0/1)	-0.218* (0.121)	-0.161 (0.121)	-0.209* (0.124)
Construction firm (0/1)	0.018 (0.081)	0.017 (0.084)	-0.016 (0.09)
Trade/retail (0/1)	-0.022 (0.074)	-0.009 (0.077)	-0.026 (0.083)
Typically bids on public procurement (0/1)	0.026 (0.066)	0.063 (0.069)	0.028 (0.072)
Tegucigalpa (0/1)	-0.113 (0.069)	-0.141* (0.072)	-0.175** (0.078)
Log no. of employees	0.014 (0.025)	0.006 (0.026)	0.017 (0.029)
Years of experience as firm (0-79)	0.002 (0.004)	0.002 (0.004)	-0.001 (0.004)
Corruption is a major problem (0/1)		-0.207*** (0.072)	-0.175** (0.076)
Government dependence (1-10)			0.032*** (0.012)
Constant	0.640*** (0.246)	0.790*** (0.27)	0.732** (0.284)
Observations	704	641	579
R-squared	0.297	0.318	0.338

*** p<0.01, ** p<0.05, * p<0.1

Table 3 tests the same relationships but changes the unit of analysis to experiences with individual agencies, rather than individual vendors. As they do not vary across experiences, I do not include control variables in these models. Models 1 through 6 operationalize fairness as a dichotomous variable distinguishing those who rate the fairness of the process as very good or good (63 percent) and those that rate it as fair, poor, or very poor. Model 7 is based on an ordinal regression of the original five-category variable. Modules 1-5 are based on experiences with specific agencies, including the secretariats of public works, health, education, security, and other agencies. With the exception of “other” agencies the sample sizes are relatively small. Models 6 and 7 are pooled models and explore variation across all interactions with government agencies.

The pooled models (6, 7) confirm the findings in Table 2; and we see that perceptions of the importance of merit, connections, and bribery all influence perceptions of fairness, with the largest estimated independent effect for perception of merit. Perhaps the most important finding in this analysis is the considerable inter-agency variation. Predicted probabilities for the agency dummy variables in model 6 are presented in Table 4. Controlling for other factors the model predicts a 25-percentage point drop in evaluations of fairness for vendors selling to the public works ministry compared to other agencies and a 14-percentage point drop for the health secretariat. While the sample sizes are low, models 1-5 show considerable inter-agency variation in what factors help explain perceptions of fairness. High levels of procurement corruption in these two agencies are confirmed by qualitative data. For example, a head of a road construction firm reported that he will only bid on tenders released through multilateral development bank supported procurement units, contending that all contracts from the public works agency are determined by the head of the agency. Clearly the government agency and the nature of the good matters for the fairness of the procurement environment.

Table 3: Logit and ordinal regression of perceived fairness across institutional experiences

Variables	1-Works Fair (0/1)	2-Health Fair (0/1)	3-Educ. Fair (0/1)	4-Security Fair (0/1)	5- Other Fair (0/1)	6-Pooled Fair (0/1)	7-Pooled Fairness (5 category)
Additive index of compliance and cost (1-4)	8.835** (7.655)	2.032* (0.788)	3.148* (2.118)	1.643 (0.757)	3.268*** (0.838)	2.707*** (0.479)	2.938*** (0.405)
Add. index of connection & party (1-4 rev)	4.109*** (2.19)	1.23 (0.325)	1.296 (0.46)	1.537* (0.387)	2.641*** (0.46)	1.951*** (0.22)	2.059*** (0.19)
Paying bribe is very important (0/1)	0.625 (0.547)	1.867 (0.906)	1.436 (0.952)	3.413** (1.64)	1.178 (0.356)	1.544** (0.316)	1.794*** (0.307)
Bribe solicited (0/1)	1.079 (1.201)	0.241** (0.139)	0.240* (0.204)	1.136 (0.724)	0.541 (0.207)	0.505*** (0.128)	0.610** (0.125)
Public works (0/1)						0.279*** (0.089)	0.323*** (0.082)
Health (0/1)						0.470*** (0.102)	0.427*** (0.0746)
Education (0/1)						0.687 (0.202)	0.672* (0.156)
Security (0/1)						0.972 (0.236)	1.024 (0.197)
cut1							6.858*** (3.61)
cut2							26.63*** (13.85)
cut3							192.0*** (103.4)
cut4							1,035*** (577.1)
Constant	.000006*** (.00002)	0.0456** (0.068)	0.0135* (0.0348)	0.0592 (0.104)	0.002*** (0.002)	0.009*** (0.006)	
Observations	62	153	77	136	453	881	881
Pseudo R ²	0.3272	0.1025	0.1036	0.1363	0.1931	0.1761	0.1313

Table 4: Predicted probabilities of fairness perceptions by institutional experience from Model 6

	0	1	PP Difference
Public works	70%	45%	-25pp
Health	70%	57%	-14pp
Education	69%	62%	-7pp
Security	68%	68%	-1pp

What then is the role of perceptions and experiences on the intent to bid on future public procurements.

Table 5 presents four models explaining the intention to bid in the next 12 months. The first model includes most of the same variables from Model 1 of Table 2 above.⁸ The second model adds a variable for whether or not the respondent bid in the previous 12 months. The third model, as in Table 2, adds in other theoretically important variables with missing values that reduce the sample size. The fourth model replaces the variables measuring importance of merit, connections, and bribery and replaces them with the measure of fairness, which served as the dependent variable in the previous analyses.

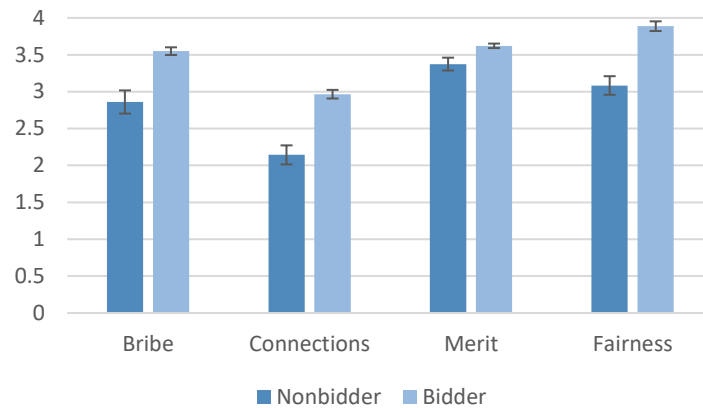
⁸ The variable for bribe solicitation to win a contract has been dropped from this model. The question asked about bribe solicitations in the previous 12 months to win a contract. As such, firms that had not bid in the last twelve months were highly unlikely to answer this question in the affirmative, introducing a measurement problem.

Table 5: Logit regression with odds ratios of choice to bid for public procurements in the previous 12 months

Variables	(1)	(2)	(3)	(4)
Ave. fairness (1-5)				1.219
				-0.163
Ave. connections and party (1-4 rev)	1.278*	0.9	0.883	
	-0.175	-0.139	-0.162	
Ave. compliance and cost (1-4)	1.28	1.032	1.059	
	-0.245	-0.216	-0.256	
Ave. import of paying bribe (1-4 rev)	1.286*	1.185	1.186	
	-0.168	-0.171	-0.194	
Construction firm (0/1)	3.075***	2.316***	2.021**	2.017**
	-0.833	-0.686	-0.71	-0.718
Trade/retail (0/1)	1.407	0.948	0.788	0.727
	-0.312	-0.239	-0.236	-0.216
Typically bids on public bids (0/1)	1.471*	1.521*	1.266	1.459
	-0.301	-0.343	-0.337	-0.393
Tegucigalpa (0/1)	1.013	0.861	0.828	0.808
	-0.212	-0.202	-0.233	-0.236
Log number of employees	1.277***	1.15	1.172	1.16
	-0.108	-0.101	-0.132	-0.127
Years of experience as firm (0-79)	1.048***	1.044***	1.040**	1.027
	-0.016	-0.017	-0.0201	-0.0185
Bid in the previous 12 months		10.46***	6.671***	7.684***
		-2.634	-2.295	-2.576
Ave. time to payment (days)			0.999	0.999
			-0.00109	-0.00112
Corruption is a major problem (0/1)			0.487**	0.608*
			-0.156	-0.182
Government dependence (1-10)			1.143**	1.111**
			-0.0664	-0.0593
Constant	0.0912***	0.229*	0.467	0.338*
	-0.0627	-0.173	-0.432	-0.218
Observations	728	724	568	589
Pseudo-R ²	0.1243	0.2396	0.2544	0.2485

The first model suggests there is a relationship between perceptions of the importance of connections and the importance of bribery on the intent to bid. However, this relationship dissipates once I control for bidding in the last twelve months. As seen in Figure 3, firms that chose *not* to bid in the 12 months prior to the study tend to view connections and bribery as more important to winning bids. Interestingly, however, and while not presented in the table, tested interactions between bidding in the last twelve months and perceptions of merit, bribery, and connections do not produce statistically significant coefficients.

Figure 3: Differences between bidders and non-bidders in the previous 12 months on perceptions of fairness of the process where high scores represent greater fairness



Note: The importance of bribes, personal and political connections and merit-based factors of cost and compliance are on a 1-4 scale while evaluations of fairness are on a 1-5 scale. Bribe and merit based indicators have been reversed to ensure comparability.

In the third model, we see similar results to model 2 on the perception based variables. In addition, the model suggests that variation in the number of days to obtain payment does not influence intent to bid. The model strongly suggests that the best predictor of bid intention is simply past bid behavior. Firms that have bid in the previous 12 months, are more dependent on government revenue, and have more experience bidding are all more likely than their counterparts to express an intention to bid in the future. In terms of predicted probabilities, the probability of bidding in the future for non-bidders in the past is 60 percent and the probability of bidding for recent bidders is 89 percent, a difference of 29 percentage points. The one exception is the proxy measure of grand corruption perceptions, which has a moderate estimated effect size. Those who view corruption as a major problem have a 79 percent chance of bidding in the next 12 months compared with a predicted probability of voting of 87 percent for those who do not view corruption as a major problem, a difference of 8 percentage points.

Model five replaces the measures of importance of merit, connections, and bribery with the overall measure of perceived fairness used as the dependent variable in the previous analysis as a further check of the somewhat surprising findings. This is also not statistically significant. While not presented here, I also run models similar to those presented in Table 3 based on agency experiences, which restricts the analysis to those whom have bid in the last twelve months, and I

find that these perceptions of the process are consistently not influential across agency experiences.

These results suggest that grand corruption has a moderate negative influence on intention to bid even controlling for past bid decisions. Finding that once bidding history is controlled for firms' perceptions of fairness, merit and non-merit based factors, and even practical matters such as the speed of payments, do not influence bid decision-making is surprising and is somewhat subject to interpretation. On the one hand, because firms that have not bid in the last twelve month tend to view the process as less merit based, this provides some credence to the vicious cycle hypothesis. It suggests that perceptions of unfairness could be a deterrent for firms not already dependent on government revenues. This relationship might even be stronger for the firms that are not included in the study: those that have not taken the step of registering to sell goods and services to the government. On the other hand, the findings suggests that those that can tolerate the nature of the process have already self-selected into the public procurement business, depend on revenue from government, and will continue to bid despite recognizing problems of unfairness in the process. This suggests that there is a clear limit to the vicious cycle hypothesis. The same argument also applies to the delays in payments. Interviews suggest that while firms would strongly prefer more timely payments, recognizing that delays are likely, interviewed firms had developed alternative financing and cash management strategies to weather payment delays.

Discussion

This study provides a useful country case study complement to Knack, Biletska, and Kacker (2017) and Ghossein, Islam, and Saliola (2018). These two studies found larger percentages of firms bidding on public procurements in countries with better PEFA and procurement benchmarking scores. However, they both risk the potential omitted variable bias inherent in cross-national statistical studies with heterogeneous populations (Ragin, 1987) and they find relatively small effect sizes. This analysis suggests that the small effect sizes might be due to (1) the likelihood that procurement corruption is typically not universal, even in countries with serious procurement corruption problems, and (2) the desirability of selling to the government as a major buyer in many countries.

Consistent with Morris (2008), Ruhl (2011), and Lupu (2017), the survey data presented here suggests that there is a very meaningful distinction between grand and administrative corruption. I find that there are many salient cases of grand procurement corruption; it is perceived to be a major problem by most respondents; and this influences both perceptions of fairness and the intent to bid in the future. While lower-level administrative procurement corruption clearly exists in Honduras, it is not universal.

This analysis is not able to provide a systematic answer to why administrative corruption is not universal given the extent of grand corruption; however, as suggested by Charron et al. (2016) and Broms, Dahlström, and Fazekas (2019) administrative corruption might be lower and grand corruption greater in high patronage environments where politicians have political control over

appointments deep into public administration. Honduras is just such a case, well described by Johnston’s (2005) Oligarchs and Clans category, with an endemic problem of patronage (Taylor, 1996; Altschuler, 2013). Although bribe money can flow up and down the government hierarchy, with administrative corruption, the primary receivers of bribe money are the bureaucrats, and with grand corruption, the primary receivers of bribe money are typically higher-level officials and politicians.

Table 6 pulls from a 2018 survey of public employees in three ministries and a small 2019 survey of procurement officials from throughout the government. The table presents three indicators of potential patronage. Patronage appointments are more likely to be non-civil service employees, have a shorter duration in office, and, most tellingly in the Honduran case, have a donation to the governing party deducted from their pay. The public works agency has a long history as a target of patronage (ASJ, 2017), and as shown in the table, there is a lower percentage of permanent employees, lower average years of employment, and an exceptionally high percentage of employees who have a donation to the governing party deducted from their paycheck. By contrast, the education and health secretariats are almost all civil service employees with high average tenures and with relatively lower percentages providing donations to the party. Public procurement employees look more like public works staff, with less civil service employment, shorter tenures, and with more political donations deducted. Patronage in the appointment of public procurement officials, would allow politicians and high-level leaders to control procurement corruption.

Table 6: Indicators of potential patronage

	Health (n=537)	Education (n=649)	Public Works (n=475)	Procurement (n=67)
Civil service employee	92%	91%	64%	66%
Average years in the institution	21	20	12	8
Have a political donation deducted	13%	14%	90%	35%

Source: 2018 Public employees survey; 2019 procurement officials survey.

Consistent with Transparency International (2005), Kenny (2009), and Hardoon and Heinrich (2011), the construction-oriented public works agency appears to be an extreme case of both procurement corruption and patronage.

Conclusion

In explaining variation in perceptions of fairness of the procurement process, this analysis confirms the first, second, and sixth hypotheses. I find that potential vendors who (1) have experienced bribe solicitations, (2) perceive bribery and connections to be important to contracting decisions, and (3) perceive corruption to be a major problem (proxy for grand corruption) are less likely to perceive the process as fair, with moderately strong effect sizes. I also find considerable variation across experiences with different government agencies. In

particular and consistent with the eighth hypothesis, vendors selling to the public works agency are considerably less likely to evaluate the procurement process as fair.

Explaining variation in intent to bid is somewhat more complicated. Consistent with hypothesis 7, I find that perceptions of grand corruption (measured via proxy) has a moderate negative influence on intention to bid, even controlling for past bid decisions. However, future bidding is best predicted by past behavior and not by perceptions of the process. Firms that have bid in the last 12 months, have more experience bidding, and depend on government revenues, and are far more likely to bid in the future than their counterparts. This is regardless of their perceptions of fairness of the process and irrespective of delays in payments. Inconsistent with the third, fourth, and fifth hypotheses, I do not find that perceptions of merit, connections, bribery, and fairness or speed of payments influence the intent to bid across the sample once bidding behavior is taken into account. The one caveat to this finding is that firms that have not bid in the last twelve months hold far more critical views of the procurement process than their bidding counterparts. This suggests that perceptions of unfairness may still be a deterrent for firms not already dependent on government revenues, even those that have taken the step of registering with the procurement regulator. I can only speculate, but it seems likely that firms that *could* sell to the government but have not taken the extra step to register with the regulator (i.e., are not part of the sample) would have views more like or more extreme than the non-bidders in this study as compared with the bidders. Otherwise, the findings suggest that those that can tolerate the nature of the process have already self-selected into the public procurement business, regardless of their perceptions. They depend on revenue from government and will continue to bid despite problems of unfairness in the process. This is perhaps best illustrated by the construction industry, where in contrast to hypothesis nine and despite much greater perceptions of unfairness, surveyed firms are actually more likely to intend to bid on procurements than firms in other industries.

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