

**BRIBERY AND FIRM PERFORMANCE IN DIFFERENT INSTITUTIONAL
ENVIRONMENTS**

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ABSTRACT

How does bribery affect firm performance? Is this effect uniform across different institutional set-ups? We utilize a firm-level dataset of 27 transition economies to examine the effect of bribery on firm performance. We find that although bribery helps firm performance by acting like *grease* in relatively underdeveloped institutional environments, this positive effect of bribery on firm performance *decreases* for firms operating within more advanced institutional contexts.

Key Words: Corruption, firm bribery, institutions, transition economies.

1. Introduction

The official history of bribery dates back to 3400 BC according to an Assyrian tomb listing the names of “employees accepting bribes” (Martin, 1999: 95). We are never pleased to discuss bribery, yet it is a practice that has been and will be with us. For this reason there are many past studies examining the impact of bribery on everyday life (Jensen & Rahman, 2010; Misangyi, Weaver, & Elms, 2008; Robertson & Watson, 2004; Spencer & Gomez, 2011). Past research, however, is at best mixed in that one side of the story that tells us bribery is “grease in the wheels” (Huntington, 1968; Leff, 1964) while the other describes it as “dust in the wheels” (Mauro, 1995). The grease perspective postulates that bribery may compensate for the lack of efficient bureaucracies, whereas the dust perspective views bribery as an impediment to development and growth (Meon & Sekkat, 2005). While the two different views look alike in conflict to each other, we posit that which view applies might depend on institutional environments. Where institutions are developed, it is likely that bribery is punished since developed institutions offer other effective and efficient means of doing business. On the other hand, underdeveloped institutional environment might be the reservoir of corruption in that there won’t be many other options to overcome institutional hazard, but to bribe. For this reason, we specifically examine countries with ill developed institutions such as transition economies utilizing “grease in the wheels” view asking: How does bribery affect firm performance under weak institutional environments? At the same time, we also utilize “dust in the wheels” view in that as institutions develop, the effectiveness of bribery on firm performance might dwindle. For this reason, we then ask: Does institutional development makes bribery less efficient in performance enhancement?

Two goals motivate our efforts to explore this question. First, we endeavor to understand the effect of bribery on organizational outcomes, specifically firm performance. Since bribing is a rational “strategic choice” for firms (Spencer & Gomez, 2011: 280) and a response to inefficient institutions (Becker, 1993), it is important to study the impact of bribery on firm growth and performance (Luo, 2002). To have a better understanding, we need to clarify what we mean by bribery. Bribery is defined as, “the offering, promising, or giving something in order to influence a public official in the execution of his or her duties” (OECD, 2000). It is interesting, however, that while the antecedents of bribery have been widely studied in the management literature (Collins, Uhlenbruck, & Rodriguez, 2009; Martin, 2007; Misangyi et al., 2008; Sanyal, 2005; Svensson, 2003), few studies have examined its effect on firm performance (Fisman & Svensson, 2007; Zhou & Peng, 2012).

Our second goal is to explore the effect of bribery on firm performance given the differences in institutional effectiveness across different economies. Institutions matter for firm performance (North, 1991; Peng, 2003); we specifically argue that the effects of bribery on firm performance differ from one place to another as the rules, norms, and routines that are established as authoritative guidelines for social behavior are different in different places (Baumol, 1996; Scott, 2004). Therefore, these institutional differences affect the costs and benefits of bribery for individual firms.

We accordingly first argue that bribes may help firm performance by eliminating bureaucratic hurdles and enabling access to certain benefits such as government contracts, preferential treatment, lower taxes, licenses, etc. This implies that negative externalities of bribery which include formal penalties, loss of reputation, and alienation from business networks (Serafeim, 2013) can be negligible in contexts with ill-defined formal institutions. Therefore, the

benefits and costs of bribery accordingly differ based on the effectiveness of the rules and laws (Fisman & Miguel, 2007). While bribery may help firms gain and sustain competitive advantages where institutions are poorly developed and there is huge institutional void, the same bribes may not help as much where institutions are well-developed. As such, we further argue that the positive effect of bribery on firm performance may decrease for firms operating within more advanced institutional frameworks.

We test our hypotheses using the Business Environment and Enterprise Performance Survey (BEEPS) conducted across 27 transition economies. Our results show that the overall effect of bribery on firm performance is positive, supporting the grease in the wheels arguments. We then report that the institutional effectiveness in a country is a significant moderator in this relationship such that the positive effect of bribery on firm performance disappears in countries with more advanced formal institutions.

With this study, we endeavor to make two contributions to the literature on bribery. First, we respond to the gap regarding the firm-level consequences of bribery by leveraging the argument of grease in the wheels from the macro to the micro domain and examine the effect of firm bribery on firm performance. Second, we not only examine the general impact of bribery on firm performance, but argue that this effect may also depend on institutional effectiveness opening us a window of opportunity to examine the role of bribery and institutional effectiveness on firm performance.

2. Bribery and Firm Performance

Two streams of arguments have developed on the effects of bribery owing to the complexity of the problem. On one hand, some scholars argue that bribing limits economic performance and

reduce efficiency at both the micro and macro levels known as the “dust in the wheels” proposition (Mauro, 1995). On the other hand, scholars also argue that bribes may indeed be regarded as “grease in the wheels” (Bardhan, 1997; Leff, 1964; Huntington, 1968). While these two conflicting views are present, here we focus on “grease in the wheels” in that we examine bribery-prone environment, transition economies. According to “grease in the wheels” view bribes are viewed as, “lubricants in an otherwise sluggish economy” (Lui, 1985: 761). A well-known example of this is the President Suharto of Indonesia who was known as “Mr. Ten Percent” because the percentage expected to be paid in order to receive favorable treatment was quite clear during his reign (Lee & Hong, 2012; Wei, 2000).

The grease in the wheels perspective endeavors to explain the “efficient corruption” claim that refers to the convenience of *getting things done* through bribery (Huntington, 1968; Leff, 1964; Lui, 1985). This economic perspective argues that individuals or organizations take part in corruption in order to maximize self-interest (Misangyi et al., 2008). In particular, the economic approach implies that bribery is a rational response to government bureaucracies (de Soto, 2000). Accordingly, individuals are driven by self-interests and may engage in bribery in order to extract personal benefits.

What then are the benefits that come with bribing government officials? We can classify three main advantages gained by bribery. First, a strong relationship with government officials may help overcome the constraints imposed by bureaucracy by eliminating bureaucratic hurdles (de Jong, Tu, & van Ees, 2012). For example, Kasuga (2013) finds that bribery improves firm productivity by reducing bureaucratic hold-ups. Moreover, bribes are considered to shift the financing of governmental services from taxes to taxes plus fees for service, meaning that bribes

work as perks that increase the quality of the service provided by government officials (Becker, 1993; Meon & Sekkat, 2005).

Second, corruption might help increase aggregate efficiency in weak institutional settings since they help work around rigid or inefficient rules (Meon and Weill, 2010). Specifically, ill-functioning institutions are among the top reasons why governments still maintain a high level of control over resources related to bank loans, business formation, finance, etc. implying that firms operating within these economies are highly dependent on governments to gain access to vital resources (Baron, 1995; Zhou & Peng, 2011). For example, Acemoglu and Verdier (2000) argue that bribe-seeking officials may speed up entrepreneurial processes in weaker institutional environments.

Third, firms also seek certain benefits through bribing civil servants such as access to illicit gains, manipulating market conditions by eliminating the threat of new entrants, and dampening competition by receiving privileges such as government contracts, winning orders, or favorable treatment. For example, Fisman (2001) finds that strong connections with government officials, often characterized by corruption, lead to higher market values for firms in Indonesia. Studying the effect of bribery on firm strategic choices, Lee and Weng (2013) report a negative correlation between bribery and exports highlighting that bribing firms establish strong positions within their home countries that reduce their need to explore foreign markets. An alternative explanation to the competitiveness argument is that high performing firms or firms with deep pockets might have the resources to collude with public officials to extract benefits (Hellman, Jones, & Kaufmann, 2003). For example, Beck and Maher (1986) show that the ranking of bribes affects the allocation of government contracts such that government officials tend to favor more generous bribers.

The above mentioned consequences indicate that bribery evolves into a social norm in the relative absence of strong formal institutions. Furthermore, the limited force of formal institutions allows the magnitude of corruption to grow further and turn it into a typical means of *getting things done* in these economies. Bribery then becomes a strategic investment made by firms with the expectation of operating smoothly and successfully. In sum, following the “grease in the wheels” perspective, we argue that bribery can help improve firm performance in relatively weak institutional settings by: (1) reducing bureaucratic delays, (2) enabling efficiency by avoiding certain regulations, and (3) gaining access to competitive treatment by government officials that enables access to key resources or certain privileges.

Hypothesis 1: Firm bribery will be positively associated with firm performance in transition economies.

3. The Role of Institutional Effectiveness

Institutions are, “humanly devised constraints that structure political, economic, and social interactions” (North, 1991: 97). Institutional theory argues that institutions have an inevitable impact on the success and failure of firms known as the “institutions matter” proposition. Institutions have two distinct characteristics. First, they are not uniform across countries (Baumol, 1996). Second, institutions have different degrees of dynamism. These characteristics particularly apply to developing economies characterized as “institutional voids” with ill-defined and poorly enforced legal systems, weak investment protection, and a lack of transparency (Carney, Shapiro, & Tang, 2009).

Interestingly, there is “not a country in the world, which does not treat bribery as criminal on its law books” (Noonan, 1984: 702). However, individuals are rational actors such that

potential benefits may encourage them to act in certain ways including bribery (Gao, 2011). In particular, the economic rationale informs us that people engage in illegal activities after a calculation of its benefits and costs. In Becker's words, "... rationality implied that some individuals become criminals because of financial and other rewards from crime compared to legal work taking account of the likelihood of apprehension and conviction, and the severity of punishment" (1993: 390). Then, the decision to bribe reflects the comparison of its costs and benefits, which is a function of institutional effectiveness.

North (1991) further classifies institutions into two as formal rules (constitutions, laws, and property rights) and informal restraints (sanctions, taboos, customs, traditions, and codes of conduct). Informal institutions fill the void when formal institutions are ill-defined and weakly enforced. It is therefore not surprising to expect that bribery may rise as a rational response to the relative absence of efficient formal mechanisms (Becker, 1993). For example, in an environment where the formal rules and procedures are vague, an executive facing diverse bureaucratic challenges in her transactions may observe that bribers obtain their requested services more efficiently (Bertrand et al., 2007; Lee & Weng, 2013), as well as face lower risks of being caught and less severe legal penalties. This is the logic of the grease in the wheels perspective, which informs that given inefficient formal institutions, bribery becomes a social norm in countries such as those in transition economies. In addition, "societies that collectively place less importance on rooting out corruption, and thus have weak anticorruption social norms may simultaneously have less legal enforcement" that significantly decrease the costs of engaging in bribery (Fisman & Miguel, 2007: 1021). In other words, better formulated and enforced institutions become influential moderators in the consequences of bribery.

While the benefits of bribery for a firm are intuitive, the costs are less well understood (Serafeim, 2013). Bribery primarily can be considered as a tax on firms, increasing transaction costs (RoseAckerman, 1999). However, due to illegality, uncertainty, and secrecy in the transactions, its negative externalities or indirect costs may exceed the observed costs (Fisman & Svensson, 2007; Jensen, Li, & Rahman, 2010; Shleifer & Vishny, 1993). The observed costs of bribery include the amount of money offered in order to receive the expected benefits and penalties in case of being caught. The amount of money offered is most of the time unpredictable and problematic since government officials may abuse their discretionary power and levy high costs on firms (Murphy, Shleifer, & Vishny, 1993). Furthermore, the returns are not guaranteed due to the secrecy aspect of bribery. However, as formal institutions become weaker bribery resembles taxation evolving into a well-accepted business practice and can therefore be considered as a relatively predictable “given” cost. On the other hand, as formal institutions become more advanced, the benefit of bribery decreases as the likelihood of being caught is elevated and criminal prosecution tends to be more severe (Becker, 1993).

Institutions also matter for the indirect costs of bribery. The indirect costs of bribery may be more severe in countries with more advanced institutions due to the elevated importance of transparency and accountability in the eyes of stakeholders. The most important indirect costs of bribery include: (1) social penalties, (2) misallocation of resources, and (3) competitive disadvantages.

First, social penalties emerge from deviating from socially accepted behavior. As formal institutions become stronger, bribery becomes a socially less accepted way of doing business (Fisman & Miguel, 2007). This then heightens the effect of social penalties including acquiring

an unreliable reputation (Lambsdorff, 2008), alienation from business networks, and loss of public trust (Nichols, 2008) that eventually hurt firm operations and performance (Luo, 2002).

Second, bribing indicates a reallocation of talent and resources from production to rent-seeking (Murphy et al., 1993). In other words, bribing crowds out investments to innovation, marketing, or training that limits firm growth options in terms of technological advancement, new product offerings, or capability development (de Jong et al., 2012). Therefore, corruption becomes an evolutionary hazard and a source of competitive disadvantage for organizations (Luo, 2002).

Third, in strong institutional environments bribing firms compete with non-bribing firms that are either more efficient or have access to resources that eliminate their dependence on governmental privileges. In other words, as the prevalence of bribery as a business norm declines, firms that insist on bribery give signals of “desperation” in terms of heavy dependence on governmental resources that lead to a competitive disadvantage compared to non-bribing firms. Overall, the indirect costs of bribery may result in lowered prospects for profitability in more advanced institutional environments (Doh et al., 2003).

In sum, the problem boils down to whether the consequences of bribery are uniform across different institutional contexts. To answer this question, we need to understand the interplay between the costs and benefits of bribery in different institutional settings. Specifically, the more institutions are developed, the more likely the benefits of bribery would be questionable given that room for bribery becomes smaller and the likelihood of being caught and punished becomes larger. More importantly, as formal institutions become stronger, indirect costs of bribery that include social penalties, misallocation of resources, and related competitive

disadvantages become further heightened. We therefore argue that the organizational outcomes of bribery may be contingent on the level of institutional effectiveness in an economy.

Hypothesis 2: Operating in a country with stronger institutional frameworks will negatively moderate the positive relationship between firm bribery and firm performance in transition economies.

4. Methodology

4.1. Data and Sample

We used the Business Environment and Enterprise Performance Survey (BEEPS) data by the European Bank for Reconstruction and Development (EBRD) to test our hypotheses (EBRD, 2009). The BEEPS project is developed by the EBRD and the World Bank Group. The role of the BEEPS is to collect information regarding a country's business environment, how it is perceived by individual firms, how it changes over time, and the various constraints to firm performance and growth. We use the BEEPS survey conducted in Eastern Europe and Central Asia countries for the following periods as 2002, 2005, and 2008/2009. The survey has also been used by many scholars in the management field as a valuable data source providing micro-level indicators of bribery and corruption (Jensen, Li, & Rahman, 2010; Lee & Weng, 2013).

The BEEPS is considered as a credible source since: (1) it has been supported by World Bank and EBRD that encourage executives regarding academic neutrality for their responses, (2) executives are motivated to participate and provide genuine answers since their responses evolve into guidance for policy makers (Azfar et al., 2001), and (3) participant privacy is highly protected and kept anonymous in addition to phrasing questions regarding specific issues in an indirect manner (Lee & Weng, 2013). Furthermore, we construct our variables using survey

questions that reflect both actual behavior (e.g. rate of bribery to total sales, government contracts granted, etc.) and executive perceptions (e.g. opinion on corruption as an obstacle to business operations) in order to account for response bias (Jensen et al., 2010), as well as use different sources of data that help minimize common method bias.

We developed our sample based on two criteria. First, our sample includes firms that operate in transition economies. Second, we excluded observations with missing values for our main variables such as bribery and sales. Overall, we had 10,221 firm-year observations based in 27 transition countries (see Table 1) and 18 industries (see Table 2). Among 27 transition countries Bulgaria has the highest number of observations (975), whereas Montenegro has the lowest number of observations (7).

(INSERT TABLE 1 & 2 HERE)

4.2. Variables

4.2.1. Dependent variable

Industry Adjusted Sales Growth: Our dependent variable for *firm performance* is industry adjusted sales growth. We operationalize this variable as the difference between the sales for the last year and the sales for the past three years divided by the sales for the past three years (Zhou & Peng, 2012). We further adjust firm-level sales growth by the industry-level growth rate in order to account for the industry differences that can partly explain firm-level growth. We calculate industry-level sales growth as the median levels of sales growth by industry, country, and year.

4.2.2. Independent variables

Firm Bribery. Following Fisman and Svensson (2007), and Lee and Weng (2013), we use firms' bribe amounts in the home country as a proxy for firm bribery. This variable is derived from the

BEEPS survey question asking the ratio of the amount of bribes paid to home country government officials over annual sales. Firm bribery is therefore operationalized as the percent of total annual sales paid in informal payments. We also favor this variable since it may reduce the potential size effect (Lee & Weng, 2013).

Institutional Effectiveness. This variable measures the extent of institutional development in a country. Our primary measure of institutional effectiveness is the *economic freedom* index developed by the Heritage Foundation and is an indicator of the effectiveness of rule of law, regulatory efficiency, limited government, and open markets. Economic freedom index has usually been used on broad international management issues that include foreign entry strategies (Meyer et al., 2009) and overseas acquisitions (Gubbi et al., 2010). We operationalize the economic freedom index as a dummy variable indicating whether a country scores above the average index values (1) or below the index values (0) in our sample. Our results do not qualitatively change when we use the index as a continuous variable. However, for the sake of simplicity, we report the findings of the dummy variable in our findings.

Interactions between Institutional effectiveness and Firm Bribery. We test the moderating relationship by generating the interaction term of firm bribery and institutional effectiveness.

4.2.3. Control variables

Our model contains the following control variables. First, we control for corruption perception, which reflects firms' exposure and tolerance to corruption, potentially determining the tendency to bribe in order to access governmental resources (Čábelková & Hanousek, 2004). Corruption perception is derived from the survey question asking for respondents' perception concerning how much of an obstacle corruption is to their current operations on a five-level Likert scale ranging from no obstacle to a very severe obstacle. Second, we control for government contract

as it indicates the intensity of interactions with government officials that opens windows of opportunity to bribery (Martin et al., 2007; Lee & Weng, 2013). Third, we control for the level of exports over total sales since exports may be an indicator of preferential treatment from government officials in exchange for bribes (Lee & Weng, 2013). Fourth, we control for research intensity (research expenditure divided by firm sales). Fifth, we control for foreign ownership and government ownership since ownership affects the vulnerability of firms to the demands of government officials and the consequences of bribery (Shleifer & Vishny, 1994). Finally, we also control for firm age and firm size since these variables may affect firm vulnerability to government officials' demands as well as the overall effect of bribery on firm performance (Zhou & Peng, 2010). To proxy for firm size, the survey uses a scale of 1-2-3 based on the number of employees; we further revised this variable by using the mid-points of number of employees for each scale as 10-60-9000 in order to better reflect the scale of firm size. However, our results remain qualitatively similar when we use size as a dummy variable as well. We also included country, industry, and year dummies in our analyses.

When we examine the distribution of our sales growth, bribery, and age variables we see observations high above the expected standard variation that generate problems with normality assumptions that may be due to survey misreporting. To reduce the effect of outliers that may be due to such problems, we winsorized sales growth (by 1 per cent), firm bribery (only high values by 1 per cent), and age (only high values by 0.1 per cent) in the reported results. However, our results do not change qualitatively in the case of non-winsorization.

4.3. Model

“The field of strategic management is fundamentally predicated on the idea that managerial decisions are endogenous to their expected performance implications” (Hamilton & Nickerson, 2003: 52). As a general rule, when a variable is endogenous it correlates with the disturbance term and therefore violates simple ordinary least squares assumptions. After running two-stage tests we see that we have endogeneity problems regarding our *firm bribery* variable. We must therefore control for the endogeneity of *firm bribery* in order to avoid biased results on its effects on firm performance. We address the endogeneity problem by using the instrumental variable approach for our firm bribery variable and apply a 2SLS model to correct for the endogenous nature of bribery choices (Greene, 2003). The instruments should not only satisfy empirical conditions but also have strong theoretical explanations. In particular the instruments should satisfy two conditions: they should correlate with firm bribery and have no significant impact on firm performance (Reeb, Sakakibara, & Mahmood, 2012). Following Lee and Weng (2013), we instrumented a firm’s bribes using the *average bribery* level by other firms operating within the same industry and country. We also account for the longitudinal nature of our data and control for heteroscedasticity by using the “xtreg” command in Stata with robust standard errors.

Below is our model integrating all our variables:

First Stage Regression

$$\text{Firm Bribery}_{it} = \alpha_1 + \beta_1 \text{Average Bribery}_{it} + \text{Controls}_{it} + u_1.$$

Second Stage Regression

$$\text{Sales Growth}_{it} = \alpha_2 + \beta_2 \text{Firm Bribery}_{it} + \beta_3 \text{Institutions}_{it} + \beta_4 \text{Institutions} * \text{Firm Bribery}_{it} + \text{Controls}_{it} + u_2.$$

In line with our Hypothesis 1 we expect to find positive and significant results for the coefficient of firm bribery, β_2 . In line with our Hypothesis 2 we expect to find negative and significant results for the coefficient of the interaction term, β_4 .

4.4. Robustness Checks and Additional Analyses

4.4.1. Instrument validity

We conducted further analyses in order to establish robustness given the nature of the survey data. We test the validity of the two-stage model by conducting an F-test, which reveals statistics of 324.6, which is above the often-used threshold of 10, indicating that our instrument is strong and valid (Staiger & Stock, 1997).

4.4.2. Institutional effectiveness

Institutional Effectiveness (OECD). We further use membership in the Organization for Economic Co-operation and Development (OECD) forum as a different measure to proxy for institutional effectiveness. OECD membership measures the extent of institutional development in a country at an aggregate level. We accordingly create a dummy variable in which countries with OECD membership are coded as 1 and others as 0. The OECD is an international forum of countries committed to market development and the enhancement of effective regulation systems. In general OECD membership reflects the economic and institutional development level of a country that in turn affects measures against the spread of corruption. For example, although every country has laws against bribery, OECD countries are among the few countries that also have laws against bribery abroad (Cuervo-Cazurra, 2008). Although the majority of OECD countries are advanced economies, there are also countries from transition economies. Out of 27

transition economies in our sample the Czech Republic, Hungary, Poland, and Slovakia are OECD members.

In sum, we test the validity of our instruments and report that their effect remains significantly strong over different tests. We also run our models using different measures for institutional effectiveness and report qualitatively similar results across two different operationalization of the variable.

5. Results

The descriptive statistics and the correlation matrix of our dependent and independent variables are summarized in Table 3. Multicollinearity seems not to be a problem since the variance inflation factors (VIF) are all below the recommended threshold of 10 and we have a mean VIF of 1.31.

[INSERT TABLE 3 HERE]

Table 4 presents the results of the two-stage regression results using economic freedom index as a proxy for institutional effectiveness. The first column represents the first stage regression results and the second represents the second stage regression results. According to our hypotheses we have two expectations: (1) a positive and significant relationship between firm bribery and sales growth, and (2) a negative and significant moderation effect for our interaction variable (Institutions*Firm bribery).

[INSERT TABLE 4 HERE]

As shown in Column 1 of Table 4, average bribery ($\beta = 0.905, p < 0.001$) has a positive and significant effect on firm bribery, which support the strength of our instrumental variable in the first stage regression on firm bribery. In Column 2 of Table 4 we report the second stage

regression results and examine the impact of our predictor variables on sales growth. Firm bribery has a positive and significant effect on sales growth ($\beta = 0.054, p < 0.01$) supporting Hypothesis 1, and the interaction effect has a negative and significant effect on sales growth ($\beta = -0.019, p < 0.01$) supporting Hypothesis 2.

We also run an F test in order to understand the joint effects of firm bribery and the interaction term. In particular, we aim to understand whether the sum of the coefficients of firm bribery and the interaction term is significantly different from zero. Through the F test, we fail to reject that the total effect of both variables is zero ($p = 0.043$), implying that the positive association between firm bribery and firm performance is not significantly observable in countries with relatively more effective institutions. We further test this using split sample analyses. Accordingly, we observe a significant and positive relationship between firm bribery and performance in countries with relatively less effective institutions, whereas we find no significant effect in countries with relatively more effective institutions.

[INSERT TABLE 5 HERE]

In Table 5 we report the results using OECD membership as a proxy for institutional effectiveness. As shown in Column 1 of Table 5, average bribery ($\beta = 0.903, p < 0.001$) has a positive and significant effect on firm bribery, which support the strength of our instrumental variable in the first stage regression on firm bribery. In Column 2 of Table 5 we report the second stage regression results. Similar to our findings in Table 4, firm bribery has a positive and significant effect on sales growth ($\beta = 0.048, p < 0.01$) supporting Hypothesis 1, and the interaction effect has a negative and significant effect on sales growth ($\beta = -0.020, p < 0.001$) supporting Hypothesis 2.

In sum, using a two-stage regression model, we find that firm bribery in general has a *positive* effect on firm performance, yet this relationship is *negatively* moderated by whether the country that the firm operates in has a well-functioning institutional framework. Therefore in both models our results provide strong support for both Hypothesis 1 and Hypothesis 2.

6. Discussion

Does bribery help firm performance in institutionally ill-developed countries such as transition economies? How does institutional effectiveness affect the relationship between firm bribery and firm performance? Although the management literature has extensively examined the determinants of bribery (Collins et al., 2009; Martin, 2007; Misangyi et al., 2008; Sanyal, 2005), it has been relatively silent on its organizational outcomes (Fisman & Svensson, 2007; Lee & Weng, 2013; Zhou & Peng, 2012). In this paper, we argue that bribery is a strategic choice, a rational response to bureaucratic deficiencies, and therefore its effects on firm performance and growth are context specific. Institutions therefore do matter and differ for the effect of bribery on firm performance.

The effect of corruption on macro and micro indicators varies widely not only between advanced and developing economies, but also across developing economies. For example, many macro-level studies suggest a negative correlation between economic growth and corruption, yet we witness the rise of South-East Asia and the decline of Sub-Saharan Africa even though both regions show relatively high levels of corruption compared to advanced economies (Fisman & Gatti, 2006). Nevertheless, despite the well-known conclusion that corruption is a major obstacle for economic development and to the discomfort of anti-corruption crusaders, some of

the great economic success stories of the past decades have taken place in relatively corrupt countries that include many transition economies (Fisman, 2010).

Transition economies therefore offer a unique context to explore the effects of bribery on firm performance thanks to their unique experience of transition from planned to market economies and consequent heterogeneous institutional structures. The use of personal networks, bribery, and corruption were all structural features of administrative dealings under the planned economy model. For example, reported by Transparency International, the corruption perception index (CPI) shows differences in the perceived level of public sector corruption on a scale of 0 - 100, where 0 means that a country is perceived as highly corrupt and 100 means it is perceived as very clean. In 2012 the average CPI of 176 reported countries was 43.3. This figure increases up to 68.8 for OECD countries, declines to 63 for European Union members, and dramatically falls back to 37.9 for transition economies. In some countries bribery reaches such points that it resembles the tipping behavior at a restaurant, operating as a fee or a perk to increase the quality or efficiency of governmental services (Sahakyan & Stiegert, 2012).

Despite major differences across countries and lingering fundamental problems, many transition economies have successfully transformed the market-regulating institutions contributing to a climate that discourages corruption. For example, chaired by the prime minister, Latvia established a Crime and Corruption Prevention Council in 2002. Similarly, in 2001 Slovenia launched a special government agency to fight corruption. As a more steep measure, Hungary, Slovakia, and the Czech Republic all adopted civil service laws mandating asset statements and property disclosures for all government officials (Transparency International, 2003). We therefore believe that this dynamism and variety in transition economies' institutional settings provides us with a frontier to test the effects of firm bribery on firm performance. By

doing so, we endeavor to shed light on the organizational outcomes of bribery and contribute to the extant literature predominantly focusing on the antecedents of bribery.

6.1. Contributions

We endeavor to make two contributions to the management literature on corruption. First, we leverage the argument for grease in the wheels from the macro to micro domain and examine the effect of firm-level bribery on firm performance. Although there is a growing body of literature investigating the determinants of firm-level bribery (Martin et al., 2007), little has been said concerning its influence on firm performance (Fisman & Svensson, 2007). This gap may be due to the complexity of the phenomenon that makes it challenging and complicated to understand and test empirically. Yet we can study this field more efficiently and effectively thanks to comprehensive firm-level surveys conducted by the World Bank and other credible international enterprises. Examining unique dataset of 27 transition economies, our findings support the 'efficient corruption' claim in the sense that bribery may help firm performance by smoothing bureaucratic restrictions, increasing efficiency and competitiveness in terms of getting licenses and winning government contracts (Lui, 1985).

Second, we not only examine the general impact of bribery on firm performance, but argue that this effect may depend on institutional effectiveness. In other words, we argue that the efficient corruption claim is subject to the effective institutions such that better formulated and enforced institutions play a highly influential role in weakening the positive link between bribery and firm performance. In this regard, the heterogeneity in the direction and speed of institutional transitions across transition economies opens us a window of opportunity to examine the role of institutional effectiveness on the organizational outcomes of bribery. Thus, we argue that the

impact of bribes on firm performance is context-specific as the dynamics between the costs and benefits of bribery depend on how well institutions function within a society. This argument is indeed parallel to the findings of Fisman and Miguel (2007) arguing that although corruption is related to cultural and social norms, more advanced policies and legal enforcement are also highly influential in combatting corruption. Our findings extend this work by underscoring the moderating effect of institutions on the link between corrupt behavior and firm-level outcomes. In particular, we find that the likely positive effect of bribery on firm performance disappears in countries with stronger formal institutions. This is, therefore, a crucial finding pointing to the significant role of market-supporting institutions in minimizing market actors' incentives to bribe and ultimately help combat corruption.

6.2. Implications for Managers and Policy Makers

Although a highly unpleasant topic, bribery is rampant in many parts of the world and is among the top priority matters in policy makers' lists such that more than one in four people paid a bribe in 2013 based on a survey of 114,000 respondents in 107 countries (Transparency International, 2013). In return for bribes individuals and firms expect to receive illicit gains such as monetary and non-monetary government benefits, government contracts, lower taxes, licenses, time advantages to speed up government processes, or legal outcomes such as avoiding punishment for the violation of property rights. Although corrupt officials may help business people get around the bureaucratic burdens of inefficient government regulations, bribery eventually discourages capable managers and entrepreneurs as well as leads to the misallocation of useful resources. To combat, many national and international organizations work on policies to improve the transparency of government transactions and accountability of market actors.

Although bribes may serve as tips or additional fees in return for better service from public officials, in the long run it has detrimental effects on both the economy and on its players. It is therefore important to adopt international governance structures that help combat corruption given the increasing competition across firms and nations around the globe. The problem then boils down to improving regulative systems and raising the costs of bribery in order to disincentivize corrupt behavior. As our findings indicate, the positive association between bribery and firm performance consequentially disappears in countries with more advanced formal institutions. This finding is particularly important given the efforts to improve legislative systems and market-supporting institutions in many parts of the world.

6.3. Limitations and Future Research

The main limitation of studies on the effects of informal economies on firm-level indicators is the existence of diverse set of micro- and macro-level factors that may play a role in the expected effects. Another potential limitation is the use of survey data that may lead to selection as well as common method biases in empirical design. We account for such empirical problems using different sources of data and conducting various robustness checks. Another limitation of using survey data is restrictions regarding variable operationalization. For example, it would contribute to our findings to examine different measures of performance such as return on investment, market share, etc. Indeed, more focused surveys would help gain access to such additional measures for different variables.

Finally, since the focus of this paper is mainly transition economies it is difficult to generalize our assumptions across economies at different levels of economic and institutional efficiency. It would be particularly interesting and valuable to compare the effect of bribery on

firm growth and performance in advanced versus developing economies that can shed further light on the role of institutions given these starker and more visible differences.

7. Conclusion

Bribery is a widespread problem. Despite its negative impact on economic growth and social welfare it functions as a way of doing business and *getting things done* in many parts of the world. It is then imperative to explore the effect of bribery on firm growth and performance. Firms operating within ill-functioning institutional environments may benefit from bribes as grease payments or strategic investments that help get around inefficient government functions or attain certain privileges. Weakly formulated and enforced formal institutions also help minimize the negative externalities stemming from bribery. This perspective is indeed a firm-level extension of the grease in the wheels perspective. However, the same logic is less strongly supported for firms operating in more advanced institutional environments. In particular, the above mentioned benefits do not necessarily translate and the costs visibly increase. The likely positive effect of firm bribery therefore diminishes as institutions develop better standards.

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Table 1. Countries in the sample

| Country | Frequency | Percent |
|----------------|-----------|---------|
| Bulgaria | 975 | 9.54 |
| Poland | 963 | 9.42 |
| Russia | 676 | 6.61 |
| Croatia | 665 | 6.51 |
| Romania | 599 | 5.86 |
| Kazakhstan | 514 | 5.03 |
| Hungary | 481 | 4.71 |
| Uzbekistan | 418 | 4.09 |
| Armenia | 413 | 4.04 |
| Ukraine | 392 | 3.84 |
| Czech Republic | 390 | 3.82 |
| Slovenia | 369 | 3.61 |
| Belarus | 349 | 3.41 |
| Moldova | 334 | 3.27 |
| Tajikistan | 321 | 3.14 |
| Albania | 279 | 2.73 |
| Lithuania | 278 | 2.72 |
| Kyrgyzstan | 271 | 2.65 |
| Latvia | 251 | 2.46 |
| Estonia | 250 | 2.45 |
| Georgia | 223 | 2.18 |
| Serbia | 192 | 1.88 |
| Slovakia | 187 | 1.83 |
| Bosnia | 184 | 1.8 |
| Macedonia | 167 | 1.63 |
| Azerbaijan | 73 | 0.71 |
| Montenegro | 7 | 0.07 |
| Total | 10,221 | 100 |

Table 2. Industries in the sample

| Industry | Frequency | Percent |
|-------------------------------|-----------|---------|
| Food | 1,591 | 15.57 |
| Wholesale | 1,518 | 14.85 |
| Other services | 1,348 | 13.19 |
| Construction | 1,127 | 11.03 |
| Retail | 974 | 9.53 |
| Transportation | 657 | 6.43 |
| Other manufacturing | 527 | 5.16 |
| Garments | 510 | 4.99 |
| Hotel and restaurants | 487 | 4.76 |
| Fabricate metal products | 479 | 4.69 |
| Machinery and equipment | 362 | 3.54 |
| Information technology | 163 | 1.59 |
| Chemicals | 111 | 1.09 |
| Textiles | 99 | 0.97 |
| Non-metallic mineral products | 95 | 0.93 |
| Electronics | 72 | 0.7 |
| Plastics & rubber | 69 | 0.68 |
| Basic metals | 32 | 0.31 |
| Total | 10,221 | 100 |

Table 3. Descriptive statistics and correlations

| Variable | Mean | Std. Dev. | Min | Max | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------------------------|-------------|-------------|-------|-------|--------|--------|--------|--------|-------|-------|--------|-------|-------|
| 1. Sales growth | 0.20 | 1.01 | -1.01 | 7.27 | 1 | | | | | | | | |
| 2. Firm bribery | 1.45 | 2.92 | 0 | 15 | 0.06* | 1 | | | | | | | |
| 3. Corruption perception | 1.34 | 1.23 | 0 | 4 | 0.08* | 0.28* | 1 | | | | | | |
| 4. Government contract | 0.26 | 0.44 | 0 | 1 | 0.02 | 0.30* | 0.23* | 1 | | | | | |
| 5. Export intensity | 9.67 | 23.85 | 0 | 100 | 0.03 | -0.07* | -0.02 | -0.04* | 1 | | | | |
| 6. R&D intensity | 2.34 | 5.15 | 0 | 29.97 | 0.02 | -0.01 | -0.01 | 0.06* | 0.13* | 1 | | | |
| 7. Foreign ownership | 9.16 | 26.47 | 0 | 100 | 0.03 | -0.04* | -0.01 | 0.00 | 0.25* | 0.11* | 1 | | |
| 8. Government ownership | 9.23 | 27.62 | 0 | 100 | -0.04* | -0.09* | -0.12* | -0.07* | -0.02 | 0.10* | -0.10* | 1 | |
| 9. Age | 15.69 | 17.62 | 0 | 145 | -0.03 | -0.07* | -0.05* | -0.05* | 0.08* | 0.12* | -0.05* | 0.35* | 1 |
| 10. Size | 1852.8 3 | 3610.7 2 | 10 | 9000 | 0.02 | -0.07* | -0.02 | -0.04* | 0.24* | 0.24* | 0.15* | 0.24* | 0.36* |

N = 10,221

* p<0.05

Table 4. 2SLS regression results (Economic freedom index is used as a proxy for institutional effectiveness)

| | First Stage Firm bribery | Second Stage Sales growth |
|--|-----------------------------|------------------------------|
| Firm bribery | | 0.054** (0.018) |
| Institutions*Firm bribery | | -0.019** (0.007) |
| Institutions | -0.098 (0.175) | 0.101 (0.092) |
| Corruption perception | 0.285*** (0.024) | 0.005 (0.012) |
| Government contract | 1.423*** (0.070) | -0.050 (0.037) |
| Export intensity | -0.001 (0.001) | 0.001** (0.001) |
| R&D intensity | -0.001 (0.005) | 0.007*** (0.002) |
| Foreign ownership | -0.003** (0.001) | 0.001* (0.000) |
| Government ownership | -0.005*** (0.001) | 0.000 (0.000) |
| Age | -0.003* (0.001) | -0.002* (0.001) |
| Size | -0.000*** (0.000) | 0.000 (0.000) |
| Average bribery | 0.905*** (0.029) | |
| F test | | $p = 0.043$ |
| H ₀ : Firm bribery + OECD*Firm bribery = 0 | | |
| R^2 | 0.341 | 0.060 |
| <i>Wald Statistics</i> | 2879.60*** | 282.60*** |
| <i>N</i> | 10,221 | 10,221 |

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Country, industry, and year dummies included.

Table 5. 2SLS regression results (OECD is used as a proxy for institutional effectiveness)

| | First Stage Firm bribery | Second Stage Sales growth |
|------------------------|-----------------------------|------------------------------|
| Firm bribery | | 0.048** (0.018) |
| OECD*Firm bribery | | -0.020*** (0.006) |
| OECD | 0.371 (0.259) | -0.024 (0.094) |
| Corruption perception | 0.284*** (0.024) | 0.005 (0.012) |
| Government contract | 1.423*** (0.070) | -0.047 (0.036) |
| Export intensity | -0.001 (0.001) | 0.001** (0.001) |
| R&D intensity | -0.001 (0.005) | 0.007*** (0.002) |
| Foreign ownership | -0.003** (0.001) | 0.001* (0.000) |
| Government ownership | -0.005*** (0.001) | 0.000 (0.000) |
| Age | -0.003* (0.001) | -0.002* (0.001) |
| Size | -0.000*** (0.000) | 0.000 (0.000) |
| Average bribery | 0.903*** (0.028) | |
| R^2 | 0.341 | 0.059 |
| <i>Wald Statistics</i> | 2875.79 | 280.45 |
| <i>N</i> | 10,221 | 10,221 |

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Country, industry, and year dummies included.