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## **ON THE DETERMINANTS AND EFFECTS OF POLITICAL INFLUENCE**

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## Abstract<sup>1</sup>

This paper uses a large cross-country survey of business firms to assess their influence on government policies. It is found that influence is associated with larger, government-owned firms that have a high degree of ownership concentration. In contrast, foreign ownership matters little. It is also found that the extent to which government policies and legislation are viewed as impeding firm growth decreases with political influence and, independently, with a country's level of institutional quality.

**JEL Classification:** H00, D21, O10.

**Keywords:** Politics, Institutions, Influence, Ownership, Government Policies, Firm Growth.

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## 1. Introduction

While government intervention in economic activity is all-pervasive in many countries, two influential but diametrically opposite theories speculate about its motivation and rationale. The public-interest theory, put forward in Pigou (1938), states that the government acts to achieve social benefit and to correct market failures. In contrast, the capture theory, originated by Stigler (1971), hypothesizes that the government is an agent of powerful commercial interests.<sup>2</sup> Similar arguments can be found in the rent-seeking literature (see Krueger, 1974). These competing views and some of their implications are discussed in depth in Glaeser and Shleifer (2003). In reality, however, government policies rarely correspond to either of the two extremes. Progressive income taxation, uniform public education, old-age policies, and air-pollution regulations are all examples of public-interest-minded approaches, and they are commonly used across countries. In contrast, monopoly regulation, trade policies, and financial regulations are often viewed as being to a large extent influenced by commercial interests, the extent of which may in principle vary significantly across countries.

In light of these considerations, it is useful to characterize the circumstances of firms' influence on government policies, and its consequences, by determining the profile of politically influential firms—specifically, the characteristics that make firms more likely to exert political influence—and by identifying the extent to which these firms stand to disproportionately gain and the policy aspects that are especially prone to political influence. To the extent that government policies are found to be responsive to the influence of business firms, this would provide support for Stigler's (1971) view of government intervention. This paper provides an analytical framework for and an empirical scrutiny of these issues.

Conceptually, the paper is related to the literature on the motives of public officials, particularly in the field of regulation as reviewed in Glaeser and Shleifer (2003). It is also related to the literature on corruption (see Aidt, 2003, for a review). The specific model builds on Choi and Thum (2007) in viewing the interaction between politicians and firms in the context of a mutual exchange of favors, whereby the former provide economic perks to the latter and receive political contributions in return. This is consistent with observed interactions between politicians

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<sup>2</sup> Cf., "With its power to prohibit or compel, to take or give away money, the state can and does selectively help or hurt a vast number of industries" (Stigler, 1971).

and pressure groups (Kroszner and Stratmann, 1998 and 2005). Empirically, the paper is related to the emerging literature that seeks to determine the extent to which politically connected firms are able to generate gains for themselves. This literature typically focuses on financial-market outcomes such as access to credit or firm value (see for example, Faccio, 2006a; Goldman, Rocholl, and So, 2006; Khwaja and Mian, 2005; and references therein). Another focus closer to this paper's emphasis is firms' ability to affect legislation (Stratmann, 2002). Earlier literature, represented by Fisman (2001) and Goldman, Rocholl, and So (2006), analyzed important events that could have affected firms depending on the extent of their political connections. Much of this research was done in the context of a specific country—often a developing country (Indonesia, in Fisman, 2001) or, alternatively, the United States. More recently, Faccio (2006b) and Faccio and Parsley (2006) studied the determinants and the outcomes of political connections in a cross-country sample. This literature has provided a very useful empirical framework and insights, generally concluding that political connections matter, especially in countries with weak institutions.

This paper examines a different range of outcomes pertaining to policy impact. Our approach complements the earlier literature in several regards. First, the existing literature typically employs direct involvement of politicians in the operation of a firm as a proxy for political connections. Arguing that such direct political connections are only one channel through which firms may affect policymaking, we focus on the more general issue of firms' influence using information on their own perceptions.<sup>3</sup> This approach captures the lobbying of politicians, which has been of documented significance in the United States (Kroszner and Stratmann, 1998 and 2005). To this end, we use the World Business Environment Survey (WBES), a large firm-level survey across countries recently conducted by the World Bank that elicits firms' responses about their policy influence at various levels of policymaking across the globe. The same dataset also contains information about perceived policy outcomes from the firms' perspective. The richness of information provides an opportunity to study a wide array of policies and to assess which are particularly sensitive to influence. Complementing Faccio (2006b) and Faccio and Parsley (2006), this is done using a large sample of firms in a cross-country context.

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<sup>3</sup> In the U.S. context, Goldman, Rocholl and So (2006) employ the amount of political contributions as a measure of political influence.

Many of our findings are consistent with the existing literature. For example, we find that larger, government-owned firms and those less exposed to competition exert more policy influence. We also confirm earlier results indicating that such influence translates into (perceived) outcomes, whereby more-influential firms regard government policies and regulations as being relatively more helpful than do less-influential firms. In contrast to existing results, however, we find that a country's institutional quality has an independent effect on perceived outcomes and does not act to moderate the effect of firms' political influence. Overall, therefore, we find some support for the capture theory, which manifests itself universally across the countries considered.

The paper is organized as follows: Section 2 provides the framework and its analysis, Section 3 presents the empirical findings, and Section 4 concludes.

## 2. Analytical Framework

### 2.1 Basic Model

The simple model below is based on the idea that politicians and firms exchange mutually beneficial favors, which is consistent with the theories presented in Stigler (1971) and Shleifer and Vishny (1994). Politicians supply economic benefits such as advantageous tax treatment, preferential access to publicly provided goods, and exemptions from complying with costly regulatory requirements, while firms make political contributions. This framework extends the recent very elegant model of Choi and Thum (2007) to the case of heterogeneous firms.

Consider the interaction between the ruling government and  $n$  firms, indexed  $i$ . The firms are differentiated by their wealth,  $w_i$ , which also stands as a proxy for firm size. Firms can be politically connected or not;  $PC$  denotes the former. Firms that are not politically connected,  $i \notin PC$ , pay a proportional tax of  $T$ , so that their net wealth is  $w_i(1-T)$ . The politically connected firms,  $i \in PC$ , are exempt from paying the tax and may derive additional benefits, such as exemption from regulations, preferential access to certain public goods, or subsidization of their products. The expected value of these perks depends on the probability of the government's survival, which, in turn, depends on the amount of political contributions. If  $x_i$  denotes the amount of such contributions made by firm  $i$ , then  $X = \sum_{j \in PC} x_j$  denotes the aggregate amount of

contributions made by politically connected firms. Provided that wealth constraints are binding, the firm's net wealth after having made political contributions is  $w_i - x_i$ . A politically connected firm derives utility from the aggregate amount of contributions, which determines the expected value of the perks, and the net wealth.

$$U^{PC}(X, w_i - x_i) = \alpha \log(X) + \beta \log(w_i - x_i), \quad 0 < \alpha, \beta < 1 \quad (1)$$

where the logarithmic specification is assumed in order to obtain closed-form solutions. In contrast, the utility of a firm that is not politically connected is  $U^{NPC} = \beta \log(w_i(1-T))$ .

This modeling of political influence through political contributions that buy perks is consistent with the empirical analysis below. It generalizes a view implicit in the existing empirical literature that influential firms are solely distinguished by the direct involvement of politicians in their operations. While this direct link does characterize some firms, we argue that political influence can be acquired through other means. Elaborate empirical support for this view of acquiring political influence is provided in Kroszner and Stratmann (1998 and 2005).

The government, therefore, has two sources of revenue at its disposal: political contributions  $X$  and tax revenues  $(1-\gamma)T \sum_{j \notin PC} w_j$ , where the parameter  $0 \leq \gamma < 1$  represents potential inefficiency associated with tax collection. This may result from administrative inefficiencies, for example, or from the presence of an informal sector, or from allocative distortions. Without considering the precise mechanism, we interpret this inefficiency as a general institutional weakness. The two revenue sources are not, however, perfect substitutes. Political contributions very specifically benefit the government per se, whereas tax revenues serve the broader needs of the population; the government must weigh the two options depending on its valuation of its own survival versus the public interest. The government's objective is to maximize a weighted sum

$$X + \lambda(1-\gamma)T \sum_{j \notin PC} w_j, \quad \lambda > 0 \quad (2)$$

where  $\lambda$  is interpreted as the weight of the public benevolence motive, assuming that tax revenues are used for the public benefit. It could be interpreted as the strength of democratic institutions that discipline the government to act in the best interests of its citizens.

The government approaches firms and offers them political alliance. These firms then become politically connected—they receive perks and offer political contributions. The rest of the firms pay their taxes. The game thus consists of two stages, whereby in the first stage the government makes its alliance offer, and then the politically connected firms determine their contributions. These decisions lead to the pay-offs of the involved actors.

## 2.2 Equilibrium Analysis

We begin the analysis with the last stage, whereby the politically connected firms make their political contributions. It is easy to see that this is a standard game of the provision of a public good. To study its equilibrium, we assume—without loss of generality, as will be argued below—that all firms make strictly positive contributions.

The first order conditions determining a firm's contributions are then given by maximizing (1):

$$\alpha X - \beta(w_i - x_i) = 0, \text{ or } \alpha(w_i - x_i) = \beta X \quad (3)$$

Aggregating, we then obtain the following equilibrium values and the utility levels:

$$\begin{aligned} X &= \alpha \sum_{j \in PC} w_j / (\alpha + k\beta); \quad w_i - x_i = \beta \sum_{j \in PC} w_j / (\alpha + k\beta); \\ x_i &= w_i - \beta \sum_{j \in PC} w_j / (\alpha + k\beta), \\ U_i^{PC} &= (\alpha + \beta) \log \left( \sum_{j \in PC} w_j / (\alpha + k\beta) \right) + \alpha \log(\alpha) + \beta \log(\beta) \end{aligned} \quad (4)$$

where  $k = |PC|$ . In the first stage, the government forms a political alliance with a subset of firms. In so doing, it hopes to achieve the objective of maximizing (2), or, substituting from (4),

$$\begin{aligned} \alpha \sum_{j \in PC} w_j / (\alpha + k\beta) + \lambda(1-\gamma)T \sum_{j \notin PC} w_j &= \\ \alpha \sum_{j \in PC} w_j / (\alpha + k\beta) + \lambda(1-\gamma)T(W - \sum_{j \in PC} w_j) &= \\ \lambda(1-\gamma)TW + \sum_{j \in PC} w_j [\alpha / (\alpha + k\beta) - \lambda(1-\gamma)T] & \end{aligned} \quad (5)$$

where  $W = \sum_{j=1}^n w_j$  is the aggregate wealth of all firms in the economy.

Suppose now that  $\alpha/(\alpha + \beta) > \lambda(1-\gamma)T$ ; if this is not satisfied, then the set of politically connected firms optimally selected by the government is empty. Also, assume without loss of generality that  $w_1 > w_2 > \dots > w_n$ . We first observe that if a firm is not expected to provide a political contribution, it will not be approached by the government, thus supporting the assumption above that all politically influential firms make positive contributions.

Also, as follows from an examination of (5), the optimal strategy for the government is to form alliances with sufficiently wealthy firms, so that in particular  $i \in PC$ , if and only if:

$$w_i \geq w_k, \text{ where } \alpha/(\alpha + k\beta) > \lambda(1-\gamma)T \text{ and } \alpha/(\alpha + (k+1)\beta) < \lambda(1-\gamma)T \quad (6)$$

It follows from the characterization in (6) that the number of politically connected firms is a decreasing function of the government's benevolence and an increasing function of tax inefficiency. Since political influence in the model is related to the number of politically connected firms, the main results can be summarized as follows:

**Proposition 1.** Wealthier (or larger) firms are the politically connected ones. Furthermore, the extent of political influence is a decreasing function of the government's actions on behalf of the public interest and an increasing function of institutional weakness.

### 3. Empirical Evidence

#### 3.1 Data and Empirical Strategy

The survey under analysis here was conducted by the World Bank Group in partnership with many other institutions in order to

- determine the state of the private sector in client countries;
- measure the quality of governance and public services, including the extent of corruption;
- provide better information on constraints to private-sector growth—from an enterprise perspective;
- establish the basis for internationally comparable indicators that can track changes in the business environment over time, thus allowing for both competitive assessments and impact assessments of market-oriented reforms; and
- stimulate systematic public-private dialogue on business perceptions and the agenda for reform.

The field work was carried out between 1999 and 2000 by a private polling of firms that fulfilled the basic requirements for sector, size, location, and ownership/firm characteristics.<sup>4</sup> The objective was to gather information on a sizeable number of firms around the world, and it was accomplished for most of the sample.<sup>5</sup> The sample consists of firm-level survey responses from thousands of firms in about 80 countries, many of them developing and in transition. The survey asked each business to rank the constraints or problems that had an impact on its operations. This process involved an extensive questionnaire presented via a face-to-face interview with either the firm's managers or owners. As a result, the survey reports comparative measurements based on firms' perceptions of their business environment as shaped by a variety of economic and policy factors.

In order to test the model's implications, we use as proxies for the firms' influence the answers to questions regarding the firm's ability to influence the government with respect to laws, rules, regulations, or decrees that have a substantial impact on the firm. The responses range from "1=never influential" to "5=very influential." In particular, the survey asked about the

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<sup>4</sup> The particular requirements that had to be fulfilled by the sample selected were as follows. *Sector*: In each country, the sectoral composition in terms of manufacturing (including agroprocessing) versus services (including commerce) will be determined by relative contribution to GDP, subject to a 15 percent minimum for each category. *Size*: At least 15 percent of the sample shall be in the small-size category and 15 percent in the large-size category. *Ownership*: At least 15 percent of the firms will have foreign control. *Exporters*: At least 15 percent of firms will be exporters, meaning that some significant share of their output is exported. *Location*: At least 15 percent of firms will be in the category "small city or countryside."

<sup>5</sup> The countries and number of firms (in parentheses) included in the survey are: Albania (133), Argentina (57), Armenia (106), Azerbaijan (102), Belarus (98), Bolivia (55), Botswana (49), Brazil (80), Bulgaria (99), Cameroon (39), Canada (43), Chile (45), China (47), Colombia (57), Costa Rica (31), Cote d'Ivoire (52), Croatia (97), Czech Republic (110), Dominican Republic (58), Ecuador (42), Egypt (11), El Salvador (39), Estonia (120), Ethiopia (35), France (33), Germany (47), Ghana (31), Guatemala (22), Haiti (20), Honduras (23), Hungary (105), Indonesia (39), Italy (48), Kazakhstan (97), Kenya (59), Lithuania (112), Madagascar (48), Malawi (30), Malaysia (22), Mexico (30), Moldova (98), Namibia (47), Nicaragua (17), Nigeria (32), Pakistan (30), Panama (30), Peru (51), Philippines (44), Poland (196), Portugal (16), Romania (100), Russia (498), Senegal (18), Singapore (64), Slovakia (106), Slovenia (100), South Africa (63), Spain (59), Sweden (69), Tanzania (25), Thailand (211), Trinidad and Tobago (50), Tunisia (30), Turkey (119), United Kingdom (32), United States (32), Uganda (53), Ukraine (197), Uruguay (31), Venezuela (54), Zambia (42), Zimbabwe (66).

extent of the influence on the executive, the legislature, the sector ministries, and the regulatory agencies. Examining the distribution of the responses to these questions, we find some similar patterns. For instance, about 7 percent of the surveyed firms consider themselves to be “frequently” or “very influential,” while about 30 percent report themselves as being just “influential” or “seldom influential,” and around 60 percent consider themselves “never influential.” This pattern of responses remains essentially the same regardless of the specific variable considered. In fact, we employ all these variables as alternative measures in order to test for robustness. Also, in order to be able to extract some policy implications from our empirical analysis, we use as proxies for the perception of institutional constraints on firms’ growth questions related to the firm’s perception of the constraints imposed by the tax authorities, tax regulations, and the quality of the judiciary system.

Additionally, we include countrywide variables, such as the regulatory quality and the logarithm of the per capita GDP. The former is taken from the World Bank’s *Governance Matters* indicators (Kaufman, et al., 2005), a well-known and comprehensive compilation; this index is taken as an average for the period 1998 to 2002, to proxy for the long-term quality of the institutional framework. The per capita GDP comes from the World Development Indicators (2006), also as an average for the period 1998-2002. Finally, as basic controls, we base our specification on existing literature and, in particular, include basic firm characteristics such as ownership, size, competition in the particular market, and industrial sector. Table 1 provides detailed definitions of all the variables used in this paper, Table 2 provides the corresponding summary statistics, and Table 3 exhibits the correlation matrix along with corresponding statistical significance. One interesting observation from the correlation matrix is the relatively high correlations (of around 0.80) between perceptions of influence on the legislature, ministries, the executive, and the regulatory agency.

### 3.2 *Determinants of Influence*

In order to provide empirical support for the theoretical model presented above, we first focus on the determinants of firm influence on the government and test the following characterization of politically connected firms as follows:

$$I_{ic} = \alpha + \beta_1 X_{ic} + \beta_2 Z_c + \varepsilon_{ic} \quad (7)$$

where  $I_{ic}$  represents our interest variable, namely, the level of influence a firm  $i$  has on the government of country  $c$ ;  $X_{ic}$  is a matrix of firm characteristics related to the ownership of the firm, the sector where it operates, the level of competition it faces in its particular market, and the size of the firm; and  $Z_c$  contains a set of country characteristics related to the institutional environment and the wealth of the country. Finally,  $\varepsilon_{ic}$  is a random error term.

Several authors<sup>6</sup> have argued that countries eager to attract foreign investors will be subjected to influence by the latter at certain government levels. Our dataset includes information about foreign ownership, which allows us to test this hypothesis. Firm ownership—public or private—can also have an impact, and we have information on this aspect as well. It could be argued that ownership concentration allows for more efficient collusion between managers to influence the policies affecting the firm. Fortunately, the WBES includes information on the percentage of shares held by the three largest shareholders of the company. The concentration shown by firms in our sample seems to be high—on average, 38.8 percent of the firms' shares are held by the three largest shareholders. Nevertheless, the standard deviation is also high (43 percent).

Table 4 shows the results of our benchmark specification for the determinants of the influence on the government. Since our dependent variable has five categories that range from 1 (never influential) to 5 (very influential), we use ordered probit regressions and show the coefficients in the tables. Table A.1 in the Appendix shows the marginal coefficients for each category of our benchmark specification (Column 1 in Table 4).<sup>7</sup> We use several measures of the influence firms usually have on new laws and regulations affecting the firms on different levels of government—the national executive, the legislature, sectoral ministries, and regulatory agencies. We observe from the outset that our results are very similar across regressions, which is not very surprising given the high correlations between the various channels of influence as noted above.

Unlike some previous studies (O'Neal, 1994), we do not find that foreign-owned companies have more influence on any level of the government than national companies. On the other hand, state-owned firms are found to be substantially more influential than privately owned

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<sup>6</sup> See, for example, Shleifer and Vishny (1994), Li and Xu (2002), Irwin and Kroszner (1999), and Lissowska (2005).

<sup>7</sup> For the sake of economy, we do not show the marginal coefficients of the remaining regressions. The results are similar to the ones shown and are available upon request.

firms. Additionally, as expected, we also find that firms with more concentrated ownership structures have more influence on every level of the government.

The WBES includes a question on the degree of competitiveness of the specific market where the firm operates, which allows us to address the empirical question of whether competitive markets help avoid or enhance behaviors supporting the capture theory first proposed by Stigler (1971). To the extent that competition implies smaller profit margins (and hence, firm wealth), this would also be a test of the model's implication. We find that firms operating in more competitive markets have significantly less influence on all levels of the government on average than those operating in the context of oligopolistic or monopolistic markets.<sup>8</sup>

We include dummies to control for the size of the firm, as measured by the number of employees it currently has. Consistent with one of the main predictions of the theoretical model, we find that the larger the firms, the more influential they are—at all levels of government. It is also reasonable to expect that firms with more workers may on average be wealthier. This is particularly true for the firms included in our sample, since most are either in the service sector (44 percent), the manufacturing sector (34 percent), or the construction sector (10 percent), all of which tend to be labor-intensive areas that will more likely reflect the high correlation between wealth and size.<sup>9</sup>

Finally, among the country-level variables included in the analysis, we take into account the institutional quality (as measured by the quality of the regulatory system) and the wealth level of the country (proxied by the GDP per capita). As expected, there is a negative relationship between a country's wealth and the influence firms have on the government. Also, we find a significant and positive relationship between the regulatory quality and the extent of influence firms have on different government levels. This finding is consistent with the results of our theoretical model.

### ***3.3 Consequences of Influence***

From an empirical perspective, a natural extension of these findings is to focus on whether firm influence really pays off. In order to answer this question, we assess the impact that the ability to

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<sup>8</sup> The regression analysis is robust to the exclusion of this variable.

<sup>9</sup> Note that among the firm-level controls, we also include industrial-sector dummies.

influence the government has on the obstacles firms experience for their growth. Specifically, we address this issue using the following empirical specification:

$$y_{ic} = \alpha + \beta_1 X_{ic} + \beta_2 I_{ic} + \beta_3 Z_c + \varepsilon_{ic} \quad (8)$$

where  $y_{ic}$  represents the obstacles for growth perceived by firm  $i$  in country  $c$ ;  $X_{ic}$  is a matrix of firm characteristics;  $Z_c$  includes several country-level controls, which include an index of the overall regulatory quality, and a measurement of the wealth level of the country; and  $\varepsilon_{ic}$  is a white-noise error term.<sup>10</sup>

Tables 5 and 6 assess the impact of this influence on the perception firms have of the constraints imposed by particular policies on their growth. Particularly, we study whether a firm's influence on the executive, legislature, ministries, or regulatory agencies actually decreases its perception that the (poor) quality of the judiciary system and tax administration/regulation constitutes an obstacle for its growth. We observe that foreign firms perceive taxes and regulations to be an obstacle for growth, but the effect is not significant with regard to tax authorities and the quality of the judiciary. On the other hand, government-owned enterprises view taxes and regulations, the tax authorities, and the judiciary as serious constraints for growth. Surprisingly, neither ownership concentration, firm size, nor the competitiveness of the markets seem to be relevant to the firms' perception of the obstacles for their development. Among the country-level controls included, we observe that the quality of the regulatory system has a moderating impact on constraints for growth, which attests to the importance of the institutional environment.

The level of influence on the executive yields a negative and statistically significant coefficient in all the corresponding regressions in Table 5.<sup>11</sup> Firms with a higher level of influence on the executive perceive that government policies are helpful, rather than obstructive, to their growth. Table 6 presents the results of similar regressions, but includes the influence on the legislature, sectoral ministries, and regulatory agencies instead of on the executive.<sup>12</sup> The results

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<sup>10</sup> As before, our dependent variable is a categorical one, so we therefore use an ordered probit approach.

<sup>11</sup> The marginal coefficients for the benchmark regression in Table 5 can be found in Table A.2 in the Appendix.

<sup>12</sup> The results in Table 6 come from regression models similar to the ones shown in Table 5. For space reasons, we do not show the other coefficients, but the results hold similar to the ones above. The complete regression tables are available upon request.

confirm that more influential firms at any level of government tend to view taxes or judicial institutions as less of a constraint for growth.

We also replicate the same benchmark specification used in the previous tables, adding an interactive variable that captures the possible link between influence and the regulatory quality of the country. For the sake of economy, Table 7 presents the estimated coefficients of the firm's influence on the government: one for the interactive term between this variable and one on regulatory quality, as well as the computed overall effect evaluated at the sample average of regulatory quality.<sup>13</sup> As before, we obtain a negative and statistically significant overall effect of the influence on the government in all the regressions, although the interactive term appears to be insignificant. This is in contrast with the existing literature (see Faccio, 2006b, and Goldman, Rocholl and So, 2006, for examples), which argues for a moderating effect of institutional quality on firms' ability to affect policy outcomes. The difference in the measurement of political influence as pointed out above could be one reason for the difference in results. Nevertheless, our analysis suggests that firms' ability to skew policies in their favor is quite independent of a country's institutional quality. Further, when comparing the overall effect of the influence variable, namely the impact of the influence variable by itself in addition to the impact of the interaction between influence and regulation, we find that the resulting coefficients are very similar to the coefficients that do not take into account any interactive term between such variables. This may also indicate that the effect of influence on government and the effect of institutional framework are, essentially, independent of each other.

#### **4. Concluding Remarks**

Based on a simple model of political influence, this paper studies firm-level determinants as well as consequences. To this end, we employ a large cross-country dataset with information on firms' perceptions of their political influence. In this regard, the study differs from the earlier literature that typically uses directly observable proxies for firm influence, such as politicians' involvement in business operations. We find that government ownership, firm size, and a less competitive environment are all associated with firm perceptions of having influence on government policies.

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<sup>13</sup> The full results of these regressions are very similar to the ones shown in previous tables and are available upon request.

These results hold across the various influence channels examined. Additionally, political influence is moderated by a high level of institutional quality in a country. These results are by and large consistent with and complement previous studies. We then examine the consequences of political influence by studying firm perceptions of government policies and regulations. Consistent with the exhibited model, we find that political influence is associated with firms' viewing such interventions as posing less of a barrier to the firms' growth. We interpret this as supporting evidence for an argument that political influence translates into policies that reflect commercial interests, thus lending indirect support to the capture theory of government intervention (Stigler, 1971). We also find that this holds independently of overall institutional quality, which contrasts with previous studies.

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**Table 1. Description of Variables**

Variable	Description
<i>Firm Characteristics</i>	
Company is owned by a foreign investor	Answer to the question on the nationality of the owners. The variable takes the value of 1 if the company is owned by a foreign investor, and 0 otherwise.
Company is owned by the government	Answer to the question on the ownership of the firm. The variable takes the value of 1 if the company is owned by the government, and 0 otherwise.
Holding of the three largest shareholders	% of the total shares held by the three largest shareholders of the firm.
Size: Medium	A firm is defined as medium if it has between 51 and 500 employees.
Size: Large	A firm is defined as large if it has more than 500 employees.
Manufacturing	Firm belongs to the manufacturing sector.
Service	Firm belongs to the service sector.
Agriculture	Firm belongs to the agricultural sector.
Construction	Firm belongs to the construction sector.
Number of competitors	Number of competitors in the same line of business. Takes the value of 1 when the firm reports having no competitors, 2 when it has 1–3 competitors, and 3 when it has more than three competitors.
<i>Influence on the government</i>	
Influence on the executive	When a new law, rule, regulation, or decree is being discussed that could have a substantial impact on your business, how much influence does your firm typically have at the national level of the executive on the content of that law, rule, regulation or decree? Would you say “very influential,” “frequently influential,” “influential,” “seldom influential,” or “never influential”?
Influence on the legislature	When a new law, rule, regulation, or decree is being discussed that could have a substantial impact on your business, how much influence does your firm typically have at the national level of the legislature on the content of that law, rule, regulation or decree? Would you say “very influential,” “frequently influential,” “influential,” “seldom influential,” or “never influential”?
Influence on the ministries	When a new law, rule, regulation, or decree is being discussed that could have a substantial impact on your business, how much influence does your firm typically have at the national level of the ministries on the content of that law, rule, regulation or decree? Would you say “very influential,” “frequently influential,” “influential,” “seldom influential,” or “never influential”?
Influence on regulatory agencies	When a new law, rule, regulation, or decree is being discussed that could have a substantial impact on your business, how much influence does your firm typically have at the national level of the regulatory agencies on the content of that law, rule, regulation or decree? Would you say “very influential,” “frequently influential,” “influential,” “seldom influential,” or “never influential”?
<i>Obstacles for growth</i>	
Taxes and regulations	Answer to the question: Please judge on a four-point scale how problematic the following factors are for the operation and growth of your business: Taxes and regulations. (1) major obstacle; (2) moderate obstacle; (3) minor obstacle; (4) no obstacle.
Tax administration regulations	Answer to the question: Please judge on a four point scale how problematic are the following factors for the operation and growth of your business: tax administration regulations. (1) major obstacle; (2) moderate obstacle; (3) minor obstacle; (4) no obstacle..
Confidence in the judicial system today	Answer to the statement: “I am confident that the legal system will uphold my contract and property rights in business disputes.” The answer ranges from 1 to 6, where 1=fully disagree, and 6=fully agree.
<i>Country characteristics</i>	
Regulatory quality	Index that assesses the extent of the incidence of market-unfriendly policies in the country. Source: Kaufman, Kraay, and Mastruzzi (2005).
Log (GDP pc)	Logarithm of the average per capita GDP for the period 1998-2002. Expressed in Constant 2000 US dollars. Source: World Development Indicators (2006).

**Table 2. Summary Statistics**

Variable	Obs.	Mean	Std. Dev.	Min	Max
<i>Firm Characteristics</i>					
Company is owned by a foreign investor	4951	0.21	0.40	0	1
Company is owned by the government	4951	0.07	0.26	0	1
Holding of the three largest shareholders	4951	38.79	42.64	0	100
Size: Medium	4951	0.40	0.49	0	1
Size: Large	4951	0.17	0.38	0	1
Manufacturing	4951	0.34	0.47	0	1
Service	4951	0.44	0.50	0	1
Agriculture	4951	0.07	0.26	0	1
Construction	4951	0.10	0.30	0	1
<i>Influence on the government</i>					
Influence on the executive	3241	1.57	0.93	1	5
Influence on the legislature	3243	1.54	0.92	1	5
Influence on the ministries	3233	1.57	0.94	1	5
Influence on regulatory agencies	3182	1.63	0.98	1	5
<i>Obstacles for growth</i>					
Taxes and regulations	4951	3.011	0.960	1	4
Tax administration regulations	4912	2.88	1.02	1	4
Confidence in the judicial system today	4775	3.40	1.43	1	6
<i>Country characteristics</i>					
Regulatory quality	4951	0.14	0.79	-2.12	1.96
Log (GDP pc)	4951	7.56	1.16	4.57	10.37

**Table 3. Correlation Matrix**

	Influence on executive	Influence on legislature	Influence on ministries	Influence on regulatory agencies	Company is owned by a foreign investor	Company is owned by the government	Holding of the three largest SH	Size: Medium	Size: Large	Taxes and regulations	Tax administration regulations	Confidence in judicial system	Log (GDP pc)
Influence on the legislature	0.812												
	0.000												
Influence on the ministries	0.772	0.794											
	0.000	0.000											
Influence on regulatory agencies	0.717	0.736	0.769										
	0.000	0.000	0.000										
Company is owned by a foreign investor	0.104	0.068	0.105	0.103									
	0.000	0.000	0.000	0.000									
Company is owned by the government	0.086	0.041	0.079	0.069	0.015								
	0.000	0.018	0.000	0.000	0.274								
Holding of the three largest shareholders	0.168	0.132	0.141	0.172	0.297	-0.059							
	0.000	0.000	0.000	0.000	0.000	0.000							
Size: Medium	0.014	0.013	0.014	0.021	0.058	0.085	0.023						
	0.428	0.458	0.419	0.237	0.000	0.000	0.097						
Size: Large	0.207	0.166	0.186	0.188	0.235	0.132	0.255	-0.374					
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Taxes and regulations	-0.086	-0.090	-0.095	-0.086	-0.161	-0.030	-0.305	0.051	-0.134				
	0.000	0.000	0.000	0.000	0.000	0.033	0.000	0.000	0.000				
Tax administration regulations	-0.077	-0.059	-0.060	-0.063	-0.073	-0.059	-0.114	0.050	-0.078	0.456			
	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Confidence in the judicial system	-0.101	-0.081	-0.094	-0.095	-0.059	-0.058	-0.143	0.011	-0.088	0.250	0.237		
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.432	0.000	0.000	0.000		
Log (GDP pc)	0.028	0.041	0.014	0.027	0.050	0.005	0.070	0.026	0.027	0.008	-0.073	-0.208	
	0.108	0.020	0.413	0.132	0.000	0.739	0.000	0.062	0.059	0.592	0.000	0.000	
Regulatory quality	0.082	0.075	0.075	0.070	0.136	-0.017	0.259	-0.048	0.063	-0.180	-0.162	-0.282	0.724
	0.000	0.000	0.000	0.000	0.000	0.222	0.000	0.001	0.000	0.000	0.000	0.000	0.000

*Note:* P-values reported below correlation coefficients.

**Table 4. Determinants of Influence on the Government  
(ordered probit regressions, coefficients reported)**

	Extent of Influence Firms Have On: (1=never influential; 5=very influential)			
	Executive	Legislature	Ministries	Regulatory agencies
Company is owned by a foreign investor	0.039 (0.60)	-0.011 (0.17)	0.088 (1.49)	0.052 (0.83)
Company is owned by the government	0.294 (4.42)***	0.137 (1.61)*	0.257 (3.15)***	0.236 (2.81)***
Holding of the three largest shareholders	0.003 (2.43)**	0.002 (1.99)**	0.002 (1.95)*	0.003 (2.75)***
Size: Medium	0.339 (4.31)***	0.270 (3.34)***	0.304 (3.31)***	0.300 (3.59)***
Size: Large	0.663 (6.91)***	0.546 (5.30)***	0.622 (6.49)***	0.592 (6.03)***
Number of competitors	-0.129 (2.74)***	-0.114 (2.78)***	-0.107 (2.32)**	-0.083 (1.83)*
Manufacturing	0.246 (1.45)	0.189 (0.85)	-0.006 (0.03)	-0.042 (0.19)
Service	0.350 (1.88)*	0.222 (0.97)	0.052 (0.29)	0.077 (0.33)
Agriculture	0.257 (1.26)	0.145 (0.61)	-0.112 (0.58)	-0.045 (0.17)
Construction	0.235 (1.28)	0.125 (0.59)	-0.011 (0.06)	0.028 (0.12)
Regulatory quality	0.210 (2.25)**	0.154 (1.70)*	0.230 (2.97)***	0.159 (1.98)**
Log(GDP pc)	-0.159 (2.00)**	-0.092 (1.12)	-0.168 (2.55)**	-0.129 (1.88)*
Observations	3256	3258	3248	3197
Number of countries	53.00	53.00	53.00	53.00
Log pseudo likelihood	-3139.67	-3102.01	-3141.89	-3278.24
Pseudo R-sq	0.05	0.03	0.04	0.04
Chi-sq	189.48	73.97	141.08	144.32

Notes: Robust z statistics are in parentheses.

\* Significant at 10 percent; \*\* significant at 5 percent; \*\*\* significant at 1 percent.

**Table 5. Influence on the Government  
and Constraints for Firm Growth  
(ordered probit regressions, coefficients reported)**

	General Constraints for Growth:		
	Confidence in judicial system	Tax administration regulations	Taxes and regulations
Company is owned by a foreign investor	-0.048 (0.92)	-0.042 (0.61)	-0.181 (2.18)**
Company is owned by the government	-0.261 (3.47)***	-0.213 (2.30)**	-0.164 (2.05)**
Holding of the three largest shareholders	-0.000 (0.40)	-0.000 (0.29)	-0.002 (1.28)
Size: Medium	0.013 (0.24)	0.155 (2.90)***	0.177 (3.44)***
Size: Large	-0.034 (0.44)	-0.055 (0.80)	-0.040 (0.48)
Number of competitors	0.078 (1.51)	0.137 (3.35)***	0.174 (3.43)***
Manufacturing	0.006 (0.02)	0.687 (4.31)***	0.448 (2.12)**
Service	-0.015 (0.07)	0.698 (4.66)***	0.395 (2.07)**
Agriculture	-0.232 (0.90)	0.698 (3.50)***	0.384 (1.62)*
Construction	-0.007 (0.03)	0.856 (5.08)***	0.473 (2.30)**
Regulatory quality	-0.421 (3.55)***	-0.315 (3.61)***	-0.341 (2.75)***
Log(GDP pc)	0.036 (0.47)	0.101 (1.93)*	0.034 (0.45)
Influence on the executive	-0.067 (2.96)***	-0.043 (2.48)**	-0.046 (1.64)*
Observations	3220	3239	3241
Num. Of countries	53.00	53.00	53.00
Log pseudo likelihood	-5257.09	-4149.60	-3746.22
Pseudo R-sq	0.04	0.03	0.05
Chi-sq	120.84	152.76	185.11

*Notes:* Robust z-statistics are in parentheses.

\* Significant at 10 percent; \*\* significant at 5 percent; \*\*\* significant at 1 percent.

**Table 6. Influence on the Government  
and Constraints for Firm Growth  
(ordered probit regressions, selected coefficients reported)**

	General Constraints for Growth:		
	Confidence in judicial system	Tax administration regulations	Taxes and regulations
Influence on the legislature	-0.050 (2.12)**	-0.031 (1.78)*	-0.065 (2.25)**
Observations	3224	3241	3243
Number of countries	53.00	53.00	53.00
Pseudo R-sq	0.04	0.03	0.05
Influence on the ministries	-0.063 (2.50)**	-0.028 (1.62)*	-0.064 (2.29)**
Observations	3214	3231	3233
Num. of countries	53.00	53.00	53.00
Pseudo R-sq	0.04	0.03	0.05
Influence on regulatory agencies	-0.060 (2.02)**	-0.032 (1.83)*	-0.050 (1.73)*
Observations	3164	3180	3182
Num. of countries	53.00	53.00	53.00
Pseudo R-sq	0.04	0.03	0.05

*Notes:* All coefficients obtained from regressions similar to those reported on Table 5. Robust z-statistics are in parentheses clustered at the country level. \* Significant at 10 percent; \*\* significant at 5 percent; \*\*\* significant at 1 percent.

**Table 7. Overall Effect between Influence on Government and Regulatory Quality on Constraints for Firm Growth**

	General constraints for growth:		
	Confidence in judicial system	Tax administration regulations	Taxes and regulations
Influence on the executive	-0.063 (2.62)***	-0.037 (1.93)*	-0.046 (1.48)
Influence on the executive*(regulatory quality)	-0.016 (0.53)	-0.021 (0.99)	0.001 (0.03)
Overall effect of influence on the executive	-0.066 (2.87)***	-0.041 (2.26)***	-0.046 (1.60)*
Influence on the legislature	-0.046 (1.85)*	-0.024 (1.23)	-0.068 (2.04)**
Influence on the legislature *(regulatory quality)	-0.020 (0.77)	-0.28 (1.30)	0.008 (0.24)
Overall effect of influence on the legislature	-0.049 (2.08)**	-0.029 (1.64)*	-0.065 (2.22)**
Influence on the ministries	-0.056 (2.08)**	-0.022 (1.15)	-0.063 (2.07)**
Influence on the ministries *(regulatory quality)	-0.040 (1.42)	-0.030 (1.53)	-0.006 (0.18)
Overall effect of influence on the ministries	-0.064 (2.55)***	-0.027 (1.55)	-0.064 (2.26)**
Influence on regulatory agencies	-0.059 (1.78)*	-0.028 (1.41)	-0.061 (1.97)*
Influence on regulatory agencies *(regulatory quality)	-0.005 (0.14)	-0.019 (0.94)	0.044 (1.27)
Overall effect of influence on regulatory agencies	-0.06 (2.00)*	-0.031 (1.74)*	-0.052 (1.89)*

*Notes:* Robust z statistics are in parentheses. \* Significant at 10 percent; \*\* significant at 5 percent; \*\*\* significant at 1 percent. Coefficients estimated after ordered probit regressions. The specification is similar to the ones shown in Table 6, adding the interactive terms between the influence variable and the regulatory quality. The overall effects are evaluated at the mean value of the regulatory quality.

**Appendix. Table A.1**  
**Determinants of Influence on the Government**  
**(ordered probit regressions, marginal effects)**

	Extent of Influence Firms Have on the Executive (1=never influential; 5=very influential)				
	Pr[Y=1   X]	Pr[Y=2   X]	Pr[Y=3   X]	Pr[Y=4   X]	Pr[Y=5   X]
Company is owned by a foreign investor	-0.014 (-0.60)	0.006 (-0.60)	0.004 (0.59)	0.002 (0.59)	0.001 (0.59)
Company is owned by the government	-0.112 (-4.30) ***	0.043 (4.75) ***	0.035 (4.02) ***	0.020 (3.40) ***	0.014 (3.10) ***
Holding of the three largest SH	-0.001 (-2.45) ***	0.000 (2.43) **	0.000 (2.38) **	0.000 (2.35) **	0.000 (2.34) **
Size: Medium	-0.125 (-4.32) ***	0.053 (3.74) ***	0.038 (-4.700) ***	0.020 (3.87) ***	0.014 (3.93) ***
Size: Large	-0.254 (-6.85) ***	0.085 (6.34) ***	0.079 (7.02) ***	0.050 (4.86) ***	0.041 (4.27) ***
Number of competitors	0.047 (2.73) ***	-0.021 (-2.52) **	-0.014 (-2.84) ***	-0.007 (-2.62) ***	-0.005 (-2.77) ***
Manufacturing	-0.091 (-1.45)	0.038 (1.44)	0.028 (1.45)	0.015 (1.41)	0.010 (1.39)
Service	-0.128 (-1.91) *	0.055 (1.86) *	0.038 (1.93) *	0.020 (1.84) *	0.014 (1.87) *
Agriculture	-0.097 (-1.23)	0.038 (1.33)	0.030 (1.23)	0.017 (1.12)	0.012 (1.07)
Construction	-0.089 (-1.25)	0.035 (1.34)	0.027 (1.24)	0.015 (1.15)	0.011 (1.11)
Regulatory quality	-0.077 (-2.24) **	0.034 (2.17) **	0.023 (2.26) **	0.012 (2.15) **	0.008 (2.23) **
Log(GDP pc)	0.058 (1.97) **	-0.026 (-1.97) *	-0.017 (-1.96) **	-0.009 (-1.87) *	-0.006 (-1.87) *

*Notes:* The number of observations is 3,256 in 53 countries, the Log-likelihood is -3139.67, the Pseudo-R-squared is 0.05, and the corresponding Chi-Squared is 189.48. The marginal coefficients shown in this table come from the regression shown in the Firms column of Table 4. Robust z-statistics are in parentheses. Standard errors are clustered at the country level. \* Significant at 10 percent; \*\* significant at 5 percent; \*\*\* significant at 1 percent.

**Appendix: Table A.2**  
**Influence on the Government and Constraints for Firm Growth**  
**(Ordered probit regressions, marginal effects)**

	Confidence in the Judicial System Today					
	Pr[Y=1   X]	Pr[Y=2   X]	Pr[Y=3   X]	Pr[Y=4   X]	Pr[Y=5   X]	Pr[Y=6   X]
Company is owned by a foreign investor	0.007 -0.890	0.008 (0.91)	0.004 (0.97)	-0.005 (-0.88)	-0.007 (-0.92)	-0.007 (-0.95)
Company is owned by the government	0.042 (2.90)***	0.046 (3.48)***	0.012 (2.21)**	-0.031 (-3.15)***	-0.037 (-3.51)	-0.032 (-4.01)***
Holding of the three largest shareholders	0.000 (0.41)	0.000 (0.4)	0.000 (0.39)	0.000 (-0.40)	0.000 (-0.4)	0.000 (-0.4)
Size: Medium	-0.002 (-0.23)	-0.002 (-0.24)	-0.001 (-0.24)	0.001 (0.24)	0.002 (0.24)	0.002 (0.24)
Size: Large	0.005 (0.44)	0.006 (0.44)	0.003 (0.45)	-0.004 (-0.43)	-0.005 (-0.44)	-0.005 (-0.45)
Number of competitors	-0.011 (-1.41)	-0.014 (-1.50)	-0.006 (-1.62)*	0.008 (1.5)	0.011 (1.51)	0.011 (1.52)
Manufacturing	-0.001 (-0.02)	-0.001 (-0.02)	0.000 (-0.02)	0.001 (-0.02)	0.001 (0.02)	0.001 (0.02)
Service	0.002 (0.07)	0.003 (0.07)	0.001 (0.07)	-0.002 (-0.07)	-0.002 (-0.07)	-0.002 (-0.07)
Agriculture	0.037 (0.76)	0.041 (0.92)	0.011 (2.32)**	-0.027 (-0.81)	-0.033 (-0.94)	-0.029 (-1.07)
Construction	0.001 (0.03)	0.001 (0.03)	0.001 (0.03)	-0.001 (-0.03)	-0.001 (-0.03)	-0.001 (-0.03)
Regulatory quality	-0.005 (-0.48)	-0.006 (-0.47)	-0.003 (-0.46)	0.004 (0.47)	0.005 (0.47)	0.005 (0.47)
Log(GDP pc)	0.059 (3.79)***	0.074 (3.53)***	0.033 (2.26)**	-0.044 (-3.49)***	-0.062 (-3.41)***	-0.060 (-3.43)***
Influence on the executive	0.009 (3.13)***	0.012 (2.92)***	0.005 (2.10)**	-0.007 (-2.88)***	-0.010 (-3.02)***	-0.010 (-2.81)***

The number of observations is 3,220 in 53 countries, the Log-likelihood is -5257.09, the Pseudo-R-squared is 0.04, and the corresponding Chi-Squared is 120.84. The marginal coefficients shown in this table come from the regression shown in the Firms column of Table 5. Robust z-statistics are in parentheses. Standard errors are clustered at the country level. \* Significant at 10 percent; \*\* significant at 5 percent; \*\*\* significant at 1 percent.