

**IS BIGGER BETTER?
FIRM SIZE AND GOVERNMENTAL INFLUENCE***

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ABSTRACT

A commonly held assumption is that large firms are more influential in shaping governmental policies than their smaller counterparts. The ability to rigorously examine this relation is hampered by inabilities to secure appropriate measures of firms' political influence. We overcome this impediment by offering a more systematic analysis of the firm size-governmental influence relationship using a novel database that measures firms' perceived influence over governmental decision-making entities on a global basis. The paper develops and tests a conceptual model that captures the firm size-governmental influence relationship, along with other direct and moderating influences from country-level and industry-level determinants. In some circumstances, variations in country-level institutions or industry-level structural variations profoundly affect the standard firm size-governmental influence relationship. Nonmarket strategy implications that follow from this refined understanding are then discussed.

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1 INTRODUCTION

The perceived relationship between firms and their level of influence over governmental decision-making entities has alternatively intrigued, fascinated and infuriated industry practitioners, academics and the general public alike. For instance, annual Harris Interactive polls report routinely that roughly 85 percent of respondents believe that “big companies” have too much governmental influence, while approximately 90 percent of respondents believe that small businesses have too little influence.¹

Despite the popular assumption of a firm size-governmental influence relationship, several factors have inhibited researchers’ abilities to explore and document this relationship in sufficient detail. First, direct measures of firms’ governmental decision-making influence are not widely available across industries, countries or governmental decision-making bodies. Most prior empirical studies instead examine influence using indirect measures that are derived from either a single industry or a single country. Second, several academic disciplines examine firms’ governmental decision-making influence, but these domains have remained largely distinct from each other and examine governmental influence solely at a particular “level.” For example, the industry-level or country-level determinants of governmental decision-making influence are typically examined in isolation from the firm-level determinants of influence. Third and relatedly, given the disparate disciplines that examine firms’ governmental decision-making influence, there have been no attempts to explore any potential interrelationships that may exist among these various levels of influence.

In this paper, we provide a conceptual and empirical framework that alleviates most of these historical constraints and subsequently improves understanding of the firm size-

¹ See <http://www.harrisinteractive.com/vault/Harris-Interactive-Poll-Research-Power-&-Influence-2009-03.pdf>

governmental decision-making influence relationship. We do so by drawing upon a novel database of nearly 6,000 firms from 60 countries that provides measurement of firms' perceived influence over several governmental decision-making entities, including the executive, legislative and ministerial branches. These data permit us to test empirically the role of firm-, industry- and country-level determinants of governmental decision-making influence, as well as explore any nuanced interrelationships that may exist across these influence determinants than has previously been achieved in the extant literature.

At the most basic level, our empirical results confirm the common assumption of a direct relationship between firm size and political influence. Large firms achieve more influence over governmental decision-makers than their smaller counterparts. But we also find strong support that the institutional environment of the country in which the firm operates and the structure of the industry in which the firm competes profoundly affect firms' governmental influence. Firms obtain more influence in countries with greater political diversity and in industries with fewer competitors. Our investigation also importantly reveals two nuanced—and potentially profound—insights into these relationships. Large firms generally lose (but sometimes gain) influence with greater political diversity, while small firms always gain influence with greater political diversity across these governmental branches. At the same time, large firms generally lose (but sometimes maintain) influence with more industry competitors, while the effect of industry structure on small firms' influence is more varied across different governmental branches. Overall, our results suggest that increases in political diversity and industry competition effectively narrow the “influence gap” between large and small firms in governmental decision-making. Depending upon the country-level institutional characteristics

and industry-level structural characteristics, our results point to situations in which small firms are no less influential than large firms in affecting governmental policies.

This paper is organized as follows. The next section reviews the extant literature that examines firms' influence over governmental decision-making entities. Section 3 provides a theoretical model and several testable hypotheses of the determinants of firm influence, examining both the direct relationships and the interrelationships between and among firm-, industry- and country-level factors and firms' governmental decision-making influence. Section 4 presents the empirical setting by describing the data, providing variable definitions, and specifying summary statistics. Section 5 presents several empirical analyses and figures of the firm-, industry- and country-level determinants—and interrelationships among these determinants—of firms' governmental decision-making influence. This section also discusses the main results. The final section provides concluding comments.

2 BACKGROUND AND MOTIVATION

Research that examines firms' influence over governmental decision-making derives from several academic disciplines—including management, economics and political science.² Three features largely characterize the extant literature. First, research that examines firms' influence over governmental decision-making identifies country-level (institutional), industry-level and firm-level characteristics as important factors that affect the abilities of firms to wield influence. But these disciplines have proceeded largely independently. Most empirical examinations consider factors at a single “level,” with virtually no conceptual or empirical accounting for determinants at other levels that may affect the abilities of firms to influence

² These include research from management on leaders, followers and free riders (Lenway & Rehbein, 1991), the economic theory of regulation (Becker, 1983; Peltzman, 1976; Stigler, 1971); the political economy of international trade (Grossman & Helpman, 1994); and political science (e.g., (Salamon & Siegfried, 1977).

governmental policies. For example, despite serving as a seminal paper on the relationship of industry structure and influence over regulators, Stigler's (1971) empirical analysis fails to account for the potentially important effect of firm size or other firm characteristics in his analysis. This failure to develop a more integrated and comprehensive picture of the varied determinants of firms' influence over governmental decision-making creates the risk that management scholars, and managers themselves, operate from a series of incomplete analyses.

Second, attempts to measure the antecedents and outcomes of firms' political activity in meaningful ways have proven to be major research challenges (Hillman, Keim, & Schuler, 2004). Bonardi et al. (2006) suggest these difficulties result from the lack of data availability relating the firms' nonmarket strategies to the performance impact of public policies. The absence of direct measures of firms' governmental decision-making influence has subsequently resulted in the adoption of highly aggregated data or indirect approaches. For instance, a number of research scholars examine the relationship between firm size and corporate political activities using proxies of influence, including measures of political action committee (PACs) activity, campaign contributions, congressional testimonies, petition filings and lobbying efforts (Bonardi, Hillman, & Keim, 2005; Hillman et al., 2004). Other researchers use even more indirect measures to examine governmental influence—such as cross-industry variations in effective tax rates paid or specific measures linked to regulatory outcomes (Lenway & Rehbein, 1991; Salamon & Siegfried, 1977; Schuler, Rehbein, & Cramer, 2002)—or aggregated data—such as corporate financial profitability (Hillman, Zardkoohi, & Bierman, 1999; Shaffer, Quasney, & Grimm, 2000). Moreover, many of these studies examine influence within a single industry or a single country. While these approaches have advanced considerably our understanding of firms'

corporate political activity, more direct and more global measures of governmental decision-making influence are obviously desired.

Third, the potential interrelationships that exist between and among firm-, industry- and country-level determinants of governmental influence has seen relatively scant academic attention. While some scholars have begun to consider the multiple levels by which governmental influence manifests (Chong & Gradstein, 2010; Macher, Mayo, & Schiffer, 2011; Weymouth, 2011), the extant research is largely silent on the potential interrelationships between and among these levels. The development of a more comprehensive model of firms' abilities to influence governments that takes into consideration how country-level institutional factors and industry-level factors interrelate with firm-level factors (such as size) to jointly determine governmental influence is nevertheless necessary to improve understanding of firms' political activities. It is to such a model and an approach that we now turn.

3 THEORETICAL MODEL AND HYPOTHESES

3.1 FIRM-LEVEL DETERMINANTS

It is commonly perceived that there is a positive relationship between firm size and governmental decision-making influence. Early examinations recognize that large firms are more political active and that firm size is an important antecedent into corporate political activity (Boddeyn & Brewer, 1994; Masters & Keim, 1985). For instance, lobbying is one mechanism by which firms generate governmental influence. If lobbying manifests itself as a pure public good, only the largest firms in an industry are likely to participate in such efforts (Olson, 1965). Stigler (1974) further suggests that larger firms are more likely to participate not only in lobbying activities independent of participation in trade associations, but also in trade associations that create political influence.

The theoretical underpinnings for this relationship stem largely from several observations and examinations that correlate firm size with political activity involvement (Hillman et al., 2004).³ First, size is often a proxy for resources available, and thereby an indicator of firms' abilities to become politically engaged (Schuler & Rehbein, 1997). Second, establishing the required firm-level infrastructure at or above the minimum scale necessary to influence governmental decision-making entails substantial (fixed) costs. As such, large firms are more likely to possess the resources and/or scale to warrant such efforts. Third, large firms offer more to governmental decision-makers in the way of votes, income or post-governmental service employment in comparison to their smaller counterparts. Fourth, if lobbying represents a pure private good with no free rider problems, large firms are likely better able to engage in more intense influence-seeking activities because the productivity of and benefits from such efforts are higher than those of small firms. In short, large firms are better able to capture many of the rents from public policy participation than their smaller counterparts (Hillman et al., 2004). With these theoretical underpinnings as a base, the extant literature documents a substantial and positive firm size-governmental influence relationship using varied measures of firm size, including sales (Schuler et al., 2002), assets (Meznar & Nigh, 1995), market share (Schuler, 1996) or number of employees (Hillman, 2003).

More recent research also documents a firm-size governmental influence relationship. For instance, Macher, Mayo and Schiffer (2002) find firm-level factors—such as size and age—are positively associated with influence across the branches of government and within regulatory agencies. Chong and Gradstein (2010) similarly document a firm size-governmental influence relationship across these same governmental decision-making entities. Weymouth (2011)

³ See Hillman, Keim and Schuler (2004) and the references provided therein for a comprehensive review of the firm-level, industry-level and issue-specific antecedents to political activity involvement (PAI).

examines firms' political activity and influence, and finds that large and well-organized oligopolists are more likely to lobby and to influence government policy—effectively increasing their political power. In short, economic power (i.e., firm size) translates directly into political power. Given the extant literature and these considerations, we examine the following hypothesis:

H1: Large firms have more influence over governmental decision-making than small firms, ceteris paribus.

3.2 INDUSTRY-LEVEL DETERMINANTS

While size is likely to affect firms' abilities to influence governmental decision-making, so too should variations in the organization of industries in which these firms compete. In particular, industry structural factors—such as concentration or number of competing firms—should affect firms' abilities to organize effectively for political action (Getz, 1997; Hillman et al., 2004). Olson (1965) notes that a larger number of participants (firms) in a group (industry) may erode the effectiveness of individual members to successfully secure outcomes that are in their collective interest. Specifically, free rider problems grow as the number of industry participants increases. In our context, the question arises as to whether industries characterized by fewer competitors are better able to overcome free rider problems to achieve influence over governmental decision-making, *ceteris paribus*. The most obvious proxy for the propensity of free rider problems to beset an industry—the number of firms—is thought to be isomorphic to the perceived extent of competition—similarly proxied by the number of firms. Any test of the free rider proposition based on firm number thereby confounds potentially with the independent impact on firm influence that may arise from competitive landscape changes. For example, as the number of industry competitors grows it is possible that the likelihood of political involvement

and the likelihood of success in that domain vary separately from changes in influence that may arise from free riding.

Perhaps not surprisingly, empirical examinations of the relationship of industry structure and firms' political activity yield mixed results. Potters and Sloof's (1996:417) survey of empirical political influence studies indicates that "most scholars indeed find an increased scope for political influence with higher degrees of concentration, but there are many that find no effect or even a negative effect." Salamon and Siegfried (1977) find a negative relationship between industry concentration and firm influence (measured by the effective tax rate), while Pittman (1976) finds a positive relationship between industry concentration and campaign contributions. Schuler et al. (2002) find firms in more concentrated industries are more likely to lobby and engage in campaign contributions than firms in more fragmented industries. Grier et al. (1994) find some evidence that concentration positively affects political contribution levels and the probability of forming political action committees. Lenway and Rehbein (1991:901-902) find that "firms in industries with a large number of firms are likely to choose a leader or a follower rather than a free-rider strategy." In light of these mixed results, Pecorino (1998) develops a theoretical model in which the industry equilibrium yields no necessary relationship between the number of firms, the degree of concentration, and the ability to overcome free-riding problems.

Despite the mixed results within the extant political activity literature, two somewhat tenuous findings around firms' governmental decision-making influence emerge: first, industry structure may affect the level of influence that firms are able to achieve over governmental decision-makers; and, second, the nature of this relationship is not well understood. We accordingly seek to advance understanding of the role that industry structure has on firms' governmental decision-making influence.

We argue that more fragmented industries create less favorable bargaining situations and opportunities between firms and governmental decision-makers in terms of either establishing or garnering influence. As Olson (1965) suggests, less concentrated industries (e.g., more firms within an industry) limit the abilities and/or effectiveness of any one firm in securing political outcomes that represent its interests, as governmental decision-makers take into consideration the varied and potentially orthogonal concerns of other industry participants. Firms' abilities to influence political decision-makers in ways congruent with their objectives are subsequently compromised (Holburn & Vanden Bergh, 2008). By contrast, more concentrated industries present more favorable bargaining opportunities between firms and governmental decision-makers. The smaller number of industry players allows incumbent firms either more opportunities to make their case (via more or more frequent face-time) with key governmental decision-makers, or greater abilities to overcome collective action problems (Getz, 1997). Moreover, governmental decision-makers are in better positions to actually bestow political influence, as free rider problems are more muted in less concentrated industries. We therefore expect that firms in more concentrated industries will obtain more political decision-making influence than firms in less concentrated industries, and examine the following hypothesis.

H2: Firms in more concentrated industries have more influence over governmental decision-making than firms in less concentrated industries, ceteris paribus.

3.3 COUNTRY-LEVEL DETERMINANTS

Similar to industry structure, variation in country institutional factors should affect firms' governmental decision-making influence. While the role of comparative economic, political and legal institutions in determining economic performance has a long history (North, 1990), the focus on how such institutions shape firm-government interactions and outcomes has gained

considerable attention recently. This literature highlights collectively the impact that inter-country variations in political institutions have in observed economic outcomes, ranging from studies of economic growth (Henisz, 2000b) to (foreign direct) investment (Gastanaga, Nugent, & Pashamova, 1998; Henisz, 2000a; Henisz & Macher, 2004; Henisz & Zelner, 2001; Wei, 2000) and economic organization (Henisz & Williamson, 1999), among others.

We suggest that the role of and differences among country-level institutional characteristics—given their rather predominant effects on economic performance and organization—can be logically extended to examine differences in firms’ influence over governmental decision-making. Consider the development of the political institution diversity measure of Henisz (2000b), which employs a simple spatial model of political actor placement. The larger the number of independent political institutions within a given country, the greater is the ability of one actor to block other actors’ discretionary behavior. In short, the larger the presence of non-isomorphic political institutions the larger the number of government “veto points.” Henisz (2000b) shows that such veto points create greater government policy stability.

By straightforward extension, political institution diversity is also likely to alter the level of influence firms are able to achieve over governmental decision-making entities. Specifically, while political concentration likely simplifies matters for firms seeking influence—especially where the interests of the concentrated polity and those of the firm seeking influence align—the likelihood of interest alignment between government actors and any particular firm is reduced with more political institution concentration. Instead—and in concordance with the “veto point” concept in a model of political discretion—more diverse political institutions increase the number of “entry points” by which firms may find a sympathetic party or government official to champion their cause. The effect of more diverse political institutions is the creation of more

entry points whereby more firms consider themselves able to actually influence policy outcomes. But to the extent that a larger number of independent political institutions can act to block policy changes, the influence-enhancing effects of additional entry points may be overcome by the influence-detering effects of additional veto points. In light of these countervailing possibilities, we test empirically whether firms operating in countries with more diversified political institutions provide an environment for greater firm influence over governmental decision-making entities than firms operating in countries with less diversified political institutions. In short, we examine the relative strength of veto points vis-à-vis entry points via the following hypothesis:

H3: Firms in more politically diverse countries have more influence over governmental decision-making than firms in less politically diverse countries, ceteris paribus.

3.4 INTERRELATIONSHIPS

Our first three hypotheses establish a foundation for understanding the direct pathways by which firms' influence governmental decision-making. But it is also likely that important moderating interrelationships are present that fundamentally alter firms' abilities to achieve certain levels of governmental influence. For instance, we argued previously that firms operating in more concentrated industries should realize more governmental influence than firms operating in less concentrated industries. We now suggest that the effect of industry structure is not constant across the population of firms.

In particular, increased fragmentation in industry structure (more competitors) should pose greater threats to large firms' influence than to their smaller firm counterparts. Large firms should possess higher levels of influence in comparison to their smaller counterparts, across all industry structures. But in more concentrated industries, large firms face the least amount of

corporate political activity competition (i.e., interference) from other industry players who seek a sympathetic government official or a regulator to champion their causes. With smaller numbers competing for political patronage, large firms can more effectively (and perhaps more completely) shut other firms out of the influence-seeking process, across all branches of government and in regulatory agencies. Large firms' abilities to successfully secure outcomes that are in their own self-interest should subsequently increase from greater industry concentration. Conversely, we expect that small firms will generally have less influence on governmental bodies than their large firm counterparts. With little influence to begin with, the addition of more competitors will impose less degradation of influence for small firms. Moreover, as the number of industry players grows, free rider problems rise (Olson, 1965). Free rider problems are, however, unlikely to affect large and small firms equally. In particular, while the gains from free riding on the coattails of a large firm (whose perceived influence can be substantial) are pronounced, the benefits from free riding for small firms is likely to be significantly smaller. We therefore examine the following hypothesis.

H4 As the level of industry concentration decreases, large firms experience disproportionate declines in governmental decision-making influence relative to small firms, ceteris paribus.

Similar to industry structure, the effect of political diversification on firms' decision-making influence should not be constant across the population of firms. Politically diverse governmental institutions, while providing independent pathways for firms to exert or establish influence, should affect small and large firms differently. In politically concentrated industries, large firms are more likely to gain access to political decision-makers given the economic and political benefits that accrue from scale, in comparison to their smaller counterparts. Moreover, if the number of entry points into the political process is limited, large firms are potentially in

better positions to block small firms from achieving access to governmental decision-makers. For any given level of “entry points” present in a particular political regime therefore large firms should have sustainable political influence advantages in comparison to small firms. But as country political diversity increases, large firms likely face particular constraints and limitations. The additional entry points increases the likelihood that (at least) one government official disagrees with the political agenda of the large firm, but is sympathetic to the agenda of another firm. The additional entry points provided through greater political diversity additionally limit large firms’ abilities to sufficiently cover the political landscape, allowing other firms entry into the influence-seeking process.

By contrast, small firms are likely to find that greater diversification within political regimes accrues certain benefits, precisely because it creates additional entry points into the political process. As small firms seek access and influence, more political diversity undoubtedly improves the chances that at least one sympathetic government official will champion their causes. In comparison to small firms, large firms face greater difficulties in effectively influencing policymakers in more politically diverse countries. While we still expect large firms to maintain their political influence advantages over small firms, we hypothesize that increased political diversity poses larger threats to large firms’ influence in comparison to their smaller counterparts. Specifically, we examine the following hypothesis.

H5 As the level of country political diversity increases, small firms experience disproportionate increases in governmental decision-making influence relative to large firms, ceteris paribus.

Our conceptual model of the relationships between firm-, industry and country-level factors and governmental influence is depicted in Figure 1. This figure indicates that while we posit direct relationships between firm size, industry structure and political diversity and the

level of influence that firms are able to exert over governmental decision-making, important interrelationships are also indicated. In particular, we propose that country-level (institutional) and industry-level factors moderate the basic firm size-governmental influence relationship.

4 EMPIRICAL SETTING

Having discussed the firm-, industry- and country-level determinants of governmental decision-making influence, as well as the interdependent determinants, we now describe the data, specify variable definitions, and provide summary and correlation statistics. The Appendix offers more detailed descriptions of the dependent, independent and control variables utilized in the empirical analyses.

4.1 DATA

The World Bank collected firm and business environment survey information during 1998-2000 from more than 10,000 firms in 80 countries in its World Business Environment Study (WBES).⁴ Firms were selected for the WBES using several factors, including firm size, firm ownership, industry and location, geographical distribution of products or services offered, and adequate representation within a specific county's economy, among others.⁵ A high survey

⁴ The survey was overseen by the World Bank but administered by Gallop, AC Nielsen, The Confederation of Indian Industries, The Harvard Center for International Development in Africa, The Egyptian Center for Economic Studies in Egypt, Lidee Khmer in Cambodia, The University Chamber of Commerce in Thailand, and The Bangladesh Export Development Project in Bangladesh. See Batra et al. (2002) for more discussion.

⁵ Firms were chosen to comprise a representative sample that reflects the importance of manufacturing, services and commercial firms in particular countries. The guidelines were as follows (Batra et al., 2002):

Sectoral Composition – The number of manufacturing versus service companies were allocated according to their contribution to GDP, with a 15 percent minimum for each.

Size – At least 15 percent of the companies in the sample were in the small category (fewer than 50 employees) and at least 15 percent in the large category (more than 500 employees).

Ownership – At least 15 percent of the companies in the sample would be firms with foreign control (or where the law prohibits this, will have substantial foreign ownership).

Exporters – At least 15 percent of the companies in the sample would export at least 20 percent of their output.

response rate obtained, although missing values reduce slightly the number of observations for various measures.

The WBES permit systematic analyses of the determinants of firm influence on governmental decision-making. In particular, survey questions asked firms to indicate the extent of their influence over the establishment of new national laws, rules, regulations and decrees by the executive, legislative and ministerial branches of their national government. The WBES also includes industry- and firm-level survey information, which we describe below. We supplement these data with country-level (institutional) data. The combined data permit a novel examination of the firm-, industry- and country-level determinants that are associated with firms' influence over governmental decision-making.

While the WBES data offer novelty relative to prior studies, they also present particular challenges. One such concern is whether firms' perceptions of governmental influence represent accurate indicators of their actual abilities, as surveys are sometimes deemed poor predictive indicators. We believe our application is credible, despite its reliance on survey data. First, the survey questions and answers are not used to predict economic agents' behavioral responses to particular stimuli but are instead focused on perceptions. Second, there are no incentives to "game" answers, as there are no benefits to particular answers. We therefore view the survey responses as unbiased, albeit imperfectly measured, indicators of actual levels of firm influence on governmental decision-making.⁶

Location – At least 15 percent of the companies in the sample would be located in small towns (with a working definition of a population of less than 50,000), or in the country side.

⁶ Unbiased measurement of a dependent variable within the context of a regression-based model can readily be shown to be absorbed by the standard random error term within the regression model. See, e.g. Greene (2003).

4.2 VARIABLE DEFINITIONS

Our main dependent variables measure firms' responses to their perceived levels of influence over the executive, legislative and ministerial branches in response to new laws, rules, regulations or decrees that potentially have substantial impacts on their businesses. *Executive Branch Influence*, *Legislative Branch Influence* and *Ministerial Branch Influence* measure influence, respectively, on a 5-point Likert scale. A value of one indicates "never influential," while a value of five indicates "very influential." A second set of dependent variables represent dichotomous representations of each of the above measures, based on those firms that report being "influential," "frequently influential" or "very influential" over these governmental decision-making entities in response to new laws, rules, regulations or decrees. The Appendix provides greater description on our dependent variables.

To test the impact of country political diversification, we account for the extent to which countries' political institutions are diversified (i.e., degree to which government branches are controlled by different parties). We utilize the Henisz (2000b) POLCON variable, which captures the extent to which changes in the preferences of political actors may lead to changes in government policy. This measure identifies for each country the number of independent government branches (executive, lower and upper legislative chambers, judiciary and sub-federal political institutions) with veto power over policy change, derives a quantitative measure of political hazards using a simple spatial model of political interaction, and modifies this measure to take into account the extent of government branch alignment based on executive and legislative party composition and legislative preference heterogeneity. Our measure is one minus the Henisz (2000b) POLCON variable to ease exposition. *Political Diversification* ranges from zero (extremely hazardous) to one (minimally hazardous).

To test the relationship between industry structure and governmental decision-making influence, we measure the number of industry competitors as reported in the WBES. *Competitors* represents the logged number of competitors that firms indicate they face in their major product lines. We take the natural log of this measure, given the likely non-linear effect of more competitors on firms' governmental decision-making influence.⁷

To test the relationship between firm size and governmental decision-making influence, we control for the number of employees as reported in the WBES. *Firm Size* is a tri-chotomous measure of the number of employees, coded as one if firms have less than 50 employees, two if firms have between 51-500 employees, and three if firms have more than 500 employees.

We include several control variables at different levels of analysis. Macher, Mayo and Schiffer (2011) have shown that the origins and structure of the country's legal system within which firms operate provides a powerful filter on firms' abilities to influence governmental bodies. Accordingly, we control for legal origin via several indicator variables (*Common Law Origin*, *Civil Law Origin* and *Socialist Law Origin*, respectively).⁸ La Porta et al. (1998) suggest that the level of national income may confound the interpretation of country legal origin. We accordingly include logged *GDP/Capita* in the estimation. Rajan and Zingales (2003) similarly argue that the incumbent firm power may be affected by the degree of economic openness. We therefore include logged *Trade/GDP* (a standard measure of country openness) in the estimation. These variables are from the World Bank Development Indicators database.

⁷ This parallels prior research that demonstrates a decreasing effect on pricing from increases in the number of competitors (Bresnahan & Reiss, 1991).

⁸ We use the Common Law system as the omitted base. We performed robustness tests to the exclusion of Germany and Sweden, whose legal systems (essentially based in Civil Law) are not so neatly categorized. The results are invariant to this alternative estimation.

Unobservable and idiosyncratic differences across particular industries in their influence-generating abilities may also exist. We therefore utilize several industry-level indicator variables—*Agriculture*, *Construction*, *Manufacturing* and *Other*, in comparison to a *Services* sector baseline—to account for specific industry sectors.

At the firm level, we control for age since founding, using the natural log of *Firm Age*. This control variable stems from both conceptual and empirical considerations (Macher et al., 2011). For instance, older firms are more likely to become adept at garnering influence via “learning curve” effects. Moreover, to the extent that governmental decisions affect the business environment within which firms operate, firms that are unsuccessful in influencing governments may fail. Older firms should, by simple selection, be more successful than younger firms. Additionally, as older firms are more likely to survive than younger firms (Mata & Portugal, 1994), governmental decision-makers are likely to recognize that providing favorable decisions (conferring influence) to younger firms is less beneficial than providing such influence to older firms with whom they are more likely to have repeated and ongoing interactions. We again take the natural log of this measure, given the likely non-linear effect of age on firms’ governmental decision-making influence. We also exploit the detail provided in the WBES database to control for a variety of additional firm-level characteristics that might differentially affect firms’ governmental influence, including: foreign ownership (*Foreign-Owned Firm*); government ownership (*Government-Owned Firm*); privatization (*Privatized Firm*); multi-nationality (*Multinational Firm*); and exportation (*Exporting Firm*).

4.3 SUMMARY STATISTICS

Table 1 provides summary statistics of the dependent, independent and control variables. Roughly one-third of the firms report some level of perceived influence, which is relatively

consistent across the executive, legislative and ministerial branches. The sample includes firms that operate in both politically concentrated and politically diversified countries; compete in industries with no competition to up to ten competitors; and range in size from small (less than 50 employees) to large (more than 500 employees). Table 2 provides correlation coefficients of the variables, highlighting in bold the pair-wise correlations that are statistically significant at .05 p -values. The political influence measures are negatively correlated with *Political Diversification* somewhat surprisingly, but negatively correlated with *Competitors* and positively correlated with *Firm Size* as expected. Pair-wise correlations between the variables are moderate, suggesting multicollinearity is not a problem.

5 EMPIRICAL ESTIMATION

The descriptive statistics are suggestive, but neither dispositive as to the identity of specific influence determinants nor do they convey statistical or economic importance. Accordingly, we now turn to a more systematic analysis of the firm-, industry- and country-level determinants of decision-making influence across the executive, legislative and ministerial branches of government.

5.1 MODEL SPECIFICATION

Firms' influence over governmental decision-making is measured by their reported influence on new national laws, rules, regulations or decrees that could have a substantial impact on their business within the executive, legislative and ministerial branches. As influence is measured on a Likert scale, we utilize ordered probit estimation. The general structure of the ordered probit estimation equation is (Greene, 2003):

$$y^* = \beta X + \mu \quad [1]$$

where y^* is an unobservable variable, β is a coefficient vector, X is a matrix of independent country-, industry and firm-level variables and μ is a normally distributed and well-behaved (zero mean, constant variance) error term. Ordered probit estimation captures the ordinal nature of the observed dependent variables (y) such that:

$$\begin{aligned}
 y &= 1 \text{ if } y^* \leq \omega_1 \\
 y &= 2 \text{ if } \omega_1 < y^* \leq \omega_2 \\
 y &= 3 \text{ if } \omega_2 < y^* \leq \omega_3 \\
 y &= 4 \text{ if } \omega_3 < y^* \leq \omega_4 \\
 y &= 5 \text{ if } \omega_4 < y^*
 \end{aligned}
 \tag{2}$$

where ω_i represent unobserved threshold values (or limit points). The firm survey responses of influence over governmental decision-making represent these observed dependent variables. The specific estimations comporting with the general structure in equations [1] and [2] take the form:

$$\text{GOVERNMENTAL INFLUENCE} = f(X_F, X_I, X_C, X_X, C, \mu)
 \tag{3}$$

where X_F represents firm-level determinants, X_I represents industry-level determinants, X_C represents country-level determinants, X_X represents interactions between the firm-, industry- and country-level determinants, and C represents firm-, industry- and country-level controls.

5.2 EMPIRICAL RESULTS

Tables 3-5 report the ordered probit estimation results using *Executive Branch Influence*, *Legislative Branch Influence* and *Ministerial Branch Influence*, respectively, as dependent variables. All models in all tables adjust standard errors for robustness and within-country clustering. Likelihood-ratio statistics reject zero slope coefficient hypotheses in all estimations (.01 p -values), and pseudo- R^2 are reasonable. Each table presents the models in an identical format: Model 1 provides a baseline estimation using control variables. Model 2 adds the direct variables of interest to Model 1. Model 3 adds the *Competitors* and *Firm Size* interaction term to Model 2, while Model 4 adds the *Political Diversification* and *Firm Size* interaction term to

Model 2. Model 5 adds both interaction terms to Model 2. Given our hypotheses, we focus our discussion on Models 3-5 in each Table.

We report estimated coefficients and standard errors following standard practice, but caution against drawing substantive interpretation or determining hypothesis support from these tables for the following reasons. First, the ordered probit coefficients—as in all nonlinear models—do not represent marginal effects (Holburn & Zelner, 2010). Second, the interaction terms used to test the conditional relationships that we posit in our latter hypotheses do not represent cross-partial derivatives (Hoetker, 2007), and thus do not convey any direct information about the magnitude or statistical significance of the conditional effects of interest.

We instead assess statistical and economic significance and economic support using a simulation-based approach recently developed in political science by King, Tomz and Wittenberg (2000) and tailored to strategy research by Zelner (2009). This approach simulates a distribution of coefficient estimates by repeatedly drawing new estimate values from a multivariate normal distribution using the CLARIFY suite of Stata commands. We subsequently display the results of this approach graphically to not only facilitate intuition, but also demonstrate statistical significance and hypothesis support over particular variable ranges (Hoetker, 2007; Zelner, 2009).

In what follows, we report on the sign and statistical significance of our control variables via Tables 3-5, but determine statistical significance, economic significance and hypotheses support of our independent variables and interaction terms using Figures 2-7.

5.2.1 CONTROL VARIABLES

The sign and statistical significance of several control variables in Tables 3-5 indicate that their inclusion is warranted. Country legal origin significantly affects firms' perceived

abilities to influence governmental decision-making entities. Moreover, the coefficients suggest a relatively consistent ordering. In comparison to firms operating in *Common Law Origin* countries, firms operating in *Civil Law Origin* countries report lower influence in the executive branch (0.05 *p*-values) and ministerial branch (0.05 *p*-values). An even more pronounced influence “penalty” is realized for firms operating in *Socialist Law Origin* (0.01 *p*-values in all Tables) countries. The control variables also pick up meaningful variations in otherwise unobserved industry-specific levels of influence. Firms operating in the *Manufacturing Sector* (0.01 *p*-values in all Tables) and *Agricultural Sector* (0.05 *p*-values in all Tables) report lower perceived governmental decision-making influence, in comparison to firms in the baseline *Services Sector*. Several firm-level characteristics also affect firms’ governmental decision-making influence. Older firms—measured by logged *Firm Age*—report moderately higher executive branch influence (0.10 *p*-values) and significantly higher legislative branch influence (0.10 *p*-values), whereas no influence effects are found in the ministerial branch. *Government-owned Firms* (0.01 *p*-values in all Tables) and *Multinational Firms* (0.01 *p*-values in all Tables) have significantly more influence in all government branches, while *Exporting Firms* have significantly more influence in the executive branch and ministerial branch (0.05 *p*-values) and moderately more influence in the legislative branch (0.10 *p*-values). No or limited statistically significant effects obtain *Foreign-Owned Firm* or *Privatized-Firm*.

5.2.2 DIRECT EFFECTS

Tables 3-5 indicate positive and generally statistically significant effects from firm size on firms’ governmental decision-making influence. While this result obtains in the executive branch (0.05 *p*-values), legislative branch (0.10 *p*-values) and ministerial branch (0.05 *p*-values),

it is not uniform across the various governmental decision-making entities. Nevertheless, large firms report more governmental decision-making influence than their smaller counterparts.

Tables 3-5 indicate negative but generally statistically insignificant effects from industry structure on firms' governmental decision-making influence. Firms facing a greater number of competitors are no more likely to report more (or less) influence than firms facing a lesser number of competitors.

Tables 3-5 indicate positive and generally statistically significant relationships between country political diversity and governmental decision-making influence (0.05 *p*-values in all Tables). Firms operating in countries with more diversified governments perceive that they have more governmental decision-making influence, in comparison to firms operating in countries with less diversified governments. This result suggests, moreover, that the political advantages firms gain from more concentrated political structures (i.e., governments with fewer entry points) are more than offset by the influence advantages they obtain from more diversified political structures (i.e., governments with more entry points).⁹

5.2.3 INTERACTION EFFECTS

Our dependent variables are based on five-point Likert scales, ranging from one (“no influence”) to five (“very influential”). Multiple dependent variable outcomes and ordered probit estimation create interpretation and presentation difficulties related to economic significance.¹⁰ To limit these concerns, as well as to facilitate the graphical display of the relationships that we

⁹ These findings do not eliminate the prospect that firms with preferences aligned completely with government preferences might prefer more consolidated political structures in comparison to more diversified structures.

¹⁰ Displaying economic significance and marginal effects with multiple dependent variable outcomes and ordered probit estimation requires showing marginal coefficients for each dependent variable category transition (e.g., from one to two; from two to three; etc.). A dichotomous variable and discrete probit estimation simplifies the presentation of economic significance through reduction to two categories and one transition.

identify, we utilize our dichotomous governmental decision-making influence measures.¹¹ Probit estimation is used for these dichotomous variables, with results reported in Table 6.

Figures 2–4 plot small and large firms’ influence over the executive, legislative and ministerial branches, respectively, across the range of *Competitors*. Each figure is produced using simulations of coefficient parameters, preset values for the explanatory variables, and calculated expected values. Figures 5–7 plot small and large firms’ executive branch influence, legislative branch influence and ministerial branch influence, respectively, across the range of *Political Diversity* levels using the same simulation approach. All other variables are set to their respective mean levels. Confidence intervals (at 0.05 *p*-values) are also provided for these simulated results. The Stata CLARIFY suite of commands for interpreting statistical results is used to generate the simulations and produce the accompanying figures (King et al., 2000; Zelner, 2009).

Figures 2–4 provide a detailed assessment of how variations in industry concentration affect large and small firms’ influence of various governmental bodies. Several noteworthy findings are evident. First, large firms perceive that they have more influence over governmental decision-making than their smaller counterparts— across nearly the entire range of *Competitors* and in all government branches. These results provide strong support for Hypothesis H1. Second, there is limited impact of variations in industry structure on large firms’ governmental decision-making influence in the executive branch, but pronounced impacts from increased competition on the perceived level of governmental influence of large firms in the legislative and ministerial branches. At the same time, small firms’ governmental decision-making influence is more varied

¹¹ Our dichotomous measures examine the likelihood of a firm being “influential” (i.e., the aggregation of the “influential,” “frequently influential,” and “very influential” categories) versus “not influential” (i.e., the aggregation of the “somewhat influential” and “never influential” categories). These results are robust to different permutations of “influence,” such as limiting the dependent variable to strictly the “frequently influential,” and “very influential” categories.

across the range of industry structure and among the different governmental branches. Some support is therefore found for Hypothesis H2, but only for large firms. Moreover, the relationships revealed in Figures 2–4 provide a potential reason for the mixed empirical results of the effects of industry structure on governmental decision-making influence. In particular, earlier examinations fail to break out either the potential for interrelated effects or how influence may vary across different government branches. Third, large firms’ governmental influence decreases in both the legislative branch and ministerial branch as more competitors are present. Small firms achieve governmental decision-making influence levels in the legislative branch that are statistically indistinguishable from those of large firms in the most competitive industries. Statistically significant differences nevertheless remain in small firms’ abilities to achieve influence in the executive branch and ministerial branch relative to large firms. Figures 2–4 therefore provide some support (albeit not unambiguous) for Hypothesis H4.

Tables 5-7 indicate that interaction of *Political Diversification* and *Firm Size* is negative and moderately significant for the various governmental branches (0.10 *p*-values). These results suggest that large firms’ perceived abilities to influence governmental decision-making are increasingly compromised under greater political diversification. Figures 5–7 plot small and large firms’ influence over the executive, legislative and ministerial branch, respectively, across the range of *Political Diversification* levels, and provide more detail as to how large firms’ perceived abilities to influence decision-making differs from small firms’. Several noteworthy findings are again noteworthy. First, large firms perceive that they have more influence over governmental decision-making than their smaller counterparts— across nearly the entire range of *Political Diversification* and all government branches. These results again provide support for Hypothesis H1. Second, large firms’ perceived influence declines in the executive and

ministerial branches—but remains nearly constant in the legislative branch—as country political structure become increasingly diversified. By contrast, small firms’ perceived abilities to influence governmental decision-making increases in all government branches as country political diversity increases. While increases in country political diversity are seen to have limited or decreasing effects on large firms’ governmental influence, consistent increases in governmental influence obtain for small firms in all branches as political diversity increases. We therefore find support for Hypothesis H3, but only for small firms. Third, small firms achieve nearly identical governmental decision-making influence levels as large firms in the most politically diverse countries—again in all government branches. These results provide strong support for Hypothesis H5.

5.3 DISCUSSION

Our empirical setting and approach arguably provide the most comprehensive and most geographically diverse analysis to date on the firm size-governmental influence relationship. Moreover, our approach and results also provide several implications that are important to both subsequent academic research and managerial practice. For instance, our results reveal that progress in understanding the firm size-governmental influence relationship requires not only simultaneously accounting for variations in firm-, industry- and county-level factors, but also considering important interactions and nonlinearities that occur across different industry and institutional settings. As we demonstrate, interactions substantively mitigate or accentuate the firm size-governmental influence relationship. Our results also suggest that the contrary findings of earlier research might be explained through greater disaggregation. In particular, the mixed empirical results related to industry structure and its effect on firms’ governmental decision-making influence might potentially be explained by moderating effects related to firm size.

Finally, our results suggest that governmental decision-making influence varies by government branch. Some consideration of the nuanced and idiosyncratic elements of each is required in future academic research.

Our approach and results also provide a more complete and more refined picture of the political landscape for managers. For instance, our results indicate that small firms may look to more politically diverse institutional settings as environments that mitigate the influence disadvantages that they typically endure. Conversely, our results indicate that larger firms' influence is dissipated in such politically diverse settings, attenuating the comparative advantage that they typically possess in achieving influence. These results collectively point toward divergent non-market strategies for large and small firms regarding the centralization of political control over governments. Similarly, our results suggest that large firms' who see political influence as a particularly important comparative advantage may be especially wary of not only the political diversity of the country in which they are located, but also the political-influence eroding effects of increased competition.

6 CONCLUSION

The propensity of firms to seek influence over governments in the establishment of governmental laws, rules or regulations is well documented. The degree to which they are successful in their efforts, and the determinants of that success, however, is less well understood. This paper reviews the extant literature that examines firms' influence over governmental decision-making bodies. Based on this review, it suggests that both the direct relationships and the interrelationships that exist between firm-, industry- and country-level factors and firms' governmental decision-making influence are important. It then undertakes several empirical analyses and presents figures of the firm-, industry- and country-level determinants—and

interrelationships among these determinants—of firms’ governmental decision-making influence.

The empirical results confirm the common-held assumption of firm size-governmental influence relationship. In particular, large firms achieve more influence over governmental decision-makers than their smaller counterparts. The results also proffer support that the institutional environment of the country in which firms operate and the structure of the industry in which firms compete affects firms’ governmental influence. In short, firms obtain more political influence in countries with greater political diversity and in industries with fewer competitors.

Importantly, the empirical results also suggest several nuanced but important insights into these relationships important to future academic research as well as industry practitioners. First, across different government branches and regulatory agencies large firms generally lose (but sometimes maintain) influence with greater country political diversity, while small firms always gain influence with greater country political diversity. Second, large firms generally lose (but sometimes maintain) influence with more industry competitors, while the effect of industry structure on small firms’ influence is more varied across different governmental decision-making entities. Third, depending upon the country-level institutional characteristics and industry-level structural characteristics, small firms are no less influential than large firms in affecting governmental policies.

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TABLE 1 – SUMMARY STATISTICS

VARIABLE	MEAN	ST. DEV.	MIN	MAX
DEPENDENT VARIABLE				
<i>Executive Influence</i>	2.426	1.027	1.000	5.000
<i>Legislative Influence</i>	2.395	1.000	1.000	5.000
<i>Ministerial Influence</i>	2.431	1.028	1.000	5.000
<i>Executive Influence PCT</i>	0.339	0.473	0.000	1.000
<i>Legislative Influence PCT</i>	0.324	0.468	0.000	1.000
<i>Ministerial Influence PCT</i>	0.336	0.472	0.000	1.000
INDEPENDENT VARIABLES				
<i>Firm Size</i>	1.788	0.743	1.000	3.000
<i>Competitors</i>	1.187	0.265	0.000	2.303
<i>Political Diversification</i>	0.648	0.184	0.280	1.000
CONTROL VARIABLES				
<i>Common Law Origin</i>	0.328	0.469	0.000	1.000
<i>Civil Law Origin</i>	0.441	0.496	0.000	1.000
<i>Socialist Law Origin</i>	0.218	0.413	0.000	1.000
<i>GDP/Capita</i>	8.499	1.031	6.015	10.505
<i>Trade/GDP</i>	4.178	0.510	2.620	5.881
<i>Manufacturing Sector</i>	0.331	0.471	0.000	1.000
<i>Agriculture Sector</i>	0.064	0.245	0.000	1.000
<i>Construction Sector</i>	0.087	0.281	0.000	1.000
<i>Other Sector</i>	0.036	0.186	0.000	1.000
<i>Services Sector</i>	0.393	0.489	0.000	1.000
<i>Firm Age</i>	2.674	0.853	1.099	6.400
<i>Foreign-Owned Firm</i>	0.188	0.391	0.000	1.000
<i>Government-Owned Firm</i>	0.122	0.327	0.000	1.000
<i>Privatized Firm</i>	0.125	0.331	0.000	1.000
<i>Multinational Firm</i>	0.182	0.386	0.000	1.000
<i>Exporting Firm</i>	0.356	0.479	0.000	1.000

TABLE 2 – CORRELATION STATISTICS

	(1) Executive Influence	(2) Legislative Influence	(3) Ministerial Influence	(4) Political Diversification	(5) Competitors	(6) Firm Size	(7) Common Law Origin	(8) Civil Law Origin	(9) Socialist Law Origin	(10) GDP/Capita	(11) Trade/GDP	(12) Manufacturing Sector	(13) Agriculture Sector	(14) Construction Sector	(15) Other Sector	(16) Services Sector	(17) Firm Age	(18) Foreign-Owned Firm	(19) Government-Owned Firm	(20) Privatized Firm	(21) Multinational Firm	(22) Exporting Firm
(1)	1.00																					
(2)	0.85	1.00																				
(3)	0.81	0.83	1.00																			
(4)	-0.08	-0.09	-0.11	1.00																		
(5)	-0.22	-0.20	-0.21	0.15	1.00																	
(6)	0.23	0.21	0.23	-0.01	-0.15	1.00																
(7)	0.21	0.20	0.19	0.09	0.09	0.02	1.00															
(8)	0.16	0.16	0.17	-0.30	-0.25	0.15	-0.62	1.00														
(9)	-0.34	-0.33	-0.34	0.29	0.21	-0.20	-0.38	-0.47	1.00													
(10)	-0.01	0.04	-0.01	-0.18	-0.21	0.02	-0.07	0.09	-0.08	1.00												
(11)	-0.05	-0.03	-0.03	0.08	0.02	-0.13	0.15	-0.27	0.14	0.08	1.00											
(12)	0.03	0.03	0.03	-0.06	-0.06	0.17	0.01	-0.03	0.03	-0.02	-0.03	1.00										
(13)	-0.08	-0.07	-0.08	0.18	0.08	0.05	-0.04	-0.10	0.16	-0.01	0.01	-0.18	1.00									
(14)	-0.02	-0.03	-0.03	0.06	0.09	-0.05	0.06	-0.04	-0.03	-0.04	-0.01	-0.22	-0.08	1.00								
(15)	-0.03	-0.03	-0.03	0.07	0.04	-0.02	0.11	-0.05	-0.06	-0.17	0.00	-0.14	-0.05	-0.06	1.00							
(16)	0.02	0.02	0.02	-0.06	-0.01	-0.17	-0.05	0.00	0.05	0.18	0.05	-0.57	-0.21	-0.25	-0.16	1.00						
(17)	0.21	0.20	0.21	-0.20	-0.20	0.37	0.08	0.30	-0.43	0.23	-0.17	0.08	-0.06	-0.03	-0.02	-0.08	1.00					
(18)	0.11	0.10	0.12	-0.04	-0.09	0.25	0.09	0.04	-0.14	-0.04	0.00	0.11	-0.08	-0.03	0.02	-0.06	0.07	1.00				
(19)	0.02	0.01	0.05	0.10	-0.06	0.23	-0.01	-0.11	0.14	0.02	0.02	0.05	0.05	-0.03	0.03	-0.03	0.13	-0.06	1.00			
(20)	-0.07	-0.06	-0.06	0.12	0.06	0.12	-0.10	-0.15	0.30	0.05	0.03	0.07	0.14	-0.02	-0.02	-0.06	-0.13	-0.04	0.17	1.00		
(21)	0.17	0.17	0.18	-0.05	-0.07	0.26	0.06	0.08	-0.18	0.00	-0.02	0.05	-0.08	0.01	0.03	-0.03	0.17	0.38	-0.04	-0.06	1.00	
(22)	0.09	0.10	0.12	-0.08	-0.04	0.29	0.16	-0.01	-0.18	0.01	0.00	0.31	-0.04	-0.06	0.04	-0.22	0.18	0.24	0.05	0.01	0.31	1.00

Bold indicates significance at .05 *p-value*

TABLE 3 – EXECUTIVE BRANCH INFLUENCE ESTIMATIONS

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5
	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)
<i>Firm Size</i>		0.196*** (0.030)	0.108 (0.089)	0.436*** (0.144)	0.335** (0.160)
<i>Competitors</i>		-0.157 (0.116)	-0.318 (0.195)	-0.154 (0.116)	-0.358** (0.172)
<i>Political Diversification</i>		0.967** (0.475)	0.960** (0.475)	1.711*** (0.555)	1.734*** (0.566)
<i>Competitors X Firm Size</i>			0.082 (0.080)		0.104 (0.070)
<i>Political Diversification X Firm Size</i>				-0.397 (0.248)	-0.413 (0.255)
<i>Civil Law Origin</i>	-0.414*** (0.147)	-0.342** (0.147)	-0.340** (0.147)	-0.344** (0.147)	-0.341** (0.147)
<i>Socialist Law Origin</i>	-1.436*** (0.229)	-1.489*** (0.182)	-1.477*** (0.182)	-1.506*** (0.177)	-1.492*** (0.178)
<i>GDP/Capita</i>	-0.165** (0.084)	-0.140* (0.086)	-0.140* (0.086)	-0.140* (0.085)	-0.140* (0.086)
<i>Trade/GDP</i>	0.010 (0.120)	-0.012 (0.125)	-0.011 (0.125)	-0.009 (0.124)	-0.008 (0.124)
<i>Manufacturing Sector</i>	-0.163*** (0.046)	-0.197*** (0.046)	-0.199*** (0.046)	-0.195*** (0.046)	-0.196*** (0.046)
<i>Agriculture Sector</i>	-0.261** (0.108)	-0.344*** (0.108)	-0.348*** (0.110)	-0.334*** (0.113)	-0.339*** (0.114)
<i>Construction Sector</i>	-0.077 (0.064)	-0.088* (0.052)	-0.087* (0.052)	-0.082 (0.053)	-0.082 (0.052)
<i>Other Sector</i>	-0.212 (0.282)	-0.070 (0.240)	-0.068 (0.240)	-0.057 (0.236)	-0.054 (0.236)
<i>Firm Age</i>	0.087*** (0.034)	0.057* (0.032)	0.056* (0.032)	0.056* (0.032)	0.056* (0.032)
<i>Foreign-Owned Firm</i>	0.061 (0.055)	-0.002 (0.050)	-0.002 (0.050)	-0.005 (0.050)	-0.005 (0.050)
<i>Government-Owned Firm</i>	0.259*** (0.072)	0.199*** (0.065)	0.194*** (0.067)	0.209*** (0.064)	0.203*** (0.065)
<i>Privatized Firm</i>	0.312*** (0.115)	0.194 (0.124)	0.189 (0.122)	0.209* (0.114)	0.204* (0.113)
<i>Multinational Firm</i>	0.218*** (0.047)	0.172*** (0.049)	0.171*** (0.049)	0.170*** (0.050)	0.168*** (0.049)
<i>Exporting Firm</i>	0.109*** (0.035)	0.079** (0.038)	0.079** (0.038)	0.079** (0.039)	0.079** (0.039)
Limit point 1	-3.341 (0.877)	-2.588 (0.847)	-2.760 (0.846)	-2.127 (0.959)	-2.326 (0.943)
Limit point 2	-1.374 (0.895)	-0.585 (0.834)	-0.756 (0.831)	-0.123 (0.942)	-0.320 (0.926)
Limit point 3	-0.671 (0.903)	0.126 (0.833)	-0.045 (0.830)	0.590 (0.939)	0.392 (0.924)
Limit point 4	-0.175 (0.900)	0.628 (0.834)	0.457 (0.831)	1.092 (0.938)	0.895 (0.923)
Observations	4631	4631	4631	4631	4631
Wald Statistic (d.f.)	168.8***	371.7***	438.3***	594.3***	630.6***
Pseudo-R ²	0.086	0.096	0.096	0.097	0.097

* <0.10; ** <0.05; *** <0.01

TABLE 4 – LEGISLATIVE BRANCH INFLUENCE ESTIMATIONS

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5
	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)
<i>Firm Size</i>		0.162*** (0.027)	0.131 (0.088)	0.356*** (0.118)	0.311* (0.144)
<i>Competitors</i>		-0.133 (0.117)	-0.190 (0.201)	-0.131 (0.117)	-0.222 (0.185)
<i>Political Diversification</i>		1.088** (0.482)	1.086** (0.482)	1.689*** (0.544)	1.699*** (0.548)
<i>Competitors X Firm Size</i>			0.029 (0.081)		0.046 (0.074)
<i>Political Diversification X Firm Size</i>				-0.320 (0.199)	-0.328* (0.200)
<i>Civil Law Origin</i>	-0.297** (0.145)	-0.205 (0.149)	-0.205 (0.148)	-0.206 (0.148)	-0.205 (0.148)
<i>Socialist Law Origin</i>	-1.324*** (0.240)	-1.395*** (0.188)	-1.390*** (0.187)	-1.408*** (0.182)	-1.402*** (0.182)
<i>GDP/Capita</i>	-0.076 (0.084)	-0.050 (0.085)	-0.050 (0.085)	-0.050 (0.085)	-0.050 (0.085)
<i>Trade/GDP</i>	0.028 (0.119)	0.003 (0.128)	0.004 (0.127)	0.006 (0.127)	0.006 (0.127)
<i>Manufacturing Sector</i>	-0.132**** (0.043)	-0.161*** (0.042)	-0.161*** (0.043)	-0.158*** (0.043)	-0.159*** (0.043)
<i>Agriculture Sector</i>	-0.165 (0.118)	-0.245** (0.115)	-0.247** (0.117)	-0.237** (0.118)	-0.239** (0.120)
<i>Construction Sector</i>	-0.127 (0.083)	-0.143** (0.070)	-0.143** (0.070)	-0.138** (0.070)	-0.138** (0.070)
<i>Other Sector</i>	-0.449** (0.222)	-0.297 (0.182)	-0.296 (0.182)	-0.286 (0.179)	-0.284 (0.179)
<i>Firm Age</i>	0.080**** (0.028)	0.058** (0.026)	0.058** (0.026)	0.058** (0.026)	0.058** (0.026)
<i>Foreign-Owned Firm</i>	0.022 (0.062)	-0.034 (0.055)	-0.034 (0.055)	-0.037 (0.055)	-0.037 (0.055)
<i>Government-Owned Firm</i>	0.206*** (0.055)	0.160*** (0.050)	0.159*** (0.051)	0.168*** (0.050)	0.166*** (0.051)
<i>Privatized Firm</i>	0.260** (0.118)	0.161 (0.127)	0.159 (0.124)	0.173 (0.119)	0.170 (0.117)
<i>Multinational Firm</i>	0.214*** (0.047)	0.174*** (0.050)	0.173*** (0.050)	0.172*** (0.050)	0.171*** (0.050)
<i>Exporting Firm</i>	0.089** (0.040)	0.071* (0.039)	0.071* (0.039)	0.071* (0.040)	0.071* (0.039)
Limit point 1	-2.380 (0.844)	-1.551 (0.835)	-1.611 (0.849)	-1.177 (0.909)	-1.266 (0.908)
Limit point 2	-0.378 (0.860)	0.487 (0.817)	0.427 (0.830)	0.862 (0.881)	0.774 (0.884)
Limit point 3	0.317 (0.863)	1.190 (0.814)	1.130 (0.827)	1.565 (0.876)	1.477 (0.878)
Limit point 4	0.811 (0.861)	1.690 (0.814)	1.630 (0.828)	2.065 (0.877)	1.977 (0.880)
Observations	4627	4627	4627	4627	4627
Wald Statistic (d.f.)	158.4***	354.3***	493.2***	550.0***	837.30***
Pseudo-R ²	0.081	0.091	0.091	0.092	0.092

* <0.10; ** <0.05; *** <0.01

TABLE 5 – MINISTERIAL BRANCH INFLUENCE ESTIMATIONS

	MODEL 1	MODEL 2	MODEL 3	MODEL 4	MODEL 5
	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)
<i>Firm Size</i>		0.194*** (0.029)	0.134 (0.097)	0.466*** (0.137)	0.385** (0.164)
<i>Competitors</i>		-0.160 (0.125)	-0.269 (0.230)	-0.156 (0.125)	-0.318 (0.203)
<i>Political Diversification</i>		0.952** (0.475)	0.948** (0.473)	1.796*** (0.580)	1.815*** (0.592)
<i>Competitors X Firm Size</i>			0.055 (0.088)		0.083 (0.076)
<i>Political Diversification X Firm Size</i>				-0.450* (0.239)	-0.464* (0.244)
<i>Civil Law Origin</i>	-0.382*** (0.137)	-0.315** (0.141)	-0.313** (0.141)	-0.316** (0.141)	-0.314** (0.141)
<i>Socialist Law Origin</i>	-1.453*** (0.226)	-1.512*** (0.179)	-1.504*** (0.178)	-1.533*** (0.174)	-1.521*** (0.174)
<i>GDP/Capita</i>	-0.199** (0.084)	-0.180** (0.083)	-0.180** (0.083)	-0.181** (0.083)	-0.181** (0.083)
<i>Trade/GDP</i>	0.005 (0.117)	-0.019 (0.119)	-0.018 (0.119)	-0.015 (0.119)	-0.014 (0.119)
<i>Manufacturing Sector</i>	-0.171*** (0.053)	-0.207*** (0.051)	-0.208*** (0.051)	-0.204*** (0.051)	-0.205*** (0.051)
<i>Agriculture Sector</i>	-0.164 (0.114)	-0.246*** (0.117)	-0.249** (0.118)	-0.235** (0.121)	-0.239** (0.122)
<i>Construction Sector</i>	-0.098 (0.064)	-0.112*** (0.057)	-0.112** (0.057)	-0.106* (0.056)	-0.105* (0.056)
<i>Other Sector</i>	-0.251 (0.282)	-0.110 (0.248)	-0.109 (0.248)	-0.096 (0.243)	-0.093 (0.242)
<i>Firm Age</i>	0.073** (0.032)	0.043 (0.030)	0.043 (0.030)	0.042 (0.031)	0.042 (0.030)
<i>Foreign-Owned Firm</i>	0.100 (0.062)	0.036 (0.055)	0.036 (0.055)	0.033 (0.056)	0.033 (0.056)
<i>Government-Owned Firm</i>	0.346*** (0.074)	0.287*** (0.061)	0.284*** (0.062)	0.299*** (0.060)	0.294*** (0.061)
<i>Privatized Firm</i>	0.238** (0.117)	0.123 (0.125)	0.120 (0.123)	0.140 (0.113)	0.136 (0.112)
<i>Multinational Firm</i>	0.221*** (0.042)	0.174*** (0.044)	0.173*** (0.044)	0.171*** (0.045)	0.170*** (0.045)
<i>Exporting Firm</i>	0.143*** (0.046)	0.115** (0.048)	0.115** (0.048)	0.115** (0.049)	0.115** (0.049)
Limit point 1	-3.693 (0.852)	-3.024 (0.789)	-3.141 (0.837)	-2.500 (0.915)	-2.660 (0.934)
Limit point 2	-1.690 (0.879)	-0.983 (0.778)	-1.099 (0.825)	-0.458 (0.900)	-0.616 (0.922)
Limit point 3	-1.016 (0.885)	-0.300 (0.777)	-0.417 (0.823)	0.226 (0.895)	0.068 (0.917)
Limit point 4	-0.484 (0.880)	0.235 (0.771)	0.119 (0.816)	0.763 (0.889)	0.604 (0.909)
Observations	4498	4498	4498	4498	4498
Wald Statistic (d.f.)	346.3***	526.3***	671.6***	686.5***	762.6***
Pseudo-R ²	0.091	0.101	0.101	0.102	0.102

* <0.10; ** <0.05; *** <0.01

TABLE 6 – PROBIT ESTIMATIONS (* <0.10; ** <0.05; * <0.01)**

	EXECUTIVE BRANCH	EXECUTIVE BRANCH	LEGISLATIVE BRANCH	LEGISLATIVE BRANCH	MINISTERIAL BRANCH	MINISTERIAL BRANCH
	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)	β (s.e.)
<i>Firm Size</i>	0.204* (0.110)	0.524*** (0.109)	0.287*** (0.110)	0.412*** (0.108)	0.276** (0.116)	0.592*** (0.109)
<i>Competitors</i>	-0.188 (0.211)	-0.054 (0.081)	0.076 (0.212)	-0.050 (0.081)	-0.140 (0.220)	-0.113 (0.083)
<i>Political Diversification</i>	0.216 (0.159)	1.000*** (0.364)	0.405** (0.159)	1.013*** (0.363)	0.264* (0.161)	1.220*** (0.366)
<i>Competitors X Firm Size</i>	0.067 (0.099)		-0.065 (0.099)		0.012 (0.104)	
<i>Political Diversification X Firm Size</i>		-0.412** (0.173)		-0.322* (0.172)		-0.504*** (0.173)
<i>Civil Law Origin</i>	-0.408*** (0.065)	-0.410*** (0.064)	-0.330*** (0.064)	-0.329*** (0.064)	-0.390*** (0.066)	-0.391*** (0.066)
<i>Socialist Law Origin</i>	-1.006*** (0.082)	-1.030*** (0.081)	-0.990*** (0.082)	-0.993*** (0.081)	-1.057*** (0.085)	-1.077*** (0.084)
<i>GDP/Capita</i>	-0.131*** (0.031)	-0.132*** (0.031)	-0.055* (0.031)	-0.055* (0.031)	-0.177*** (0.033)	-0.177*** (0.033)
<i>Trade/GDP</i>	0.172*** (0.040)	0.173*** (0.040)	0.128*** (0.039)	0.130*** (0.039)	0.157*** (0.041)	0.159*** (0.041)
<i>Manufacturing Sector</i>	-0.219*** (0.047)	-0.215*** (0.047)	-0.188*** (0.047)	-0.185*** (0.047)	-0.229*** (0.048)	-0.225*** (0.048)
<i>Agriculture Sector</i>	-0.354*** (0.107)	-0.342*** (0.107)	-0.191* (0.105)	-0.187* (0.105)	-0.168 (0.109)	-0.157 (0.109)
<i>Construction Sector</i>	-0.082 (0.079)	-0.076 (0.079)	-0.143* (0.079)	-0.138* (0.079)	-0.126 (0.080)	-0.119 (0.080)
<i>Other Sector</i>	-0.258 (0.327)	-0.250 (0.328)	-0.334 (0.348)	-0.323 (0.348)	-0.017 (0.310)	-0.007 (0.310)
<i>Firm Age</i>	0.084*** (0.027)	0.084*** (0.027)	0.074*** (0.027)	0.073*** (0.027)	0.063** (0.028)	0.063** (0.028)
<i>Foreign-Owned Firm</i>	0.015 (0.055)	0.011 (0.056)	-0.022 (0.055)	-0.025 (0.055)	0.027 (0.057)	0.023 (0.057)
<i>Government-Owned Firm</i>	0.276*** (0.077)	0.291*** (0.077)	0.276*** (0.077)	0.280*** (0.076)	0.369*** (0.078)	0.384*** (0.078)
<i>Privatized Firm</i>	0.152** (0.077)	0.171** (0.077)	0.093 (0.077)	0.100 (0.077)	0.003 (0.079)	0.022 (0.079)
<i>Multinational Firm</i>	0.213*** (0.056)	0.213*** (0.056)	0.190*** (0.055)	0.187*** (0.055)	0.225*** (0.056)	0.223*** (0.056)
<i>Exporting Firm</i>	0.095** (0.048)	0.095** (0.048)	0.098** (0.048)	0.098** (0.048)	0.164*** (0.049)	0.165*** (0.049)
Constant	-0.045 (0.424)	-0.663 (0.422)	-0.920** (0.426)	-1.162*** (0.423)	0.331 (0.444)	-0.285 (0.438)
Observations	4631	4631	4627	4627	4601	4601
LR Statistic (d.f.)	609.1***	614.3***	508.0***	511.1***	680.4***	689.2***
Pseudo-R ²	0.099	0.100	0.084	0.085	0.111	0.112

FIGURE 1 – THEORETICAL INFLUENCE MODEL

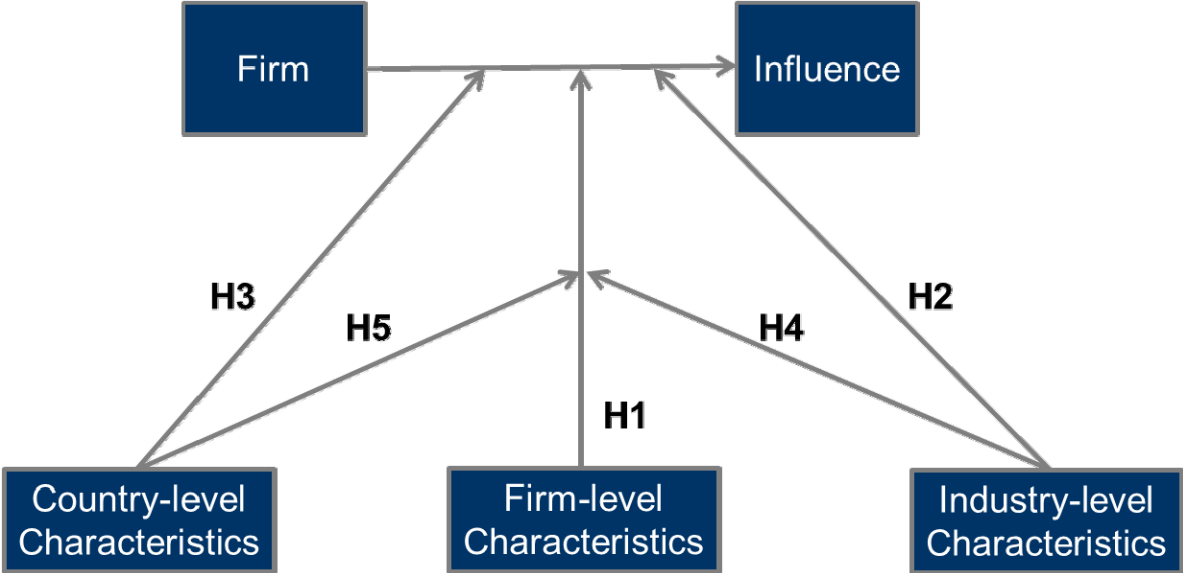


FIGURE 2 – EXECUTIVE BRANCH INFLUENCE (SIZE x COMPETITION)

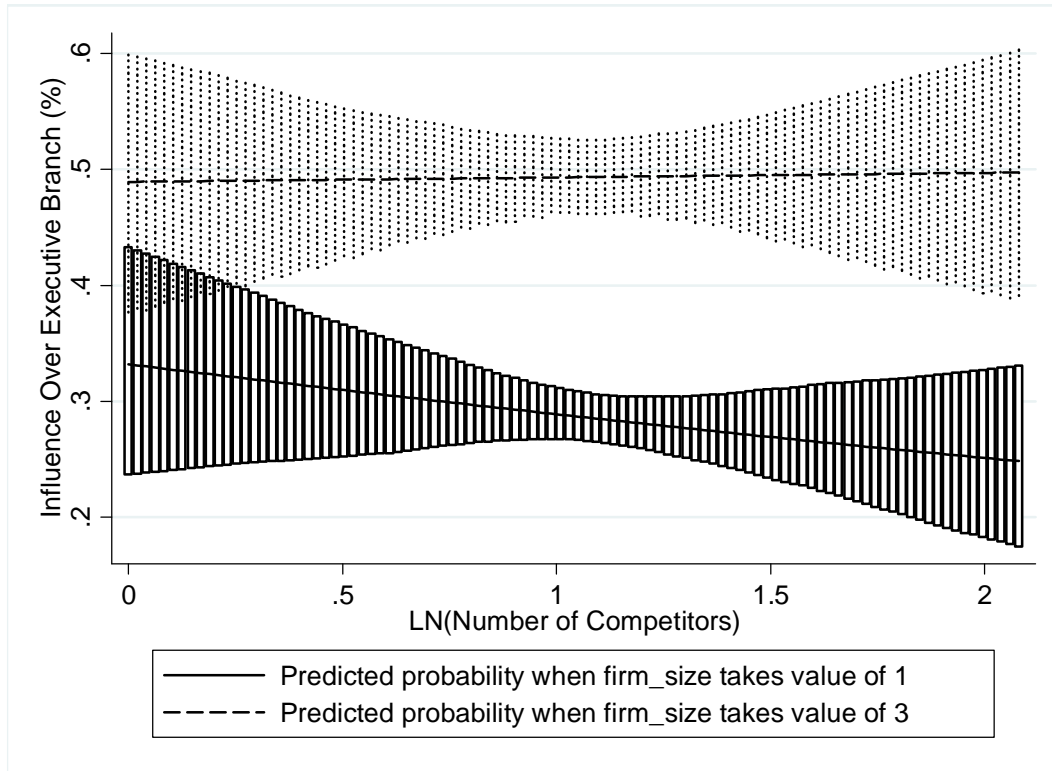


FIGURE 3 – LEGISLATIVE BRANCH INFLUENCE (SIZE x COMPETITION)

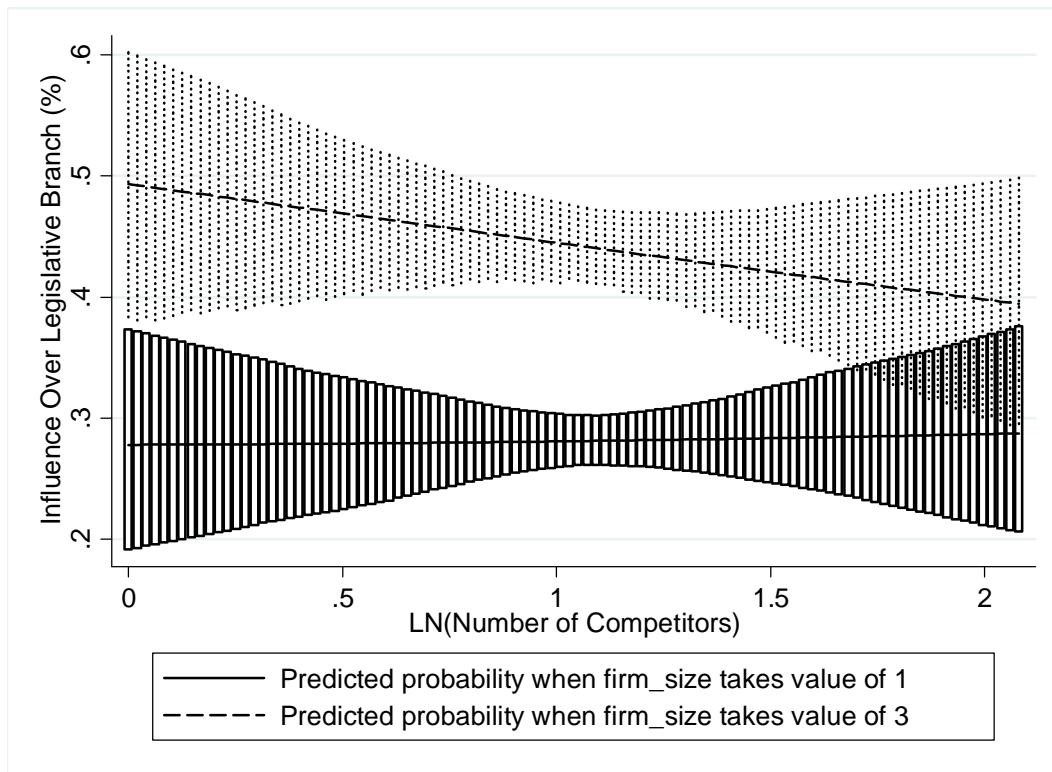


FIGURE 4 – MINISTERIAL BRANCH INFLUENCE (SIZE x COMPETITION)

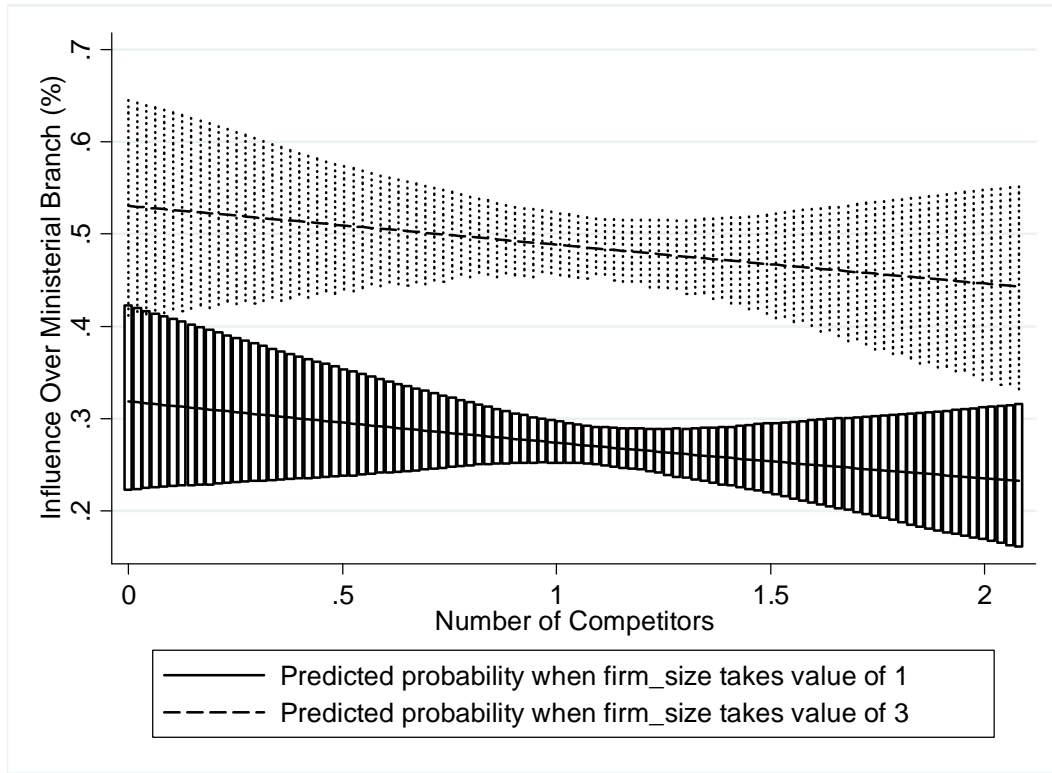


FIGURE 5 – EXECUTIVE BRANCH INFLUENCE (SIZE x POLITICAL DIVERSITY)

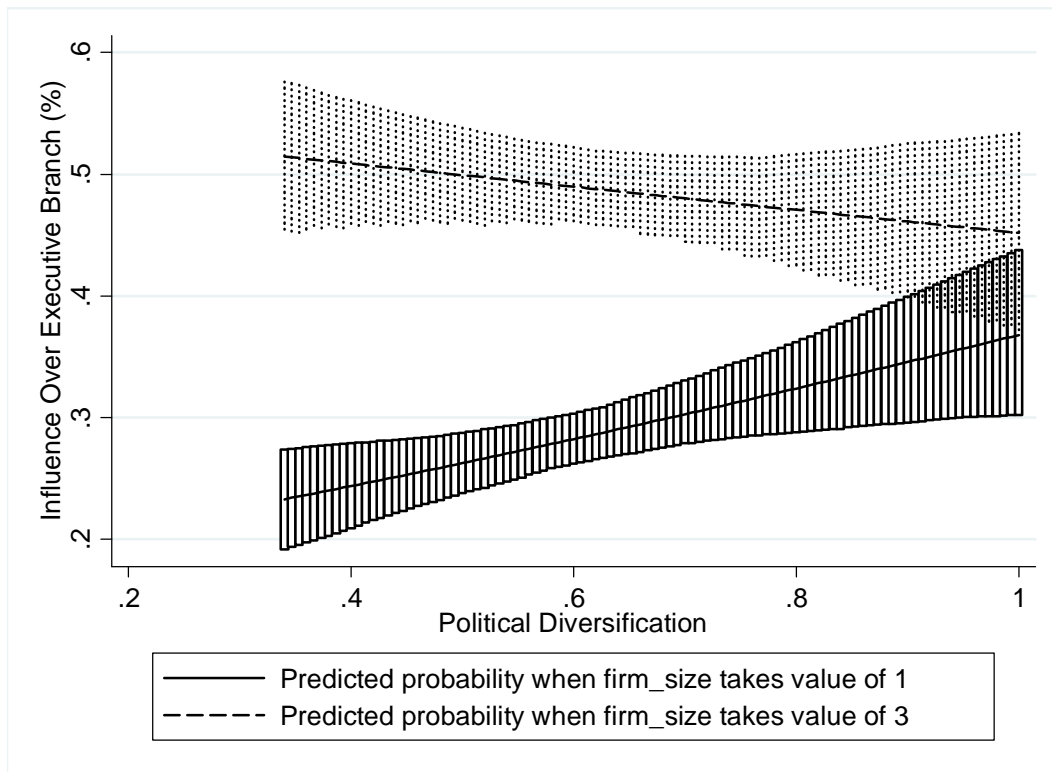


FIGURE 6 – LEGISLATIVE BRANCH INFLUENCE (SIZE x POLITICAL DIVERSITY)

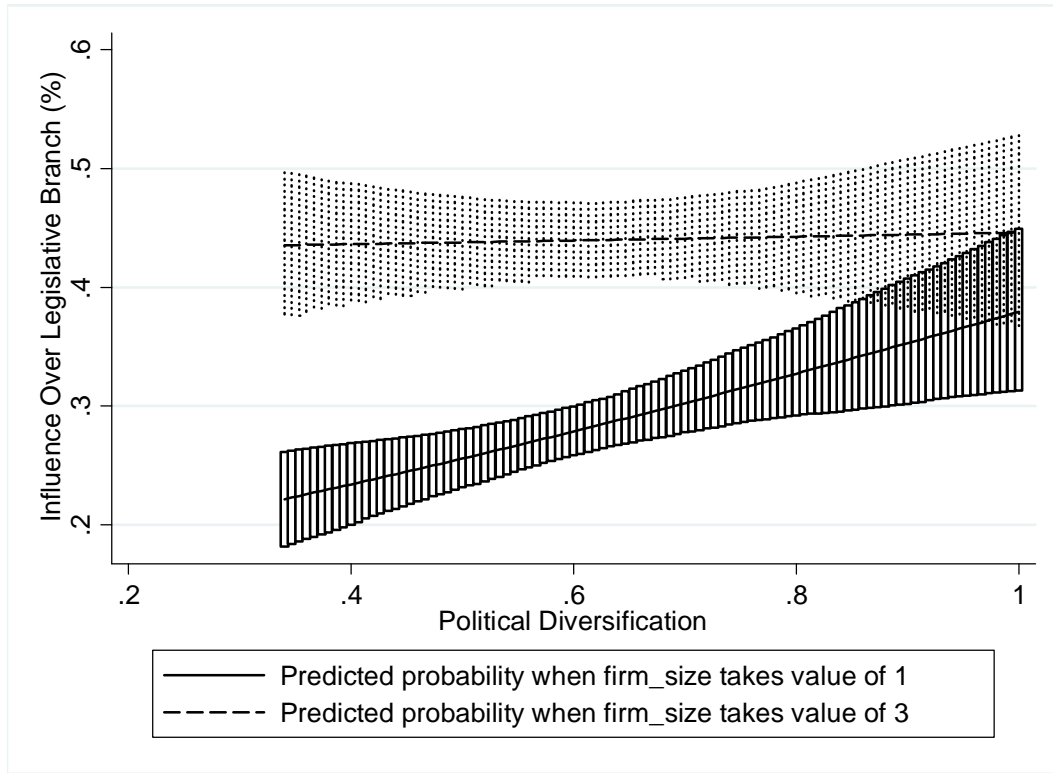
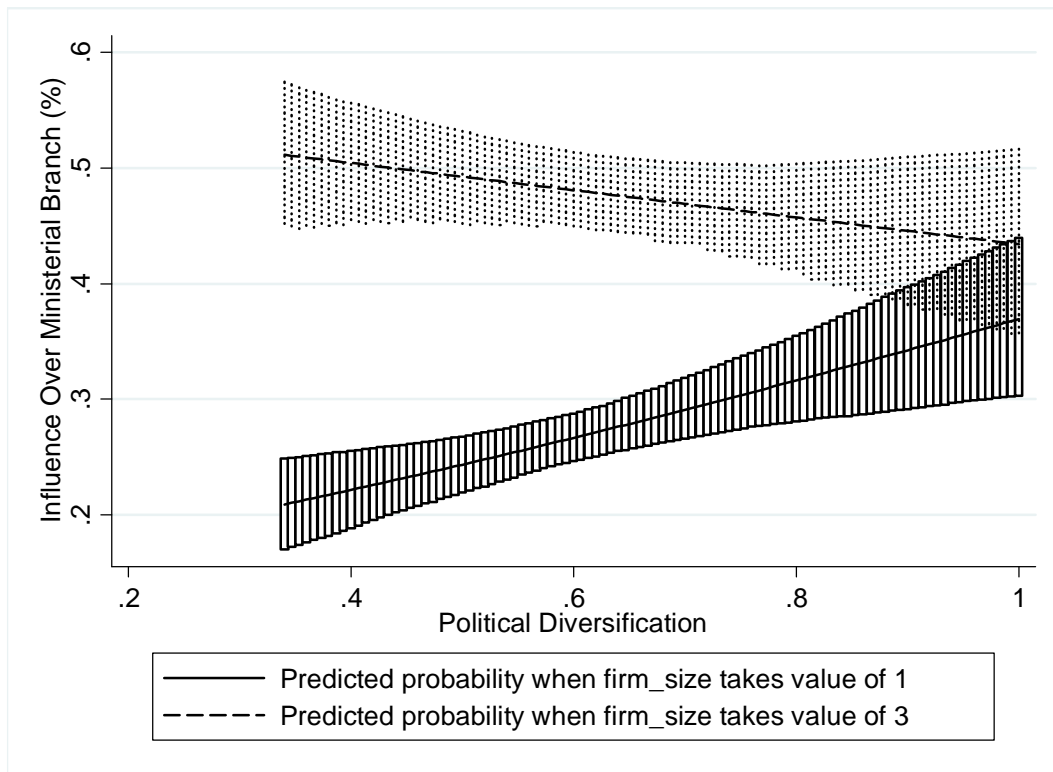


FIGURE 7 – MINISTERIAL BRANCH INFLUENCE (SIZE x POLITICAL DIVERSITY)



APPENDIX – VARIABLE DEFINITIONS

DEPENDENT VARIABLES	DESCRIPTION AND SOURCE
<i>Governmental Decision-Making Influence</i>	“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 government on the content of that law, rule, regulation or decree?” Answered separately for 1) Executive Branch; 2) Legislative Branch; 3) Ministerial Branch Source: WBES. Scale: 1: never influential...5: very influential.
INDEPENDENT VARIABLES	DESCRIPTION AND SOURCE
<i>Firm Size</i>	Size of firm. (1) Small-sized: 5–50 full-time employees; (2) Medium-sized: 51– 500 employees; (3) Large-sized: more than 500 employees. Source: WBES.
<i>Competitors</i>	“Regarding your firm’s major product line, how many competitors do you face in your markets?” Source: WBES. Scale: Logged.
<i>Political Diversification</i>	Number of institutional players (e.g., executive, upper and lower legislative bodies) and partisan alignment across political institutions. Higher values imply greater diversity of partisan alignments. Source: Henisz (2000). Scale: 0...1.
CONTROL VARIABLES	DESCRIPTION AND SOURCE
<i>Legal Origin</i>	Country Legal Origin: (1) English Common Law; (2) French Commercial Code; (3) German Commercial Law; (4) Scandinavian Commercial Law; (5) Socialist/Communist Law. Germany and Sweden included in Civil Law (rather than Common Law) category. Source: La Porta et al. (1999). Scale: 0/1.
<i>GDP/Capita</i>	GDP and Population for 1999 (current USD). Source: World Development Indicators. Scale: Logged.
<i>Trade/GDP</i>	Trade and GDP for 1999 (current USD). Source: World Development Indicators. Scale: Logged.
<i>Industry Sectors</i>	Industry Indicators: a) Services; b) Manufacturing; c) Agriculture; d) Construction; e) Other. Source: WBES. Scale: 0/1.
<i>Firm Age</i>	Logged years since start-up. Source: WBES. Scale: 0/1.
<i>Foreign-Owned Firm</i>	“Share of Foreign Ownership?” Source: WBES. Scale: 0/1.
<i>Government-Owned Firm</i>	“Share of State Ownership?” Source: WBES. Scale: 0/1.
<i>Privatized Firm</i>	“How was your firm established?” Source: WBES. Scale: 0/1.
<i>Multinational Firm</i>	“Does your firm have holdings or operations in other countries?” Source: WBES. Scale: 0/1.
<i>Exporting Firm</i>	“Does your firm export?” Source: WBES. Scale: 0/1.