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Agency breadth and political influence[☆]

Zachary Breig^{a,*}, Mitch Downey^b^a School of Economics, The University of Queensland, Level 6, Colin Clark Building (#39), St Lucia, QLD 4072 Australia^b Institute for International Economic Studies (IIES), Stockholm University, Stockholm SE-106 91, Sweden

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ABSTRACT

We study, theoretically and empirically, legislative influence over executive agencies, focusing on the breadth of agency responsibilities. We model interest groups, the legislature, and agencies. Politicians exert costly effort to influence agencies in exchange for interest groups' campaign contributions. Effort, however, can only be imperfectly targeted. When effort is spent on behalf of one group, some spills over to benefit other interest groups. This creates externalities of influence that are larger in broad agencies, deterring legislative influence. Empirically, we develop a novel lobbying-based measure of breadth and combine it with survey data on influence in 70 US federal agencies. Broad agencies report less influence, and we rule out several alternative explanations. These results are important for understanding how to insulate divisive tasks from political influence.

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1. Introduction

The division of responsibilities between electorally-accountable politicians and insulated bureaucrats is a classic issue in economics, and its tradeoffs have received substantial attention (Stigler, 1971; Besley and Coate, 2003; Maskin and Tirole, 2004; Alesina and Tabellini, 2007). Of course, bureaucrats are not fully insulated. Though they are not directly accountable to voters, they are accountable to the politicians (their political principals). This oversight can create a balance, allowing bureaucrats to draw on their technical expertise while preventing mission creep and over-regulation. However, it also creates the risk that bureaucratic agencies become politicized, especially in light of rising polarization in many legislatures.

Regardless of whether one believes political influence aligns bureaucrats' incentives with social welfare or it distorts policy implementation, these normative concerns raise the following positive question: When are politicians most able to influence bureaucratic agencies? In this article, we attempt to understand how the design of an agency can make it more or less susceptible to political influence, focusing in particular on the range of tasks for which the agency is responsible.

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* Corresponding author.

E-mail address: z.breig@uq.edu.au (Z. Breig).

We show theoretically and empirically that the amount of political influence is greater for narrow agencies than for broader ones.

We model the interaction of politically-active interest groups, bureaucratic agencies, and a legislature. Agencies perform tasks, which affect a set of interest groups. Interest groups can lobby these agencies to adjust implementation and can use campaign contributions to contract with politicians to influence the agency.¹² A key focus of our analysis is that agencies differ in how many tasks they are responsible for, which we call the *breadth* of the agency: A broad agency is one that performs more tasks and thereby affects more interest groups.

An interest group can “buy” Congressional influence over tasks that affect it, but our central assumption is that some of the influence applied to that task spills over onto other tasks. For instance, suppose that Congress sought to reduce regulation of commercial foods. They might push for and confirm an anti-regulation Commissioner for the Food and Drug Administration. This, however, will affect regulation of pharmaceuticals in addition to food. If Congress seeks to reduce television market concentration, they might increase funding for the Federal Communication Commission, who is responsible for this form of anti-trust enforcement. However, the FCC does not have distinct line-item budget entries for television market activities, so some of the funding would be applied to regulating internet providers, which are a very different set of stakeholders. Congress might hold oversight hearings to influence the Federal Bureau of Investigations to reduce investigations of international banks (these investigations are costly in terms of banks’ time and resources), but intensive Congressional oversight on this topic will surely redirect some of the agency’s attention and resources away from civil rights investigations, counter-terrorism operations, and cyber-security, some of the Bureau’s other responsibilities. Even detailed “limitation riders” in appropriations bills that narrowly circumscribe specific agency actions are often challenged in court, forcing them to be applied more broadly than originally intended (Zellmer, 1997). These forms of spillovers underpin our model.

Although all influence is costly for the legislature (including the unintended influence), we assume they cannot force other interest groups to “pay for” these spillovers, creating within-agency externalities from legislative influence. The more broad an agency is, the greater the externalities, and we show that the legislature will adjust the price of influence to compensate for these externalities. This price increase reduces the amount of influence interest groups buy and, in equilibrium, a particular task will experience less Congressional influence when embedded within a broader agency. This provides a novel channel by which politically sensitive tasks can be insulated from Congressional influence.³

We then use data from 70 US federal agencies to test our model’s main prediction. We use two approaches to measure the breadth of the agency. First, we build a novel measure using lobbying disclosure reports. We match our model and measure an agency’s breadth as the number of interest groups observed lobbying the agency, with the core idea being that agencies lobbied by a broad set of interest groups must be responsible for a broad set of tasks. The decision to lobby is, of course, endogenous, but we perform an extensive set of robustness checks to ensure that this does not affect our results. Nonetheless, all of our empirical results are presented in parallel using a measure of breadth unrelated to lobbying: the Office of Management and Budget’s classification of how many policy areas the agency falls into (up to 17). We discuss the advantages and disadvantages of each measure, but reassuringly, *all* of our main results are consistent with the two.

We combine these measures with survey data in which high-level bureaucrats report how much influence Congress has over their agency’s policy decisions. We show that broader agencies report significantly less Congressional influence. A one standard deviation increase in breadth is associated with a 0.35–0.4 standard deviation decrease in influence (depending on the measure). We consider a range of alternative explanations and find no evidence that this correlation is explained by other agency characteristics, characteristics of the regulated groups, or reverse causality.⁴⁵

¹ Since Grossman and Helpman (1994, 1996), the assumption that interest groups can enter into enforceable contracts with politicians using campaign contributions has been common but controversial. In Appendix C.7 we discuss an alternative model without these contracts, but where agency breadth still causally affects legislative influence through a mechanism which is very different but (in our view) perfectly plausible. We then present evidence strongly rejecting that alternative mechanism as the explanation behind our main results.

² Our model provides interest groups two means of influencing agencies: directly (through lobbying) and indirectly (through Congressional influence on their behalf). This is partly motivated by the empirical observation that Congress *does* influence agencies and that most interest groups spend money on both campaign contributions and lobbying. Though our primary interest is in determinants of Congressional influence over agencies, we allow interest groups to lobby those agencies to make clear, transparent, and explicit how we think about lobbying expenditures, which is an important part of our empirical strategy.

³ In Appendix C.5, we consider heterogeneous effects depending on the characteristics of the interest groups associated with the agency. We find that our effects are much stronger when the agency oversees extreme groups (either those that are strongly pro-Democrat or strongly pro-Republican) as opposed to centrist groups. This underscores the importance of our mechanism when considering particularly politically divisive responsibilities.

⁴ To test whether the correlation is explained by other agency characteristics, we use every control that has been used in the (admittedly small) past literature, as well as several new ones. To test whether it is explained by characteristics of the regulated groups, we use instances where the same group is overseen by multiple agencies. To test whether it is explained by reverse causality, we use an instrumental variables strategy based on political circumstances at the time of agency creation.

⁵ In Appendix C.7, we point out that our core result (Congressional influence decreases in breadth) can be obtained even if contracts between the legislature and the interest groups cannot be enforced. Specifically, we show empirically that broad agencies are more likely than narrow ones to oversee a blend of pro-left and pro-right groups. In the presence of cross-task spillovers, this means that the legislature will be better able to target its influence on only allies or only opponents when dealing with a narrow agency than a broad one. This implies the legislature’s influence will fall as agencies become more broad, *even in the absence of enforceable contracts*. However, although the ideological balance of groups that lobby an agency is increasing in its breadth, we show clear, robust evidence that this cannot explain the decline in Congressional influence.

In addition to testing for alternative explanations for our main results, we also test for evidence supporting the mechanisms underlying our model. The test is based on the recognition that the legislature has intrinsic policy preferences and is therefore more aligned with some interest groups than others. We use groups' pattern of campaign contributions to measure their preferences and partisan alignment. Using this measure, we look for more direct evidence on a link between Congress and interest groups' lobbying. By definition, lobbying an agency is about influencing its decisions. It is conceptually possible that this is completely independent of what is happening in Congress. For example, if Congress *only* passed legislation, and its actions had no bearing on agencies, then we might still observe interest groups contributing to Congressional campaigns (to affect elections or legislation) and lobbying agencies (to affect their decisions), but the groups' Congressional spending would be unrelated to agencies activities. This testable hypothesis would be inconsistent with our model.

We reject this possibility and find that interest groups increase agency lobbying when their allied party takes control of Congress. Our model provides a natural interpretation of this result, since we assume that lobbying and Congressional influence are complements. More important for our purposes, though, is that lobbying only increases for narrow agencies. For broad agencies, lobbying is non-responsive to changes in Congressional control. Our model provides a natural interpretation because these broad agencies see little Congressional influence and so partisan control of Congress is unimportant.

In light of the battery of tests to which we subject our results and the support for the underlying mechanisms behind our model, we ascribe a causal interpretation to our results. Our core claim, then, is that agency breadth reduces legislative influence.

Our model is related to work on legislatures' decision to delegate authority to bureaucratic agencies (see [Gailmard and Patty \(2012\)](#) for a review). Most of this literature focuses on a single one-dimensional task, so there is no notion of breadth of agency responsibilities. [Alesina and Tabellini \(2008\)](#) and [\(Ting, 2002\)](#) are notable exceptions, though they focus on how features of a task affect the decision to delegate it to an agency, rather than how features of an agency affect ex post influence after delegation. More generally, our model relates to the literature on linking incentive constraints, which typically finds that principals enjoy *more* (rather than less) influence when the agent is making more distinct decisions ([Jackson and Sonnenschein, 2007](#); [Frankel, 2016](#)). The primary difference in the model here is that because of spillovers, the politician is not able to flexibly tie together the outcomes of each task. Our empirical results relate to recent work showing that Congressional influence increases as the number of oversight committees falls ([Clinton, Lewis, and Selin \(2014\)](#), whose survey-based measure of influence we use), as statutory features give them more mechanisms for influence ([Selin, 2015](#)), and as they are staffed with more political appointees ([Berry and Gersen, 2017](#)). Relative to these three papers, ours is the first in this literature to include an explicit formal model of the influence process and to empirically test the mechanisms behind our model. We also provide a more extensive exploration of causality and show that our feature of interest (breadth) has a substantively larger effect than those previously considered.

The remainder of the paper is laid out as follows. In [Section 2](#), we develop a simple model of the interactions between a political party, a series of government agencies, and a set of regulated interest groups. In [Section 3](#) we discuss our data and empirical strategy. [Section 4](#) presents our core results and identification tests. [Section 5](#) explores the mechanisms of our model, and [Section 6](#) concludes by discussing implications for future research and policy.

2. Theory

In this section, we present our theoretical model. We keep the basic model simple to highlight the relationship we focus on: how the breadth of an agency affects the legislature's influence over that agency. The primary strategic actors are the interest groups and the political party in control of the legislature. A single agency is influenced by the party and lobbied directly by the interest groups it regulates.⁶ The agency is in charge of N tasks, each of which affects a single interest group. Thus, the *breadth* of the agency, measured by the number of tasks it is in charge of, is denoted by N . This is the key parameter of our model.

We will first explain the preferences and action spaces of the party and interest groups and will then solve for the subgame perfect equilibrium of the game. In [Section 2.4](#) we discuss broader questions around agency breadth and institutional design.

2.1. The political party

We consider a political party currently in control of the legislature. We focus on the party in power (abstracting from strategic dynamics within the legislature) because it mirrors our empirical context where the available survey data asks about the influence of Democrats in Congress (who controlled the House and Senate at the time). In our baseline formu-

⁶ We present the model with a single agency for simplicity. In reality, there are many agencies, and interest groups are often regulated by multiple agencies. It is straightforward to extend our results by changing interest group preferences in [Section 2.2](#) to allow multiple agencies to affect it in an additively separable way.

lation, we assume that the party only cares about maximizing the campaign contributions that it receives (in exchange for influencing agencies), subject to effort costs it incurs by exerting influence.⁷

In our empirical analysis, we consider several hundred interest groups. Thus, we treat the party-in-power as a monopolist and allow them to set the price of influence. We let π_i denote the price that the party charges group i (to be paid in campaign contributions) in exchange for one unit of influence, and $\boldsymbol{\pi}$ denote the vector of π_i for all i . The total contributions the party receives from interest group i is $\pi_i S_i(\boldsymbol{\pi})$, where S_i is the amount of influence i purchased. However, we assume that the party's efforts to influence the agency are imperfectly targeted: if the legislature seeks to influence group i 's task of interest, then only a fraction of its influence will actually affect that task, while the rest will spill over onto other tasks. For every unit of influence the legislature applies to the task of group i – we denote the amount of this targeted influence as S_i – each other interest group receives η units of influence, where $0 < \eta < 1$. Likewise, the agency's actions on i 's task of interest are affected by spillovers from influence over other tasks, so the total influence exerted on task i is not only S_i , but also the spillovers arising from S_j for $j \neq i$. We denote total influence on task i as

$$A_i(\boldsymbol{\pi}) = S_i(\boldsymbol{\pi}) + \eta \sum_{j \neq i} S_j(\boldsymbol{\pi}),$$

which implies that the total effort exerted by the party is

$$\begin{aligned} \sum_{i=1}^n A_i(\boldsymbol{\pi}) &= \sum_{i=1}^N \left[S_i(\boldsymbol{\pi}) + \eta \sum_{j \neq i} S_j(\boldsymbol{\pi}) \right] \\ &= \sum_{i=1}^N (1 + (N - 1)\eta) S_i(\boldsymbol{\pi}). \end{aligned}$$

This assumption – that $\eta > 0$ so that Congressional influence over one task affects the performance of other tasks the agency is responsible for – is the key ingredient of our model.⁹ We view it as a realistic feature of many federal agencies. For instance, in June, 2018, top investigators from the Homeland Security Investigations (HSI) unit of the US Immigration and Customs Enforcement (ICE) agency requested that their unit be split off into a separate, independent agency ([Texas Observer, 2018](#)). They argued that investigations of transnational criminal organizations like drug cartels and human trafficking rings were “unnecessarily impacted by the political nature” of immigration enforcement. A former ICE deputy director went so far as to say that agents worried the unit was “just becoming a political pawn” and that “because of this whole immigration rhetoric – that immigrants are bad, they're criminals and rapists and all that – the focus is totally off mission.” In other words, efforts to influence politically charged immigration enforcement were affecting totally unrelated tasks and responsibilities housed within the same agency.

This is unsurprising. Many of the methods by which legislatures influence agencies – such as appointing directors ([Wood and Waterman, 1991](#)) or imposing oversight hearings ([Kriner and Schwartz, 2008](#); [Parker and Dull, 2009](#)) – are necessarily blunt. Oversight hearings focused on one specific program or set of operations create chilling effects on other responsibilities and redirect priorities and resources, even if only senior managers' attention.

Even the most targeted methods for Congressional influence – so-called “limitation riders” in appropriations bills that pledge certain funding to specific tasks or prohibit certain uses of funds – can spill over. Often, appropriations bills give agencies a block of funding with an explicit requirement that it is used for a specific purpose. Money, of course, is fungible, and so in many cases agencies can redirect some of their resources that otherwise would have been applied to the task. Other times Congress explicitly bans the use of funds for certain tasks but these, too, can spill over. In a well-known example, the 1995 Emergency Timber Salvage Rider barred agencies from reviewing and blocking certain land sales. But subsequent court rulings applied these bans to more than twice the sales originally targeted ([Zellmer, 1997](#)); arbitrarily specific statutory language is often not legally enforceable. These are exactly the sort of spillovers that our model captures.

Again let S_i be the influence the party exerts on behalf of i and A_i be the total influence produced that affects interest group i . We assume that the party in power pays linear costs on this total amount of influence (an important assumption that we discuss shortly). Letting c denote the effort costs, the party's problem is to choose the vector of prices $\boldsymbol{\pi}$ to solve:

$$\max_{\boldsymbol{\pi}} \sum_{i=1}^N \pi_i S_i(\boldsymbol{\pi}) - c A_i(\boldsymbol{\pi}).$$

Critical to our model is that the legislature pays effort costs for all influence, even the spillovers. Of course, just because there are spillovers does not necessarily mean they are costly for the legislature. Assuming that spillovers incur effort costs

⁷ The party's goal of maximizing campaign contributions in order to obtain reelection is consistent with the model used by [Grossman and Helpman \(1996\)](#). We consider this to be a simplification of the incentives present in a more complex contest which is “locally” valid when the probability of the party winning is near one half.

⁸ In Appendix A.2, we extend the model to allow for the legislature to have different ideological preferences for different groups. We apply these theoretical results in [Section 5](#).

⁹ It is also plausible that spillovers might be *negative*, such that the party's influence partially redirects agency scrutiny away from other interest groups. We consider this model in Appendix A.3.

is a reduced form way of modelling a wide range of consequences these spillovers might have. For example, the legislature may have preferences over the way that an agency implements all of its tasks. If the mechanisms described above cause influence over one task to spill over onto others, then it might push implementation of these other tasks away from the legislature’s bliss point, incurring utility costs rather than effort costs. Similarly, the legislature might have preferences for competence and quality in implementation. Redirecting resources from other tasks in response to Congressional influence applied to one task can undermine performance on those other tasks, and this performance reduction can be costly to a legislature that considers social welfare.¹⁰ Finally, cross-task spillovers might have political consequences that affect the legislature. For example, in 1993, a raid gone wrong by the Bureau of Alcohol, Tobacco, and Firearms (ATF) led to the disastrous 51-day siege in Waco, TX. Republicans in control of Congress responded with a series of hearings, budget cuts, and reforms targeting the ATF’s investigations of armed militias (many of which supported the conservative populist wing of the party). But these efforts to influence the ATF also affected the routine inspection of licensed gun retailers ([Washington Post, 1995](#)), and claims that Republicans have handicapped the enforcement of laws on day-to-day gun sales are a key theme that gun control activists use to organize and motivate voters to support Democrats. Our model’s assumption (that spillovers are costly to the legislature in terms of effort) stands in for any of these dynamics that might be occurring in the background.

2.2. Interest groups

Interest groups receive utility from two sources: “mission spending” and policy. We seek a formulation that allows a broad notion of interest groups, including collections of firms (in which case “mission spending” might be investments to improve future profits, wages to pay for current production, etc.) or not-for-profit entities or citizen groups (in which case “mission spending” might be public opinion campaigns, spending on conservation, provision of membership benefits, etc.). We denote the mission spending of interest group i as m_i .

With respect to policy, we assume that each interest group cares about some task being performed by a government agency. To increase the payoffs they receive from this task, they can either lobby the agency directly (ℓ_i) or contribute to the party in control of Congress in exchange for that party to influence the agency on the group’s behalf. In either case, the spending uses up some of the group’s budget which could otherwise be devoted to mission spending.¹¹

As above, we denote the total support interest group i purchases with campaign contributions as S_i and the total amount of action that the party takes on i ’s behalf as A_i . With these elements, we model the interest group’s problem as:

$$\max_{m_i, \ell_i, S_i} m_i + \omega \ell_i^{\gamma_1} A_i^{\gamma_2}$$

subject to the budget constraint $m_i + \ell_i + \pi_i S_i = R_i$ where A_i is defined as before. To ensure that the solution to the interest group’s problem is interior, we assume that the interest group’s returns from spending on policy instruments are concave, so $\gamma_1 + \gamma_2 < 1$. We also assume that given the parameter ω which represents how important policy is to the interest group, the interest group’s budget R is sufficiently large so that the interest group finds it worth spending money on their mission.

With this specification of interest group preferences, lobbying and Congressional influence are complementary and there are decreasing marginal returns to the total amount spent on them.¹² Consider, for instance, a firm that contracts with the political party to purchase indirect influence that leads an agency to define a policy (e.g., a regulatory standard). We assume this influence will be less effective without the firm also lobbying the agency directly to shape how that policy is implemented (e.g., how the standard is measured and applied). The spending will first go towards removing the most onerous aspects of the regulations facing the firm, followed by those which are less costly. Eventually, the returns to spending on the firm’s other (non-political) interests becomes more valuable than spending to change policy.

2.3. Timing and equilibrium

All players have complete information. The party first chooses what price to charge each interest group, after which the interest groups simultaneously choose how to allocate their budgets. Since this is a dynamic game of complete information, we solve for the subgame perfect equilibrium using backward induction.

Interest groups will exhaust their budgets on lobbying, influence, and spending on their mission, so their budget constraint can be substituted back into their objective function. Taking first order conditions and combining interest group best responses, we get

$$\ell_i^*(\pi) = \left(\frac{\gamma_1 \pi_i}{\gamma_2} \right)^{-\frac{\gamma_2}{1-\gamma_1-\gamma_2}} (\omega \gamma_1)^{\frac{1}{1-\gamma_1-\gamma_2}} \tag{1}$$

¹⁰ Consider the example described in the introduction, where Congressional hearings about the FBI’s international banking investigations spill over into its counter-terrorism operations. Alternatively, the legislature might be concerned that politicizing the agency pushes out some of the most experienced staff ([Richardson, 2019](#)).

¹¹ We allow interest groups to directly lobby agencies (in addition to purchasing indirect influence from Congress via campaign contributions) in order to motivate our empirical measure of breadth, which is based on observed lobbying expenditures. Our core result, that breadth reduces Congressional influence, does not require us to model direct lobbying of agencies, as can be seen by setting $\gamma_1 = 0$ below.

¹² The assumption of complementarity is consistent with existing evidence ([Tripathi et al., 2002](#); [You, 2017](#)), but not important for our results. Below, we show that lobbying increases when the allied party takes control of Congress, lending support to this formulation.

$$\begin{aligned}
 S_i^*(\boldsymbol{\pi}) &= \frac{-(N-2)\eta-1}{(N-1)\eta^2-(N-2)\eta-1} \left(\frac{\gamma_1 \pi_i}{\gamma_2} \right)^{\frac{\gamma_1-1}{1-\gamma_1-\gamma_2}} (\omega \gamma_1)^{\frac{1}{1-\gamma_1-\gamma_2}} \\
 &+ \sum_{j \neq i} \frac{\eta}{(N-1)\eta^2-(N-2)\eta-1} \left(\frac{\gamma_1 \pi_j}{\gamma_2} \right)^{\frac{\gamma_1-1}{1-\gamma_1-\gamma_2}} (\omega \gamma_1)^{\frac{1}{1-\gamma_1-\gamma_2}}
 \end{aligned} \tag{2}$$

Thus, the party in power essentially faces the monopolist’s problem, with the additional complication that it will only be paid for a proportion of what it produces. We can plug the interest groups’ demand functions back into the political party’s problem to find the optimal price level. Lemma 1 presents this result (see Appendix A for the proof).

Lemma 1. *In the unique pure strategy subgame perfect Nash equilibrium, the political party charges price*

$$\pi_i^* = \frac{c(1-\gamma_1)}{\gamma_2} ((N-1)\eta+1) \tag{3}$$

to interest group *i* for influence.

Eq. (3) gives the price that the party in power charges for targeted influence. The price optimally trades off between bringing in more campaign contributions and paying higher effort costs. Even though the marginal cost is constant, this price is increasing in the number of regulated interest groups due to influence spillovers.

Proposition 1. *The political party’s average influence on an agency is decreasing in agency breadth.*

Proposition 1 follows immediately from Lemma 1 and the fact that each interest group’s demand is decreasing in the price they pay. Notice that an increase in *N* leads to a fall in both $S_i^*(\boldsymbol{\pi}^*)$, the amount of influence that the interest group pays for, and $A_i(\boldsymbol{\pi}^*)$, the total amount of influence (including spillovers) affecting interest group *i*. For each additional interest group, the party in power has to exert more effort to produce the same amount of targeted influence. Because of this, the party charges higher prices, and each interest group demands a lower quantity.

Restricting the party to offer a simple linear price mechanism for the sale of influence is partially responsible for this equilibrium outcome. Because the party interacts with each interest group individually, interest groups have an incentive to free ride, lowering their demand. More complex contracts which condition the amount of influence put towards one task on the amount demanded for other tasks could internalize these externalities, eliminating the relationship between breadth and influence.¹³ We consider these types of contracts to be unrealistic. Contracts based on campaign contributions cannot be legally enforced; such *quid pro quo* exchanges are illegal. While we follow (Grossman and Helpman, 1996) in allowing members of Congress to set a “price” for influence, we reiterate their logic that these prices “are intended as metaphors, rather than as literal descriptions of explicit contracts. In practice, offers of political support are conveyed as much by the public posture of a lobby as by any private communications it may have with the politicians. Accordingly, the *quid pro quo* for campaign support may come to be common knowledge among the parties (p. 272).” Certainly in a repeated game, expectations of behavior and willingness to make exchanges form as reputations build. This reputational enforcement, however, becomes more difficult to imagine the more complex contracts become. The types of contracts that are capable of internalizing these externalities and eliminating the relationship between breadth and influence require complex exchanges that explicitly condition the exchange with each interest group on the behavior of the rest.

The theoretical result found in Proposition 1 implies that when controlling for other observable characteristics of a government agency, we should expect broad agencies (those performing tasks that affect more interest groups) to report being less influenced than narrow agencies. This result is our primary empirical focus.¹⁴

2.4. Institutional design of bureaucratic agencies

In this section we discuss broader issues related to the institutional design of bureaucratic agencies. While we do not formally model or empirically test these issues, we discuss their relevance for future work.

Modern governments are responsible for an incredible array of different tasks. These tasks not only differ from one another in many important respects (discussed below), but there are complex links *between* them. Sometimes, different tasks require closely related skills (such as evaluating the efficacy of medical equipment and evaluating the efficacy of vaccines). In these cases, there is a clear efficiency gain from grouping these tasks into the same agency. Since different tasks surely have different degrees of overlap with others, some agencies will naturally be more broad (because those tasks

¹³ Examples of such contracts are available from the authors upon request.

¹⁴ Another prediction of our model is that interest groups will spend less (on average, per group) lobbying broad agencies. This is because breadth reduces Congressional influence, and Congressional influence and lobbying are complements. We thank an anonymous referee for pointing this out. In Appendix C.6, we test this, find a negative but non-significant relationship, and discuss several challenges unique to this exercise.

have more natural complements), while others will be more narrow.¹⁵ This is important for our analysis since it provides a non-political conceptual underpinning for our implicit assumption that agencies differ in breadth.

In reality, however, agencies are created by the legislature, and this complicates the considerations behind agency creation in several important ways. First, it is not obvious that the legislature *wants* to increase its influence over agencies. As pointed out by Macey (1992) and de Figueiredo (2002), since the legislature anticipates partisan turnover over time, they must account for how the opposition party will influence policy implementation when they come into power.

Second, even taking as given whether the legislature wants to increase or decrease its influence *on average*, the heterogeneity across tasks is important. The literature on delegation has pointed out that the incentives to put a task under the control of politicians or bureaucrats depends on the extent to which social preferences (Alesina and Tabellini, 2008) or market conditions (Montagnes and Wolton, 2017) change over time, the importance of substantive expertise (Epstein and O'Halloran, 1999) and minority protections (Maskin and Tirole, 2004), and whether bureaucrats are likely to be intrinsically motivated or effort-averse (Bueno De Mesquita and Stephenson, 2007).¹⁶ Our model, which emphasizes that agencies are responsible for *multiple* tasks and influence spills over across these tasks, further complicates the problem. Now, the optimal degree of Congressional influence depends not only on the features of a given task, but also on the features of *other* tasks that share natural substantive complementarities with it. The example above, in which Homeland Security Investigations wished to be separated from the rest of Immigration and Customs Enforcement, is an illustration. Given the considerations from above (e.g., the extent to which social preferences change over time), a designer might want a great deal of political influence over immigration enforcement. However, even though there is a natural complementarity between different law enforcement tasks that focus on border security, the designer might hesitate in the face of risks that this influence spills over onto transnational crime investigations.

Finally, it is important to note that institutions are designed amidst imperfect information about the future. For example, the Federal Communications Commission (FCC) oversees the licensing of television, radio, and telephone companies, regulates pricing and content control in internet provision, and helps negotiate international agreements on orbital satellites. When Congress established the FCC in 1934, it is difficult to imagine that they anticipated the central role of communications technology in the US economy or citizens' lives. What may have begun as a relatively narrow agency overseeing radio frequency allocations eventually became extremely broad as new media and communications technologies were developed which were naturally grouped in with radio.

These different mechanisms create complex incentives for the allocation of tasks to bureaucratic agencies. A thorough analysis of the institutional design problem is beyond the scope of this paper. However, we believe that future work should account for the multi-task nature of the problem, which we see as under-studied, and particularly for how the breadth of tasks an agency oversees affects the legislative opportunities for ex post influence.

3. Empirical strategy

3.1. Measuring breadth

One contribution of this paper is developing a novel measure of the breadth of agencies. In our model, we defined an agency's breadth as the number of interest groups who are affected by the tasks that the agency oversees (for simplicity, we sometimes refer to this as the number of interest groups regulated, though our logic applies beyond regulatory agencies). While this number is not directly observable, our model assumes that interest groups have an incentive to lobby the agencies that regulate it. Thus, we will infer which interest groups are regulated by an agency by identifying which interest groups lobby that agency. We do so using lobbying disclosure data from the Center for Responsive Politics (CRP; www.opensecrets.org), used extensively in past work (e.g., Blanes i Vidal et al. (2012), Kang (2015), You (2017)).¹⁷

The CRP data include lobbying of federal agencies and identifies the "category" of the organization hiring or employing the lobbyist. We refer to these categories as interest groups. They are organized hierarchically, ranging from 16 coarse 1-digit codes to 115 2-digit, 367 3-digit, and 424 4-digit codes.

It is helpful to consider an example. Among the 16 1-digit codes, the interest group "H: Health, Education, and Welfare" spent the most on lobbying agencies in our sample. Table B2 in the appendix shows how this single broad group breaks down into six narrower 2-digit groups, such as "H1: Doctors and health practitioners," "H2: Inpatient health facilities,"

¹⁵ Of course, grouping all tasks into one agency would surely produce an unwieldy agency, and splitting each task into a separate agency would surely miss important potential efficiency and operational gains.

¹⁶ These issues have a long history in both economics and political science. Within economics, most analyses are normative (i.e., they focus on social welfare and the optimal division of responsibilities, though (Alesina and Tabellini, 2008) is a notable exception) and models rarely give politicians ex post opportunities for influence over the bureaucracy. Besley and Coate (2003), (Maskin and Tirole, 2004), and (Alesina and Tabellini, 2007) are important contributions. Within political science, most analyses are positive (i.e., most, not all, focus on how much authority the politician will choose to delegate, though political scientists have debated the normative questions for over a century), and ex post opportunities for influence are a key theme. Huber and Shipan (2008) and (Gailmard and Patty, 2012) provide reviews.

¹⁷ Blanes i Vidal et al. (2012) estimate lobbyists' financial returns to being connected to members of Congress. Kang (2015) estimates a dynamic model of interest groups' strategic interactions and lobbying decisions on energy policy in order to back out the returns to lobbying. You (2017) studies the distinction between lobbying for policy passage and lobbying for its implementation. A minority of the literature focuses on lobbying of agencies (as opposed to lobbying Congress), and ours is the first paper to use lobbying data to infer structural characteristics of agencies.

and “H4: Medical supplies.” These codes are further broken down into 3-digit codes. For instance, doctors includes “H11: Physicians” and “H14: Dentists,” health facilities includes “H21: Hospitals” and “H22: Nursing homes,” and medical supplies includes separate categories for manufacturers of medical equipment (H41) and pharmaceuticals (H43).

These 3-digit codes are far more precise, and it is easy to think of circumstances in which hospitals and nursing homes, for instance, might have different policy preferences or be affected by different agencies. These 3-digit codes are the level of precision that we use for our main specification, though we show our results are robust for all four levels of aggregation.

Finally, Table B2 shows that only one of the 19 3-digit codes breaks into separate 4-digit codes (physicians are divided into Optometrists, Other specialists, and Physicians not elsewhere classified).

For our primary measure of breadth, we use all lobbying disclosure forms available from 1998 to 2016. We define interest groups according to 3-digit CRP codes, and convert their lobbying expenditures of an agency into real 2017 dollars. Often a single lobbying contract involves multiple agencies being lobbied but with only one expenditure total. In these cases, we divide those lobbying expenditures equally across lobbied agencies. We then aggregate total lobbying expenditure (across the full period) up to the interest group/agency dyad. We exclude any case in which an interest group spent less than \$10,000 in 2017 dollars lobbying an agency (over the full 19 years) so as to isolate an appreciable amount of activity. Finally, for each agency we calculate the total fraction of all interest groups that are observed lobbying that agency. We refer to this share as the “breadth” of the agency. This describes our primary measure of breadth, but we show that our results are robust to the level of aggregation, the use of the \$10,000 cutoff, and the choice to normalize multi-agency lobbying contracts.

The lobbying-based measure of breadth connects directly our model and is a flexible and continuous measure that captures the interests of politically-involved actors and the diversity of politically-relevant tasks that an agency is engaged in. In Appendix B.2, we discuss representative examples of agencies drawn from across the distribution of breadth, present the main groups that lobby these agencies, and use the lobbying disclosure reports to understand some of the more surprising examples (such as why manufacturing firms lobby the Bureau of Labor Statistics so heavily). Overall, we feel that this empirical measure represents very well the conceptual notion of breadth that we are interested in.

However, a disadvantage is that the decision to lobby is endogenous, complicating the interpretation of this measure. We present a series of robustness checks and a rich set of evidence suggests that this endogeneity is not a problem for our analysis. This *does not* mean that the decision to lobby is not endogenous; it certainly is. However, because we set an extremely low threshold (\$10,000) and look at a very long period (19 years), our analyses suggest that we capture the full range of relevant interest groups. Our assumption is that any interest group which is meaningfully affected by the actions of an agency will spend *some* money lobbying that agency at some point during a 19 year period. We find this assumption realistic.¹⁸ Under this assumption, realistically endogenous decisions – such as whether or not to lobby during some particular year, or how much to spend on lobbying one agency compared to another – will not affect our measure.

Nonetheless, because lobbying is an endogenous decision, we present all of our analyses jointly using an agency-level measure of breadth from Clinton et al. (2014): the number of different policy areas under which the agency was classified during a review by the Office of Management and Budget conducted during the Bush Administration. This number ranges from 1 to 17 and we discuss these policy areas – as well as several examples of specific agencies – below when we compare this measure to our lobbying-based measure.

3.2. Measuring influence

To measure the degree of Congressional influence, we turn to the existing political science literature and use the measure from Clinton et al. (2014).¹⁹ That measure is drawn from the authors' 2007 Survey on the Future of Government Service, which collected data from 2368 federal agency administrators and program managers (what we refer to as “high-level bureaucrats”). Clinton et al. (2014) describe the data collection methods in detail.

Among other questions, respondents were asked to rate on a scale of 1–5 how much influence various groups have “over policy decisions in your agency.” Options ranged from “a great deal” of influence to “none.” The question was asked of Democrats in Congress (who controlled both the House and the Senate at the time), the White House (the president at the time was a Republican), and others. Clinton et al. (2014) explicitly prime respondents to think about the *relative* influence of different groups.

For this reason, they intentionally use a simultaneous list to show respondents all nine groups at once. They do this to account for inherent differences across respondents in how to interpret “a great deal” of influence, “some” influence, etc. Because respondents answer about all groups at once, their measure of influence is calculated by taking the reported influence of Democrats in Congress and subtracting the reported influence of the president.²⁰ This is a natural normalization.

¹⁸ The magnitudes of lobbying are important to keep in mind. The *average* interest group in our sample spends \$144 million on agency lobbying during our sample.

¹⁹ Bery and Gersen (2017) develop a creative alternative by focusing on how the geographic distribution of government spending responds to partisan control of Congress. Because of limited information in the spending data, the authors focus on only 22 cabinet-level agencies (mostly large departments). The only data on spending of detailed agencies comes from USA Spending, which is only available from 2005 onward. With such a short panel, one cannot reliably estimate agency-level spending responses to control of Congress. Data limitations aside, a conceptual advantage of the (Clinton et al., 2014) measure is that it captures influence over the full range of an agency's responsibilities, rather than simply where it spends its money.

²⁰ Technically, Clinton, et al., use the negative: Presidential influence minus Congressional Democrats'.

These are executive agencies; therefore, they are explicitly designed to be underneath the President and it is intuitive that the degree of Congressional influence would be defined *relative to the statutory principal*.

One limitation of this measure is that it is only available from a single point in time (2007), and therefore under a single set of political conditions. Our interest is in identifying general structural features of an agency that facilitate or mitigate Congressional influence, so it is plausibly problematic that we cannot assess the breadth/influence relationship under different conditions. While we cannot observe variation over time in these conditions, we can indirectly test for their importance using variation in political circumstances across agencies. If, for example, the relationship between breadth and influence were systematically different when Democrats control congress because of differences in the groups that support Democrats, then we would expect for this to be reflected in comparisons across agencies. In Appendix C.5, we test whether the relationship between breadth and influence differs across agencies that primarily oversee Democratic-allied groups compared to those which oversee Republican-allied groups. We find no heterogeneity along this dimension.²¹ We find this reassuring that the partisan composition at the time of our measurement does not distort the breadth/influence relationship that we are interested in.

Nonetheless, we acknowledge that this point-in-time measurement is problematic. In particular, we cannot rule out features of the political environment that are *not* related to the composition or partisan-alignment of interest groups. For example, the Democratic party might have a different objective function through which the costs of spillovers are evaluated, or the Democratic party might have a different valuation of professionalized, independent bureaucracies (since bureaucrats are more likely to hold liberal ideological views). These concerns are important, and we acknowledge that the difficulty in measuring Congressional influence is a key challenge for empirical work on the topic.

3.3. Summary statistics

We create our final dataset by merging our lobbying-based measure of breadth and the survey-based measure of influence for every agency in the CRP data and the available (Clinton et al., 2014) data. The Data Appendix has further details. In total, we are left with 70 federal agencies. Table 1 presents summary statistics on these agencies, as well as the interest groups observed lobbying them.

Panel A considers interest groups. The average 3-digit interest group lobbied 27 of the 70 agencies in our main sample, though there is wide variation. Across the 367 groups, 10% lobbied 7 or fewer and 10% lobbied 46 or more. When we restrict to agencies the groups spent \$10,000 or more lobbying (again, over a 19 year period), these numbers fall, but only slightly because typical lobbying expenditures dramatically exceed \$10,000. The average lobbying relationship (conditional on exceeding the \$10,000 threshold) sees \$158,000 spent lobbying an agency *each year* (median: \$66,000). This amount is per agency, and is large relative to the amount spent on Congressional campaign contributions. Across our 367 groups, the median spends 9.3 times as much lobbying agencies in our sample as it spends on Congressional campaigns, closely resembling the 10:1 figure from Tripathi et al. (2002).²² As is seen in the far right column, groups that lobby more lobby more agencies, more per agency, and spend more on Congressional campaigns.

Panel B presents statistics on the 70 agencies used in our analysis. The first four rows summarize our lobbying-based measure of breadth for different levels of aggregation, always interpretable as the *fraction* of groups that lobby the agency. Using the coarsest measure of breadth (with only 16 interest groups), we are left with the impression that nearly all groups lobby nearly all agencies (the average agency is lobbied by 84% of groups, and the median is 94%). When adopting a more precise set of interest group codes, however, this figure falls rapidly, stabilizing at 3-digits, where the average agency is lobbied by 36% of all groups (median: 29%). The variation is large: The most narrow 10% of agencies are lobbied by less than 4% of groups, while the most broad 10% are lobbied by 75% of groups. The fifth row shows the number of policy areas under which the agency is classified (up to 17). The median agency is classified under only two policy areas, but 10% of agencies are classified under 11 or more areas (examples are discussed below). Importantly, the correlation between breadth measured using lobbying and policy areas is high (.663), which we find reassuring.

Most agencies report more presidential influence than Congressional influence (as expected, given that these are *executive* agencies). Our average agency has 48,000 employees, though this varies dramatically. The 10th percentile is only 364 employees and the 90th is 131,000. Importantly, the correlation between employment and lobbying-based breadth is only 0.22, which in practice means that our regressions should be able to separate the two and we can avoid conflating broad agencies with large ones.

The final two rows show the number of Congressional oversight committees responsible for the agency (the substantive focus of Clinton et al., 2014) and the prevalence of political appointees (the substantive focus of Berry and Gersen, 2017). The correlation between breadth and political appointees is small (-.16), and so our regressions should be able to easily separate them. The correlation with oversight committees is larger (.50), as would be expected: Broad agencies are overseen by more committees. Nonetheless, below we show that controlling for this has little effect on our estimates.

²¹ It is not the case that our test is simply under-powered. We *do* find evidence for heterogeneous effects depending on groups' political alignment; we simply *do not* find that it depends whether they are allied with Democrats or Republicans. Instead, we find that influence declines more sharply in breadth when regulated groups tend to be extreme (as opposed to moderate). This does not show up when testing for Democratic- or Republican-alignment because the effect is symmetric; far-right and far-left groups are equally important.

²² That lobbying spending exceeds campaign spending is a point emphasized elsewhere (see, for instance, Drutman (2015) and You (2017)).

Table 1
Summary statistics.

Panel A: Interest group characteristics (n = 367)								
	Mean	Standard deviation	Percentiles					Corr. with log(Lobbying)
			10th	25th	50th	75th	90th	
Num. of agencies lobbied	27.0	14.1	7	18	27	36	46	0.819
Num. of agencies lobbied 10K+	25.0	13.5	6	16	25	34	43	0.834
Lobbying per agency per year (th.)	158	280	10.4	24.4	66.0	158	351	0.653
Congressional contrib. per year (th.)	865	1882	0.736	23.2	141	809	2591	0.294
Democratic share	0.447	0.235	0.204	0.299	0.421	0.513	0.883	-0.52
Ratio: Agency lobbying to contributions	342	3297	0.742	3.13	9.34	24.5	105	0.032
Panel B: Agency characteristics (n = 70)								
	Mean	Standard deviation	Percentiles					Corr. with Breadth
			10th	25th	50th	75th	90th	
Lobbying-based breadth (1-digit)	0.837	0.206	0.531	0.813	0.938	0.938	0.938	0.599
Lobbying-based breadth (2-digit)	0.527	0.274	0.117	0.365	0.517	0.739	0.895	0.965
Lobbying-based breadth (3-digit)	0.355	0.256	0.042	0.165	0.293	0.534	0.756	1
Lobbying-based breadth (4-digit)	0.347	0.255	0.036	0.150	0.283	0.519	0.748	0.999
Policy areas	4.45	3.97	1	1	2	7	11	0.663
Congressional influence	-.582	0.634	-1.23	-1	-.549	-.320	0.138	-.432
Year founded	1933	53.1	1856	1913	1947	1970	1979	-.244
Employees (th.)	48.4	120	0.364	1.29	5.30	36.0	131	0.220
Number of oversight committees	3.06	0.580	2.37	2.63	3.00	3.42	3.81	0.498
Political appointee share	0.137	0.172	0	0	0.102	0.182	0.300	-.159

Panel A is based on 3-digit interest groups that ever lobby an agency in the main sample. “Corr. with log(Lobbying)” refers to the correlation with the log of the inflation-adjusted amount of total lobbying of all agencies during the full period (1998–2016). “Number of agencies lobbied” (resp., “10K+”) refers to the number of agencies in our main sample ($n = 70$) that the interest group lobbied (resp., spent \$10,000 or more (in 2017 dollars) lobbying during the full period). “Lobbying per agency per year” is measured in thousands of 2017 dollars (as is Congressional contributions) among agencies which the group spent \$10,000 or more on. “Democratic share” refers to the share of the group’s Congressional contributions spent on Democratic candidates. “Ratio of agency lobbying to Cong. contribs” is the ratio of the group’s average annual lobbying expenditures (on all agencies) to its average annual Congressional campaign spending. Panel B is based on 70 agencies that appear in the lobbying data and the (Clinton et al., 2014) data. “Breadth (n-digit)” is the share of all n-digit interest groups that are observed lobbying the agency by \$10,000 (in 2017 dollars) or more during the period. Policy areas ranges from 1 to 17 and is based on the number of policy areas under which the OMB classified the agency in budget and performance review documents. To obtain “Congressional influence” (which we take from Clinton et al., 2014), each respondent’s Likert scale response is normalized by his/her own response about presidential influence, and a simple average is taken across respondents within the same agency. “Employees” refers to 2007 employment (when the survey was conducted). “Number of oversight committees” and “Political appointee share” are also averaged over survey responses.

3.4. Comparing measures of breadth

As mentioned above, we perform all of our analyses using both our lobbying-based measure of breadth *and* a measure from Clinton et al. (2014) based on the number of policy areas under which an agency has been classified. These measures are highly correlated (.66), but in Fig. 1 we show some important differences. For example, Fig. 1 shows that the Food and Drug Administration (FDA) and the Occupational Safety and Health Administration (OSHA) are both classified as appearing under only one policy area, specifically Health and Well-Being. Despite only appearing in this one policy area (which is itself a very broad area), both agencies handle a diverse array of responsibilities. The FDA regulates *all* products related to food or medicine (including tobacco, livestock feed, cosmetics, dietary supplements, medical equipment and devices, vaccines, prescription and non-prescription drugs, condoms and sperm donations, and more). While these are, indeed, all related to health and well-being, it is a broad mandate, as is OSHA’s regulatory authority over all health and safety work conditions in the United States. This should be contrasted with other agencies that also only appear under a single policy area like the Bureau of Prisons (which manages the 110 federal prisons in the United States) and the Peace Corps (which places service workers in developing countries). According to the OMB’s classification, all four agencies are equally broad, however our lobbying data shows that 6 times as many interest groups lobby the FDA as the Bureau of Prisons, and our primary measure interprets that as evidence that the FDA is responsible for a broader set of tasks. Several such examples are displayed in Fig. 1.

However, Fig. 1 shows another subtle but important distinction between the OMB classification and our lobbying-based one. The Administration for Children and Families (ACF) appears under 7 policy areas, the same number as the Department of the Treasury. The ACF runs 60 different programs related to adoption assistance, child support enforcement, welfare, foster care, and child abuse, programs which span criminal justice, health, housing, education, and more. It’s mission is to create “opportunities for families to lead economically and socially productive lives,” a mandate which is surely no less broad than that of the Treasury Department. In the lobbying data, however, Treasury is lobbied by over 3 times as many interest groups,

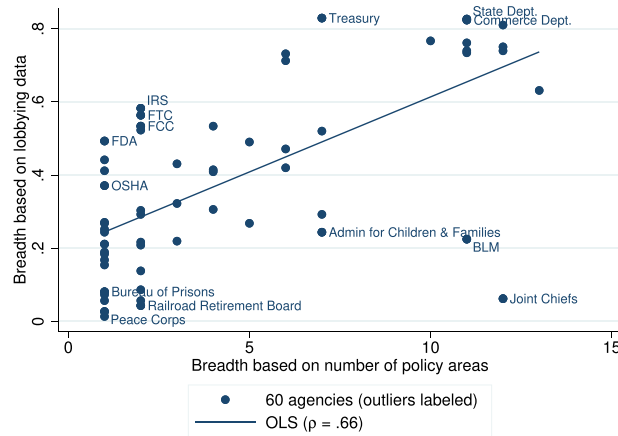


Fig. 1. Relationship between two measures of breadth. Each observation is an agency. Figure shows relationship between lobbying-based measure of breadth and measure based the number of different policy areas under which the agency was classified during a Bush Administration Office of Management and Budget review (ranging from 1 to 17). Selected agencies are labeled to help interpret the two measures. FDA: Food and Drug Administration. OSHA: Occupational Health and Safety Administration. IRS: Internal Revenue Service. FTC: Federal Trade Commission. FCC: Federal Communications Commission. BLM: Bureau of Land Management.

ranging from financial institutions to computer software developers and oil and gas companies.²³ The interpretation we find most compelling is that the ACF may well be as broad as Treasury, but it attracts less lobbying because its activities are less political. Our lobbying-based measure, then, captures the breadth of politically-relevant tasks (rather than the breadth of all tasks), which is plausibly what drives Congressional influence behaviors.

Finally, it is important to point out that some of the policy areas OMB defines are more broad than others. For example, “Business and commerce” is clearly more broad than “Disaster relief” and “Health and well-being” is clearly more broad than “Veterans benefits.” A measure based on the lobbying behavior of different groups within, say, the business community might be a more accurate reflection of the breadth of tasks an agency oversees.

3.5. Econometric strategy

Our primary estimates correspond to a simple OLS specification in which we regress agency-level reported influence on agency-level breadth of tasks:

$$Influence_a = \alpha + \beta Breadth_a + \varepsilon_a \tag{4}$$

We present a rich set of robustness tests to address various measurement-related concerns regarding the lobbying data, the reliability of the underlying survey measure of influence, and the role of outliers in our small sample.

We do not have an explicit exogenous or quasi-random source of variation in $Breadth_a$. Instead, our strategy is to take seriously several identification threats which we think are plausible and to provide realistic, fair tests for them.

Specifically, we consider the possibility that agency breadth is correlated with other structural features of the agency, including every control from the past literature, as well as several others. Next, we consider the possibility that the negative correlation we observe is caused by characteristics of the interest groups rather than the agency. We exploit the fact that the same interest group is often overseen by multiple agencies, allowing us to include interest group fixed effects so that identification is driven solely by different agencies overseeing the same interest groups. Finally, we consider the possibility of reverse causality by instrumenting for the breadth of an agency using the timing of its creation.

In none of these tests do we find evidence for an alternative, non-causal explanation of the breadth-influence relationship. We find these tests reassuring. However, our core result is cross-sectional and there are naturally many potential concerns about causality. It is difficult to imagine a different approach. Our primary measure of influence is survey data which we have for only one time period. Even if we could measure influence over time, there is likely little over-time variation in the breadth of an agency’s responsibilities, and the variation there is may well be just as endogenous as the cross-sectional variation. Sometimes tasks are shifted from one agency to another, which affects breadth. However, these shifts are part of broader agency restructuring, meaning that one must still account for changes in staffing, funding, and policies (the exact identification threats we face cross-sectionally). Moreover, without a *task-level* measure of influence (which we think is unrealistic to expect), one would still need to prove that changes in

²³ Looking through the disclosure reports, computer companies often lobby Treasury on issues related to e-commerce taxation, software for cybersecurity and counterterrorism and financial intelligence (which the Department oversees), and eligibility rules governing R&D tax credits. Lobbyists on behalf of oil and gas companies tend to vaguely lobby for “US government support with respect to the client’s investment abroad.”

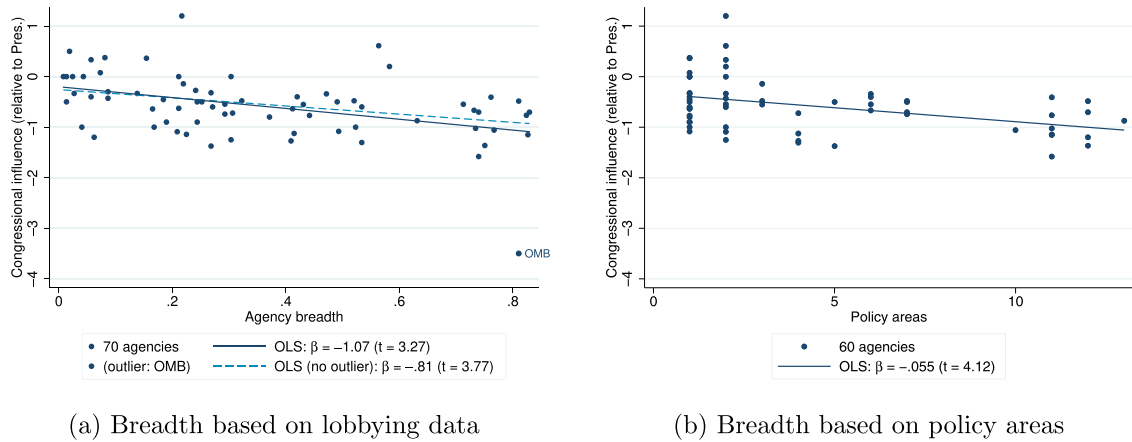


Fig. 2. Agency breadth and political influence. Each observation is an agency. In panel (a), breadth is measured as the share of all interest groups lobbying the agency. In panel (b), breadth is measured as the number of policy areas under which the OMB classifies the agency. Corresponding regression results can be found in Table 2 column 1.

Table 2
Evidence that breadth causally affects influence.

DV: Influence	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Breadth based on lobbying data						
Breadth	-1.072*** (0.328)	-0.987* (0.562)	-0.941** (0.456)	-0.950* (0.564)	-1.053** (0.473)	-1.492** (0.735)
R ²	0.187	0.394	0.292	0.188	0.136	0.158
N	70	69	66	65	9871	70
First stage F						13.9
Panel B: Breadth based on policy areas						
Policy areas	-0.055*** (0.013)	-0.040** (0.019)	-0.032** (0.015)	-0.045*** (0.016)	-0.042** (0.016)	-0.166* (0.095)
R ²	0.171	0.461	0.321	0.183	0.145	
N	60	59	56	57	9160	60
First stage F						3.4
Controls		CLS-14	Selin-15	Other		
Agency-IG panel					Yes	
IG FE					Yes	
IV						Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Unit of observation is an agency. In Panel A, breadth is measured as the fraction of interest groups that lobby the agency. In Panel B, breadth is measured as the number of policy areas (1–17) under which the agency is classified, according to the OMB and taken from Clinton et al. (2014). Column 2: 8 controls from Clinton et al. (2014) are log employment, number of Congressional oversight committees, whether it is a commission, whether agency is cabinet-level, whether it has field offices, the share who are political appointees, whether it was part of the Bush administration's agenda, and the (Clinton and Lewis, 2008) ideology (missing for one agency). Column 3: 2 controls are independence estimates from Selin (2015). Column 4: 2 controls are average lobbying spending per group (logged) and agency expertise (see text). See Table C8 for estimated coefficients on the controls. The instrument is an indicator for whether the agency was established during the Franklin D. Roosevelt, John F. Kennedy, or Lyndon B. Johnson administrations, which tended to be less broad agencies (see Table C5 for evidence that these periods produced more agencies and Table C6 for the first stage). "IG" stands for "Interest group".

agency-level influence resulted from changing *the breadth of* responsibilities as opposed to changing *which* responsibilities agencies' held. In other words, a time-varying measure of influence would not change the identification threats we consider.

4. Results

4.1. Main results

Our core result is that more broad agencies report less Congressional influence. Fig. 2 shows this flexibly using the raw data on the 70 agencies in our main sample. On the x-axis is the breadth of the agency (measured using lobbying data in

Panel (a) and policy area classifications in Panel (b)). On the y-axis is reported relative Congressional influence. Both figures show an obvious negative relationship that is statistically significant.²⁴

Column 1 of Table 2 presents the formal econometric results behind Fig. 2. Again, Panel A uses lobbying-based breadth while Panel B uses that based on policy area classifications. Interpreting these coefficients in light of the summary statistics in Table 1, a one standard deviation increase in lobbying-based breadth is associated with a 0.43 standard deviation decrease in reported influence, and a one standard deviation increase in policy areas is associated with a 0.34 standard deviation decrease in influence.

4.2. Robustness

4.2.1. Robustness related to the lobbying-based measure

Table C1 shows the results using our lobbying-based measure are nearly unchanged for different levels of aggregating interest groups. Table C2 shows they are invariant to the use of our \$10,000 cutoff and how we handle multi-agency contracts. Table C3 shows the results are stronger when breadth is measured using only lobbying that occurred close to the timing of our influence survey (2007). Fig. C1 shows that our results become stronger as we restrict to only interest groups that are strongly attached to the agency (i.e., those who persistently lobby the agency year after year), and exclude those who lobby it only infrequently.

These results all suggest that our core result (that broad agencies experience less Congressional influence) is robust to sensible changes in developing our lobbying-based measure, in addition, of course, to being robust to our policy areas classification that has nothing to do with lobbying. While lobbying decisions are endogenous (as we show empirically below), our measure is sufficiently conservative (i.e., based on the extensive margin of lobbying measured over a very long time period) that it does not seem to be substantially affected by this endogeneity.

4.2.2. Additional robustness

Table C4 shows that our results hold across a variety of agencies (excluding OMB, military agencies, or cabinet-level departments), and weighting by employment, respondents, or response rates. Both measures of breadth are always statistically significant and show remarkable stability, despite our small sample.

4.3. Identification

Thus far, we have been careful to describe our empirical results as correlations. Here, we test for three alternative (non-causal) explanations for our empirical results.

First, it is possible that breadth is simply correlated with some other agency characteristic that affects influence. We tie our hands and use the full set of controls used in the entire past literature. In Table 2, column 2 includes all controls from Clinton et al. (2014),²⁵ column 3 controls for the factors (Selin, 2015) develops based on 50 statutory features of agency design, and column 4 controls for average lobbying spending per group (a measure of agency importance) and the share of employees in “professional” occupations (a measure of the importance of expertise). None of these controls appreciably changes the magnitudes of our core coefficients.²⁶

Second, it is possible that our evidence has nothing to do with features of the agency, but with features of the regulated interest groups (e.g., narrow agencies might regulate more divisive groups, and this might attract greater Congressional influence). We estimate a modified form of our main specification based on a dyadic data structure. That is, we create a dataset of agency-group dyads in which each agency appears alongside each group that lobbied it (equivalently, each group alongside each agency it lobbied). We then estimate our main specification including interest group fixed effects. This modified data structure uses the exact same variation as our primary specification, but is only identified from instances where multiple agencies regulate the same interest group (if this never happened, there would be no within-group, cross-agency variation in breadth to generate identification). Column 5 displays the estimates, which are virtually unchanged.

Finally, one might worry about reverse causality, in which agencies that are exogenously subject to additional Congressional influence are lobbied by few groups, giving the illusion that they are narrow agencies. We draw on evidence that an agency’s design is affected by the national political circumstances in place at the time of its creation (Lewis, 2004), and specifically note that periods of rapid agency creation tended to produce more narrow agencies (i.e., when many new agencies are being created, responsibilities are more likely to be split between them rather than condensed). In appendix tables C5 and C6, we show that agencies created during the FDR, Kennedy, or Johnson administrations (when many agencies were

²⁴ Panel (a), based on lobbying-based breadth, shows a clear outlier: the Office of Management and Budget (OMB). This agency’s responsibility is to “assist the President in meeting his policy, budget, management, and regulatory objectives.” This is nearly identical to the Congressional Budget Office, which is designed to assist Congress in the same matters. This likely explains why OMB experiences so little Congressional influence. OMB is also the agency that did the policy area classifications, and since it did not classify itself during the project, it does not appear in Panel (b).

²⁵ Given the small sample, including eight controls increases the standard errors, but the coefficients change only slightly. Figure C2 depicts the relationship visually in a Frisch-Waugh plot. The downward slope is clear and strong.

²⁶ When we control for all twelve alternative controls at once (65 agencies, 13 independent variables), breadth is not statistically significant, but very similar in magnitude to our baseline specification. Variable selection methods (e.g., Lasso) always select breadth as an important predictor.

being created) are significantly more narrow than others. We use a dummy variable that pools the three administrations as an instrument for agency breadth.²⁷ Column 6 presents IV results showing that the narrow agencies created during these administrations experienced significantly more Congressional influence decades later.

We cannot possibly rule out every potential identification threat, and the breadth of an agency's design will never be randomly decided and unrelated to other characteristics. However, taken together, these findings support a causal interpretation.

5. Lobbying responses by agency breadth

In this section, we present additional evidence which supports the underlying mechanisms of our model. We present an augmented version of the model in which the political party is more willing to exert effort on behalf of their political supporters than their political opponents in Appendix A.2. This, along with the assumption of complementarity between influence and lobbying, leads to two further predictions which we test with our data. First, a group's lobbying increases when its allied party is in control. Second, because Congressional influence is lower in broad agencies, the swing in policy implementation (and therefore the response of complementary lobbying) should be smaller for broad agencies.

We test this using our 19 years of lobbying data. Specifically, we estimate the following modification of a triple-difference specification:

$$\text{Lobbying}_{iat} = \alpha_{ia} + \delta_{at} + \beta_1 1\{i\text{'s supported party controls Congress}\}_{it} \\ + \beta_2 1\{i\text{'s supported party controls Congress}\}_{it} \times \text{Breadth}_a + \varepsilon_{iat}$$

where i denotes interest groups, a denotes agency, and t denotes year.²⁸

If a group's lobbying increases when its allied party is in control, then $\beta_1 > 0$. If the swing is smaller for broad agencies, then $\beta_2 < 0$. This first hypothesis is simply a function of the complementarity that we assume in our model, while the second hypothesis (that β_2 is opposite signed from β_1) is our main substantive interest: the effect of breadth on influence. We see this specification as being closely related to a triple-difference specification because one difference is variation in control of Congress over time, one difference is variation in breadth across agencies, and one difference is variation in partisan preferences across interest groups. A fully flexible pure triple-difference specification would include fixed effects for each pairwise combination of the three dimensions of variation (i.e., group-by-agency fixed effects, agency-by-time fixed effects, and group-by-time fixed effects). In that case, β_1 could not be identified (control of Congress would be colinear with the group-by-time fixed effects), but β_2 could be. However, our main theoretical prediction is that β_1 and β_2 are opposite signed, which obviously cannot be confirmed without estimating β_1 . Thus, we prefer this "modified" triple-difference specification. Nonetheless, if we implement a pure triple-difference specification (including group-by-time fixed effects), our estimate of β_2 is virtually unchanged (results available upon request).

Our specification accounts for i 's time-invariant tendency to contribute to a (with the group-agency fixed effect α_{ia}) and the universal (i.e., cross-interest-group) tendency to contribute to agency a in a particular year (with the agency-year fixed effect δ_{at}), which might be driven by the changing importance of policy issues that a works on. Identification comes from changes in partisan control of Congress, and differences in how different groups respond (for the case of β_1) and which agencies see the largest lobbying responses (β_2). β_1 reflects the lobbying change for an extremely narrow agency ($\text{Breadth}_a = 0$) and $\beta_1 + \beta_2$ is the change for the broadest possible agency (lobbied by all groups, $\text{Breadth}_a = 1$).

We determine each group's partisan support by dividing all interest groups into three equally sized terciles based on the share of Congressional campaign contributions going to Democrats. This identifies Republican-aligned groups (the lowest tercile), Democratic-aligned groups (the highest), and centrist groups. We code a group's supported party as controlling Congress only when they control both houses. This setup implies that some groups are not connected to any party (centrist groups) and that in some years neither party controls Congress (the chambers are split), though none of these proves to be important for our conclusions (results available upon request).

Table 3 presents the results using two approaches to normalize lobbying expenditures: the inverse hyperbolic sine and dividing each period's lobbying by the full-period average level of group-agency lobbying. Both approaches allow us to include years in which there was zero observed lobbying of the agency.²⁹ Interest groups do appear to increase their lobbying expenditures when the allied party is in power. These main effects (i.e., ignoring the interaction) are statistically significant in three of the four specifications and are often substantively large (we interpret magnitudes momentarily). This is consistent with our assumption that direct lobbying and Congressional influence are complements for interest groups.

²⁷ Importantly, our instrument is non-monotonic in agency age, so it neither isolates especially old or young agencies. This instrument does not solve all identification concerns. While these agencies tend to be more narrow than others, they may differ in other design characteristics as well. Thus, in interpreting these IV results, it is important to keep in mind that column 2 showed that the breadth-influence relationship is *not* explained by other agency traits.

²⁸ When using the lobbying-based measure of breadth, lobbying expenditures appear on both the right-hand and left-hand side of the regression. We recognize that this is unusual. We emphasize that *i*) the results are nearly identical when measuring breadth using policy areas, *ii*) identification in this regression is about *when* groups lobby agencies, which is conceptually distinct from variation in *which* groups lobby, which is what determines our measure of breadth, and *iii*) because we include agency fixed effects, identifying variation is mechanically uncorrelated with the number of groups lobbying the agency (i.e., breadth).

²⁹ In the appendix, we separately estimate extensive margin (binary indicators) and intensive margin (natural logarithm) responses (Table C10).

Table 3
Lobbying responses to changes in partisan control.

	(1)	(2)	(3)	(4)
DV: Lobbying expenditures (L_{iat})	$\sinh^{-1}(L_{iat})$	L_{iat}/\bar{L}_{ia}	$\sinh^{-1}(L_{iat})$	L_{iat}/\bar{L}_{ia}
Supported Party in Power	0.299*** (0.102)	0.133** (0.055)	0.187 (0.126)	0.107* (0.057)
Supp. Party Power \times Breadth	-0.702*** (0.222)	-0.248*** (0.092)		
Supp. Party Power \times Policy areas			-0.038** (0.016)	-0.015** (0.006)
R^2	0.541	0.060	0.557	0.032
N	285,399	285,399	156,104	156,104
Fixed effects	<i>ia, at</i>	<i>ia, at</i>	<i>ia, at</i>	<i>ia, at</i>
Implied effects at 10 th percentile	0.292***	0.131**	0.149	0.092*
Implied effects at 90 th percentile	-0.040	0.013	-0.233*	-0.057

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Unit of observation is an interest group-agency-year triad. Standard errors (two way clustered at the agency and interest group levels) are in parentheses. All columns include agency-by-group fixed effects and agency-by-year fixed effects. Columns 2 and 4 (L_{iat}/\bar{L}_{ia}) is observed lobbying divided by the time-invariant agency-group mean.

However, more important for our primary focus, the interaction coefficients are statistically significantly negative in all four columns. Regardless of how we measure breadth, interest groups' lobbying responds less to control of Congress for broad agencies than it does for narrow ones. To interpret the magnitudes, the bottom of the table presents the implied change depending on the breadth of the agency. Looking at column 1, for instance, implies that when a group's allied party takes control of Congress, it's lobbying of an agency at the 10th percentile of breadth would rise by roughly 30%, while it's lobbying of an agency at the 90th percentile is virtually unchanged. In other words, our results suggest that lobbying only responds to partisan control for narrow agencies. In our model, this is because there is little Congressional influence over broad agencies, so the control of Congress is irrelevant.

6. Conclusion

We have studied the relationship between regulatory agency breadth and Congressional influence. We first show theoretically that the party in power in the legislature will exert more effort influencing very narrow agencies, because their incentives for influence decline when the agency becomes broad. We then show empirically that breadth is negatively correlated with Congressional influence. This relationship is robust to a number of identification strategies, and we show evidence consistent with the mechanisms of our model.

Our model has taken the allocation of interest groups across agencies as given. A clear pathway for future work is to study the strategy behind agency formation and interest group allocation. Those forming the agency must consider both how they will be able to influence it, as well as how the opposition will do so in the event that they come into power. At the same time, technical and practical concerns create constraints preventing agencies from being too broad or narrow. Empirically, it would be useful to generate data that studies how congressional influence varies over time, as well as cross-country analysis comparing how differing institutions and political environments affect agency formation and influence.

Declaration of Competing Interest

None.

Supplementary material

Supplementary material associated with this article can be found, in the online version, at [10.1016/j.jebo.2021.05.009](https://doi.org/10.1016/j.jebo.2021.05.009).

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