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Bribery solicitations and firm performance in the Latin America and Caribbean region

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ABSTRACT

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This study shows that for firms in the Latin America and Caribbean region, bribery significantly distorts firm growth. Firms that were solicited for bribes when conducting business transactions – such as applying for permits, electricity, or water connections – have 23% lower annual sales growth than firms that do not face such solicitations. Moreover, these distortions are more severe for low-revenue-generating and young firms. Using the instrumental variables method on cross-sectional data as well as evidence from panel data, the authors show that these results are robust to different specifications and the use of different sub-samples. *Journal of Comparative Economics* **42** (1) (2014) 246–264. The World Bank, United States.

1. Introduction

This paper examines the relationship between corruption and firm performance using Enterprise Surveys' firm-level data from the Latin America and Caribbean (LAC) region conducted by the World Bank. In the data there is large variation in firm performance measured by real annual sales growth. In 2009, the region exhibited a 3% average annualized sales growth rate with a standard deviation of 31%. Interestingly, firms who were solicited for informal payments or gifts while conducting business transactions had an average growth rate of 0.8% compared to 3.4% among firms who were not solicited.[1] While some literature posits that corruption can *grease* the wheels of growth, descriptive statistics suggests that in this region, corruption has a *negative* distortionary effect onto growth.[2] Understanding distortions to growth in the private sector is particularly relevant in LAC, since this region has significantly less young small and medium-sized enterprises (SME) in comparison to other developing regions. According to data from Enterprise Surveys in LAC region 27% of firms with less than 100 workers have been in business for less than ten years, whereas in the developing countries from other regions this average is 45% (World Bank, 2013). While there has been great effort to promote development, efforts have been concentrated on increasing consumption rather than development of the private sector. Moreover, economic growth in LAC has been credited to changes in commodity

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[1] These values are according to our sample of firms used for analysis.

[2] While some studies like Huntington (1968), Leff (1964), Leys (1970) suggest corruption can be "efficient", these results have primarily been shown using macro level data.

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prices rather than increases in productivity. Recognizing business climate factors constraining firm performance is crucial for fostering future growth.

Corruption in the LAC region is regarded to be commonplace (Gaviria, 2002). Many countries in the region are ranked to be high corruption countries by international agencies. Transparency International's Corruption Perception Index ranges from 0 to 100, with low scores characterizing highly corrupt countries. As an example, in 2012, Mexico and Argentina scored 34 and 35 respectively compared to the United States with a score of 73.

Using data from 1999, Gaviria (2002) uses perception-based information and finds negative effects from corruption onto sales growth for firms in Latin America. However, perception-based corruption data presents simultaneity problems which were not addressed. Perception-based data can be confounded with the aggregate health of the economy and lead to counterintuitive correlations.[3] In this paper, we use objective measures of corruption, specifically, whether or not a firm was solicited for a bribe when conducting business transactions.

Asiedu and Freeman (2009) use firm-level data from 1999 and find no significant effect from corruption on investment growth in the region. Yet other firm-level studies finding negative effects from corruption focus on only one country and none being in the LAC region: Uganda, Mauritania, China, and India.[4] Research with large country coverage has relied on perception-based measures of corruption.[5]

Isolating the effect of bribery onto firm performance can be challenging. First, it is unclear if bribery is random; bribe seekers may selectively target certain firms such as highly profitable ones (Svensson, 2003). To control for this possible endogeneity and reverse causality of high performing firms being targets of bribery, we instrument a firm's bribery exposure by the average bribery exposure in their sector and location cluster. Fisman and Svensson (2007) use this instrumental variable method to identify the impact of corruption on firms in Uganda, and other authors have used similar methods to identify effects of the investment climate on various measures of firm performance (Dollar et al., 2005, 2006; Şeker, 2011; Aterido et al., 2011). While this identification strategy is commonly used in the literature, we recognize certain criticisms and provide further evidence based on a smaller set of panel firms. First differencing of each variable removes time invariant regional effects and unobservable firm characteristics such as firm being a preferred target by bribe seekers due to their exposure or profit levels.

This paper differs from these existing studies from a regional perspective as well as a methodological one by studying recently surveyed firms across the Latin America region, using objective measures of corruption, and using a unique panel data set.

Our sample includes 6639 firms from 29 countries in Latin America and Caribbean incorporating lower-middle, upper-middle, and high-income countries with various degrees of openness to international trade. Enterprise Surveys data also allows us to use a much richer set of control variables which fortifies the identification of the relationship between bribery and growth.

We find exposure to bribery (measured objectively) has a negative association with annual sales growth. In particular, young firms and firms with low sales are more severely affected by bribery than their counterparts. The negative relationship is also stronger in large LAC countries; bribery can be more common or disruptive in large cities where relationships with officials are less personal (Hunt, 2004). These findings suggest that corruption has a negative distortive effect on firm operations resulting from the financial costs involved or management time and resources devoted to dealing with these government officials. We find consistent results using the full cross-section of data as well as a panel data set covering a subset of countries.

Using objective measures, a negative association is found between bribery solicitations and a firm's annual sales growth. There are plausible scenarios where being a victim of bribery can negatively impact firms. If a firm does not pay a requested bribe, they may not obtain a necessary license or service which can result in constraining production and business operations affecting growth. Moreover, the bribery data refers to instances where firms were solicited rather than instances when firms voluntarily paid for their own benefit. Therefore our measurements are more likely to reflect the negative aspects of bribery rather than support the "grease" hypothesis.

The impact from facing bribery solicitations is found to differ by the size of firms based on their sales levels. Firms who are bribed grow 23.6% slower than firms who are not bribed and these distortions decrease as annual sales increase. Compared to bribed firms with sales level in the 75th percentile, bribe-payers with sales in the 25th percentile have sales growth that is 43 percentage points lower (more than one standard deviation). These results are robust to a series of robustness tests including variations in country groupings, constructions of the bribery measure, and use of different subsamples. We also obtain similar results when using the panel data set. These results are expected given the nature of petty bribe solicitations occurring during business transactions. In the sample, only 6% of firms report bribery costs more than 1% the value of annual sales and only 3.1% of firms report bribery costs more than 5% of annual sales. Our indicators do not directly account for several forms of corruption that may take place in large scale business transactions such as preferential treatment during public procurement or government contracting. The indicators also do not measure corruption in situations where an economic transaction is not concerned, such as in the legal system where a court is asked to look the other way or to rule in favor of a party that paid a bribe. These types of corruption may involve greater amounts of money and also result in larger

[3] For example, Kaplan and Pathania (2010) find firm perceptions of the business environment are worse in periods of high growth.

[4] Fisman and Svensson (2007), Francisco and Pontara (2007), Hallward-Driemeier et al. (2006) and Honorati and Mengistae (2007).

[5] Bastos and Nasir (2004); Beck et al. (2005), Carlin et al. (2006), Gaviria (2002); Commander and Svejnar (2007).