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Firm lobbying and influence in developing countries: a multilevel approach

Abstract: A large literature examines corporate political activity in the United States, but much less is known about firms' lobbying activities and policy influence in developing countries. I argue that firm-level heterogeneity helps explain firms' political behavior, while political institutions shape policymakers' incentives to respond to business interests. The empirical analysis relies on the World Bank's Enterprise Survey, which covers over 20,000 firms operating in 42 developing and transition countries, to examine the determinants of lobbying and perceived policy influence. Multilevel estimates support the hypotheses that lobbying and influence increase with the firm's size and market power. Additionally, I find that firms report greater policy influence in democracies than in non-democracies.

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1 Introduction

That firms seek to influence government policy in diverse institutional settings around the world is without dispute. Still, many related questions remain unresolved, such as: Why do some firms lobby the government while others do not? What factors explain variation in firms' policy influence? These questions ignite scholarship in many fields, but direct tests of the determinants of firms' lobbying behavior and policy influence are rare due to inherent obstacles in measuring political activities and their effectiveness (Bonardi et al. 2006). Researchers attempt to overcome these constraints using data on lobbying expenditures and political action committee (PAC) contributions in the United States (Masters and Keim 1985; Grier et al. 1994; Mitchell et al. 1997; Kim 2008; Lux et al. 2011), but in most developing countries, contributions and other political activities are not reported. As a result, we have very little quantitative evidence on the factors driving firms' nonmarket strategies in the developing world.

This paper makes two main contributions. First, I argue that firm-level heterogeneity helps explain political activities and their effectiveness. My theoretical framework draws inspiration from new research in economics that shows substantial intra-industry variation in firms' market and nonmarket behavior. For instance, firm size and productivity influence global trade and investment strategies (Bernard and Jensen 1999; Melitz 2003; Antrás and Helpman 2004). In the nonmarket arena, Chen (2012) shows that firm-level heterogeneity determines the nature of firms' engagement with government officials in China. The empirical results reported in this paper demonstrate that a number of firm-specific characteristics, notably size and market power, correlate with lobbying and its effectiveness in the developing world. Second, drawing on insights from institutional economics and political science, I argue that the institutional environment shapes policymakers' incentives to respond to business interests. Exploiting the substantial institutional heterogeneity across developing countries, I uncover systematic empirical correlations between country-level institutions and firms' lobbying behavior and policy influence.

The empirical section of the paper tests the determinants of lobbying and policy influence using firm-level survey data. I rely on the World Bank's Enterprise Survey, which covers over 21,000 firms across 42 developing and transition countries. Firms are asked specific questions regarding their lobbying activities, as well as their perceived influence over policy.[1] My empirical strategy complements more indirect approaches, which attempt to measure the efficacy of political strategies by relating policy outcomes to the structural characteristics or campaign contributions of specific firms, industries, or PACs.

I estimate multilevel statistical models to better identify the firm- and country-specific determinants of political behavior and influence. Multilevel (or hierarchical) models explicitly account for the fact that firms operating in the same country are embedded in a common political and economic environment (Hitt et al. 2007). My models capture unobserved country-specific variation through the inclusion of country-level random intercepts, while enabling tests of the relative importance of observable firm- and national-level determinants of political behavior and influence.

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1 This paper is the first to exploit this rich source of data to explore the determinants of lobbying. Related research by Macher et al. (2011) and Chong and Gradstein (2010) studies firms' influence using the World Bank's World Business Environment Survey (WBES), a precursor to the Enterprise Survey that I analyze in this paper. Inspired by these contributions, I extend the research to explicitly model the determinants of lobbying along with the determinants of influence. Furthermore, my extension incorporates multilevel models, and includes a much larger set of firms than those covered by the WBES.

The empirical results contribute to our understanding of business-government relations in developing countries. Consistent with existing work on corporate lobbying in the United States, multilevel estimates that control for firm-, sector-, and country-level heterogeneity support the hypotheses that lobbying and political influence increase with the firm's size and market power. I also find that the share of government ownership, the degree of international orientation, and firms' participation in business associations correlate with lobbying and its effectiveness. Second, the results indicate that the political and institutional setting shapes corporate political activities. In particular, I find strong support for the hypothesis that firms exert greater policy influence in democracies than in autocracies. The results also indicate that lobbying correlates with volatility in the policy environment: firms appear more likely to engage in political strategies in countries where regulatory policy is less stable.

The paper proceeds as follows. The next section introduces the theoretical framework and develops testable hypotheses. The third section explains the empirical strategy. I present the results of multilevel models of lobbying and influence in the fourth section. The final section concludes.

2 The determinants of lobbying and political influence

My political economy theoretical framework examines the political market for policy, in which policy outcomes are subject to the forces of supply and demand (Hillman and Keim 1995; Bonardi et al. 2005; Naoi and Krauss 2009). On the demand side, firms and other social actors seek policies that favor their interests. In order to achieve their goals, these policy "demanders" may lobby the government using their available resources. Lobbying is the process of offering campaign contributions, bribes, or information to policymakers for the purpose of achieving favorable policy outcomes (Denzau and Munger 1986; Grossman and Helpman 1994; Hall and Deardorff 2006). Policy "suppliers" are candidates, elected leaders, and de facto rulers who advocate and pursue a set of policies that maximize their probability of achieving or maintaining political power.

Corporate political activity (CPA) is defined as proactive actions taken by firms to influence the policy market in ways that increase the expected profits of the firm (Baysinger 1984). Thus, firms' CPA, like firms' market strategies, is subject to cost-benefit analysis (Baron 1995). With profits defined as revenues minus costs, profit maximization implies that an individual firm will engage in lobbying and other CPA if the expected outcome of the activity is an increase in

revenues or a reduction in costs (Hansen and Mitchell 2000). The actual influence that a firm exudes over policymaking depends on the stake that the firm has in the policy outcome, as well as its ability to persuade policymakers to adopt policies that favor the firm.

Political strategies can be directed toward increasing revenue and lowering costs through a number of channels, and the specific strategy that a firm pursues will often depend on the characteristics of the firm and institutional features of the country which it operates. In this section, I discuss a number of firm- and country-level determinants of firms' political strategies and their effectiveness.

2.1 Firm-level factors

This section develops hypotheses relating firms' size and market power to lobbying activity and political influence.

First, following a growing literature, I expect that the political influence of the firm increases in its size (Salamon and Siegfried 1977; Lenway and Rehbein 1991; Boddewyn and Brewer 1994; Alt et al. 1999; Schuler et al. 2002; Chong and Gradstein 2010; Kerr et al. 2011; Macher and Mayo 2012). Looking at the effects of size on the supply side of policy, one reason to expect that larger firms will be more active and influential in their nonmarket efforts is that larger firms offer greater potential payoffs to support-maximizing politicians. Indeed, if the size of the firm is measured by the number of employees, larger firms provide politicians with a greater pool of potential support, increasing the incentives of politicians to provide favorable policies (Alt et al. 1999; Hillman 2003). To the extent that these policies increase jobs and policymakers have incentives to reduce unemployment, firms' expectations of lobbying success, and thus the payoffs to their lobbying effort, will increase with their size (Alt et al. 1999).

On the demand side, there are several reasons to expect that larger firms will be more politically active and influential. As Macher and Mayo (2012) note, firm size is often a proxy for available resources, and firms with greater resources are better able to engage policymakers. Furthermore, Macher et al. (2011) suggest that size may directly affect the costs of the lobbying effort, which, like other types of strategic investment, is subject to economies of scale considerations. These authors argue that smaller firms often lack sufficient scale to cover a lobbying infrastructure characterized by fixed costs. Kerr et al. (2011) note many of the potential up-front costs to lobbying, which include:

> *learning the complex laws about lobbying; educating newly hired lobbyists about the details of the firm's interests, characteristics, and vulnerabilities; developing a lobbying agenda;*

researching what potential allies and opponents are lobbying for; and investigating how best to attempt to affect the political process (e.g., in which policy makers to invest). (p. 3)

Consider, for example, a firm that raises money for contributions to a PAC. Bigger firms have more employees from which to raise these funds, and are thus better able to pay the startup costs related to the formation of the PAC (Grier et al. 1994). For smaller firms, the costs of organizing to lobby may simply outweigh the benefits, especially if the benefits of lobbying fall disproportionately on large firms (Kerr et al. 2011). For these reasons, large firms will be more likely to lobby and to exert influence over policy.

A second hypothesis is that firms with market power will be more politically active and influential. The argument builds on Olson (1965), who explains that the costs of lobbying depend on the number of actors that stands to gain from the lobbying effort. When groups compete for collective goods (such as a subsidy to a particular industry), smaller groups are "privileged" because the per-unit benefits of obtaining the good are higher, and the costs of organization are lower, compared with larger groups. This logic informs a number of studies examining the hypothesis that firms operating in concentrated industries are more likely to lobby because the costs of organizing are lower and the per-firm benefits of a policy subsidy are higher (Grier et al. 1994; Schuler et al. 2002; Ozer and Lee 2009; Macher et al. 2011).[2]

Following the literature that links industry concentration to CPA, I predict that the political "weight" of the firm increases with its market power, a firm-level analogue to industry concentration. Market power exists when a firm can restrict output and raise prices without inducing competitors to offer similar products at lower prices. A firm with market power is able to charge a price that exceeds marginal cost without losing customers to competitors.

Market power generates powerful incentives for firms to seek influence over economic and regulatory policy (Tullock 1967). For instance, incumbent oligopolists may push for expansive licensing requirements and other forms of entry regulations in order to restrict competition (Djankov et al. 2002). More indirectly, dominant incumbent firms may oppose financial sector regulatory reforms, since the development of deep and stable financial markets may enable otherwise

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2 Interestingly, the empirical support for the link between industry concentration and political activity is mixed (Ozer and Lee 2009). One of the earliest cross-national tests of the relationship between industry concentration and political activity is Kennelly and Murrell (1991), who find no evidence that interest groups are more prevalent in concentrated industries using data from 10 countries. However, studying the U.S. case, Grier et al. (1994) show that contributions to political action committees (PACs) are higher among more concentrated industries.

financially-constrained entrepreneurs to enter the market (Rajan and Zingales 2003). Additionally, firms with market power may gain substantial benefits by restricting foreign sources of competition, and will therefore pursue tariffs and other restrictions on international trade and investment (Grossman and Helpman 1994).

Since dominant firms can use their available resources to influence policy-makers through various forms of monetary persuasion (Schuler 1996; De Figueiredo and De Figueiredo 2002), the direct link between market power and political power is clear: economic rents translate into political influence through campaign contributions, bribes, or other forms of CPA. The argument holds even if one takes the view that lobbying is not a means of exchanging money for policy, but that lobbying instead serves to subsidize like-minded legislators (Hall and Deardorff 2006). A firm with market power can use rents extracted from its favorable market position to contribute to, or perhaps to subsidize, political leaders in the pursuit of policies that extend its ability to extract rents into the future. The observable outcome is that firms with market power will be more active and influential in the policymaking process.

2.2 Country-level factors

Beyond their place within specific industries, firms are embedded in unique institutional environments that shape the behavior of social actors, including firms and policymakers (DiMaggio and Powell 1983; North 1991). Several recent contributions show that country-level institutions affect the incentives of policymakers to respond to corporate interests (Hillman and Keim 1995; Hillman and Hitt 1999; Bonardi et al. 2005; Hillman and Wan 2005; Macher et al. 2011). I highlight the impact of democratic and regulatory institutions in particular.

The effect of democratic political institutions on CPA potentially operates through multiple channels. First, consider the process of democratization as an expansion of the selectorate, or the portion of the population that participates in choosing the political leadership (Bueno de Mesquita et al. 2003). Policymakers compete for the support of the minimum winning coalition, a subset of the selectorate whose support is required for the leadership to maintain political power. As the selectorate expands with democracy, firms are likely to be incorporated into the minimum winning coalition; and as a result, their perceived influence on policy should grow. Second, democracies are more likely than autocracies to allow interest groups, including firms, to freely organize and to voice their policy preferences. Third, democracies are characterized by greater institutional checks and balances, or veto players, which represent constraints on executive

policymaking discretion (North and Weingast 1989; Henisz 2000; Shugart and Haggard 2000; Cox and McCubbins 2001; Tsebelis 2002). Recent research suggests that veto players provide entry points into the policymaking process for a variety of social actors, such that the potential opportunities for influencing policy increase with the number of veto players in government (Macher et al. 2011). As a result of these institutional characteristics of democratic governance, I expect firm lobbying and influence will be more likely in democracies than in autocracies.

A second set of relevant institutions define the regulatory rules of the game. Regulatory institutions engender political conflict since they create winners and losers through their impact on market access and the costs associated with doing business (Stigler 1971; Peltzman 1976). We would therefore expect that the regulatory environment affects CPA and firms perceived influence over policy outcomes.

To increase analytical tractability, I focus on a form of regulation with clear distributional implications. Entry regulations, or the costs associated with starting a business, have been analyzed in detail beginning with De Soto (1989), and extended to a global sample by Djankov et al. (2002). This work shows that higher startup costs, often measured as the number of days required to comply with the legal requirements to start a business, are associated with slower employment growth (Bertrand and Kramarz 2002) and reduced total factor productivity (Barseghyan 2008). However, entry regulations also create winners, since they shield incumbent firms from competition by new entrants (Klapper et al. 2006; Ciccone and Papaioannou 2007). To the extent that high startup costs reflect an uncompetitive economy dominated by entrenched interests, they may be associated with a higher level of perceived influence among incumbent firms.

Another aspect of the regulatory and policy environment to elicit significant scholarly attention is its overall predictability and stability (Henisz 2000; Cox and McCubbins 2001; Keefer and Stasavage 2002; Tsebelis 2002). While volatile policy environments are associated with lower overall institutional quality (Panizza 2001) and slower economic growth (Fatas and Mihov 2012), their impact on CPA is not well understood. One view is that a volatile policy environment generates incentives for firms to lobby to the extent that the potential policy swings impact firms' profitability. However, if policy is too unpredictable, then firms may decide not to invest in CPA at all. Similarly, if the causal mechanism linking veto players to firms' perceived influence (Macher et al. 2011) operates through the stability that that these institutions impose on policy (Tsebelis 2002), we would expect firms' perceived influence to be higher in more stable policy environments.

I now turn to the data to test how firm characteristics and institutional heterogeneity shape lobbying and influence in the developing world.

3 Data and methods

The empirical models rely on data from the World Bank's Enterprise Survey, which covers a broad range of business environment topics including corruption, infrastructure, competition, and performance. Private contractors hired by the World Bank conduct face to face interviews with firm owners and managers in emerging market and developing countries.[3] The Enterprise Survey began in 2002, and my analysis draws on the standardized iteration conducted over the period 2002–2005. The sample includes up to 21,257 respondents in 42 countries.

To measure the determinants of lobbying and perceived influence over policy, I use responses from a portion of the survey designed to probe the relationship between the firm and the government of the country in which it operates. Respondents were prompted to think about national laws and regulations enacted in the last two years that had a substantial impact on their business. The first question, which I label *Lobby* asks:

> *Did your firm seek to lobby government or otherwise influence the content of laws or regulations affecting it?*

Responses are binary and coded 0=no, 1=yes. The average value of *Lobby* indicates that 15% of firms in the sample of developing countries reported that they lobbied the government, which is slightly higher than the 10% of publically traded firms that lobby in the U. S., according to Kerr et al. (2011).

The follow-up question measures the perceived influence of the firm on national laws and regulations. The variable *Political Influence* represents firm-level responses to the following question:

> *How much influence do you think [your firm] actually had on recently enacted national laws and regulations that have a substantial impact on your business? (0=No impact, 1=Minor influence, 2=Moderate influence, 3=Major influence, 4=Decisive influence)*

The unique structure of the cross-national survey data has important implications for my research design. The units of observation are firms, but firms in the same country are clustered within a common institutional and economic environment. As a result, the standard assumption of independent observations is likely

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3 The Enterprise Survey and its precursor, the World Business Environment Survey, have been used to study a range of topics, including property rights (Ayyagari et al. 2008; Weymouth and Broz 2013), exchange rate policy attitudes (Broz et al. 2008), banking sector regulations (Demirgüç-Kunt et al. 2008), bribes (Martin et al. 2007), and corruption (Fan et al. 2009).

violated due to correlation of the error terms among firms operating within the same country. It is possible to alleviate this source of bias and exploit the richness of the data by estimating a multilevel model (Rabe-Hesketh and Skrondal 2008). Multilevel (or hierarchical) models allow for dependence among the responses of units (i.e., firms) operating within the same cluster (i.e., country); they also allow us to decompose the variance in the individual responses to assess the proportion explained by country-level predictors.[4]

To get a sense of the structure of the data, I begin by estimating a variance components model. The purpose of the model is to estimate within-country correlations in survey responses. Following the discussion in Rabe-Hesketh and Skrondal (2008, Chapter 2), consider the firm-level survey response y_{ij} for firm i operating in country j. This response can be modeled without covariates as:

$$y_{ij} = \beta + \phi_{ij} \tag{1}$$

where β is the population mean response, and the residual or error term is represented by ϕ_{ij}. The model in expression 1 assumes that the errors are independent over countries and firms, which is unlikely the case.

I model the dependence among firms in the same country by splitting ϕ_{ij} into two components: ζ_j, the random effect (or random intercept) specific to each country j, which I assume has a population mean equal to zero and a variance ψ; and the term ε_{ij}, a firm-specific component, which also has a population mean equal to zero and a variance θ. A simple two-level model of each firm's response is:

$$y_{ij} = \beta + \zeta_j + \varepsilon_{ij} \tag{2}$$

where the random intercept ζ_j is shared among firms operating within the same country, and ε_{ij} is unique to each firm i.

The total variance $Var(y_{ij})$ is the sum of the variance components:

$$Var(y_{ij}) = Var(\beta + \zeta_j + \varepsilon_{ij}) \tag{3}$$

Since $Var(\beta) = 0$ by assumption, the total variance $Var(y_{ij})$ is equal to $Var(\zeta_j + \varepsilon_{ij})$. I can then compute the proportion of the total variance represented by country-level variance as:

$$\rho = Var(\zeta_j)/Var(y_{ij}) = \psi/(\psi + \theta) \tag{4}$$

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4 See, for example, Martin et al. (2007), who apply multilevel methods in their analysis of the WBES survey to identify the determinants of bribery.

Since no covariates are present in this model, I refer to ρ as the unconditional intraclass correlation; ρ can be thought of as the fraction of the total variance that is explained by country-level factors. In this way, ρ provides a measure of the extent of between-country heterogeneity.

Table 1 reports the results of variance components estimations of both of the dependent variables, *Lobby* and *Political Influence*. The models suggest that country-level factors explain approximately 6% of the variance in the incidence of lobbying, and 8% of the heterogeneity in firms' political influence. These results underscore the salience of firm-level determinants of lobbying and perceived influence.

The first set of models estimated in the following section examine the determinants of the variable *Lobby*. The empirical strategy relies on a latent variable formulation of the statistical model. In particular, consider the observed decision of firm i in country j to lobby y_{ij} as taking a value of 1 (lobbying occurs) if the excess utility from lobbying as compared to not lobbying is positive. That is,

$$y_{ij} = \begin{cases} 1 & \text{if } y_{ij}^* > 0\,; \\ 0 & \text{otherwise}\,. \end{cases} \tag{5}$$

where y_{ij}^* is the unobserved (latent) continuous variable representing the excess utility of lobbying as compared to not lobbying the government.

I estimate the following multilevel probit model:

$$y_{ij}^* = \beta + F_{ij}'\gamma + C_j'\delta + \zeta_j + \varepsilon_{ij} \tag{6}$$

where F_{ij} represents the firm-level independent variables, and the vector C_j contains the country-level institutional and economic variables. The parameter ζ_j is

Table 1 Variance components estimates.

	Lobby	**Political Influence**
Fixed Part		
β	0.174	0.454
Random Part		
ψ	0.008	0.066
θ	0.123	0.727
ρ	0.061	0.083
Observations	21,257	9252
Countries	42	36
Log likelihood	−7971.408	−11703.898

Note: The table presents the results of variance components models of two dependent variables: *Lobby* and *Political Influence*.

the country-specific random intercept, which is independent across countries j. The random intercept can be interpreted as the combined effect of unobserved country-specific factors that make lobbying (or influence) more likely in some countries than in others. Following Rabe-Hesketh and Skrondal (2008), the models are estimated using maximum likelihood with adaptive quadrature.

To test my main firm-level hypotheses, I include two responses from the survey. Following the literature, I use the logged number of employees (*Workers*) to test the effect of firm size on political activity and influence. To examine the effects of market power, the models incorporate the best proxy for the firm's market power available in the dataset. Specifically, the variable *Market Power* represents the response to the following question from the Enterprise Survey:

> *Now I would like to ask you a hypothetical question. If you were to raise your prices of your main product line or main line of services 10% above their current level in the domestic market (after allowing for any inflation) which of the following would best describe the result assuming that your competitors maintained their current prices? (1. Our customers would stop buying from us; 2. Our customers would continue to buy from us, but at much lower quantities; 3. Our customers would continue to buy from us, but at slightly lower quantities; 4. Our customers would continue to buy from us in the same quantities as now).*

All of my specifications include additional firm-level variables to account for alternative hypotheses developed in the literature. One potentially important driver of firms' political activities and influence is the age of the enterprize. Hall and Deardorff (2006) argue that firms lobby to enforce a contract with politicians who are sympathetic to the firm's goals. Repeated interaction improves the monitoring and enforcement of this contract (Greif et al. 1994; Naoi and Krauss 2009). Since older firms have an advantage of repeated interactions, the costs of monitoring may decrease with the age of the firm. With these arguments in mind, all models include the logged age of the firm.

Other studies show that firms' relationships with the government affects their stake in policy outcomes, which in turn affect lobbying behavior (Esty and Caves 1983). Hall and Deardorff (2006) conceive of lobbying not as a form of exchange (i.e., money for policy) or persuasion, but instead as a legislative subsidy: interest groups lobby to assist natural allies in achieving common policy objectives, rather than to change their minds. Their theory predicts that the confluence of interests between firms and policymakers explain lobbying activity and influence. I account for this relationship with two variables. One is a measure of the share of the firm owned by the government; the second accounts for the share of total sales that are made to the government.

Exposure to and reliance upon international markets may also drive political behavior. For instance, Masters and Keim (1985) show that firms subject to trade

regulations are more likely to lobby. Others argue that firms operating in diverse international markets are more likely to seek policy favors from the government (Sundaram and Black 1992). I account for firms' exposure to international markets with three variables: the share of foreign ownership, and dummy indicators for exporters and for firms with international operations.

Additionally, firms may be more likely to pursue political strategies to the extent that they can overcome free-rider problems that otherwise deter groups from engaging in collective political action (Olson 1965). For instance, firms that have overcome the initial hurdle of collective action by organizing a business or trade association may be more politically active and influential for a few reasons. First, as members of a business association, firms will likely have greater information about the costs and benefits of a particular policy. Second, business associations may address the problem of free-riding by threatening sanctions for firms that do not engage in the political process in ways beneficial to other members of the group (Greif 2006). Finally, through their representation of multiple firms, business associations provide a source of political support for vote-maximizing politicians. Membership within a business association may thereby increase the political activity and influence of the firm. I test this proposition by introducing a dummy variable *Business Association Member* that captures whether the firm is a member of a "business association or chamber of commerce".

Finally, I control for a number of idiosyncratic sources of political activity and influence. Since the sector in which the firm operates may affect political behavior, I include a series of sectoral fixed effects in all of my specifications.[5] Publicly-owned firms are subject to pressures from external shareholders, and so I include a dummy indicator that equals one if the firm is publicly listed on an exchange. I also introduce a variable measuring the share of inputs from domestic sources to capture how domestic regulation may indirectly affect the firm through supplier channels. Finally, since physical proximity to policymakers may affect the costs of lobbying, I include a dummy variable to account for firms located in a capital city.

At the country-level, the empirical tests attempt to differentiate among the multiple democratic channels of CPA and influence using three distinct variables that measure different aspects of democracy. From the Freedom House dataset, the variable *FH Political Rights* captures freedom of political participation, including the right to vote in contested elections; the variable *FH Civil Liberties* measures freedom of expression, associational rights, and the rule of law. The variable

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5 The sectoral categories are: services, agriculture, construction, and other. Manufacturing is the (omitted) reference category.

Political Constraints, developed by Henisz (2000), measures the number of veto players in the government.[6]

I examine the hypothesis that the regulatory environment shapes firms' non-market behavior using the following data. To examine the specific impact of entry regulation, I include the logged number of days to start a business.[7] To examine the relationship between regulatory predictability, lobbying, and influence, I incorporate firms' responses to the following question:

> *In general, government officials' interpretations of regulations affecting my establishment are consistent and predictable. To what extent do you agree with this statement? (1. Fully disagree to 6. Fully agree)*

My models also include a series of country-level economic control variables, each of which is averaged over the period of the survey, 2002–2005.[8] To test whether differences in economic development and recent economic performance affect lobbying and influence, I include *GDP/capita* and *GDP/capita Growth*. I also include a measure of the size of the country (*Population*), and its exposure to international markets, as measured by the value of imports and exports as a share of GDP (*Trade*).[9]

The models of *Political Influence* include the same set of covariates as the *Lobby* specifications; the only difference is that I estimate the multilevel model using ordered probit due to the ordinal nature of the responses to *Political Influence*.

Summary statistics for all variables in the study appear in Table 2. Table 3 is a correlation matrix.

4 Empirical results

In this section, I report the results of various multilevel models of firms' lobbying activities and perceived policy influence. The models that I estimate extend the variance components models to include observable firm-, sector-, and country-level explanatory variables. The multilevel models include country random intercepts to account for dependence among firms operating in the same country. I model the determinants of *Lobby* and *Political Influence* in turn.

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6 The political variables are averaged over the period of the survey, 2002–2005.
7 The data are from the World Bank's Doing Business Database, and correspond to the year 2004.
8 These variables come from the World Development Indicators.
9 The variables *GDP/capita* and *Population* are logged.

Table 2 Summary statistics.

Variable	n	Mean	SD	Min	Max
Lobby	21,257	0.153	0.360	0	1
Political influence	9252	0.460	0.883	0	4
Publicly listed	21,257	0.064	0.245	0	1
Age	21,257	2.767	0.610	1.609	5.583
Government ownership (%)	21,257	8.499	26.643	0	100
Sales to government (%)	21,257	5.927	17.741	0	100
Foreign ownership (%)	21,257	9.156	26.387	0	100
Exporter	21,257	0.170	0.376	0	1
Multinational	21,257	0.077	0.267	0	1
Domestic inputs (%)	21,257	72.409	36.866	0	100
Located in capital city	21,257	0.299	0.458	0	1
Market power	21,257	2.414	1.097	1	4
Business association member	21,257	0.474	0.499	0	1
Workers	21,257	3.138	1.585	0.693	10.363
Policy predictability	20,573	3.312	1.444	1	6
GDP/capita growth	41	5.514	2.983	-0.093	13.623
GDP/capita	41	7.619	1.341	5.222	10.271
Population	41	16.105	1.226	13.364	18.787
Trade	41	93.542	31.497	43.766	156.843
Entry regulations	39	3.744	0.535	2.773	4.736
FH political rights	40	4.963	2.031	1	7
FH civil liberties	40	5.025	1.563	1.750	7
Political constraints	40	0.336	0.172	0.000	0.558

Note: The table presents summary statistics for all variables used in the paper. Variable definitions and sources appear in the text.

4.1 Determinants of lobbying

I estimate the determinants of *Lobby* and report the results in Table 4. First, I note that the estimates provide strong support for the firm-level hypotheses developed in this paper and elsewhere. The estimates reported in Column 1 suggest that market power significantly increases the probability that a firm lobbies the government.[10] The estimated coefficient implies that market power increases the average predicted probability that a firm lobbies by around

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10 The survey question is designed to capture market power, but responses are likely correlated with industry concentration. Thus, the findings do not completely distinguish between these two related explanations. I thank an anonymous reviewer for raising this point.

Table 3 Correlations.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
(1) Lobby	1																						
(2) Political influence	0.3322*	1																					
(3) Publicly listed	0.0800*	0.0127	1																				
(4) Age	0.1527*	0.0822*	0.2276*	1																			
(5) Government ownership (%)	0.1474*	0.0993*	0.5525*	0.3173*	1																		
(6) Sales to government (%)	0.0737*	0.0268	0.0572*	0.0876*	0.2329*	1																	
(7) Foreign ownership (%)	0.0804*	0.0300*	-0.0382*	-0.0378*	-0.0969*	-0.0325*	1																
(8) Exporter	0.1204*	0.0623*	0.0419*	0.1602*	0.0259*	-0.0045	0.1986*	1															
(9) Multinational	0.0936*	0.0615*	0.0241*	0.0845*	-0.0193*	0.0038	0.2999*	0.2667*	1														
(10) Domestic inputs (%)	-0.1000*	-0.0363*	0.0131	-0.0069	0.0577*	0.0089	-0.2155*	-0.1753*	-0.1557*	1													
(11) Located in capital city	0.0727*	0.0243	0.0013	-0.0213*	-0.0021	0.0430*	0.1300*	0.0410*	0.1098*	-0.1650*	1												
(12) Market power	0.0409*	0.0377*	0.0594*	0.0053	0.1134*	0.0483*	0.0090	0.0243*	0.0160	0.0048	0.0349*	1											
(13) Business association member	0.1924*	0.0790*	0.0807*	0.2268*	0.0059	-0.0296*	0.0905*	0.1816*	0.1210*	-0.0639*	0.0184*	-0.0007	1										
(14) Workers	0.2443*	0.1580*	0.2490*	0.3942*	0.3230*	0.1578*	0.1906*	0.3241*	0.2277*	-0.1047*	0.0712*	0.0597*	0.2264*	1									
(15) GDP/capita growth	0.0339*	-0.0374*	-0.0023	-0.1567*	0.0846*	0.0978*	0.0159	-0.0269*	-0.0491*	-0.0696*	0.1644*	0.0691*	-0.2755*	0.0753*	1								
(16) GDP/capita	-0.0758*	-0.0562*	-0.0534*	0.1339*	-0.0862*	-0.1225*	-0.0159	0.0358*	0.0160	0.0595*	-0.1346*	-0.0717*	0.2715*	-0.1299*	-0.5689*	1							
(17) Population	-0.1318*	-0.0672*	-0.0231*	-0.0135	-0.0203*	-0.0148	-0.0269*	-0.0560*	-0.0377*	0.1836*	-0.2062*	0.0081	0.0313*	0.0000	-0.2473*	0.1804*	1						
(18) Trade	0.0613*	-0.0407*	-0.0407*	-0.0917*	0.0092	0.0323*	0.0335*	0.0458*	0.0124	-0.1239*	0.0906*	-0.0173	-0.2024*	0.0048	0.3136*	-0.1897*	-0.5110*	1					
(19) Entry regulations	-0.0330*	0.0284	0.0790*	0.0030	-0.0156	-0.0101	0.0013	0.0160	0.0407*	-0.0101	0.0158	-0.0160	0.0518*	0.0082	-0.0966*	-0.0085	0.0398*	0.1550*	1				
(20) FH political rights	-0.0128	0.0078	-0.0102	0.1625*	-0.0658*	-0.1737*	-0.0029	0.0749*	0.0383*	0.0043	-0.0813*	-0.0774*	0.2523*	-0.1111*	-0.5283*	0.7723*	-0.1068*	-0.0579*	-0.0723*	1			
(21) FH civil liberties	-0.0112	0.0220	-0.0111	0.1696*	-0.0672*	-0.1722*	-0.0053	0.0687*	0.0390*	0.0078	-0.1005*	-0.0786*	0.2521*	-0.1100*	-0.5615*	0.7931*	-0.0813*	-0.0496*	-0.0360*	0.9723*	1		
(22) Political constraints	0.0245*	0.0711*	-0.0230*	0.1213*	-0.0587*	-0.1437*	-0.0094	0.0565*	0.0192*	0.0035	-0.004	-0.0452*	0.2070*	-0.0961*	-0.3435*	0.4824*	-0.2193*	-0.0503*	-0.1612*	0.8032*	0.7950*	1	
(23) Policy predictability	-0.0355*	0.0552*	0.0276*	0.0481*	0.0736*	0.0352*	-0.0033	0.0051	0.0139	0.0476*	-0.0128	0.0555*	0.0580*	0.0629*	-0.0626*	0.0747*	0.0095	0.0083	0.0629*	0.0058	0.0237*	0.0118	1

Note: The table presents the correlation coefficients for all variables used in the paper. Variable definitions and sources appear in the text.

Table 4 Determinants of Lobbying (Multilevel Probit Estimates).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Full sample	Full sample	Full sample	Full sample	Full sample	Democracies	Autocracies	Full sample	Full sample
Services	0.162***	0.255***	0.263***	0.263***	0.262***	0.282***	0.191***	0.279***	0.264***
	(0.025)	(0.026)	(0.026)	(0.026)	(0.026)	(0.031)	(0.049)	(0.027)	(0.027)
Agriculture	0.238**	0.248**	0.275***	0.272***	0.274***	−0.154	0.315***	0.247**	0.233**
	(0.099)	(0.102)	(0.103)	(0.103)	(0.104)	(0.377)	(0.108)	(0.101)	(0.102)
Construction	0.076*	0.070*	0.083**	0.083**	0.083**	0.072	0.104	0.105**	0.086**
	(0.040)	(0.040)	(0.041)	(0.041)	(0.041)	(0.051)	(0.068)	(0.041)	(0.041)
Other sector	0.590***	0.556***	0.551***	0.551***	0.550***	0.595***	0.465***	0.614***	0.594***
	(0.072)	(0.073)	(0.074)	(0.074)	(0.074)	(0.096)	(0.118)	(0.076)	(0.075)
Publicly listed	−0.109***	−0.148***	−0.155***	−0.155***	−0.155***	−0.114**	−0.248***	−0.145***	−0.158***
	(0.041)	(0.040)	(0.041)	(0.041)	(0.041)	(0.047)	(0.081)	(0.041)	(0.041)
Age	0.229***	0.118***	0.120***	0.120***	0.120***	0.139***	0.109***	0.120***	0.128***
	(0.017)	(0.017)	(0.018)	(0.018)	(0.018)	(0.021)	(0.034)	(0.018)	(0.018)
Government ownership (%)	0.005***	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Sales to government (%)	0.002***	0.002***	0.002***	0.002***	0.002***	0.003***	0.000	0.002***	0.002***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Foreign ownership (%)	0.002***	0.001***	0.001**	0.001***	0.001**	0.001***	−0.000	0.001**	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Exporter	0.165***	0.071***	0.078***	0.078***	0.078***	0.036	0.227***	0.080***	0.075***
	(0.025)	(0.026)	(0.026)	(0.026)	(0.026)	(0.031)	(0.050)	(0.027)	(0.027)
Multinational	0.133***	0.053	0.051	0.051	0.052	0.022	0.152**	0.050	0.062*
	(0.033)	(0.033)	(0.034)	(0.034)	(0.034)	(0.041)	(0.063)	(0.034)	(0.034)
Business association member	0.763***	0.679***	0.682***	0.681***	0.682***	0.635***	0.726***	0.696***	0.673***
	(0.026)	(0.026)	(0.027)	(0.027)	(0.027)	(0.033)	(0.043)	(0.027)	(0.027)
Domestic inputs (%)	−0.001***	−0.001***	−0.001***	−0.001***	−0.001***	−0.001**	−0.003***	−0.001***	−0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Located in capital city	0.056***	0.036	0.035	0.035	0.035	0.008	0.101**	0.035	0.037
	(0.022)	(0.022)	(0.023)	(0.023)	(0.023)	(0.028)	(0.041)	(0.023)	(0.023)
Market power	0.026***		0.018*	0.018*	0.018*	0.041***	−0.026	0.019*	0.024*

Table 4 *(Continued)*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Full sample	Full sample	Full sample	Full sample	Full sample	Democracies	Autocracies	Full sample	Full sample
Workers	(0.009)	0.149*** (0.008)	0.149*** (0.008)	0.149*** (0.008)	0.149*** (0.008)	0.153*** (0.009)	0.134*** (0.016)	0.150*** (0.008)	0.149*** (0.008)
GDP/capita growth			-0.001 (0.013)	0.001 (0.013)	-0.001 (0.013)	0.014 (0.025)	-0.026 (0.017)	-0.007 (0.018)	0.002 (0.017)
GDP/capita			-0.156*** (0.037)	-0.193*** (0.039)	-0.138*** (0.028)	-0.098* (0.057)	0.021 (0.061)	-0.146*** (0.039)	-0.112*** (0.036)
Population			-0.159*** (0.023)	-0.150*** (0.022)	-0.161*** (0.025)	-0.152*** (0.056)	-0.145*** (0.038)	-0.158*** (0.043)	-0.143*** (0.040)
Trade			0.000 (0.001)	0.001 (0.001)	0.000 (0.001)	0.003 (0.002)	-0.001 (0.002)	0.003* (0.002)	0.002 (0.002)
FH political rights			0.019 (0.027)						
FH civil liberties				0.053 (0.036)					
Political constraints					0.165 (0.255)				
Entry regulation								-0.208** (0.088)	
Policy predictability									-0.058*** (0.008)
Observations	21,257	21,257	20,330	20,330	20,330	14,627	6,135	20,225	20,094
Countries	42	42	39	39	39	28	13	39	41
Log likelihood	-6809.073	-6621.426	-6246.902	-6247.022	-6246.869	-4367.717	-1908.727	-6139.230	-6227.242

Note: The table presents the results of probit models with country-level random effects. The dependent variable is *Lobby*, which represents the firm-level response to the following survey question: *"Did your firm seek to lobby government or otherwise influence the content of laws or regulations affecting it?"* (0=no, 1=yes). All variable definitions and sources appear in the text. ***p<0.01, **p<0.05, *p<0.10.

1.8% compared with firms with no market power (i.e., firms for which a 10% price increase would cause customers to stop buying from them). The results in Column 2 indicate that the probability of lobbying increases with firm size, measured by the number of employees. A one standard deviation increase in the logged number of workers increases the average predicted probability that a firm lobbies by around 3.5%.

The estimates uncover a number of interesting and intuitive correlations between some of the other firm characteristics and lobbying. For instance, government-owned firms and firms with sales to the government are more likely to lobby. Additionally, members of business associations are more politically active. International exposure also strongly predicts corporate political activities: foreign-owned firms, firms that export, and firms that rely on international markets for a greater share of inputs are more likely to lobby.

To test whether country-level economic and institutional variables help explain lobbying, Models 3–5 of Table 4 successively introduce alternative proxies for political institutions, while controlling for the macroeconomic environment. While the estimates indicate that lobbying is more likely in smaller, poorer nations, democratic political institutions appear to have no effect on lobbying.

I test whether the relationship between any of the firm-level variables is conditional on the political regime by splitting the sample of countries according to the Gandhi and Przeworski binary democracy-autocracy regime type classification (Gandhi and Przeworski 2007; Gandhi 2008). While firm size predicts lobbying in democracies and autocracies alike, market power is associated with the propensity to lobby only in democracies, where the magnitude of the coefficient increases substantially over the previous estimates. By contrast, exporters and multinational firms appear more likely to lobby in autocratic regimes than in democracies. While beyond the scope of this paper, future research should consider the mechanisms driving the strong association between autocracy and the political strategies of firms with international exposure.

The results reported in Columns 8–9 are consistent with the view that the regulatory environment has a direct impact on lobbying. In Column 8, I introduce the logged number of days required to start a business. The results indicate that these entry barriers are associated with a lower probability that the firm lobbies the government. Lastly, the results reported in Column 9 show that the probability of lobbying declines with the perceived predictability of the policy environment, a result that is significant at the 99% level of confidence. Firms appear to have greater incentives to engage in political strategies where they view regulatory policy as less predictable.

4.2 Determinants of firms' perceived influence

Table 5 displays the results of models estimating the determinants of *Political Influence*. The results reported in Column 1 are strongly supportive of the argument that market power translates into political power. In particular, the variable *Market Power* enters positive and strongly significant, suggesting that firms with market power are more likely to report influence over national laws and regulations. Substantively, firms with market power are about 3.7% more likely to report that they have at least minimal influence over policy than are firms without any market power. Furthermore, the results reported in Column 2 indicate that larger firms are more likely to report influence over policy. A one-standard deviation increase in the number of workers increases the average predicted probability that a firm reports at least minimal influence by around 4.3%.

I run a series of tests to examine whether political institutions and macroeconomic conditions are associated with firm influence, and report the results in Columns 3–5 of Table 5. I first note that the main firm-level variables retain significance to the inclusion of the country-level variables. Furthermore, democracy is significantly associated with firms' reported influence. The positive coefficient corresponding to Freedom House Civil Liberties index in Column 4 is particularly intuitive, as the index captures in part the freedom of interest groups to organize. The results in Column 5 indicate that firms are more influential in countries with greater numbers of checks and balances. This result is consistent with the view that veto players provide entry points into the government's decision-making processes for a range of social actors, including business firms (Henisz 2000; Macher et al. 2011; Macher and Mayo 2012).

In Columns 6–7, I divide the sample according to the Gandhi and Przeworski binary democracy-autocracy regime type classification (Gandhi and Przeworski 2007; Gandhi 2008) to test whether the determinants of influence are sensitive to the political environment. Market power appears to translate into political influence in autocratic regimes, but the result is not significant in democracies. This finding suggests that democracy may weaken the oligarchy, perhaps since electoral competition in democracies strengthens policymakers' incentives to respond to the interests of the median voter. Firm size appears to matter regardless of political institutions. Public firms appear more influential in democracies, while older firms are more likely to report influence in autocracies.

Finally, regulatory institutions as captured by this study appear to exert minimal impact on firms' reported influence. The results in Column 8 suggest that entry regulations are not significantly associated with influence. In Column 9, I find that firms are (weakly) more likely to report influence where policy is more predictable.

Table 5 Determinants of Political Influence (Multilevel Ordered Probit Estimates).

	(1)	(2)	(3)	(4)	(5)	(8)	(9)	(6)	(7)
	Full sample	Full sample	Full sample	Full sample	Full sample	Democracies	Autocracies	Full sample	Full sample
Services	0.068*	0.136***	0.141***	0.140***	0.143***	0.067	0.270***	0.121***	0.142***
	(0.039)	(0.039)	(0.041)	(0.041)	(0.041)	(0.050)	(0.070)	(0.042)	(0.041)
Agriculture	−0.054	−0.001	0.008	0.011	0.038	−0.421	0.080	−0.010	−0.014
	(0.115)	(0.113)	(0.122)	(0.123)	(0.122)	(0.309)	(0.136)	(0.116)	(0.115)
Construction	0.005	0.018	0.012	0.011	0.016	0.007	0.091	0.037	0.028
	(0.058)	(0.058)	(0.061)	(0.061)	(0.061)	(0.077)	(0.095)	(0.061)	(0.060)
Other sector	0.288**	0.296**	0.315**	0.315**	0.318**	0.344**	0.186	0.267**	0.319**
	(0.123)	(0.123)	(0.125)	(0.125)	(0.125)	(0.161)	(0.203)	(0.129)	(0.126)
Publicly listed	0.064	−0.029	0.011	0.009	0.013	−0.020	0.057	−0.018	−0.025
	(0.064)	(0.064)	(0.069)	(0.070)	(0.070)	(0.070)	(0.172)	(0.066)	(0.065)
Age	0.100***	0.031	0.042	0.042	0.043	0.001	0.158***	0.028	0.037
	(0.026)	(0.026)	(0.027)	(0.027)	(0.027)	(0.031)	(0.054)	(0.027)	(0.027)
Government ownership (%)	0.004***	0.003***	0.003***	0.003***	0.003***	0.003***	0.001	0.003***	0.002***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Sales to government (%)	0.001*	0.001	0.001	0.001	0.001	0.002**	−0.000	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Foreign ownership (%)	0.001**	0.000	0.000	0.000	0.000	0.001	−0.001	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Exporter	0.111***	0.041	0.028	0.029	0.030	0.066	−0.024	0.046	0.042
	(0.039)	(0.039)	(0.041)	(0.041)	(0.041)	(0.046)	(0.083)	(0.041)	(0.040)
Multinational	0.138***	0.103**	0.103**	0.101**	0.104**	0.053	0.307***	0.118**	0.116**
	(0.047)	(0.047)	(0.049)	(0.049)	(0.049)	(0.056)	(0.096)	(0.048)	(0.048)
Business association member	0.217***	0.149***	0.177***	0.177***	0.178***	0.073*	0.330***	0.165***	0.146***
	(0.032)	(0.032)	(0.034)	(0.034)	(0.034)	(0.040)	(0.059)	(0.033)	(0.033)
Domestic inputs (%)	−0.001	−0.001	−0.001	−0.001	−0.001	−0.000	−0.001*	−0.001	−0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Located in capital city	−0.017	−0.033	−0.017	−0.017	−0.016	0.063	−0.148***	0.000	−0.020
	(0.034)	(0.034)	(0.036)	(0.036)	(0.036)	(0.045)	(0.057)	(0.036)	(0.036)
Market power	0.041***		0.037***	0.037***	0.037***	0.025	0.063**	0.040***	0.034**

Table 5 *(Continued)*

	(1)	(2)	(3)	(4)	(5)	(8)	(9)	(6)	(7)
	Full sample	Full sample	Full sample	Full sample	Full sample	Democracies	Autocracies	Full sample	Full sample
Workers		0.114***	0.111***	0.111***	0.111***	0.117***	0.106***	0.109***	0.111***
	(0.013)	(0.011)	(0.012)	(0.012)	(0.012)	(0.014)	(0.022)	(0.012)	(0.012)
GDP/capita growth			−0.059**	−0.050**	−0.055***	−0.056**	−0.007	−0.059**	−0.073***
			(0.024)	(0.023)	(0.019)	(0.027)	(0.035)	(0.024)	(0.022)
GDP/capita			−0.209***	−0.215***	−0.177***	0.088	−0.471***	−0.082	−0.097**
			(0.072)	(0.072)	(0.043)	(0.077)	(0.118)	(0.055)	(0.047)
Population			0.087*	0.083*	0.068	0.052	0.045	0.023	0.077*
			(0.045)	(0.050)	(0.045)	(0.051)	(0.107)	(0.071)	(0.043)
Trade			0.002	0.001	0.003*	0.000	−0.002	0.001	0.003
			(0.002)	(0.002)	(0.002)	(0.002)	(0.005)	(0.002)	(0.002)
FH political rights			0.076*						
			(0.041)						
FH civil liberties				0.134**					
				(0.054)					
Political constraints					0.945***				
					(0.304)				
Entry regulation								0.097	
								(0.112)	
Policy predictability									0.019*
									(0.010)
Observations	9252	9252	8647	8647	8647	6353	2689	8719	8847
Countries	36	36	33	33	33	23	12	33	35
Log likelihood	−7769.960	−7724.228	−7290.195	−7287.727	−7286.081	−5396.694	−2100.838	−7223.175	−7414.166

Note: The table presents the results of multilevel ordered probit models with country-level random effects. The dependent variable is *Political Influence*, which represents the firm-level response to the following survey question: *"How much influence do you think [your firm] actually had on recently enacted national laws and regulations that have a substantial impact on your business?"* (0=No impact, 1=Minor influence, 2=Moderate influence, 3=Major influence, 4=Decisive influence). All variable definitions and sources appear in the text. ***$p<0.01$, **$p<0.05$, *$p<0.10$.

5 Conclusion

This paper explicitly examined the role of the firm in the policymaking process, relying on firm-level data to directly test the determinants of lobbying and political influence in developing countries. Multilevel variance components estimates indicate that firm-level heterogeneity explains the majority of the variance in firms' political activities and their effectiveness. The results from multilevel regression models that account for unobserved country-specific variation suggest that lobbying activity and influence increase with the firm's: market power, size, degree of government ownership, participation in business associations, and international orientation. As a consequence of a unique identification strategy that allowed me to control for the numerous sources of country-level variation, the findings achieve a high degree of external validity and represent some of the most rigorous survey-based evidence to date on the political activities and influence of business in developing countries. The results of this study show that many of the same factors explain lobbying and influence in the developing world as in developed democracies.

While firm heterogeneity goes a long way in explaining corporate political activity and its effectiveness, I find that the regulatory and political environment also influences CPA. Namely, regulatory institutions that shield incumbent firms from competition and those that increase policy predictability significantly weaken firms' incentives to lobby. Furthermore, while firms report greater influence under democratic institutions, democracy appears to exert offsetting effects on a number of the firm-level determinants. For instance, market power is associated with a greater propensity to lobby only in democracies, whereas firms with market power appear more likely to report political influence only in autocratic regimes. These results suggest that dominant firms are politically powerful in autocracies, regardless of the level of effort that they exert to influence policy. While future research should consider the causal mechanisms driving this result, one interpretation is that electoral competition in democracies weakens the political power of the economic elite, perhaps through policies such as trade and financial market liberalization that introduce international sources of economic competition.

Researchers should continue to develop new ways to measure the causes and policy consequences of corporate political activity, especially in developing countries where data are scarce. Important remaining questions concern the effects of CPA on firm performance: Do lobbying and influence improve the performance of firms in developing countries? Is the relationship between CPA and performance conditional on the institutional environment? I leave these questions for future research.

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