

THE INTEGRATION OF MARKET AND NONMARKET STRATEGIES REVISITED: MARKET INVESTMENTS AS POLITICAL ASSETS

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ABSTRACT

The literature on corporate political activities stresses the importance for firms of integrating their market and nonmarket strategies. However, beyond this claim, little has been done theoretically and empirically to push forward this concept of integration. Building on political market theory and New Institutional Economics, we argue that integrating market and nonmarket strategies is not only about political activities facilitating the development of market strategies, but also about specific market investments serving as direct inputs in the development of nonmarket strategies. Because of the high level of transaction costs involved in this type of political market exchange, however, firms in less regulated markets have to discover policy-makers' preferences and thus diversify the market investments they integrate in their nonmarket strategy. These less regulated firms, also, might wait for election periods, i.e. times where policy-makers' preferences get revealed, to refocus their investments on certain assets, while more regulated firms might tend to avoid these periods of intense political competition. We test and find support for our theory using a broad sample of US firms between 1998 and 2012. On average, during election periods, a 50% increase in lobbying expenses is associated with a \$2.8 million increase in capital expenditures for firms in less regulated markets. For firms in more regulated sectors, a 50% increase in lobbying corresponds to a \$4.4 million market investment increase, but outside election periods.

Keywords: Corporate political activity; market-nonmarket integration; lobbying; strategic market investments.

INTRODUCTION

The last decade has witnessed increased interest in the design and implementation of firms' nonmarket strategies, defined as coordinated actions that firms undertake in public policy arenas (Baron, 2003; Baysinger, 1984; Hillman, Schuler, & Keim, 2004; Shaffer, 1995). These actions typically involve campaign contributions (Ansolabehere, de Figueiredo and Snyder, 2003), lobbying (Bertrand, Bombardini and Trebbi, 2014) or constituency building (Lord, 2003), and have been shown to vary with dimensions such as the degree of regulation, the nature of the industry structure (Salomon & Seigfried, 1977), the amount of government purchase (Masters & Keim, 1985; Pittman, 1977), the attractiveness of the political market (Bonardi, Holburn and Vanden Bergh, 2006), or the nature of the political institutional environment (Macher & Mayo, 2015).

Within this literature, one important aspect is the so-called integration of firms' market and nonmarket strategies (Baron, 1995, 1999). The underlying idea is that market strategies are often constrained or slowed down by public policy or regulatory factors, and nonmarket activities can be instrumental in overcoming these constraints and make market strategies successful (Ahammad et al., 2017). In that spirit, nonmarket activities constitute an important factor to account for firms' competitive advantage and superior performance (Baron, 1997). Despite its importance, however, few studies have tried to test empirically the integration concept and develop it theoretically. Some notable exceptions include Taylor (1997) or Ozer and Markoczy (2010), who explored empirically the articulation of R&D expenditures and campaign contributions, Bonardi (2004), who looked at the integration of global market strategies and defensive/offensive nonmarket activities within former monopolies, or Holburn & Vanden Bergh (2014), who showed that regulated firms in the US significantly increase campaign contributions when these firms need regulatory approval to launch in a merger or acquisition. These few studies certainly shed some light on the existence and importance of integrated strategies, but there remains plenty of room for more work on the topic, in particular, to identify more precisely how and when firms engage in this type of integration (Mellahi et al., 2016; Xie, Li, and Xie, 2014).

The purpose of this paper is to go in this direction. More specifically, we suggest that there is a different way to look at this market-nonmarket integration than what has been done so far in most of the literature. In effect, the studies highlighted above have one point in common in that they present nonmarket activities as complementing firms' market strategies when regulatory or public policy constraints require it (Baron, 1995). Increased lobbying expenses or financial contributions are therefore expected to be observed when companies need to push public policy decisions in a direction that favors these firms' market strategies (Kingsley, Vanden Bergh and Bonardi, 2012). This conception of market-nonmarket integration is clearly relevant and important for firms, but it is not the only plausible one.

Another view could be one in which market and nonmarket activities are more intrinsically intertwined. Funk and Hirschman (2017), for instance, suggest that firms might attempt the effect of policies through market actions. This occurs when firms' interpretation of incomplete laws contributes to shape the meaning of these laws, or when firms push the boundaries of existing regulatory frameworks through novel practices. Raiha (2018) shows that firms, when they make market investments, affect the local economy and therefore change voters' evaluation of how political officeholders have performed. In a similar spirit, Bonardi and Urbiztondo (2013) develop theoretical models in which firms get political influence through their market actions, for instance by expanding their workforce or investing in politically visible sectors or technologies. The underlying idea there is that market investments often carry significant political value as they might fit with public officials' objectives and can, therefore, help firms obtain regulatory approvals and more favorable policies. Bonardi (1999, 2009) suggests that this type of behavior has been at play during the deregulation of former European telecom monopolies to the point where this integration might have been detrimental to these firms' ability to successfully adapt to liberalized environments, finally forcing these firms to give up this integrated strategy. The critical point here is that the integration of market and nonmarket activities within firms happens not only through a willingness to align the two types of strategies towards the same goal but also through 'joint production': market activities may be direct inputs into the firm's nonmarket strategy and significantly impacts its likelihood of success.

The purpose of this study is to develop a theory for this second mode of market-nonmarket integration, and to test this theory. Several questions emerge, such as: What are the links between this integration mode and traditional political tactics such as lobbying or campaign contributions? What are constraints for firms to develop this integration mode and how do firms cope with these constraints? When do various types of firms use these integrated strategies and how? In order to explore these questions, we build on the political market framework, according to which public policy in a democracy is the product of the relationships between demanders (firms, interest groups, groups of consumers, activists, etc.), suppliers (politicians, regulators, civil servants, etc.), and the degree of competition faced by in the demand and the supply side of the political market (Bonardi, Hillman and Keim, 2005). Enhancing this perspective with concepts based on New Institutional Economics (Dixit, 1996; North, 1990), in particular transaction cost economics, we show that two types of political assets can play an important role in this mode of integration of market and nonmarket strategies: *actual political assets* – political assets that hold immediate political value and serve firms' current strategic objectives, and *potential political assets*– political assets that have the potential to create future political value. We thus expect that firms' lobbying expenses –which we consider here as an indication that firms develop their

corporate political activities¹— should have a direct relationship with firms’ strategic market investments both for actual and potential political assets.

Looking at firms in regulated or less regulated industries, we will first see that both types of firms rely on strategic market investments as actual political assets to serve their immediate strategic objectives. However, only less regulated firms will be prone to using strategic market investments as potential political assets in their integration of non-market and market strategies since they face higher transaction costs in their relationships with policy-makers. These less regulated firms, therefore, need to diversify the economic assets they use as political investments. Moreover, we will show that election periods constitute windows of opportunities in political markets in which less regulated firms increase market investments concerning both actual and potential political assets as they are better informed about the value of these assets for policy-makers; by contrast, more regulated firms, who face lower transaction costs and better know the political value of their economic assets, avoid competitive election periods and rely mainly on strategic market investments with actual political value outside of these election periods.

We test our theory using corporate lobbying data from the Center of Responsive Politics (CRP) and merged it with annual financial records from COMPUSTAT and regulation data from RegData. The CRP sums the mid-year and end-year total amount of lobby expenses reported by a registrant (firm) in order to obtain the annual amount invested by the firm to lobby in the US. Our sample encompasses all available data on corporate political involvement through lobbying for firms from 1998 to 2012, which led to a sample of 5,425 observations. Using CAPEX and R&D expenses as measures of market investments with political value, we find broad empirical support for our theory. On the broad sample, increases in firms’ lobbying expenses have a clear impact on market expenses. Besides, the analysis confirms clear differences among more and less regulated firms and suggests that firms’ integration of market and nonmarket activities is different in presidential election and non-election periods. In the last section, we discuss these results not only for the concept of integration of market and nonmarket activities, but also for the nature of political markets in democratic countries.

THEORY AND HYPOTHESES

The political value of market assets and investments

As suggested in the introduction, the overarching theoretical lens we are considering in developing a theory of market-nonmarket integration is the political market framework (Bonardi et al., 2005, 2006). Figure 1 below, adapted from Bonardi (2011), highlights the main aspects of this framework. This framework conceptualizes political environments through the interactions of demanders of public policies

¹ The underlying assumption here is that lobbying expenses are only one aspect of a firm’s political strategy, and can thus be interpreted as a signal of how keen firms are to develop their political activities.

(firms and other interest groups) and suppliers of public policies (politicians seeking election or reelection, civil servants, regulators, etc.). Demanders compete or collaborate with each other and have to provide things that will push suppliers to adopt a policy that is close to these demanders' preferred policy. These things might include financial contributions, information or blocks of votes (Hillman and Hitt, 1999). In this context, firms are often presented to have 'natural' advantages over other demanders in the sense that firms are already 'organizations' and are therefore less prone to the collective action problem that often plagues demanders' attempts (Olson, 1965). On top of this, however, firms can also make market investments that are appealing to politicians and regulators, which is at the core of our concept of integrated strategy in this paper.

Insert Figure 1 about here

Which market investments carry the highest political value is, of course, dependent not only on the policy-makers' preferences, the current context in which firms and policymakers reside but also on the future state of the world. Therefore, different market investments carry not only political value that allows firms to satisfy immediate strategic objectives while helping politicians to be elected, but also potential political value that might allow firms to continuously overarch strategic objectives while aiding politicians to be reelected. Market investments which hold actual political value are often appealing to suppliers of policies because they represent the immediate and credible commitment of support to economic development and employment which can last over extended period of time, like for instance, capital investments (CAPEX). President Trump's election, whose campaign rhetoric was based on the premise that it is essential to make and bring back jobs in America, is a case in point as suggested by the headline of an article published in The Washington Post on 26th of July 2017 entitled: "Foxconn announces new factory in Wisconsin in a much-needed win for Trump and Scott Walker"².

A similar argument can be made for strategic market investments which hold potential political value, such as research and development (R&D) investments. Market investments that hold potential political value are often appealing to suppliers of public policies as they support the technological dynamism of a region or an industry and can thus be used by these politicians or regulators to argue for a brighter economic future, something that has often been found as an important election determinant. For instance, Fair (1978) in his model regarding economic determinants of political elections suggests that the growth rate of real per capita GNP, the absolute value of the rate of inflation and a president running for reelection have important positive effect on the popular vote for the incumbent party. Therefore, if

² https://www.washingtonpost.com/news/wonk/wp/2017/07/26/foxconn-to-announce-new-factory-in-wisconsin-in-much-needed-win-for-trump-and-scott-walker/?utm_term=.8f8a69f20594

increases in lobbying expenses signal that firms strengthen their nonmarket activities, we make the following baseline hypothesis:

Hypothesis 1: Increases in firms' lobbying expenses have a positive impact on variations in market investments.

Political assets, transaction costs in political markets and degree of regulation

As indicated in Figure 1, political markets present another important characteristic: they imply high transaction costs between demanders and suppliers (North, 1990). These high transaction costs can be of several kinds. First, demanders often do not know what politicians or bureaucrats really value; figuring this out requires experience and knowledge of policy-makers, which some firms have and others have to discover. Second, neither demanders nor suppliers of public policies can be sure that promises been made at a certain point in time by one player will really be fulfilled later. When a firm promises to build a plant in a region, for instance, this investment carries political value but this political value will only be totally realized when the plant has been built; if a politician provides a favorable regulation as a counterpart for this investment, there might be a time difference in the moment the regulation is adopted and when the investment is made. In this example, both the firm and the politicians face transaction costs. In the case of the firm, the regulation could also be reversed while the investment has been made. This second type of transaction cost is related to ex post opportunism.

Firms are not equal when it comes to these transaction costs, however. Firms that have developed through past experience some political capabilities that allow them to be more effective in dealing with these political transaction costs. For instance, Martin (2000), in her study of US health policies, suggests that firms develop specific political resources –which she calls ‘capacity’– which lead some organizations to be more successful than others in their nonmarket strategies. Similarly, Holburn and Zelner (2010) show that the political capabilities developed by firms in their home environment can be used when they enter international markets, and more specifically firms that have developed capabilities in difficult political environments –i.e. in environments characterized by high transaction costs– are more likely to enter and succeed in other difficult environments. These findings are consistent with the idea that there is a large heterogeneity among firms regarding the knowledge and skills some of them possess to handle high transaction costs in political environments (Henisz, 2003), and also that these knowledge and skills are developed over time in an experiential manner (Bonardi and Vanden Bergh, 2015).

All firms, however, do not and cannot accumulate this experiential knowledge at the same rate as they are not similarly exposed to political issues. For this reason, firms operating in highly regulated industries, as they have to interact very frequently with regulatory authorities and regulators, are much more likely than others to develop not only higher constituency in their nonmarket activities (Lord, 2003),

but also the ability to deal with transaction costs in political markets (Bonardi, Holburn and Vanden Bergh, 2006). These firms are thus more likely than others to engage in nonmarket activities in an effort to integrate their market and nonmarket strategies through market investments that generate higher immediate political value. For instance, capital investments have long been shown to significantly affect the value and very survival of firms (Tobin, 1969; Yoshikawa, 1980; Hayashi, 1982; Abel, 1983). Similarly, in political environments, market expenses as capital investments generate higher transaction costs but arguably also generate higher political value as these expenses should produce a more visible impact. Therefore, more regulated firms, as they have the capabilities to handle higher transaction costs and have already built constituency, are more likely to rely on market investments with higher and immediate political value, that is, would rely more on actual political assets. Therefore,

Hypothesis 2a: In more regulated sectors, increases in firms' lobbying expenses have a positive impact on variations in market investments with actual political value.

Firms that operate in less regulated industry do not interact frequently with regulatory authorities or regulators, and therefore face higher transaction costs in political environments. In particular, it is difficult for these firms to clearly evaluate policy-makers' preferences, or the true political value of their economic assets. These firms are thus more likely to engage in nonmarket activities by diversifying the portfolio of market assets they can leverage for political reasons, as a way to 'search' for the economic assets that have value for policy-makers. In this spirit, these firms might constitute portfolios of market assets that might have political value, and thus mix strategic market investments that hold both actual and potential political value since that will allow them not only to satisfy current strategic objectives but also build constituency, learn how to deal with transaction cost in political environment and open opportunity for more sustainable integration of market and nonmarket strategies.

Hypothesis 2b: In less regulated sectors, increases in firms' lobbying expenses have a positive impact on variations in market investments with both actual and potential political value.

Political value of economic assets during versus outside election periods

A last important aspect of political markets is that they significantly differ in election periods and outside election periods. During election periods, in effect, politicians have to set their preferences and reveal them as clearly as possible. One key source of political transaction costs identified thus goes away. Firms in less regulated sectors are likely to seize these windows of opportunities in political markets and should therefore seek to increase market investments and do it in a more focused way, i.e. by focusing on assets that have actual political value. In effect, one type of political transaction costs will be lower during election periods: the ones that have to do with discovering politicians' preferences, as politicians go at length in these periods to disclose these preferences and make them public. We thus hypothesize that

firms in less regulated industries will seize these windows of opportunity to increase their market investments on political grounds.

Hypothesis 3a: In less regulated sectors, increases in firms' lobbying expenses within election periods will have a positive impact on variations in market investments.

Firms in sectors with higher degrees of regulation, on the other hand, do not face lower political transaction costs during election periods. These firms, in effect, do not have to wait for election periods to have a good sense of politicians' preferences. These election times for these firms might actually be risky ventures as competition from other interest groups is likely to be much higher (since firms in less regulated markets will now invest more). We therefore expect firms in more regulated sectors to create political value through market investments outside of election times rather than during election times.

Hypothesis 3b: In more regulated sectors, increases in firms' lobbying expenses outside election periods will have a positive impact on variations in market investments.

Insert Figure 2 about here

SAMPLE, DATA AND METHODS

Lobbying data

We obtained lobbying data for a sample of US companies from the Center for Responsive Politics (CRP). The Lobby Disclosure Act of 1995 establishes the regulation and reporting requirements for those organizations who seek to affect U.S. government policies or the implementation of Federal programs. Registrants must file semi-annual reports (within 30 days of the end of semi-annual period) detailing the issue they lobby for and the amount spent³. The CRP data includes lobbying expenses, PAC contributions and soft-money (for some years) as distinct categories. It is compiled using the semi-annual lobbying disclosure reports filed with the Secretary of the Senate's Office of Public Records and is available by calendar year since 1998. The CRP sums the mid-year and year-end total amounts of expenses reported by a registrant to provide annual figures for each firm. Adjustments are made if there are any subsequent amendment reports correcting the original report amount in either the mid-year or end-year filings. Lobbying can be done in-house, and/or via a contractual arrangement with external lobbyists to lobby on a firm's behalf. Thus, even if an organization does not file for lobbying itself (e.g. because it has no in-

³ Typically, issues are very general, e.g., "Lobby for business and workforce development programs and appropriations". The CRP provides a considerable service by sifting, matching, and cleaning the raw lobbying disclosure data. The Senate lobby reports and registrations database can be accessed at: <http://sopr.senate.gov>.

house lobbying), the CRP sums all of the organization's contracted lobbying expenses reported by its external lobbyists. Finally, when a parent firm and its subsidiary both file for lobbying, the CRP attributes all lobbying expenses to the parent firm. In our study we do not use PAC contributions and soft money since those are reported by election cycle rather than calendar year. PAC and soft money might also respond to different and broader investment logics than lobbying expenses, which can be seen as squarely focused on specific political issues (Bertrand, Bombardini and Trebbi, 2014) and is thus more directly applicable to our theoretical framework.

We match corporate lobbying expenses with financial records from COMPUSTAT for all public firms in our sample from 1998 until 2012. Our final sample compiles 5,425 total observations. Panel A of Table 1 shows the overall distribution of sample firms per sector reporting some significant concentrations in Manufacturing (45.60%), Information technology (13.07%), Utilities (13.12%), Transportation and Warehousing (5.59%), Mining, Quarrying, and Oil and Gas Extraction (4.02%), Professional, Scientific and Technical Services (3.89%), Retail Trade (3.78%) and Wholesale Trade (2.06%). Panel B of Table 1 shows the yearly distribution of sample firms indicating a relatively low increase (12.99%), in the number of listed companies reporting their lobbying expenses over the whole sample period, as well as a relatively low variation (standard deviation (SD) of 21.64) across sample years. Moreover, Panel A of Table 2 reports the general characteristics of the overall final sample with summary data on lobbying expenses, sales, total assets, research and development (R&D) expenses and capital expenditures (CAPEX). Accordingly, sample firms vary significantly in terms of size (mean sales value equal to 21.00 \$ billion and standard deviation (SD) of 42.00 \$ billion), R&D expenses (mean equal to 726.32 \$ million and SD of 1.51 \$ billion) and CAPEX (mean equals to 1.07 \$ billion and SD of approximately 2.99 \$ billion).

Also, the average sample firm reports lobbying expenses for about 2.07 \$ million a year and the maximum expense disclosed is around 56.55 \$ million, invested by Pfizer Inc. in 2009 (the year Pfizer merged with Wyeth). Furthermore, similar to prior evidence (Chen et. al, 2014), Panel B of Table 2 shows that corporate lobbying expenses increased over the four presidential mandates between 1998 and 2012 under investigation. Specifically, average corporate lobbying expenses raised from 1.49 \$ million in the 1998-2000 presidential election cycle to 2.69 \$ million in the 2009-2012 period. Finally, Panel C of Table 2 shows that corporate lobbying expenses do not seem to vary significantly before and after each presidential election.

Insert Table 1 about here

Regulation data

Data on regulation intensity by industry comes from RegData. Compiled by the Mercatus Center from 1998, RegData provides on an annual basis an index measuring the intensity of industry regulation by tracking how much of each year's Code of Federal Regulations applies to each industry. The index of regulatory intensity is based on text analysis of the Code of Federal Regulations, which is published annually and contains all regulations issued at federal level. More specifically, the index contains a search term count of the number of occurrences of a list of words that are likely to indicate binding constraints. These words are "shall," "must," "may not," "prohibited," and "required." In addition to the search term count, the RegData index also considers industry targeting by measuring how frequently the regulations produced by a specific policy maker target a particular industry (see Al-Ubaydli and McLaughlin (2014) for a detailed explanation of the RegData index).

Insert Table 2 about here

An important advantage of the RegData index is that it measures the intensity of regulation by counting constraints. Previous work has tended to use cruder measures such as page counts (Coffey, McLaughlin, and Tollison 2012; Dawson and Seater 2013) or, in recent years, file-size data from state statutes (Mulligan and Shleifer 2005). Such attempts to measure the extent of regulation have obvious shortcomings. Not all the information contained in the Federal Register, for example, is dedicated to regulation. Furthermore, not all pages, even when they are dedicated to regulation, are equal. A particular page, for example, could be of enormous consequence for its regulatory impact, or it might have little effect. To mitigate some of the shortfalls of the existing measures, RegData focuses on the number of binding constraints that apply to a particular industry. RegData classifies industries down to the four-digit NAICS level. In our study, however, we use the three-digit NAICS level to measure the RegData index and then group each of the three-digit NAICS sectors in higher and lower regulated industries based on the RegData index mean distribution (see Appendix for the detailed list of higher and lower regulated industries and the associated RedData Index mean values). It is important to note that regulatory data connected to some three-digit NAICS codes were missing (less than 9% of the overall sample data). To mitigate this issue, we created a qualitative questionnaire for the missing NAICS codes which was sent to three nonmarket strategy experts to rank the degree of regulation per missing sector. Consistent with prior empirical evidence (reference), Table 2 Panel D shows that companies operating in industries with RegData index for intensity regulation higher than the mean level report significantly higher corporate lobbying expenses than companies operating in lower regulated industries.

Market investment data

We use annual accounting data for research and development (R&D) expenses and capital expenditures (CAPEX) to measure market investments with potential and current political value respectively. In particular, in order to capture companies' market investments response to changes in corporate political investment, we measure the yearly changes in R&D expenses and CAPEX based on the following formulas:

$$\Delta R\&D_t = \frac{R\&D_t}{R\&D_{t-1}}$$
$$\Delta CAPEX_t = \frac{CAPEX_t}{CAPEX_{t-1}}$$

We then use annual lobbying expenses to measure corporate political investment of sample firms. In general, corporate political investments include lobbying expenses, PAC contributions, and soft money contributions (legal until 2003). Looking at the overall data collected on firms' political activity, however, lobbying expenses account for the lion's share -in both dollar amounts and in number of firms involved (Chen et. al, 2014). This further supports the choice of using lobbying expenses as independent variable in the effort to show the effect of increased political investment on imminent changes in firms' market investments. In particular, we compute the yearly changes in lobbying expenses based on following formula:

$$\Delta Lobbying_t = \frac{\sum Corporate Lobbying Expenses_t}{\sum Corporate Lobbying Expenses_{t-1}}$$

Identification of election periods?

We use presidential elections as focal points of our analysis for Hypotheses 3a and 3b.

Control variables

Beyond adding fixed effects, we control for several firm characteristics including growth, variation in investment, profitability and leverage.

Methods

To estimate the effect of corporate political investment on market investments, we use the two following empirical models:

$$\Delta R\&D_{it} = \beta_0 + \beta_1 \Delta Lobbying_{it-1} + \beta_2 Growth_{it-1} + \beta_3 \Delta Investment_{it-1} + \beta_4 \frac{EBITDA_{it-1}}{Total\ Assets_{it-1}} + \beta_5 BTM_{it-1} + \beta_6 Leverage_{it-1} + \beta_7 T_t + \varepsilon_{it} \quad (1)$$

$$\Delta CAPEX_{it} = \alpha_0 + \alpha_1 \Delta Lobbying_{it-1} + \alpha_2 Growth_{it-1} + \alpha_3 \Delta R\&D_{it-1} + \alpha_4 \frac{EBITDA_{it-1}}{Total\ Assets_{it-1}} + \alpha_5 BTM_{it-1} + \alpha_6 Leverage_{it-1} + \alpha_7 T_t + \varepsilon_{it} \quad (2)$$

We use equation (1) to test for the effect of changes in corporate lobbying expenses on imminent changes in R&D expenses and equation (2) to test for the effect of changes in corporate lobbying expenses on imminent changes in CAPEX. To mitigate problems to important omitted variables, we include control indicators measuring companies' growth, prior variations in long-term investments and R&D expenses (in equations (1) and (2), respectively), EBITDA over total assets, firms' leverage, book-to-market value of equity, and year fixed effects, in accordance with extant research on the financial effects of corporate political activities and the determinants of corporate investments (Hill et al., 2013; Chen et al, 2010; Lev and Sougiannis, 1999; Eisner 1978). More specifically, we measure *Growth* as the standard deviation of companies' net sales over the three years preceding the proxy date divided by the mean of the net sales over the same three years-period. For investment, we create the variable *ΔInvestments*. to account for companies' yearly variations in CAPEX and investments for acquisitions one year prior to the proxy date. We compute *EBITDA over total assets* to capture the influence of potential operating cash flow available prior to the proxy date and include *Leverage* to evaluate the impact of companies' financial pressure using the three years-average ratios between total liabilities and total assets prior to the proxy date. Also, we use the ratio *book-to-market value of equity (BTM)*, measured as one-year period to the proxy date, to account for market expectations regarding the firms' future growth opportunities.

Finally, we include year (T) dummies to account for unobserved time-invariant differences as well as changes in norms and expectations that occurred between 1998 and 2012.

We test our hypotheses by performing panel data linear regressions with a firm fixed effects (FE) estimator. FE is used here to control for firms' characteristics that are unobservable but stable over time, and possibly correlate with the independent variables as well as with the dependent variable. The omission of such controls may indeed result in spurious findings. As suggested by Angrist and Pischke

(2009), we chose a FE estimator after conducting tests for consistency to select the best specification for the proposed econometric models⁴. Moreover, we use the one-year lag of the lobbying expenses variable to address (at least partly) the concern for lags in the payoffs to influencing legislation and regulations (Hill et al. 2013), as well as we lag all the control variables by one year given that we are interested in identifying those firm characteristics that relate to imminent market investments. Finally, standard errors were clustered by firm to account for heteroscedasticity and non-independence among observations from firms included in various years.

RESULTS

Panel A of Table 3 shows the main descriptive statistics of the sample variables, while Panel B outlines the mean differences in terms of changes in market investments and all control variables, split between firms with higher changes in lobbying expenses and firms reporting lower changes. At a first sight, companies reporting higher changes in lobbying expenses than the sample median show significantly higher changes in R&D expenses in the same year, but are similar to companies with lower changes than the median regarding all other firm characteristics.

Insert Table 3 about here

Table 4 reports the results from equations (1) and (2) and shows the estimated effects of changes in, respectively, R&D expenses and CAPEX as a function of changes in lobbying expenses and all the control indicators proposed. Specifically, we find that increased lobbying expenses are positively associated with a subsequent increase in the sample companies' R&D expenses (Model 1: $\beta = 0,0184$, $p < 0.05$) and CAPEX (Model 2: $\beta = 0.0273$, $p < 0.01$). Overall, these results support Hypothesis 1, which states that increases in companies' lobbying expenses have an imminent positive impact on variations in strategic market investments. In terms of economic significance, the findings indicate that, for the average sample firm, a hypothetical change of 50% in lobbying expenses at time t-1 (corresponding to a value of about 0.4 \$ million) predicts changes at time t in CAPEX of approximately \$2 million and in R&D expenses for approximately \$0.6 million. This provides some evidence of the existence of the new type of market-nonmarket integration elaborated in the theory section of this paper.

Insert Table 4 about here

⁴ In particular, an over-identification test (Hausman test), assuming that the random effects (RE) estimator is fully efficient and provides consistent estimates under null hypothesis, is run to choose between the RE and FE estimators. The test results reject the null hypothesis and suggest a FE specification, which should lead to consistent estimates in the context of the proposed model.

Regarding control variables, sample companies' sales *Growth* correlates positively with subsequent changes in CAPEX but does not relate to subsequent changes in R&D expenses. As expected, we also observe that prior variations in sample companies' investments ($\Delta Investments$) and R&D expenses ($\Delta R\&D$) are likely to predict positively subsequent changes in R&D expenses and CAPEX, respectively. Moreover, companies' potential operating cash flow ($EBITDA/Total\ assets$) is strongly significant and predicts positive future changes in R&D expenses but does not relate to future changes in CAPEX. By contrasts, market expectations regarding sample companies' future growth opportunities (*BTM*) is positively and significantly associated with future changes in CAPEX but do not seem to relate to future changes in R&D expenses. On the other, the coefficient of *Leverage* is not significant suggesting that, across sample companies, financial pressures do not seem to affect imminent future variations in corporate market investments with potential and actual political value.

In order to test for Hypotheses 2a and 2b, we then perform equation (1) and (2) regression analyses over two subsamples compiled of higher and lower regulated industries. Table 5 reports the results from these analyses and show the estimated effects on changes in companies' market investments in response to prior variations in corporate lobbying expenses by higher and lower regulated industries. We find that, in more regulated sectors, increased lobbying expenses are positively associated with changes in CAPEX (Model 6: $\beta = 0.0284$, $p < 0.05$), but do not significantly affect imminent changes in R&D expenses (Model 4: $\beta = 0.011$, $p > 0.10$). This is in line with Hypothesis 2a, which states that, on average, in sectors with higher regulation, increases in firms' lobbying expenses have an imminent positive impact on variations in strategic market investments that hold actual political value (CAPEX). In addition, we document that, in less regulated industries, increased lobbying expenses relate to positive variations in both R&D expenses (Model 3: $\beta = 0.0283$, $p < 0.01$) and CAPEX (Model 5: $\beta = 0.0260$, $p < 0.10$). These results are in line with Hypothesis 2b arguing that, on average, in sectors with lower regulation, increases in firms' lobbying expenses have an imminent positive impact on variations in strategic market investments that hold actual (CAPEX) and potential (R&D expenses) political value.

In terms of economic significance, the findings indicate that, for the average sample firm that operates in lower regulated industries, a 50% change in lobbying expenses at time t-1 (corresponding to a value of about \$0.3 million) would predict a change in CAPEX at time t for approximately \$1.4 million and a change in R&D expenses at time t for approximately \$0.6 million. Differently, a change of 50% in lobbying expenses at time t-1 across sample firms in more regulated industries (corresponding to a value of about \$0.7 million) would predict a change in CAPEX at time t for approximately \$2.8 million.

Insert Table 5 about here

Overall, the evidence so far is consistent with the idea that, unlike companies that operate in higher regulated industries, companies in less regulated industries face higher transaction costs when they engage in political markets (Lord, 2003; Bonardi and Vanden Bergh, 2015), and have to diversify the market investments they make for political reasons. In addition, the evidence reported in Table 5 supports the idea that R&D expenses are flexible options for firms in lower regulated industries when they integrate market and nonmarket strategies (Borghesi & Chang, 2015). On the other hand, firms that operate in more regulated markets have a better understanding of what politicians want or are trying to achieve, and can thus commit more market assets for political purposes and can do it in a more focused way (Henisz, 2003; Bonardi, Holburn and Vanden Bergh, 2006). Interestingly, results also indicate that companies in less regulated industries do create actual political value through CAPEX, in spite of the high transaction costs generated by this type of engagements in the political markets.

Finally, we investigate the impact of elections as revelation mechanisms of politicians' preferences. Specifically, we focus on the periods covering the one-year prior the presidential elections, as well as the election years (occurring in November). We then re-perform equation (1) and equation (2) regression analyses over the two subsamples including companies in higher and lower regulated industries, but classify the effects into either within election periods or outside election periods. Panel A and Panel B of Table 6 report the estimated effects of changes in corporate lobbying expenses on subsequent changes in market investments by higher and lower regulated industries, both inside and outside election periods. As displayed in Panel A of Table 6, we find that firms in lower regulated industries that increase lobbying expenses are associated with a significant increase in R&D expenses only during election periods (Model 7: $\beta = 0.0355$, $p < 0.01$). Indeed, investments in R&D made by companies operating in more regulated industries do not seem to be significantly affected by previous changes in lobbying expenses during elections (Model 8: $\beta = 0.003$, $p > 0.10$). By contrasts, we note that, outside election periods, lobbying expenses show a positive but insignificant coefficient on future changes in R&D expenses across sample companies in both sectors with higher and lower regulation (Model 9: $\beta = 0.013$, $p > 0.10$ and Model 10: $\beta = 0.023$, $p > 0.10$).

In Panel B of Table 6, we find that firms in less regulated industries that increased lobbying expenses are associated with a significant increase in imminent CAPEX within election periods (Model 11: $\beta = 0.0438$, $p < 0.10$). By contrasts, in more regulated industries, increased corporate lobbying expenses do not seem to affect significantly imminent variations in CAPEX during elections (Model 12: $\beta = 0.008$, $p < 0.10$).

Moreover, we document a positive and significant effect of lobbying expenses on imminent changes in CAPEX across companies in more regulated industries but only outside election periods (Model 14: $\beta = 0.0615$, $p < 0.05$). Inside elections, however, CAPEX spent by firms operating in more regulated industries do not appear to be associated significantly to previous changes in lobbying expenses (Model 13: $\beta = 0.009$, $p > 0.10$).

In terms of economic significance, the results indicate that, for the average sample firm that operates in lower regulated industries, a 50% change in lobbying expenses at time $t-1$ during election times (corresponding to a value of about 0.3 \$ million) would predicts a change in CAPEX for approximately 2.8 \$ million, as well as a change in R&D expenses at time t for approximately 0.8 \$ million. More interestingly, for the average sample firm in more regulated industries, a change of 50% in lobbying expenses at time $t-1$ outside election times (corresponding to a value of about 0.8 \$ million) would predict a change in CAPEX at time t for approximately 4.4 \$ million.

Accordingly, the results also show that the estimated β coefficient on lobbying expenses displayed under Model 7 (see Panel A of Table 6) is significantly higher ($t = 2.47$, $p < 0.05$) than what was accounted under Model 3 (see Table 5). Similarly, the estimated β coefficient on lobbying expenses displayed under Model 13 (see Panel B of Table 6) is significantly higher ($t = 1.93$, $p < 0.10$) than what was accounted under Model 6 (see Table 5). By contrasts, the estimated β coefficient on lobbying expenses displayed under Model 13 (see Panel B of Table 6) is not significantly different than what was accounted under Model 6 (see Table 5). Overall, these analyses indicate that sample companies are likely to respond to changes in lobbying expenses asymmetrically as a function of their industry regulation intensity and the existence of a window of opportunity with attractive political environment. On the one hand, sample companies in lower regulated industries tend to rely more on R&D expenses as political assets during elections; on the other hand, sample companies in higher regulated industries tend to use more CAPEX as a form of political assets but only outside elections.

Insert Table 6 about here

Overall, these findings confirm Hypothesis 3a stating that increases in firms' lobbying expenses within windows of opportunity with attractive political environment have an imminent positive impact on variations in strategic market investments that hold actual (CAPEX) and potential (R&D expenses) political value in sectors with lower regulation. For election times in sectors with higher regulation, on the other hand, the positive but insignificant results detected may suggest that, in spite of the existence of windows of political opportunity, R&D expenses and CAPEX are not attractive enough political assets

for firms that have high levels of political skills and built constituency. In fact, in line with the reasoning of Holburn and Vanden Bergh (2014), and of Bonardi, Holburn and Vanden Bergh (2006), election times for firms in more regulated sectors might be risky ventures as competition from other interested groups can be much higher. As expected, firms in more regulated sectors tend to create political value through market investments outside of election times rather than during election times.

Findings shown in Panel B of Table 6 also provide support to Hypothesis 3b arguing that increases in firms' lobbying expenses outside of political windows of opportunity have a positive impact on variations in strategic market investments that hold actual political value (CAPEX) in sectors with higher regulation. Specifically, these latter findings are in line with the argument that more regulated firms, which have easier and more frequent access to policy-makers, do not count on election periods as windows of opportunities to develop their integrated strategies.

ROBUSTNESS CHECKS

We could provide several robustness checks:

- State elections versus presidential elections?
- Regulation used as a continuous variable?
- Heckman models, to fit with previous lobbying literature?

DISCUSSION - CONCLUSION

In this paper, we revisit the concept of integration of market and nonmarket strategies within firms, and argue that its scope might be much broader than generally assumed. Whereas the existing literature suggests that firms only use nonmarket activities as support or complements to their market strategies when the environment requires it, we show that firms frequently use market investments as inputs into their nonmarket activities. Market investments can thus be ways for firms to support politicians' campaigns, and to derive political benefits. The integration of market and nonmarket activities within firms is therefore much broader than what has been argued so far in the literature.

Figure 2 below summarizes the differences among firms regarding the use of these integrated strategies. The main differences has to do with the level of transaction costs that firms face when they develop these integrated strategies: firms facing high transaction costs in their relationships with policy-makers will adopt unfocused integrated strategies outside election periods, and more focused ones during election periods. Firms facing low transaction costs, either because they have experience with political processes or because they are highly regulated and know their regulatory authority well, develop focused integrated strategies outside election periods, and avoid election periods (that are much more competitive for them).

Insert Figure 2 about here

One important implication of our results is that the transaction costs that firms face in political markets have a lot to do with their need to discover what politicians want to achieve, and probably less with ex post renegotiation problems.

These results have important implications not only for strategy, but also for the broader role of firms in democratic societies. They indicate that firms, beyond their direct roles in markets, are also political organizations to some extent. In fact, both actual and potential political assets seem to play a distinctively important role for firms in different regulatory environments. Although both less and more regulated industries use market investments as political assets, they do it differently. Firms in low regulation sectors seem to use a combination of market investments as actual and potential political assets and seize windows of opportunities, while firms in more regulated markets concentrate on market investments with actual political value and build their integrated strategies outside of windows with political opportunity - election periods. Therefore, our findings offer a direct extension to the current version of the political market framework. More specifically, we do not only explain the market and non-market integration of firms' strategy but also show how firms in different regulatory sectors and under different windows of political opportunity build constituency as a way to continuously overarch their strategic objectives. In other words, we provide a new level of dynamics of the already proposed political market framework in an effort to further enhance its generalizability.

Several lines of future research could come from this observation. First, other measures of market investments and market assets need to be considered in the context of this type of market-nonmarket integration. In this paper, we focused on R&D and CAPEX investments as measures for actual and potential political assets, but these naturally provide only a limited coverage of the type of market investments that could be considered. In a similar manner, regarding nonmarket activities, we concentrated on lobbying data. Other corporate political activities, such as campaign contributions, soft money or dark money could certainly be considered as well to explore their role in the development of integrated strategies.

Second, the implications for thinking on the integration of market and nonmarket strategies need to be fully drawn out. What it means for the internal organization of firms, in particular, is a fascinating

topic to study. Many incentives and counter-incentives could come from it as internal employees certainly realize that some investments are not made purely based on positive net present value or other pure market metrics. Fourth, in a similar spirit, one should explore the internal costs for firms that this type of market-nonmarket integration implies. This goes in a similar direction as what Bonardi (2009) observed in the case of former telecommunication monopolies who had to give up on their defensive nonmarket strategies in order to allow the development of more competitive market activities. This type of integration creates limitations and also potential drawbacks, both firms and for economies (Rahia, 2013), which need to be further explored. Last, it would be interesting to compare the relative effectiveness of different modes of market-nonmarket integration. Recent literature suggests that nonmarket strategies in general might not be as profitable for firms as often assumed (Hadani et al., 2017); similar work should move from studying only corporate political activities to the study of the performance of integrated strategies.

Limitations

Our study also has several limitations. First, like many empirical studies, we did not have all the data we desired. The data for firms' lobbying activities doesn't span across all years for all the firms in our sample, that is, from 1998 until 2012 because some firms were politically active in all years while others were active only in some years. It would have been ideal if we were able to complete our dataset with firms that have complete political activity data for the full span of years we were interested in. Second, even though we relied on good previous studies to measure the regulation per sectors in which firms operate, we were not able to find regulation data for all firms, that is, under all NAICS codes of our sample. In order to mitigate for this downturn, we created qualitative questionnaire which was sent to three nonmarket strategy and public policy experts to rate the regulation per missing 3-digit NAICS codes. Our results there are in line with the analyses presented above. However, it would be interesting if the same regressions were retested with data from the original source that supplied us the data on regulation. Third, our analysis accounts only for firms that were politically active in the United States. Thereafter, even though we believe that our results are generalizable it would be interesting to retest our theory on data that involves political activity in other countries, or even on data set that accounts for firm's political activity in multiple countries in the world. This in terms opens new venues for research where scholars can test how political system with different characteristics further affect the effect of increased political activity on the firm's market strategic investments. Finally, our study is limited in terms of the strategic market investments considered, thereafter opens possibility for other scholars to consider other accounting measures in order to see whether firms coordinate their market and nonmarket activities with other accounting-based measures, investments or strategic moves.

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Figure 1 – Political markets and market investments as political assets (adapted from Bonardi, 2011)

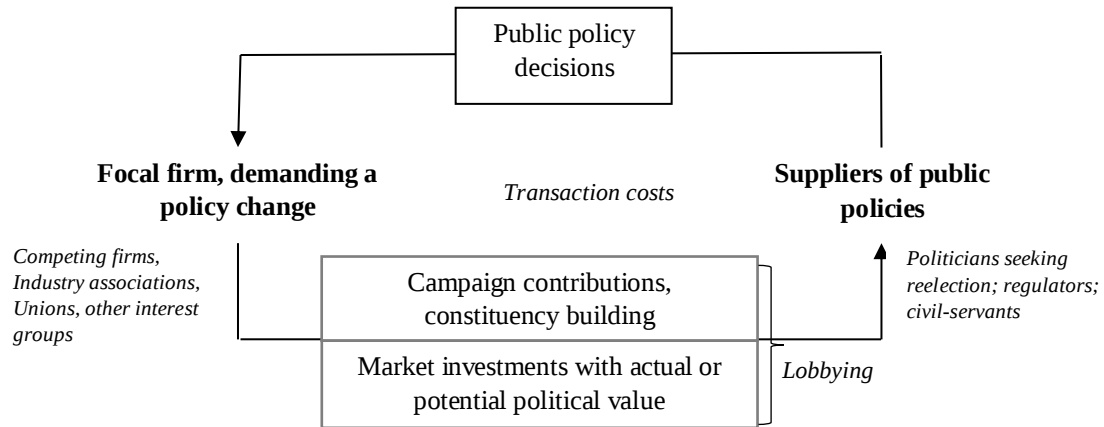


Figure 2 - Market investments as political assets and differences across firms

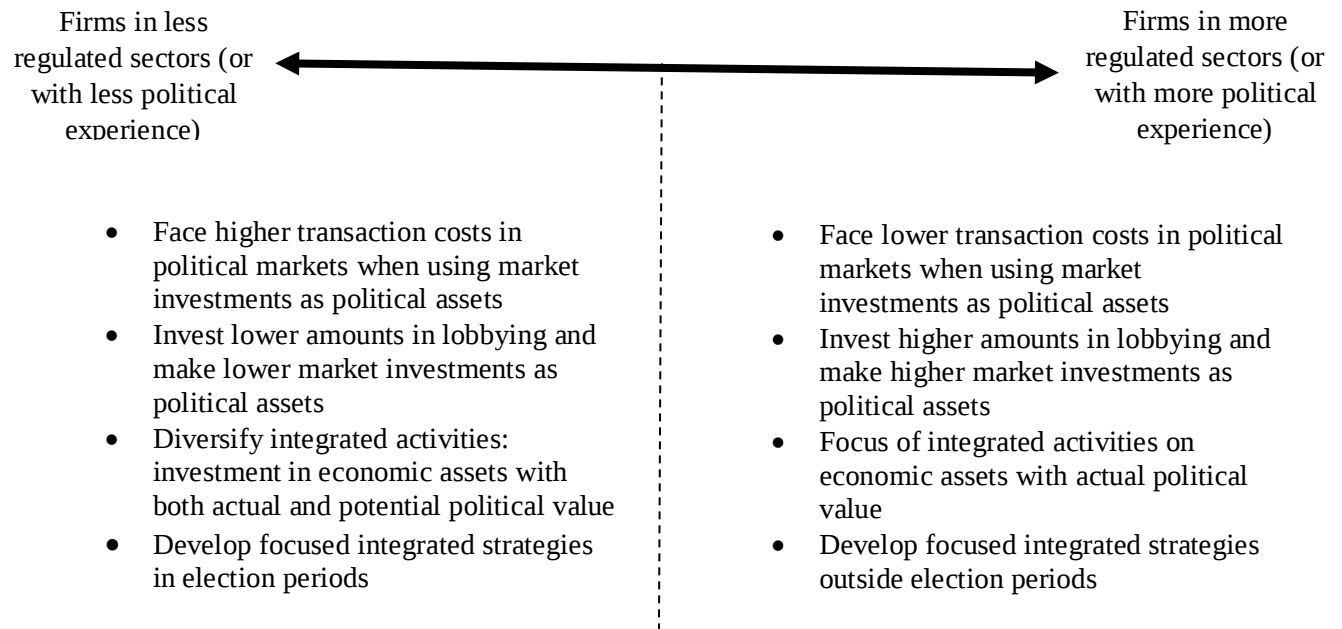


Table 1. Distribution of sample firms per industry and per year

Panel A - Industry distribution (NAICS - 2 digits)		
	Final Sample	
	N	%
Agriculture, Forestry, Fishing and Hunting (11)	23	0.42%
Mining, Quarrying, and Oil and Gas Extraction (21)	218	4.02%
Utilities (22)	712	13.12%
Construction (23)	44	0.81%
Manufacturing (31, 32, 33)	2'474	45.60%
Wholesale Trade (42)	112	2.06%
Retail Trade (44, 45)	205	3.78%
Transportation and Warehousing (48, 49)	303	5.59%
Information (51)	709	13.07%
Professional, Scientific, and Technical Services (54)	211	3.89%
Administrative and Support and Waste Management and Remediation Services (56)	110	2.03%
Educational Services (61)	27	0.50%
Health Care and Social Assistance (62)	107	1.97%
Arts, Entertainment, and Recreation (71)	13	0.24%
Accommodation and Food Services (72)	92	1.70%
Other Services (except Public Administration) (81)	15	0.28%
Conglomerates (99)	<u>50</u>	<u>0.92%</u>
Total	<u>5'425</u>	<u>1.00</u>

Panel B - Year distribution		
	Final Sample	
<u>Year</u>	Obs	%
1998	331	6.10%
1999	351	6.47%
2000	339	6.25%
2001	339	6.25%
2002	337	6.21%
2003	342	6.30%
2004	346	6.38%
2005	373	6.88%
2006	369	6.80%
2007	374	6.89%
2008	390	7.19%
2009	391	7.21%
2010	389	7.17%

2011	380	7.00%
2012	<u>374</u>	<u>6.89%</u>
Total	<u>5'425</u>	<u>1.00</u>

Table 2. General characteristics of the sample

Panel A - Main characteristics								
Variable (\$ million)	Obs	Mean	SD	Min	P25	Median	P75	Max
Lobbying expenses	2'378	2.07	4.17	0.00	0.23	0.68	1.86	56.55
Sales	2'378	21'000.00	42'000.00	0.22	1'807.40	6'295.00	19'000.00	430'000.00
Total assets	2'378	24'000.00	65'000.00	9.87	2'237.68	7'372.58	21'000.00	800'000.00
R&D expenses	2'378	726.32	1'513.09	0.00	26.50	152.49	591.03	12'000.00
CAPEX	2'378	1'071.53	2'991.29	0.00	77.38	268.11	762.00	34'000.00

This panel reports the number of observations, mean, standard deviation, minimum, 25th percentile, median, 75th percentile and maximum of key sample companies characteristics.

Panel B - Corporate lobbying expenses across presidential political cycles				
Presidential mandate	Obs	Mean	Median	SD
1998-2000	380	1.494	0.440	2.939
2000-2004	621	1.627	0.520	3.006
2005-2008	697	2.174	0.740	4.349
2009-2012	<u>680</u>	<u>2.691</u>	<u>0.958</u>	<u>5.260</u>
Total	<u>2'378</u>	<u>2.070</u>	<u>0.680</u>	<u>4.171</u>

This panel reports the number of observations, mean, median and standard deviation of corporate lobbying expenses (\$million) across US political presidential election cycles.

Panel C - Corporate lobbying expenses ante and post presidential political elections					
	Obs	Ante-Pres.Election	Obs	Post-Pres.Election	Mean difference
Lobbying expenses (\$ million)	1'115	2.072	1'263	2.069	0.0030

This panel reports the mean difference of corporate lobbying expenses (\$million) between the two years prior to the US presidential political elections (Ante-Pres. Election) and the two years following the vote (Post-Pres. Election).

Panel D - Corporate lobbying expenses in less and more regulated industries					
	Obs	Less regulated	Obs	More regulated	Mean difference
Lobbying expenses (\$ million)	1'443	1.507	936	3.127	-1.620***

This panel reports the mean difference of corporate lobbying expenses (\$million) between lower regulated and higher regulated industries.

*, **, *** Denote significance at the 10%, 5%, and 1% levels two-tailed, respectively.

Table 3. Descriptive statistics of sample variables

Panel A: Descriptive statistics								
Variable	Obs	Mean	SD	Min	P25	Median	P75	Max
Δ Lobbying	1'802	1.309	1.040	0.000	0.835	1.043	1.421	7.667
Δ R&D	1'802	0.049	0.270	-1.713	-0.049	0.047	0.147	1.881
Δ Capex	1'802	0.035	0.416	-2.031	-0.157	0.047	0.233	2.500
Growth	1'802	0.208	0.175	0.026	0.091	0.156	0.261	1.281
Δ Investments	1'516	0.044	0.950	-3.433	-0.398	0.046	0.431	3.657
EBITDA/Total assets	1'802	0.135	0.101	-1.106	0.091	0.135	0.189	0.443
Leverage	1'802	0.229	0.158	0.000	0.113	0.209	0.316	0.924
BTM	1'802	3.810	5.247	-19.720	1.814	2.992	4.695	36.520

This table shows the number of observations, mean, standard deviation, minimum, 25th percentile, median, 75th percentile and maximum of model variables. Detailed variable definitions are in Appendix A.

Panel B: Mean differences across higher and lower lobbying expenses					
Variable	Obs	Δ Lobbying<median	Obs	Δ lobbying>median	Mean difference
Δ R&D	901	0.036	901	0.062	-0.026**
Δ Capex	901	0.019	901	0.050	-0.0310
Δ Investments	756	0.079	760	0.010	0.0680
EBITDA/Total assets	901	0.132	901	0.139	-0.0070
Leverage	901	0.232	901	0.225	0.0070
BTM	901	3.807	901	3.812	-0.0050

This table reports the mean differences of model variables between higher changes and lower changes in corporate lobbying expenses.

*, **, *** Denote significance at the 10%, 5%, and 1% levels two-tailed, respectively.

Table 4. Effects of changes in corporate political activity on changes in market investments

DV =	$\Delta R\&D$	$\Delta CAPEX$
	(1) Firm FE	(2) Firm FE
$\Delta Lobbying_{t-1}$	0.0184**	0.0273***
$Growth_{t-1}$	-0.077	0.2007**
$\Delta Investments_{t-1}$	0.0584***	
$\Delta R\&D_{t-1}$		0.2877***
$(EBITDA/Total\ assets)_{t-1}$	0.7157***	0.018
BTM_{t-1}	0.001	0.0054*
$Leverage_{t-1}$	-0.119	-0.212
Year fixed effects	Included	Included
Observations	1'474	1'751
R-Squared	0.2747	0.2829

Models report results from linear panel regression analyses with fixed-effect estimator. Standard errors are clustered at the firm level. A constant is included in the regression but not reported in the table.

*, **, *** Denote significance at the 10%, 5%, and 1% levels two-tailed, respectively.

Table 5. Effects of changes in corporate political activity on changes in market investment across less and more regulated industries

	DV = $\Delta R\&D$		DV = $\Delta CAPEX$	
	(3) Lower Regulation Firm FE	(4) Higher Regulation Firm FE	(5) Lower Regulation Firm FE	(6) Higher Regulation Firm FE
$\Delta Lobbying_{t-1}$	0.0283***	0.011	0.0260*	0.0284**
$Growth_{t-1}$	0.004	-0.142	0.2796**	0.148
$\Delta Investments_{t-1}$	0.0356***	0.0884***		
$\Delta R\&D_{t-1}$			0.2944***	0.2721***
BTM_{t-1}	0.001	0.002	0.002	0.0094***
$Leverage_{t-1}$	-0.3328*	0.179	-0.113	-0.320
$(EBITDA/Total\ assets)_{t-1}$	0.6542**	0.7407***	1.3172***	-0.8356***
Year fixed effects	Yes	Yes	Yes	Yes
Observations	850	624	1'005	746
R-Squared	0.3163	0.2746	0.3145	0.2982

Models report results from linear panel regression analyses with fixed-effect estimator. Standard errors are clustered at the

firm level. A constant is included in the regression but not reported in the table.

*, **, *** Denote significance at the 10%, 5%, and 1% levels two-tailed, respectively.

Table 6. Effects of changes in corporate political activity on changes in market investments by lower and higher regulated industries within or outside election periods

Panel A: DV = $\Delta R\&D_t$	Within election period		Outside election period	
	(7) Lower Regulation Firm FE	(8) Higher Regulation Firm FE	(9) Lower Regulation Firm FE	(10) Higher Regulation Firm FE
$\Delta Lobbying_{t-1}$	0.0355***	0.003	0.013	0.023
$Growth_{t-1}$	0.123	-0.034	-0.139	-0.118
$\Delta Investments_{t-1}$	0.0379**	0.0983**	0.0401**	0.0844**
BTM_{t-1}	0.005	0.004	0.	-0.001
$Leverage_{t-1}$	-0.4487**	0.4631**	-0.158	-0.217
$(EBITDA/Total\ assets)_{t-1}$	0.6351**	0.269	0.392	0.639
Year fixed effects	Yes	Yes	Yes	Yes
Observations	473	338	377	286
R-Squared	0.4249	0.3795	0.4301	0.4070

Panel B: DV = $\Delta CAPEX_t$	Within election periods		Outside election periods	
	(11) Lower Regulation Firm FE	(12) Higher Regulation Firm FE	(13) Lower Regulation Firm FE	(14) Higher Regulation Firm FE
$\Delta Lobbying_{t-1}$	0.0438*	0.008	0.009	0.0615**
$Growth_{t-1}$	0.3615**	0.306	0.254	0.2
$\Delta R\&D_{t-1}$	0.2528**	0.2160**	0.3303**	0.4839***
BTM_{t-1}	0.007	0.001	0.002	0.0112**
$Leverage_{t-1}$	0.5491**	-0.5513*	-0.8725**	-0.081
$(EBITDA/Total\ assets)_{t-1}$	1.0178*	-0.597	1.3709**	-0.058
Year fixed effects	Yes	Yes	Yes	Yes
Observations	555	404	450	342
R-Squared	0.4255	0.3266	0.4990	0.5651

Models report results from linear panel regression analyses with fixed-effect estimator. Standard errors are clustered at the firm level. A constant is included in the regression but not reported in the table.

*, **, *** Denote significance at the 10%, 5%, and 1% levels two-tailed, respectively.

APPENDIX: Industry Regulation

Frequency distributions per industry regulation

Panel A: Lower regulation

NAICS 3 digits	Industry Label	RegData Index
211	Oil and Gas Extraction	11'468
621	Ambulatory Health Care Services	10'753
517	Telecommunications	10'678
483	Water Transportation	9'802
111	Crop Production	8'029
213	Support Activities for Mining	7'994
339	Miscellaneous Manufacturing	7'895
333	Machinery Manufacturing	6'721
334	Computer and Electronic Product Manufacturing	5'277
238	Specialty Trade Contractors	4'752
562	Waste Management and Remediation Services	4'657
482	Rail Transportation	4'143
236	Construction of Buildings	3'768
515	Broadcasting	3'371
611	Educational Services	2'909
454	Nonstore Retailers	2'903
487	Scenic and Sightseeing Transportation	2'696
335	Electrical Equipment, Appliance, and Component Manufacturing	2'685
713	Amusement, Gambling, and Recreation Industries	2'311
446	Health and Personal Care Stores	2'220
486	Pipeline Transportation	1'947
237	Heavy and Civil Engineering Construction	1'692
327	Nonmetallic Mineral Product Manufacturing	1'640
322	Paper Manufacturing	1'591
447	Gasoline Stations	756
337	Furniture and Related Product Manufacturing	595
444	Building Material and Garden Equipment and Supplies Dealers	346
452	General Merchandise Stores	298
331	Primary Metal Manufacturing	273
313	Textile Mills	98
492	Couriers and Messengers	40
314	Textile Product Mills	21
212	Mining (except Oil and Gas)	na
312	Beverage and Tobacco Product Manufacturing	na
315	Apparel Manufacturing	na
316	Leather and Allied Product Manufacturing	na

321	Wood Product Manufacturing	na
323	Printing and Related Support Activities	na
326	Plastics and Rubber Products Manufacturing	na
332	Fabricated Metal Product Manufacturing	na
422	Merchant Wholesalers, Durable Goods	na
423	Merchant Wholesalers, Nondurable Goods	na
441	Motor Vehicle and Parts Dealers	na
443	Electronics and Appliance Stores	na
445	Food and Beverage Stores	na
448	Clothing and Clothing Accessories Stores	na
453	Miscellaneous Store Retailers	na
511	Publishing Industries (except Internet)	na
512	Motion Picture and Sound Recording Industries	na
518	Data Processing, Hosting, and Related Services	na
519	Other Information Services	na
561	Administrative and Support Services	na
622	Hospitals	na
623	Nursing and Residential Care Facilities	na
711	Performing Arts, Spectator Sports, and Related Industries	na
721	Accommodation	na
722	Food Services and Drinking Places	na
812	Personal and Laundry Services	na

Panel B: Higher regulation		
NAICS 3 digits	Industry Label	RegData Index
325	Chemical Manufacturing	61'971
541	Professional, Scientific, and Technical Services	46'937
221	Utilities	43'158
336	Transportation Equipment Manufacturing	38'102
488	Support Activities for Transportation	27'386
311	Food Manufacturing	25'852
999	Conglomerates	22'777
324	Petroleum and Coal Products Manufacturing	18'461
481	Air Transportation	13'784
113	Forestry and Logging	na
321	Wood Product Manufacturing	na
