European Journal of Business and Management
ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online)
Vol.14, No.20, 2022

Antecedents of Business-Government Relationship: Evidence from 13 African Countries

Mebrahtu Tesfagebreal Gebrehans*[1] Li Chang[1,2] Siele Jean Tuo[1] Qian Yu[1] Hao Zheng[1]
1.School of Accounting, Dongbei University of Finance and Economics, No. 217 Jianshan Street, Shahekou District, Dalian 116025, P.R. China
2.Professor, at the School of Accounting, Dongbei University of Finance and Economics, No. 217 Jianshan Street, Shahekou District, Dalian 116025, P.R. China
* E-mail of the corresponding author: mebljtes@gmail.com

Abstract
A strong Business-government relationship is one method of rent-seeking activity of firms. Using novel proxies of political connectivity from the World Bank Enterprise Survey (WBES), we study the relationship behavior of 7733 firms from 13 African countries with their government. According to the results of the baseline estimation and subgroup analysis using robust Tobit and Probit models, we find business regulations and policies trigger the relationship introspects of a firm's strategic choices. The result further indicates that the strength and magnitude of the business-government relationship are subjected to specific country-level characteristics including, corruption level, regulatory quality, economic development, duration of government tenure, and the level of the bureaucracy of countries. Moreover, firm-specific characteristics including firm size, age, government dependency, extensive exporters, and the existence of informal market competition are among the firm-level antecedents of the Business-government relationship. Our separate analysis further provides that old, big, and manufacturing firms have more likely to form a strong relationship than others.
Keywords: Business-Government Relationship; Corporate Political Connectivity; Institutional Qualities; Small and medium firms, censored data.
DOI: 10.7176/EJBM/14-20-02
Publication date: October 31st 2022

1. Introduction

While many factors contribute to economic growth in measurable ways, a strong state-business relationship is one significant underlying component whose contribution has been difficult to quantify in the past (Te Velde, 2013). Te Velde (2013), emphasizes that apart from the optimal allocation of resources, an effective state-business relationship can promote, greater government efficacy in promoting private sector activity and removing roadblocks. So far, in-depth studies of state-business ties have mostly been limited to developed countries with strong institutional and governmental structures. Measurement of state-business interactions in African countries has been patchy or nonexistent (Te Velde, 2013). In light of this, this research is focused on the African continent. It covers 13 nations, and as a result, it adds to the paucity of cross-national empirical evidence. The current study examines numerous elements of the determinants of Business-Government Relationships (hereafter BGR) to expand the existing empirical knowledge. We first ran the regression for all 7733 companies in the sample. The sample enterprises are then, grouped by sector (manufacturing, service, and retail), size (micro, small, medium, and big), and age (young, mature, and old). As a result, we gain insight into the elements that influence BGR. In addition, we look for possible endogenous confounders and run several robustness tests. The result obtained by utilizing the robust Tobit, and probit model show that the strength of BGR varies among countries with different legal and institutional setups, as well as specific firm characteristics.

2. Literature Review and hypothesis

2.1. Business government relationships

Political ties between firms and government officials have been always a hot topic in the study of strategic management in emerging economies (Ismail, Ford, Wu, & Peng, 2013; Meyer & Peng, 2016; Peng & Heath, 1996). According to Resource Dependency Theory (RDT), enterprises are not autonomous; instead, they are enmeshed in interdependent networks and social ties (Granovetter, 1985). The demand for resources, such as financial and physical resources, as well as information obtained from the environment, made organizations potentially reliant on external sources of these resources (Pfeffer & Salancik, 2003).

Corporate involvement in political actions commonly referred to as corporate political activities, is one of the recommendations of Salancik and Pfeffer (1978), to mitigate this dependency. Business-government relationships thus indicate the explicit formal or informal relationships formed between senior managers of a company and the government or its agencies in response to government policies, business instructions, or institutional settings. According to the World Bank Enterprise Survey, the magnitude of the relationship depends on the proxy used to measure the relationship. For example in one of the proxies, the strength of the relationship

depends on the length of time spent by senior managers in dealing with government policies and regulations, while in another it depends on the occurrence and frequency of visits from the tax authority to the premise of the firm. A sound justification to manage constraints through government alliance, especially in countries that suffered from low institutional quality is that government agencies and public service providers are unpredictable, which slows down the delivery of essential services, restricts access to them, and raises the cost of doing business with them (Burki & Perry, 1998). Moreover, in such context, governments' policies determine the rule of commerce, market structure, sectorial, and/or institutional preferences, entrant barriers, import-export restrictions, subsidies, fiscal policies, cost structure, product, and service allowable (Schuler, Rehbein, & Cramer, 2002). According to Veblen (1961), Inadequate or unsatisfactory institutional settings especially the formal, force entrepreneur and managers of firms to consider alternative routes of what they required for the functioning of their firms (Daniel, Fu, & Dolfsma, 2018). Particularly, they might require to exert extra effort in terms of meeting and engaging with authorities regularly to clarify requirements, responding to government regulations, monitoring or reminding authorities of their pledges, and maintaining legitimacy and visibility (Chu & Hoang, 2020). At the same time, in low-quality institutions, business owners and managers may resort to various methods such as informal payments (e.g. gifts or bribes) to create an obligation (Dolfsma, Van der Eijk, & Jolink, 2009).

Conventional works of literature on Corporate Political Activity (CPA) are concentrated on the political connectivity of listed corporations. They employed almost identical procedures to measure and confirm political connectivity. They mainly focus on the interpersonal relationships of top management of corporations with their incumbent or former governments. On the net, empirical research supports the underlying relationship between government dependency and political action (Faccio et al., 2006b; Goldman, Rocholl, & So, 2009; K. Hillman, Gerald D & Schuler, 2004). Nevertheless, this method of analyzing connectivity seemingly ignores the unlisted private firms in general and the small and medium-sized firms in particular due to information about their political rent-seeking activities is not publicly available.

By utilizing a rich data source from the World Bank Enterprise Survey (WBES), Chu and Hoang (2020) and Tian et al. (2019), used the existence and strength of the Business-government relationship as means of political connectivity of firms. Krueger (1974), argues that entrepreneurs spend time and money persuading government officials to grant them access to economic rents. Hence, following Tian et al. (2019) and Chu and Hoang (2020), we consider the time spent by the senior managers in dealing with requirements of government regulations to measure the existence and strength of the business-government relationship. The main purse of this study is to understand firm and country-specific antecedents in shaping the business-government relationship in Africa.

The environmental context of African countries provides an ideal setting to empirically test such a hypothesis because: First, most African countries are characterized by a tenuous institutional and legal environment. In such contexts, firms use government relationships as a substitute for undeveloped institutions (Dong, Asmi, Zhou, Keren, & Anwar, 2017) and to avoid possible legitimacy challenges (Muttakin, Mihret, Khan, & Journal, 2018). Second, most studies of political connectivity are conducted in the context of developed and emerging countries. Literature on business-government relationships and their characteristics in low-income countries such as Africa is almost non-exist and thus, warrants empirical investigation. Third, unlike the existing strand of literature on strategic management on political connectivity, this study considers all sizes, ages, and sectors of firms to investigate their characteristics.

2.2. Legal, Economic, and institutional Antecedents of BGR

Corruption level

Several prominent scholars had confirmed that the political connection and its benefits are more pronounced in countries with a high level of corruption (Boubakri et al., 2008a; Faccio, 2002b; Faccio, 2007; Faccio et al., 2006b). Comprehensive research by Faccio (2006), indicates that distortions in the distribution of public resources are widespread in both emerging and industrialized countries. However, in more corrupt systems, the size of this phenomenon is significantly greater. For a large sample of political connections, the benefits are pronounced especially in highly corrupt countries. Those studies were conducted across different corners of the world with insignificant participation from an African context. Particularly given a severe corruption level within the African countries, we hypothesize,

H1: There is a positive business-government relationship in countries with high corruption levels.

Economic Development;

Boubakri et al. (2008a), stipulated that political connectivity is less pronounced in developed countries. Press freedom and a transparent system are among the reasons behind their argument. The justification of poor economic development and active corporate political connectivity was supported by many scholars (Faccio, 2007; Mauro, 1995; Daniel Treisman, 2000). The extent to which this might be true and the conditions in which relationship ties might occur more in less developed states, we hypothesize,

H2: Business-government relationships are stronger in low-income countries.
Bureaucracy:
The number of procedures to get legal status is one of the barriers to new entry and benefits and protects the existing from potential new competition (Boubakri & Hamza, 2007). Excessive red tape and bureaucracy might drive many small firms to pursue informal business. Nevertheless, it is expected that firms with strong government relations, will continue to get special privileges and preferences. Hence,
H3: Business-government relationships are more prevalent in countries with higher barriers to entry.
Regulatory quality:
Qualified legal environment activities and efficient government operation help a firm to carry out its daily activities smoothly and diligently. Especially, such effectiveness and quality governance have a paramount role in innovative activities as there is a high degree of uncertainty about the effect of implementing innovative activities in the innovation process. Moreover, Jiao, Koo, Cui, and Change (2015), indicate law enforcement's contribution to the increase of patent applications. Nie (2011), found that fiscal policy can have a positive impact on the company's internal incentives and promote entrepreneurial activities. Therefore, this study proposes the following:
H4. The regulatory environment has a positive impact on the normal operation of a firm. In a weak regulatory environment, business-government relationships become stronger.
Government tenure
Appointment of civil servant officials is usually taking place in the initial years of the government tenure and most likely they will stay in charge for an indefinite period as long as the incumbent government is functioning. Boubakri and Hamza (2007) in their political connection of newly privatized firms, found that government that has been in office for only a few years is more likely to interfere in the management of corporations through the appointment of politicians on the board of the corporations. The associational aspect is relevant here. Therefore, in contrast to Boubakri and Hamza (2007), we expect that firms will have a good relationship with the government or its agencies, in countries with an extended period of government tenure. Hence hypothesize,
H5: The relationship between business and government will be strong in countries with longer government tenure.

2.3. Firm-specific antecedents of BGR.

Size and resources: Large corporations frequently have significant public policy requirements (Epstein, 1969) and therefore have an incentive to create a sound relationship with the government. Managers choose to create relationships with the government to increase the firm's value, and these decisions are mostly influenced by firm-specific characteristics such as size, financial resources, and reliance on government contracts (A. J. Hillman, Keim, & Schuler, 2004). Since a company's size also be a measure of resources, visibility, and influence, likely, its share of the gain and/or losses related to the decision of government relationships will be determined by its size. Measured by the number of employees, earlier works such as A. J. Hillman, Zardkoohi, and Bierman (1999), argue that larger firms are more politically active and firm size is an important antecedent. Hence,
H6: The bigger the size the stronger the relationship between the enterprise and the government.
Firm dependency on government: Another important antecedent of business-government relationships at the firm level is the firm's reliance on the government, initially studied dates back to the early works of Stigler and science (1971) and Zardkoohi (1985). According to resource dependency theory, a typical firm that generates a significant portion of its revenue dealing with the government such as sales to the government has a strong desire to manage such dependency through strong relationships. Moreover, Schuler et al. (2002) include exporter firms that naturally are dependent on some government policy as a determinant of firm choice of political activities. Therefore

H7a: A firm that secures government contracts has a better relationship with the government.

H7b: Ceteris paribus, exporter firms have a strong relationship with the government or its agencies.

Firm age: many prominent scholars linked the decision to create a bond with the government to firm's ages (Boubakri, Cosset, & Saffar, 2008b; Boubakri & Hamza, 2007; Faccio, 2002a; Faccio, 2007; Mara Faccio, Ronald W Masulis, & John McConnell, 2006a; K. Hillman, Gerald D & Schuler, 2004). Hart (2001), found that young firms were more likely to engage in extensive corporate political activity than older firms. In contrast to Hart (2001), Luo (2001), discovers a link between corporate political actions and credibility evaluated by firm age, as evidenced by personal relationships developed over time between senior managers and government officials. Hence, following Luo (2001), we hypothesize that,
H8: Older firms are more connected to the government than younger firms.
Foreign ownership: The presence of foreign ownership in a company can assist to gain a competitive advantage in terms of technological know-how, managerial and organizational skills, and access to international markets (Gonzalez, Qiang, & Kusek, 2018). Moreover, Ayalew and Xianzhi (2020) state that, the presence of foreign-owned businesses increases competition among local businesses, and hence they always gravitate the attention of

local government officials. It suffices to predict that such firms have a good relationship with the government. Therefore, we hypothesize,

H9: Foreign-owned firms are more likely to have a good relationship with the incumbent government.

Informal competition: uncertainty in the market conditions particularly the informal market competition intensity exacerbate the difficulties of smooth business activities. The negative effect of more severe in innovative firms. Tian et al. (2019), in their study, remark, that the informal market competition intensity negatively moderates the relationship between business-government relationships and firms' innovation. African markets are characterized by poor property rights, weak institutional structure, high copyright infringement, and high level of informal competition in the market. Most firms try to navigate this bottleneck problem by alighting themselves with the government for supportive engagements, including conducive working policies, tax shields, lesser import-export restrictions, and so on. Hence,

H10: The business-government relationships are stronger when the firms encounter informal market competition.

3. Data and empirical model

3.1. Sample selection

Firm-level data are obtained from World Bank's Enterprise Survey database, https://www.enterprisesurvey.org. We use survey data collected from 2017 to 2020. Our sample countries include Egypt, South Africa, Tunisia, Morocco, Niger, Sierra Leon, Rwanda, Mozambique, Liberia, Chad, Kenya, Gambia, and, Zambia. We select those counties because they form a comprehensive representation of African countries. The World Bank maintains rigorous supervision over sample selection and research execution. The World Bank used stringent stratified random sampling to achieve unbiased estimates of the entire company and assure proper representation of the sample (Asakawa, Nakamura, Sawada, & Management, 2010), taking full account of the industry, business, and regional differences (Tian et al., 2019).

Since 2002 the Enterprise Surveys have been performed face-to-face interviews with firm managers, owners, or directors to collect a wide range of qualitative and quantitative data about the firm's experience and impression of the business climate. The interview has a wide range of topics spanning from infrastructure and service, sales and supplies, competition, and innovation to business-government relationships. Our sample covers 7733 firms in 13 countries, of which 51% are in manufacturing, 35% in service, and 14% in retail. Table 1, indicates sample classification based on size class, age group, and sector. Based on permanent, full-time employees, there is an equal percentage distribution of micro and small firms 38% each, about 17% of them are medium, and about 7% are large firms.

Table 1. Summary of size, age, and sector distribution of sample firms

Size class (number of full-time employees	No. of firms	%	Age group	No. of Firms	%	Sector	No. of firms	%
Micro (1-10) Small (11 to 50)	2952 2952	0.38 0.38	Young (1 to 5)	764	0.10	Manufacturing	3948	0.51
Medium (51 to 200)	1344	0.17	Mature (6 to 15)	2714	0.35	Service	2759	0.36
Large (more than 200)	485	0.07	Old (more than 15	4255	0.55	Retail	1026	0.13
Total	7733			7733			7733	

3.2. Measurement

3.2.1. Dependent variables

The main dependent variable of this study is the Enterprise's Survey of 'Business Government relation'. There is extensive coverage of business-government relationships at the firm level thus, the Enterprise Survey database is well suited for examining firm-government relations. Based on survey questionnaires and replies from businesses about their relationships with their incumbent government, we use two proxies to measure the existence and magnitude of their relationship. The first proxy is "what percentage of total senior management's time was spent on dealing with requirements imposed by government regulations" and takes a natural logarithm (ln) to eliminate variation bias. The second proxy is "Was this establishment visited or inspected by tax officials or required to meet with them". To quantify this proxy, we create a dummy variable equal to 1 if the firm has been visited by the tax authority at least once during the last three years and zero otherwise.

3.2.2. Independent variable

Explanatory variables can be classified into two groups. While the first group encompasses indicators to describe the legal and institutional Antecedents of BGR, the second category represents firm-specific antecedents of BGR. Table 2 in appendix 1 presents the measurement of all these variables.

3.2.3. Instrumental variables and fixed effects

As this study utilizes cross-sectional data; therefore it needs to control for potential endogeneity that arises due to cross-sectional issues and other heterogeneity (Ayalew & Xianzhi, 2020). There might be a causal relationship between the corruption index and the level of business-government relations. Strong business-government relationships might inflict to have illegal favor payments which ended up in corruption. To treat this problem, we employ a two-stage least square method by using two instrumental variables from Daniel Treisman (2000), i.e., the percentage of Protestants in the country and state intervention in the economy.

Finally, to mitigate the systematic variation in dependent variables across survey year and country, all the regressions except otherwise indicated are controlled for country and year fixed effects.

3.3. Model specification

The empirical model of this study is based on the nature of the dependent variable. The first proxy of BGR is a continuous variable that contains censoring (truncating) probabilities from below. Thus, the Tobit model is a suitable model to run the regression. Hence, a standard Tobit is developed based on a latent and continuous variable as follows:

$Y_i^* = \beta_0 + \beta_1 X_j + Z_{ij} + e, e \sim N(0, \delta)$ …… (1)

Y_i>0 & continuous if $Y_i^* > 0$ ($Y_i = Y_i^*$)

$Y_i = 0 \; if \; Y_i^* \leq 0$

Where: Y* the probability of having a government relationship. While Xj is countries' legal and institutional settings that might affect the BGR, Z_{ij} is firm i in the country j's specific characteristics that affect its relationship with the government. Therefore, the Tobit model for this specific dependent variable consists of;

Probit model for the discrete decision of whether or not a firm has a relationship with government

$$prob(y > 0) = \Phi(x'\beta) \text{……(2)}$$

And truncated regression model for the magnitude of the relationship with the government is given by (for the quantity of y/y>0).

$$E(yi|yi > 0 = x'\beta 1 + \sigma\lambda(\frac{x'\beta}{\sigma}) \text{ ……(3)}$$

The second proxy of BGR measurement is a dichotomy binary variable. Hence, we used the probit model. The discrete probability of whether or not a firm is visited by the tax authority is developed using a standard probit model based on a latent variable as follows;

$$G(z) \equiv \Phi(z) \equiv \int_{-\infty}^{z} \phi(v)dv \text{ ……(4)}$$

Where; if G is the CDF of e, then because the CDF of e is symmetric to zero, then 1-G(-z) = G(z) for all real numbers z. $\Phi(z)$ is the standard normal density. Therefore, the probit model can only be derived from the latent variable formulation when e has a standard normal distribution (Wooldridge, 2002). Accordingly, the probit model that considers various explanatory variables (x_i,x_h,) is developed as follows;

$p(y_i^* = 1) = \Phi(\beta_1 + \beta_i x_i + \beta_h x_h + \ldots + \mathcal{E}_i$…….. (5)

The observed dichotomy variable y_i is related to the latent variable y_i^* by the relation, as follows:

$y = 1 \; if \; \beta_i x' + \gamma_i z' + \varepsilon > 0$ and

$y = 0 \; if \; \beta_i x' + \gamma_i z' + \varepsilon \leq 0$ } ……(6)

Where y is the firm's propensity to be visited by the tax authority, x is the vector of the country explanatory variables (corruption level, regulatory quality, government effectiveness, GDP per capita, bureaucracy level, and government tenure), z is the vector of firm-specific variables (size, age, government contract, exporter, and, informal market competition).

The main disadvantage of controlling too many variables simultaneously is that the data might not contain enough variation to distinguish clearly between them. However, instead of exposing it to missing variable bias, it is better to include many variables instead. Moreover, during the regression of each stipulated hypothesis, the rest variables (explanatory) are serving as control variables.

4. Empirical Results

4.1. Distribution of BGR

Table 3 reveals there is a substantial difference in the strength of BGR's indicators among the countries. On average senior managers of firms in the sample, countries spend around 47% of their time dealing with government regulations. At the same time, about 66% of the sample firms were visited by the tax authority of their respective countries.

BGR indicators show a presence of high variation among the sample firms. For example, senior managers of the sample firms in Sierra Leon, Niger, Liberia, Chad, Kenya, Morocco, Zambia, and, South Africa, spend

more than half of their time dealing with government regulations during the last three years. However, managers in Tunisia spend only around 4% of their time dealing with their government regulations makes them by far have the weakest relationships with their government. On the other hand, 70% of senior managers' time in Chad spend negotiating and dealing with their government regulations, of all the sample countries, makes them have the strongest relationship with their government. Similarly, while more than 80% of firms in Sierra Leon, Liberia, Gambia, and Chad were visited or inspected at least once by the tax authority of their respective government, around 10% and 20% of firms in Tunisia and South Africa respectively were visited by the tax authority.

Table 3. Distribution of business-government relationships in Africa.

Country	No. of firms	% sample	Business Government Relationship	
			% of Time spend	Visit From Tax Authority
Sierra Leon	141	0.018	0.610	0.858
Niger	96	0.012	0.668	0.688
Liberia	126	0.016	0.538	0.810
Gambia	117	0.015	0.239	0.848
Chad	123	0.016	0.700	0.859
Kenya	791	0.102	0.610	0.645
Mozambique	564	0.073	0.444	0.773
Morocco	602	0.078	0.606	0.547
Rwanda	340	0.044	0.308	0.725
Zambia	559	0.072	0.590	0.711
Egypt	2775	0.359	0.119	0.731
Tunisia	519	0.067	0.039	0.103
South Africa	980	0.127	0.607	0.287
Total	7733		0.467	0.66

4.2. Descriptive statistics

Table 4 presents the summary statistics. Based on transparency International's annual index of "corruption control", and "Regulatory Quality", the average scaled corruption control level of sample counties is 2.032, while the average scaled level of regulatory Quality among the sample countries is 2.014. Transparency International rates countries within the range of -2.5 to 2.5[1], with the higher rate, indicating better corruption control and regulatory quality respectively. The average government tenure is approximately 5.7 years. The data shows a great variety of economic development measured by GDP per capita among sample countries with an average of 2890 thousand. The average number of full-time permanent employees of the sample firms is approximately 54, and the average age of the sample firms is 20 years. On average 13.7%% of the sample, firms engage in exporting. The table shows almost half of the sample firms are dealing with informal competition in their respective markets. Of the sample firms, about 14.8 % of them secured or attempted to secure a government contract.

Table 4. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Time spent by Senior	7733	8.545	19.046	0	100
Tax visit	7733	0.616	.486	0	1
Foreign stake dummy	7733	0.115	.319	0	1
Government contract	7733	0.148	.355	0	1
Size	7733	54.306	113.169	1	1000
Age	7733	20.918	16.197	0	153
Exporter	7733	0.137	.343	0	1
Informal comp	7733	0.45	.498	0	1
Scaled Corruption Control	7733	2.032	.393	1.076	3.105
Scaled Regulatory Quality	7733	2.014	.506	1.38	3.153
GDP per capita	7733	2890.646	1985.264	483.437	7250.33
Government tenure	7733	5.754	5.811	1	27
Start-up procedure	7733	18.338	11.883	4	59.5

4.3. Regression result of baseline Estimations

Table 5 presents the baseline estimation result of Equations 2, 3, and Equation 4. While the first and second

[1] For computational simplicity, we re-scaled the rate of corruption control and regulatory quality to rate of 0-to-5, with the highest indicate better governance.

Models present the explanatory power of variables on the time spent by senior managers in dealing with government regulations, the third model presents the effect of the same explanatory variables on the probability that a firm will be visited or inspected by the tax authority.

4.3.1. Firm specific antecedents of BGR

Six variables (government contract, foreign ownership, size, age, exporter, and, informal market competition) that might have an impact on the BGR are included in the estimation. The result shows that in all the models a firm that secured a government contract or intended to, have a positive and significant relationship with the government through their senior manager's time in dealing with government regulations and there is a high probability of visiting or inspection by the tax authority. The finding is in line with the expectation; hence hypothesis (7a) is confirmed. While being an exporter firm was found to be insignificant in affecting the time spent by the senior managers, they are more likely to be inspected or visited by the tax authority. Thus, hypothesis 7b is partially supported. The availability of informal market competition positively steeps the time spent by senior managers in dealing with government instructions and the probability that the firm will inspect or be visited by the tax authority. Hypothesis (h10) is thus, confirmed. Despite its positive association, having foreign ownership doesn't significantly affect senior managers' time nor the probability of tax inspection, thus failing to accept the hypothesis (H9). Firm age positively and significantly affects managers' time, which helps to foster the relationship between the firm and the government. On the other hand, firm size has nothing to do with the probability of inspection by the tax authority. Therefore, hypothesis 6 is partially supported. In all the models and proxies, firm ages positively and significantly affect the BGR. This is consistent with our expectations and hypothesis 8 is supported. Availability of Informal market competition is a positive leading factor in fostering the BGR, as it is significantly positive in all the models, hence hypothesis h(10) is supported.

4.3.2. Legal and institutional antecedents of BGR

Various country-level determinants of BGR are included in the estimation. This part presents the result obtained on these variables. In all the proxies used, better corruption control has a negative and significant correlation with BGR. The result is in line with the expectation; hence the hypothesis (h1) is confirmed. Regulatory quality on the other hand has mixed results. While the level of regularity quality positively and significantly affects the time spent by senior managers in dealing with government regulations, it decreases the probability of a firm being visited or inspected by the tax authority at the same time. Therefore hypothesis H4 is neither accepted nor rejected.

Economic development has a significant negative impact on the BGR. The result confirms our expectation in hypothesis (h2). The effect of the government tuner on the BGR is also found to be significantly positive. The reported marginal effect for this variable is strong as well. The result is consistent with the postulated hypothesis (h5) and it supports the dependency theory from the theoretical perspective. The level of bureaucracy measured by the number of procedures required for a start-up to legitimize has a positive and significant effect on both the senior manager's time and the probability that the firm will be inspected by the tax authority which, both of the results are expected, thus hypothesis (h3) is confirmed.

Table 5. Determinants of business-government relation: overall sample analysis

	Ln(time)		Tax Visit
Variable	(Ols)	(Tobit)	(probit)
Foreigndummy	0.256***	0.096	0.022
	(0.105)	(0.066)	(0.035)
govcon	0.216***	0.169***	0.097***
	(0.046)	(0.035)	(0.019)
lnemp	0.036***	0.038***	0.000
	(0.013)	(0.011)	(0.005)
lnage	0.067***	0.064***	0.025***
	(0.021)	(0.017)	(0.008)
expo	0.024	0.038	0.062***
	(0.047)	(0.038)	(0.020)
infcomp	0.164***	0.126***	0.064***
	(0.03)	(0.027)	(0.013)
scaleCC	-2.752***	-3.060***	-0.621***
	(0.577)	(0.083)	(0.223)
scaleGE	3.595***	4.885***	1.469***
	(0.635)	(0.459)	(0.258)
scaleRQ	0.72***	0.583***	-0.053***
	(0.244)	(0.149)	(0.095)
lngdp	-1.91***	-2.828***	-1.192***
	(0.196)	(0.2)	(0.091)

	Ln(time)		Tax Visit
Variable	(Ols)	(Tobit)	(probit)
logofiice	-0.866**	-1.741***	-0.893***
	(0.384)	(0.272)	(0.151)
lndays	0.497*	1.044***	0.595***
	(0.270)	(0.190)	(0.107)
Constant	11.481***	49.272***	16.94***
	(1.037)	(3.541)	(1.21)
Var(e lntime)		7.936	
		(0.263)	
Country FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
No. of Observation	7733	7733	7733
Pseudo/ R-squared	0.178	0.111	0.160
Log likelihood/ F-test	127.95	-8809.0791	-4606.68
Predictive power			73.13%

Notes: measurement of variables is reported in table 2 in the appendix 1. Year and country dummies are included in all equation. The coefficient is reported for Ols and margina effect for the rest models. foreigndmy is foreign stake dummy; govcon is government contract dummy, lnemp is Natural log of number of employees, lnage natural logarithm of firm age , infcomp is informal market competition dummy, scaleCC is scaled corruption control of a country, scaleGE is scaled government efficiency level of a country, scaleRQ is scaled regulatory quality level of county, lngdp is natural logarithm of GDP per capita, lndays is natural logarithm of number of days it takes to a start-up has to comply with in order to obtain a legal status, lnofiice is natural logarithm of number of years government in office. Maximum likehood estimation is used for the probit and tobit model. The robust standard error is presented in parenthesis and adjusted for clustering at country level. *** p<0.01, ** p<0.05, * p<. 0.1

4.4. Business-Government relation: across firm's heterogeneity

4.4.1. Determinants of Business-government relationship: Sector-based analysis

To get a better and complete understanding of the determinants of BGR, we cluster sample firms based on sector, size, and age and conduct a separate estimation for each subgroup. Table 6, displays the result of the baseline model estimation separated for the manufacturing, service, and retail sector. The result overall supports the findings from the baseline estimation. However, there are evidence of variations in direction and significant level of some variables. While most of the country-specific variables maintain their direction and significance among the different sectors, the effect of some of the variables on the BGR are more pronounced in some sectors than in others. For instance, GDP per capita and government tenure have a relatively higher effect on the BGR of manufacturing firms than any other type of firm. On the other hand, the level of corruption control has a more negative impact on the relationship between service sector firms and their government. Meanwhile, bureaucracy and regulatory quality level show relative more effect on retail firms. The result obtained on the remaining variables is similar especially for both the manufacturing and service sectors and highly consistent with the result of the baseline. Having said that, the impact of the firm-level characteristics on the BGR among the three sectors is quite the same, except that it is now only significant with the manufacturing firms. For example, the effect of a firm's size is positive and significant only in manufacturing firms. This can be due to the nature of the manufacturing firm which are having more employees than the other sectors.

Table 6: Determinant of BGR: Sector-based analysis

	Manufacturing		Service		Retail	
Variables	Lntime	Tax visit	Lntime	Tax visit	Lntime	Tax visit
ForeignDmy	0.089	0.167***	0.450	0.062	0.116	0.171
	(0.084)	(0.055)	(0.334)	(0.056)	(0.329)	(0.132)
Govcon	0.093**	0.122***	0.817***	0.057*	0.260*	0.072
	(0.047)	(0.026)	(0.174)	(0.031)	(0.144)	(0.055)
lnemp	0.052***	-0.003	0.020	0.002	0.006	0.014
	(0.013)	(0.007)	(0.059)	(0.009)	(0.047)	(0.017)
lnage	0.086***	0.041***	0.139	0.027*	-0.006	-0.043*
	(0.023)	(0.012)	(0.093)	(0.015)	(0.061)	(0.022)
exp	-0.091*	0.048*	0.100	0.006	0.143	-0.063
	(0.054)	(0.029)	(0.263)	(0.044)	(0.184)	(0.070)
infcomp	0.031	0.067***	0.732***	0.031	0.195*	0.130***
	(0.035)	(0.018)	(0.139)	(0.022)	(0.108)	(0.039)

	Manufacturing		Service		Retail	
Variables	Lntime	Tax visit	Lntime	Tax visit	Lntime	Tax visit
scaleCC	-3.074***	-0.451	-3.699***	-2.211**	-0.420	1.016***
	(0.454)	(0.289)	(0.538)	(1.043)	(0.582)	(0.219)
scaleGE	4.741***	1.217***	2.055***	2.479***	0.521	-0.191
	(0.606)	(0.370)	(0.488)	(0.756)	(0.479)	(0.183)
scaleRQ	0.347*	0.062	2.318***	-0.343**	2.674***	1.345***
	(0.197)	(0.133)	(0.372)	(0.162)	(1.054)	(0.382)
lngdp	-2.619***	-1.153***	-1.090***	-0.949***	-0.607***	-0.374***
	(0.254)	(0.130)	(0.134)	(0.176)	(0.228)	(0.082)
lndays	0.942***	0.518***	-0.970***	0.002	-1.089*	-1.419***
	(0.216)	(0.134)	(0.199)	(0.355)	(0.619)	(0.371)
logofiice	-1.661***	-0.817***	2.792***	-0.072	-0.327	-0.675***
	(0.325)	(0.198)	(0.242)	(0.490)	(1.019)	(0.223)
Constant	54.633***	16.624***	4.561***	17.663***	3.935**	4.624***
	(5.465)	(1.887)	(0.849)	(1.733)	(1.948)	(0.827)
Var(e	9.22		7.021		7.133	
	(0.454)		(0.381)		(0.552)	
No. of observation	39748	3948	2759	2759	1026	1026
Pseudo r-squared	0.109	0.179	0.122	0.159	0.057	0.113
Chi-square	947.5	894.507	793.341	558.627	129.867	155.35
Prob > chi2/	0.000	0.000	0.000	0.000	0.000	0.000
Predictive power		75%		72.3%		67.3%

Notes: Definition of variables are reported in table 2 in appendix 1 and abbreviation are defined at the footnote of table 5. Year and country dummies are included in all equation. The marginal effect is reported. The robust standard error are presented on parentheses. *** *p<.01,* ** *p<.05,* * *p<.1*

4.4.2. Determinants of BGR: Size-based analysis

At the beginning of this study, we hypothesize (h6): bigger firms have a strong connection with the government. The result of baseline estimation presents in the previous section supports the hypothesis, presenting that the firm size has a significant positive effect on the BGR. For better comparison analysis of this hypothesis, we re-estimate the baseline model by classifying the overall sample firms into four size categories (Micro, small, medium, and large) based on the number of full-time employees. Table 7 presents the result of the probit and Tobit models. It shows that the impact of the antecedents of BGR becomes significant at least in one of the BGR proxies in bigger firms. This indicates, bigger firms have better relationships with the government. The reported marginal effect of corruption control level, regulatory quality level, and government tenure on BGR is relatively higher in large firms compared to other size firms. There is a high probability a firm to be visited or inspected by a tax authority when it is bigger. Moreover, firm age has a strong positive significant effect on large firms.

Table 7: Determinant of BGR: size-based analysis

	Micro		Small		Medium		Large	
Variables	Lntime	Tax visit	Lntime	Tax visit	Lntime	Tax visit	Lntime	Tax visit
ForeignDmy	0.145	0.35	-0.133	0.131	0.114	0.168	-0.142	0.41***
	(0.209)	(0.102)	(0.198)	(0.093)	(0.242)	(0.106)	(0.463)	(0.155)
Govcon	0.671***	0.161*	0.593***	0.163**	0.55**	0.342***	-0.32	0.491***
	(0.17)	(0.082)	(0.17)	(0.078)	(0.216)	(0.094)	(0.455)	(0.155)
lnage	0.239***	0.045	0.056	-0.017	0.325**	0.102*	0.919***	0.323***
	(0.077)	(0.031)	(0.085)	(0.035)	(0.145)	(0.06)	(0.282)	(0.099)
exp	0.455*	0.127	0.048	0.111	-0.248	0.051	-0.307	0.178
	(0.238)	(0.105)	(0.196)	(0.079)	(0.232)	(0.088)	(0.417)	(0.132)
infcomp	0.59***	0.08	0.417***	0.131**	-0.264	0.109	0.408	0.242*
	(0.129)	(0.051)	(0.133)	(0.054)	(0.213)	(0.083)	(0.454)	(0.144)
scaleCC	-	0.383*	-	-0.148	-4.397***	0.477	-5.486**	-1.267
	2.691***	(0.226)	2.799***	(0.277)	(1.076)	(0.453)	(2.168)	(1.195)
	(0.597)		(0.61)					
scaleRQ	2.429***	0.239	2.12***	0.74***	4.005***	1.642***	5.101***	2.619***
	(0.466)	(0.213)	(0.44)	(0.236)	(0.66)	(0.4)	(1.424)	(0.761)

	Micro		Small		Medium		Large	
Variables	Lntime	Tax visit	Lntime	Tax visit	Lntime	Tax visit	Lntime	Tax visit
lngdp	-1.068***	-0.578**	-.492	-0.988***	-2.386***	-1.509***	-2.279*	-2.126***
	(0.349)	(0.148)	(0.326)	(0.157)	(0.558)	(0.281)	(1.319)	(0.575)
lndays	2.482***	-0.155	2.15***	0.375***	3.427***	0.183	0.988	0.568
	(0.354)	(0.128)	(0.414)	(0.179)	(0.673)	(0.268)	(1.473)	(0.743)
lnofiice	-.692***	-0.054	-0.705***	-0.236**	-1.78***	-0.421***	-4.024***	-1.145***
	(0.253)	(0.097)	(0.249)	(0.114)	(0.375)	(0.163)	(0.92)	(0.38)
Constant	2.829	4.357***	2.704	7.177***	14.168***	9.072***	14.483**	11.76***
	(1.883)	(0.759)	(1.77)	(0.796)	(3.067)	(1.402)	(6.849)	(2.985)
Var(e lntime)	2.651		2.72		2.855		3.423	
	(0.056)		(0.057)		(0.086)		(0.165)	
No. of observation	2952	2952	2952	2952	1344	1344	485	485
Pseudo r-squared	0.119	0.127	0.12	0.17	0.114	0.21	0.079	0.187
Log likelihood	-3334.38	-1744.64	-3219.11	-1589.65	-1547.63	-711.1	-506.71	-256.10
Predictive power		70.24%		75.32%		74.6%		77.6%

Notes: Definition of variables are reported in table 2 in appendix 1 and abbreviation are defined at the footnote of table 5. Year and country dummies are included in all equation. The marginal effect is reported. The robust standard error are presented on parentheses. *** *p<.01,* ** *p<.05,* * *p<.1*

4.4.3. Determinants of BGR: Age-based analysis

One of the antecedents of BGR is firm age. It is hypothesized that older firms have more likely to form strong relationships than younger ones. This argument is supported by the result of the baseline estimation. We further investigate the effect of the different antecedents of BGR by classifying sample firms based on their age. Broadly, firms are categorized into three groups, young (1-5 years), mature (6-15 years), and old (more than 15 years). Table 8 composes the result of the subsample analysis and strongly supported the age hypothesis. The outcome shows almost all explanatory variables firm-specific and country-specific, become significant when the firm is older. This simply concludes, older firms have more likely to be connected with the government than young and mature firms. This, however, doesn't mean other explanatory variables are not indicators of BGR in the other age categories. Though the magnitude is lower than the older firms, almost all variables of interest are significant in mature firms too. On the other hand, most firm-specific and some country-specific variables are insignificant predictors of BGR in younger firms.

Table 8: Determinant of BGR: Age-based analysis

	Young firms		Mature		Old firms	
Variables	Tax visit	lntime	Tax visit	lntime	Tax visit	lntime
ForeignDmy	0.418***	0.382	0.216**	-0.593***	0.224***	0.366**
	(0.151)	(0.28)	(0.085)	(0.189)	(0.075)	(0.173)
Govcon	-0.013	0.294	0.346***	0.803***	0.166***	0.526***
	(0.149)	(0.279)	(0.081)	(0.16)	(0.06)	(0.146)
lnemp	0.131**	0.158	-0.074***	0.089	0.051***	0.14***
	(0.052)	(0.104)	(0.022)	(0.057)	(0.017)	(0.047)
exp	0.184	0.108	0.2**	-0.023	-0.001	0.062
	(0.185)	(0.409)	(0.08)	(0.194)	(0.061)	(0.165)
infcomp	0.116	0.283	0.184***	0.407***	0.099**	0.384***
	(0.103)	(0.228)	(0.055)	(0.132)	(0.044)	(0.119)
scaleCC	0.599	-1.246	0.18	-2.776***	-0.883**	-3.197***
	(0.432)	(0.997)	(0.242)	(0.564)	(0.477)	(0.596)
scaleRQ	-0.774**	2.25***	1.124***	1.665***	1.102***	3.63***
	(0.38)	(0.773)	(0.227)	(0.423)	(0.204)	(0.422)
lngdp	0.15	-0.08	-1.267***	-0.715**	-1.28***	-1.09***
	(0.241)	(0.536)	(0.156)	(0.307)	(0.153)	(0.358)
lndays	0.541***	2.06***	0.242*	2.346***	0.778***	2.155***
	(0.198	0.646	(0.14)	(0.352)	(0.299)	(0.378)

	Young firms		Mature		Old firms	
Variables	Tax visit	lntime	Tax visit	lntime	Tax visit	lntime
lnofiice	0.306	(-0.473)	-0.376***	-0.503**	-0.776***	-1.292***
	(0.258)	0.458	(0.1)	(0.24)	(0.184)	(0.223)
Constant	-0.466	-2.888	8.225***	2.817	8.228***	5.869***
	(1.309)	(3.057)	(0.795)	(1.719)	(0.839)	(1.85)
Var (e lntime)	-	2.465	-	2.579		2.946
		(0.091)		(0.054)		(0.051)
No. observation	764	764	2714	2714	4255	4255
Pseudo r-squared	0.063	0.1038	0.168	0.125	0.173	0.114
Log likelihood	-459.23	-953.21	-1514.5	-2923.9	-2363.80	-4791.79
Predictive power	66.27%		72%		74.21	

Notes: Definition of variables are reported in table 2 in appendix 1 and abbreviation are defined at the footnote of table 5. Year and country dummies are included in all equation. The marginal effect is reported. The robust standard error are presented on parentheses. *** $p<.01$, ** $p<.05$, * $p<.1$

5. Discussion

The result provides consistent evidence on the effect of firm characteristics and countries' legal and institutional settings in determining the level of Business-government relations. A large firm that is better equipped with several resources, including human and financial, has keen to create better or stronger relationships with its government to safeguard its market position and eliminate competitors. Parallel to the big firm's demand for government assistantship and support, the government's scrutiny of the firm increased equally. Moreover, as their procedure of doing business gets more complicated, it required a significant amount of time to deal with government policies, especially in countries with weak legal and institutional setups. Our result supports this argument, as the managers of large firms in Africa spend more time dealing with government regulations than smaller firms. When it comes to the probability of inspection by the tax authority, however, size doesn't have a significant impact. If a significant amount of a firm's revenue is generated by selling products or services to government agents or bodies, they naturally lean to create dependency on the government, hence, have a stronger interest to make a sound relationship with the government. The result supports this phenomenon. In the terms of the reported marginal effects, this variable significantly interferes with the time of senior managers more than any firm-level characteristics.

Firm age has a positive and strongly significant influence on the BGR. The result indicates, senior managers of old firms spend more time dealing with government instruction than younger firms. As well as, older firms have more likely to be visited or inspected by the tax authority. The separate analysis based on age indicates that the magnitude of the effect of firm-level characteristics in BGR is low or insignificant within the young firms, then strong significant within the mature firms and much stronger within the old firms. Yet, some of the variables have a strong impact on mature firms than on old firms. For example, the effect of informal competition is much bolder in mature firms than in old firms.

In this study, we use a single proxy of competition. The informal market competition. The result obtained from baseline regression and subsequent sub-group analysis confirms the effect of completion from the informal market is positive and significant. Generally, firms that witness higher informal markets tend to align themselves more with the government to mitigate the impact of unfair competition. Thus, managers tend to spend more time dealing with government regulations and at the same time attract the tax authority to pay more visits to their business. In general, the result collapses that, informal market competition has a significant effect on the BGR of small mature service firms.

Firms having a certain level of foreign ownership are more likely to attract tax authority for inspection or other supervision purposes. They have the potential to generate more revenues as they probably use advanced foreign technology, thus enhancing productivity. They have the technical know-how and managerial, and organizational skills that could lead them to have a superior in the economics of scale. This might trigger the attention of the local government. The baseline analysis, however, declines our hypothesis except that it is only significant in the alternative OLS model analysis. Intuitively, however, once we consider those firms that have more than 50% of their stake owned by foreign enterprises or personnel, we have a positive and significant result in all our models and proxies. Therefore, in the African context, a firm having 50% or more foreign ownership is more likely to be visited or inspected by the tax authority and a significant amount of their senior manager's time is spent dealing with government regulations.

Despite the expectation that export companies would naturally require to comply with numerous export-related regulations which are supposed to make their senior managers spend more time dealing with those regulations, the baseline result suggested otherwise. Being export is insignificant in affecting the time of senior managers but it does have an impact on the probability of the firm being visited by tax authorities. In the

robustness analysis, after considering only those firms that export greater or equal to 50% of their product, the result reveals that senior managers of exporter firms spend more time dealing with the regulations of the government. Therefore, we can conclude, BGR is stronger when the magnitude of export of an exporter firm is big.

Literature documented that, the strength of BGR/political connectivity is more pronounced in more corrupt countries (Boubakri et al., 2008a; Faccio, 2006). The result obtained from our baseline regression is consistent with those strands of literature. The level of corruption control negatively affects the time of senior managers and the probability of a firm being visited or inspected by the tax authority. This implies, in countries with more corruption the relationship between firms and government is stronger.

Ex-ante, countries with better regulatory quality would have fewer BGR. Good legal regimes should be linked to increased regulatory transparency, uniform application of the law, and strict enforcement of penalties for breaking the law. This induces straightforward business-government relationships and could block all possibilities of illicit relationships. In keeping with this expectation, we find, however, that countries with better regulatory quality display conflict links for our proxies of BGR. While better regulatory quality increases the time spent by senior management in dealing with government regulations, it decreases the possibility of tax inspection at the same time. Even though the result related to the probability of tax inspection is consistent with our expectations, the positive impact on the time spent by senior managers is odd. Though we were unable to verify, we can think of no explanation for this other than the probability of multicollinearity between the variables provided by World Bank governance indicators.

Economic development is one of the main drivers of BGR. As per our expectations, in countries with better economic advancement, regulations are straightforward, less bureaucratic, and clear. Hence, managers don't need to spend a considerable amount of time dealing with the regulations. The result obtained support that, hence managers of African firms located in a relatively better economy spend less time dealing with requirements imposed by the governments and there is less probability that the firms will be visited or inspected by the tax authority of the country. The imminent relationship that could have been created as the result of frequent interactions between the senior manager and government officials will therefore be limited.

The level of bureaucracy and the tenure period of the governments are considered as one of the main variables of interest in the BGR. 'Number of days' summarizes the number of procedures as well as the official time, required to establish a new firm. This measure is meant to capture "entry hurdles." More bureaucratic procedures require more paper works and more time to deal with them. As such, countries with a high degree of entry regulation are predicted to have a higher frequency of connection with the government. Our result confirms this. In all the used models and proxies of BGR, in more bureaucratic countries, the time spent by senior managers is high and more likely the firm will be inspected or visited by the tax authority. Government tenure as well as the same effect. As a measure of Government tenure, we use the number of years the chief executive has been in office. The "Database of Political Institutions" provides data for this variable. Government officials in a country with an extended period of tenure, tend to create a strong personal relationship with business owners as an outcome of longtime acquaintance. The result obtained supports our prediction of government tenure in shaping BGR. In all models and proxies, the longer the government tenure, the higher the time spent by senior management in dealing with government instructions, and the more likely the firm will be visited or inspected by the tax authority.

6. Robustness analysis

To assess the robustness of the prior results, we run a series of robustness tests. One of the main indicators of business government connectivity which has been confirmed by many prominent scholars is the level of corruption. Our baseline analysis and our subsequent subgroup analysis conformed to this argument. To make sure that our result is not dedicated to choice bias, we take alternative measures of corruption. We employ Transparency International's annual index of 'perceived corruption. The result (not tabulated) shows that in all the models, the alternative measure of corruption holds an almost identical effect on the BGR as the baseline estimation. The strength of business-government relationships gets stronger in countries with high corruption. Moreover, we replace the corruption control index of countries with another governance indicator i.e. government effectiveness index. The result not reported for the brevity of space shows that the level of government effectiveness has an almost identical effect as the corruption control level in BGR within the sample countries.

To test whether the two proxies of BGR (dependent variables) depend on the same list of explanatory variables and are correlated, we estimate a bivariate probit model. Before we run the model, we transform the continues variable of the first proxy of BGR into a dummy variable with a value equal to 1 if senior managers of a typical firm spend more than the mean of time spend by total sample firm's managers in dealing with government regulations and 0 otherwise. Table 9 in the appendix 2, presents the bivariate probit model. Generally, the result confirms that the two equations largely depend on the same list of independent variables as

the correlation between the error terms is significantly different from zero. Furthermore, the correlation is positive, indicating that the two BGR proxies are complementary. The result depicts that, despite most of the variables having the same directional effect in both of the BGR proxies the magnitude of the effect is slightly different.

Endogeneity/causality concerns.

Literature suggests that the benefits and value of politically connected firms are high in countries with high corruption levels. The existing report supports the view that high corruption level is a breeding ground for corporations to connect politically with the government by different means. However, the relationship between corruption and BGR is potentially endogenous. The government's fiscal policies and/or the quality of business supporting institutions might lead managers of enterprises to spend a considerable amount of time dealing with government officials. With time these frequent meetings could result in strong interpersonal relationships. This relationship could eventually be a reason for corruption. Simply put, a country where there is high BGR may simply have a greater chance of high corruption. We employ two-stage least squares estimation to deal with this potential reverse causality. For this purpose, we use two variables from Daniel Treisman (2000), i.e., the percentage of protestants in the country and state intervention in the economy as instrumental variables. Daniel Treisman (2000), La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1999), and Faccio (2007) found that Protestant-dominated countries are more well-governed and less corrupt. Faccio (2007) in her study of characteristics of politically connected firms, found out that in more state intervention countries the level of political connectivity is more. Hence, using both of the instruments at the same time we re-run the baseline regression using ivtobit and ivprobit based on the nature of the dependent variable proxy. Before running iv analysis, we conducted various tests including, a weak instrument test, a correlation of instrument variables with endogenous variables, and an over-identification test to make sure that the IVs are appropriate to our model. Table 10 in appendix 3 reports the results of the ivtobit and ivprobit analysis and further confirms the strong effect of corruption in the BRG. Therefore, controlling for endogeneity does not change our main findings regarding effect of corruption in BGR.

7. Conclusion

The fundamental goal of this study is to understand the bases of business-government relationships in African countries. It revisits the effects of firm-specific characteristics and country's institutional and economic settings on the BGR. We provide useful the practical insights about the BGR based on the World Bank's Enterprise Surveys dataset on 13 African nations. Using two proxies of BGR, the result obtained from the baseline regression and subgroup analysis confirms that, firms which are large, old, who secure a government contract or at least attempt to, and facing informal market competition form a relationship with the government (at least in one of the proxies). At the same time, the tendency of strong business-government relationships is pronounced in countries with high corruption, low regulatory quality, and low economic development. Moreover, the findings illustrate that firms located in countries with the longest government tenure and high bureaucracy levels show stronger relationships with the government according to the World Bank's definition of business-government relations.

In regions with poor formal institutions and rampant corruption, such as African countries, securing a good relationship with government agents or officials might be more than a firm political choice but rather a survival strategy. The finding of this study is to provide an overview of the bases for BGR within African firms. Future studies can examine the direct or moderating impact of formal and informal BGR on a firm's performance.

Reference

Asakawa, K., Nakamura, H., Sawada, N. J. R., & Management, d. (2010). Firms' open innovation policies, laboratories' external collaborations, and laboratories' R&D performance. *40*(2), 109-123.

Ayalew, M. M., & Xianzhi, Z. (2020). The effect of financial constraints on innovation in developing countries. *Asian Review of Accounting, 28*(3), 273-308. doi:10.1108/ARA-02-2019-0036

Bertrand, M., Kramarz, F., Schoar, A., & Thesmar, D. (2007). Politicians, firms and the political business cycle: evidence from France. *Unpublished working paper, University of Chicago*, 1-40.

Boubakri, N., Cosset, J.-C., & Saffar, W. (2008a). Political connections of newly privatized firms. *Journal of corporate finance, 14*(5), 654-673.

Boubakri, N., Cosset, J.-C., & Saffar, W. (2008b). Political connections of newly privatized firms *Journal of corporate finance, 14*(5), 654-673.

Boubakri, N., & Hamza, O. (2007). The dynamics of privatization, the legal environment and stock market development. *International Review of Financial Analysis, 16*(4), 304-331.

Burki, S. J., & Perry, G. (1998). *Beyond the Washington consensus: institutions matter*: World Bank Publications.

Cai, Y., & Sevilir, M. (2012). Board connections and M&A transactions. *Journal of Financial Economics, 103*(2), 327-349.

Chu, L. K., & Hoang, D. P. (2020). The impact of corporate political activity on innovation in Sub-Saharan African countries: A double-edged sword. *Borsa Istanbul Review, 20*(4), 358-374.

Daniel, G. O., Fu, K., & Dolfsma, W. (2018). Institutional quality and economic development in sub-Saharan Africa: Can management effort and bribes compensate for low-quality institutions? *Journal of Economic Issues, 52*(2), 473-482.

Deng, Y., Wu, Y., Xu, H. J. E., & Economics, R. (2020). Political connections and firm pollution behaviour: an empirical study. *Journal of Environmental Resource Economics*
75(4), 867-898.

Dolfsma, W., Van der Eijk, R., & Jolink, A. (2009). On a source of social capital: Gift exchange. *Journal of Business Ethics, 89*(3), 315-329.

Dong, W., Asmi, F., Zhou, R., Keren, F., & Anwar, M. A. (2017). *Impact of Trust and Perceived Privacy in B2C Mobile Apps among Foreigners: A Case of People's Republic of China.* Paper presented at the 2017 IEEE 14th International Conference on e-Business Engineering (ICEBE).

Epstein, E. S. J. T. (1969). Stochastic dynamic prediction. *21*(6), 739-759.

Faccio, M. (2002a). Politically-connected firms: Can they squeeze the State? *Available at SSRN 305099*.

Faccio, M. (2002b). Politically-connected firms: Can they squeeze the State?

Faccio, M. (2006). Politically connected firms. *American economic review, 96*(1), 369-386.

Faccio, M. (2007). The characteristics of politically connected firms. *American economic review*.

Faccio, M., Masulis, R. W., & McConnell, J. (2006a). Political connections and corporate bailouts. *The journal of finance, 61*(6), 2597-2635.

Faccio, M., Masulis, R. W., & McConnell, J. (2006b). Political connections and corporate bailouts. *American economic review, 61*(6), 2597-2635.

Fisman, R. (2001). Estimating the value of political connections. *Journaal of American economic review, 91*(4), 1095-1102.

Goldman, E., Rocholl, J., & So, J. (2009). Do politically connected boards affect firm value? *The review of financial studies*
22(6), 2331-2360.

Gonzalez, A., Qiang, C. Z., & Kusek, P. J. W. B. G. (2018). Foreign investment is a major contributor to development. 1-185.

Granovetter, M. J. A. j. o. s. (1985). Economic action and social structure: The problem of embeddedness. *91*(3), 481-510.

Hart, D. M. J. J. o. P. (2001). Why do some firms give? Why do some give a lot?: High-tech PACs, 1977–1996. *63*(4), 1230-1249.

Hillman, A. J., Keim, G. D., & Schuler, D. (2004). Corporate political activity: A review and research agenda. *Journal of Management, 30*(6), 837-857.

Hillman, A. J., Zardkoohi, A., & Bierman, L. (1999). Corporate political strategies and firm performance: indications of firm-specific benefits from personal service in the US government. *Strategic management journal, 20*(1), 67-81.

Hillman, K., Gerald D, & Schuler, D. (2004). Corporate political activity: A review and research agenda. *Journal of Management, 30*(6), 837-857.

Ismail, K. M., Ford, D. L., Wu, Q., & Peng, M. W. (2013). Managerial ties, strategic initiatives, and firm performance in Central Asia and the Caucasus. *Asia Pacific Journal of Management, 30*(2), 433-446.

Jiao, H., Koo, C. K., Cui, Y. J. T. F., & Change, S. (2015). Legal environment, government effectiveness and firms' innovation in China: examining the moderating influence of government ownership. *96*, 15-24.

John, M., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American journal of sociology 83*(2), 340-363.

Krueger, A. O. (1974). The political economy of the rent-seeking society. *The American economic review, 64*(3), 291-303.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1999). The quality of government. *The Journal of Law, Economics, Organization, 15*(1), 222-279.

Li, G., & Zhou, H. (2015). Political connections and access to IPO markets in China. *China Economic Review, 33*, 76-93.

Luo, Y. J. J. o. I. B. S. (2001). Toward a cooperative view of MNC-host government relations: Building blocks and performance implications. *32*(3), 401-419.

Mauro, P. (1995). Corruption and growth. *The quarterly journal of economics, 110*(3), 681-712.

Meyer, K. E., & Peng, M. W. (2016). Theoretical foundations of emerging economy business research. *Journal of International Business Studies, 47*(1), 3-22.

Muttakin, M. B., Mihret, D. G., Khan, A. J. A., Auditing, & Journal, A. (2018). Corporate political connection and corporate social responsibility disclosures: A neo-pluralist hypothesis and empirical evidence.

Peng, M. W., & Heath, P. S. (1996). The growth of the firm in planned economies in transition: Institutions, organizations, and strategic choice. *Academy of management review, 21*(2), 492-528.

Pfeffer, J., & Salancik, G. R. (2003). *The external control of organizations: A resource dependence perspective*: Stanford University Press.

Salancik, G. R., & Pfeffer, J. (1978). *The external control of organizations: A resource dependence perspective*: New York: Harper & Row.

Schuler, D. A., Rehbein, K., & Cramer, R. D. (2002). Pursuing strategic advantage through political means: A multivariate approach. *Academy of Management Journal, 45*(4), 659-672.

Scott, W. R. (1995). *Institutions and organizations* (Vol. 2): Sage Thousand Oaks, CA.

Semykina, A., & Wooldridge, J. M. J. J. o. E. (2010). Estimating panel data models in the presence of endogeneity and selection. *157*(2), 375-380.

Shi, H., Xu, H., & Zhang, X. (2018). Do politically connected independent directors create or destroy value? *Journal of Business Research, 83*, 82-96.

Siegel, J. (2007). Contingent political capital and international alliances: Evidence from South Korea. *Administrative science quarterly, 52*(4), 621-666.

Siegel, J. (2007). Contingent political capital and international alliances: Evidence from South Korea. *Administrative science quarterly, 52*(4), 621-666.

Staiger, D. O., & Stock, J. H. (1994). Instrumental variables regression with weak instruments. In: National Bureau of Economic Research Cambridge, Mass., USA.

Stigler, G. J. J. T. B. j. o. e., & science, m. (1971). The theory of economic regulation. 3-21.

Stock, J. H., & Yogo, M. (2002). Testing for weak instruments in linear IV regression. In: National Bureau of Economic Research Cambridge, Mass., USA.

Te Velde, D. W. (2013). Measuring state–business relationshipsin sub-Saharan Africa. In *State-Business Relationshipsand Economic Development in Africa and India* (pp. 37-54): Routledge.

Tian, Y., Wang, Y., Xie, X., Jiao, J., & Jiao, H. (2019). The impact of business-government relationshipson firms' innovation: Evidence from Chinese manufacturing industry. *Technological Forecasting Social Change143*, 1-8.

Treisman, D. (2000). The causes of corruption: a cross-national study. *Journal of public economics, 76*(3), 399-457.

Veblen, T. J. V. T. P. o. S. i. M. C. The Place of Science in Modern Civilization (NewYork: Russell & Russell, 1961 [1919]. 64.

Wooldridge, J. M. J. P. E. J. (2002). Inverse probability weighted M-estimators for sample selection, attrition, and stratification. *1*(2), 117-139.

Zardkoohi, A. J. S. E. J. (1985). On the political participation of the firm in the electoral process. 804-817.

Appendix 1. Table 2: Variable measurement and description

Variable	Measurement and definition
Dependent Variables	
Time spent by seniors	Natural legalism of Senior management's time spent dealing with requirements in government regulations
Tax visit	Dummy variable equal to 1 if a firm visited or inspected by the tax authority in the last three years, 0 otherwise
Legal and Institutional variables	
Corruption Control	Assessment of the corruption control in the country produced by the country-risk rating agency International Country Risk. Scale from 0 to 5, with lower scores for lower control of corruption. Source: World Bank, http://www.worldbank.org/wbi/governance/datasets.html#dataset
Corruption Level	Transparent Intelligence's s assessment of the corruption in government. Higher scores indicate a higher corruption level. Source: Transparent Inteleigency.com
Government Effectiveness	Assessment of the government effectiveness in the country produced by the country-risk rating agency International Country Risk. Scale from 0 to 5, with lower scores for lower effectiveness. Source: World Bank, http://www.worldbank.org/wbi/governance/datasets.html#dataset
Regulatory Quality	Assessment of the regulatory quality in the country produced by the country-risk rating agency International Country Risk. Scale from 0 to 5, with lower scores for lower quality levels. Source: World Bank, http://www.worldbank.org/wbi/governance/datasets.html#dataset Scaled
GDP per capita	Natural log of GDP per capita (in US$) source: World Bank Development Indicators.
Government Tenure	Natural log of years the chief executive been in office.
Bureaucracy level	Natural log of Number of different steps that a start-up has to comply with to obtain a legal status
Firm-level antecedents of BGR	
Foreign ownership	Dummy variable equal to 1if a foreign owner has a stake in the firm, 0 otherwise
Government contract	Dummy variable equal to 1 if a firm secure or attempt to secure government contract in the last three years, 0 otherwise
Full time employees	Natural legalism of the number of full-time employees
Micro-firm	A firm with 1-10 employees
Small-firm	A firm with 11-49 employees
Medium-firm	A firm with 50-200 employees
Large-firm	A firm with more than 200 employees
Firm age	Natural legalism of age of the firm
Young	1 to 5 years
Mature	6 to 15 years
Old	More than 15
Exporter	Dummy variable equal to 1 if a firm export in the last three years, 0 otherwise
Informal competition	Dummy variable equal to 1 if a firm faces an informal market completion in the last three years, 0 otherwise
% Protestant	Protestants as fraction of the total population. Source: "The World Factbook 2020"
Government interference	Total expenditure includes both current and capital expenditures, Source: World Bank, http://sima-ext.worldbank.org/query/

Appendix 2. Table 9: Bivariate probit model result

Variables	Model 1 Manager's time	Model 2 Tax visit
foreignDmy	0.037	0.048
	(0.092)	(0.089)
govcon	0.283***	0.247***
	(0.048)	(0.048)
lnemp	0.043***	0.004
	(0.015)	(0.014)
lnage	0.093***	0.067***
	(0.023)	(0.022)
exp	-0.02	0.068
	(0.059)	(0.058)
infcomp	0.112***	0.173***
	(0.035)	(0.033)
scaleCC	3.153***	4.649***
	(0.979)	(0.122)
scaleGE	-3.636***	-4.455**
	(0.849)	(0.125)
scaleRQ	1.254***	5.247***
	(0.063)	(0.406)
lngdp	-1.366***	-1.455***
	(0.032)	(0.092)
logofiice	0.835***	-0.772***
	(0.056)	(0.270)
lndays	-0.53***	-1.817***
	(0.049)	(0.055)
Constant	3.056***	3.122***
	(0.217)	(0.221)
Correlation rho	0.279***	
	(0.024)	
Log pseudo-likelihood	-8518.17	
Observation	7733	
Wald test (rho=0)		
X^2 (1)	172.197	
P value X^2	0.000	

Notes: Definition of variables are reported in table 2 in the appendix 1 and abbreviation are defined at the footnote of table 5. Country and year dummies are included. The marginal effect is reported. The robust standard error is presented in parentheses and adjusted for clustering at country level. *** *p<.01,* ** *p<.05,* * *p<.1*

Appendix 3. Table 10, Instrumental variables analysis

Variables	Ivtobit (lntime)	Ivprobit (visit)
foreignDmy	0.12	-0.187**
	(0.233)	(0.092)
govcon	0.56***	0.196***
	(0.119)	(0.048)
lnemp	0.16***	0.034**
	(0.039)	(0.014)
Lnage	0.065	0.034
	(0.063)	(0.058)
Export	-0.146	-0.043*
	(0.15)	(0.023)
Infcomp	0.515**	0.515**
	(0.033)	(0.033)
scaleCC	-6.105***	-2.50***
	(0.766)	(0.259)
scaleGE	1.75***	1.75***
	(0.227)	(0.227)
scaleRQ	2.339***	-0.542***
	(0.214)	(0,064)
lngdp	-1.28***	-0.192***
	(0.083)	(0.032)
Logofiice	2.809***	0.464***
	(0.19)	(0.071)
Lndays	-1.262***	-0.402***
	(0.172)	(0.064)
Constant	8.081***	5.269***
	(0.838)	(0.264)
Wald test of exogeneity		
Chi(1)	21	123.49
P value of chi(2)	0.000	0.000
Log likelihood	-2304.28	1545.73
Predictive power		71.95%

Notes: Definition of variables are reported in table 2 in the appendix 1 and abbreviation are defined at the footnote of table 5. Country and year dummies are included. The marginal effect is reported. The robust standard error is presented in parentheses and adjusted for clustering at country level. *** *p<.01,* ** *p<.05,* * *p<.1*