Policy-Development Monopolies: Adverse Consequences and Institutional Responses

Alexander V. Hirsch, California Institute of Technology
Kenneth W. Shotts, Stanford Graduate School of Business

We analyze a model of policy making in which only one actor (e.g., a bureaucratic agency or a well-funded interest group) has the capacity to develop high-quality policy proposals. By virtue of her skills, this actor has an effective monopoly on policy development and thus can craft proposals that are good for herself but provide few benefits to decision makers who enact policies. We then examine institutional responses that decision makers can use to induce a policy-development monopolist to craft more appealing proposals: (i) establishing in-house policy development capacity, (ii) delegating authority to an agent who counterbalances the monopolist's preferences, and (iii) fostering competition by policy developers with different preferences. We apply our model to a diverse set of contexts, including lobbying in term-limited state legislatures, regulation of banking and financial services, and administrative procedures for rule making in US federal bureaucracies.

During the Cuban Missile Crisis, the Joint Chiefs of Staff wanted to take aggressive actions to deal with the threat posed by Soviet missiles. The military had previously crafted plans to bomb and invade Cuba, and once the crisis began in October 1962, the Joint Chiefs pushed President Kennedy to implement these plans.¹ The president wanted to consider less aggressive approaches but faced the challenge of designing and implementing a viable alternative. A massive assault is not a simple undertaking, so once the military had used its expertise and effort to generate specific operational plans, there was no straightforward way for the president to use them as part of a different strategy. Thus, although the president had formal decision-making authority, the military's expertise in fighting wars could potentially give it informal authority to determine US strategy in the crisis.

The president, however, used several institutional tools to ensure that he had more appealing options. First, he had in-house policy development capacity in the National Security Council. Moreover, he had advisors, particularly Secretary of

Defense Robert McNamara as well as his brother Attorney General Robert F. Kennedy, who were skeptical of the military and who were less inclined to initiate combat. The president and his advisors worked with the State Department and the Navy to generate options that did not involve bombing or invasion. Although there was no perfect way to handle the crisis and, as noted by Allison (1969), many mistakes were made along the way, the president ultimately was able to implement a reasonably well-crafted policy, using a combination of a blockade and diplomacy, that was much more in line with his preferred approach.

The counterfactual of what might have happened if Kennedy did not have these institutional tools at his disposal, but rather had to rely solely on the Joint Chiefs, is perhaps more terrifying than the actual history of the Cuban Missile Crisis. Would he have implemented the Joint Chiefs' plans, which they expected to lead to a minimum of 18,500 US casualties and potentially escalate to nuclear war?² Would he have acquiesced to the presence of destabilizing medium-range

Alexander V. Hirsch (avhirsch@hss.caltech.edu) is a professor of political science in the Division of the Humanities and Social Sciences, California Institute of Technology, Pasadena, CA 91125. Kenneth W. Shotts (kshotts@stanford.edu) is the David S. and Ann M. Barlow Professor of Political Economy at the Stanford Graduate School of Business, Stanford, CA 94305.

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1339

missiles? Or would he have tried to concoct a different, ad hoc policy, even if it was poorly designed?

These questions are particularly provocative in the context of the Cuban Missile Crisis. Yet similar issues arise whenever an actor with formal decision-making authority must rely on others to craft policy options for his consideration. Policy developers include not just military leaders but also civilian bureaucrats who design economic policies and business interests that craft complicated regulatory policies. When policies are not neatly decomposable, but rather consist of complicated interactive components, a decision maker cannot take the components that make a policy proposal effective and use them to pursue his own goals. This fact is, of course, understood by policy developers, who realize that their expertise gives them informal agenda power that they can exploit to achieve their own ends. Indeed, Weber (1942) forcefully argued that in a wide range of settings, the expertise of a dominant bureaucracy or business interests ensures that a nominal “political master”—whether a president, parliament, electorate, or monarch—is actually a powerless “dilettante.”

In this article, we analyze the relationship between policy developers and decision makers, using a model in which policy consists of both a spatial component, over which actors disagree, and a quality component that they all value. In the Cuban Missile Crisis, the spatial component represents the aggressiveness of a policy, with the range of options including acquiescence, negotiation, blockade, invasion, or a nuclear first strike. The quality component represents how well crafted the policy is, a matter that was especially salient after the failure of the badly designed Bay of Pigs invasion.

In the model, creating a high-quality policy requires expertise or institutional capacity as well as effort. A key assumption of our model is that effort exerted to craft one policy option does not improve the quality of other options (i.e., it is *policy specific*). The assumption that quality is policy specific has been used in a growing literature on policy choice in legislatures (Hirsch and Shotts 2012; Hitt, Volden, and Wiseman 2017; Londregan 2000), courts (Lax and Cameron 2007), and bureaucratic agencies (Bueno de Mesquita and Stephenson 2007; Ting 2011). This approach contrasts with a large literature building on Crawford and Sobel (1982) and Gilligan and Krehbiel (1987) in which the information necessary to implement a liberal policy is the same as the information necessary to implement a conservative one. However, as argued by Callander (2008, 2011), in many empirical domains, the fact that an actor knows how to design one policy does not mean he knows how to design a completely different one. For example, the Joint Chiefs’ invasion plans were carefully crafted, using the military’s institutional resources and expertise in warfare, but these plans were useful only for an assault, not for a blockade or a diplomatic approach to the crisis.

To identify our model’s key strategic tension, we first analyze what happens if a single actor can develop high-quality policies for consideration by a decision maker. We show that a *policy-development monopolist* will take advantage of her expertise to obtain informal authority by crafting policies that promote her own interests, as in Aghion and Tirole (1997) and Bendor, Taylor, and Van Gaalen (1987). From the perspective of the decision maker, this is problematic: he wants a high-quality policy in line with his preferences but is instead stuck choosing between a low-quality one in line with his preferences or a high-quality one that serves the monopolist’s interests. This strategic tension may appear similar to what arises in informational models in the tradition of Crawford and Sobel (1982), but it is actually quite different. In classical informational models, an expert is reluctant to acquire or reveal information because she worries that a decision maker will use it to implement a policy far from the expert’s ideal point. In our model, in contrast, the only way a decision maker can benefit from a policy developer’s expertise is by adopting the policy she developed. Hence, the policy developer has informal agenda power.

The ideal way for the decision maker to rein in this agenda power would be to credibly threaten to enact something the monopolist dislikes if she fails to craft a policy in line with the decision maker’s interests. This, however, would require the decision maker to commit *ex ante* to reject policies that are better than what he can develop on his own. Politicians typically find it difficult or impossible to make such commitments because they have limited means of control, urgency to address specific policy issues, and short time horizons in office. Instead, the solution is often to create institutions that effectively, if crudely, achieve the same end.

Our first contribution is to show how the problem of policy-development monopoly can be mitigated using three common institutional arrangements: establishing internal policy-development capacity, delegating decision-making authority to an agent who counterbalances the monopolist, and facilitating participation by a competing policy developer with different preferences. These institutional responses share a simple common theme: *it is useful to make a monopolist’s life more difficult* because the threat of being stuck with a policy that she dislikes will spur her to exert greater effort crafting high-quality proposals in line with the decision maker’s preferences. This contrasts with informational models, in which, broadly speaking, a decision maker finds it useful to make an expert’s life easier by committing not to expropriate her information, for example, by adopting a closed rule (Gilligan and Krehbiel 1987), delegating to an agent aligned with the expert (Boehmke, Gailmard, and Patty 2005; Dessein 2002), or delegating to the expert herself (Bendor and Meirowitz 2004).

Our second contribution is to apply the model to a variety of empirical contexts. Our goal is not to provide a full test of our model, as is typical in applied formal theory that derives hypotheses for empirical testing. Rather, we use the model as a novel analytical lens to reinterpret existing theoretical and empirical debates in the literature on policy making, similar to the approach used by Gailmard and Patty (2013a) and advocated by Clarke and Primo (2012). When analyzing internal capacity, we show how term limits encourage state legislatures to rely on policy development by external actors like governors and lobbyists. We apply our model of delegation to suggest that regulation of a complicated industry like banking should be handled by anti-industry skeptics rather than pro-industry insiders. Finally, we use our model of competition to analyze the effects of administrative procedures that can either foster or inhibit broad participation in regulatory rule making.

More generally, our analysis complements Hitt et al. (2017) in demonstrating how complete-information spatial models with endogenous quality provide a tractable framework for analyzing a wide variety of institutional arrangements. Our model's foundation is similar to previous models of endogenous quality focusing on one particular question or institutional arrangement (Bueno de Mesquita and Stephenson 2007; Hirsch and Shotts 2012, 2015; Lax and Cameron 2007; Ting 2011; Wiseman 2006). Here we show how institutional features like internal capacity, delegation, and competition can be analyzed in a unified modeling framework that is technically simple and therefore very accessible to applied researchers.

BASELINE MODEL: POLICY-DEVELOPMENT MONOPOLY

We first introduce our model of policy-development monopoly. Policy consists of two dimensions: ideology y and quality q , where $q \geq 0$. There are two actors: a decision maker and a policy developer, with ideological ideal points $x_{DM} = 0$ and $x_D > 0$. Each actor $i \in \{DM, D\}$ incurs losses $\lambda_i(|x_i - y|)$ that depend on the distance between the policy y and the actor's ideal point x_i . Each actor's loss function is continuously differentiable, strictly increasing and convex, and satisfies $\lambda_i(0) = 0$, $\lambda'_i(0) = 0$, and $\lim_{z \rightarrow \infty} \lambda'_i(z) = \infty$; thus, quadratic spatial preferences $\lambda_i(|x_i - y|) = (x_i - y)^2$ are a special case of our model. We also assume the two players value quality equally, at exactly q , regardless of the ideological location of the policy. Thus, player i 's utility from policy (y, q) is

$$U_i(y, q) = q - \lambda_i(|x_i - y|).$$

In the baseline model, only the developer can produce quality, at a cost $c_D(q)$ that is a continuously differentiable, strictly increasing and convex function of quality, where $c_D(0) = 0$,

and $\exists q > 0$ such that $c'_D(q) > 1$ (so she cannot generate infinite utility via an infinite amount of quality). Quality is policy specific: if the developer crafts a policy (y_D, q_D) with $q_D > 0$, then any other ideological policy $y \neq y_D$ chosen by the decision maker will have zero quality. The quality level $q = 0$ is a normalization, representing the quality associated with a policy that is developed with minimal skill or effort.

The baseline model is quite simple, and proceeds as follows. (1) The developer crafts a policy $b_D = (y_D, q_D)$. (2) The decision maker enacts b_D or any zero-quality policy $(y, 0)$.

To solve the model, we first note that if the decision maker does not enact the developer's policy, he will enact his own ideal point with zero quality, $(0, 0)$, because this is his most preferred zero-quality policy. The developer, when choosing which policy to develop, thus chooses a policy that maximizes her utility subject to the constraint of producing enough quality to induce the decision maker to prefer b_D over $(0, 0)$. This dynamic resembles Romer and Rosenthal's (1978) classic agenda setting model, in which a decision maker is forced to choose between a single proposal and an exogenous status quo, with $(0, 0)$ playing the role of the status quo. But the substantive rationale for this aspect of our model is quite different. The developer has no formal ability to constrain the decision maker's choices—indeed, the decision maker may choose a policy at any ideological location. However, if the decision maker wants a high-quality policy, then his choices are informally constrained by the developer's monopoly over the technology of quality development, combined with the properties of quality itself—namely, that once developed it is attached to a single policy.

To find the developer's optimal policy to develop, note that she must give the decision maker at least as much utility as he gets from $(0, 0)$, which means that she must develop quality $q_D \geq \lambda_{DM}(y_D)$. If the developer is close to the decision maker, this constraint is not binding; she will craft a policy at her own ideal point with the level of quality q_0 that she intrinsically prefers to produce ($c'_D(q_0) = 1$). If the developer is further away from the decision maker so that her cost function is sufficiently steep ($c'_D(\lambda_{DM}(x_D)) \geq 1$), she optimally produces no more quality than necessary to satisfy the constraint with equality, paying cost $c_D(\lambda_{DM}(y_D))$. She also values quality for its own sake, so the net cost of developing the lowest-quality enactable policy at y_D is $c_D(\lambda_{DM}(y_D)) - \lambda_{DM}(y_D)$. The developer's ideological utility is $-\lambda_D(|x_D - y_D|)$. Because of the convexity of the actors' cost and loss functions, a unique $y^* \in (0, x_D]$ is optimal and satisfies the following first-order condition trading off costs against ideological benefits:

$$c'_D(\lambda_{DM}(y_D)) - 1 = \frac{\lambda'_D(x_D - y_D)}{\lambda'_{DM}(y_D)}. \quad (1)$$

Our first proposition summarizes this argument. Formal proofs are in the appendix, available online.

Proposition 1 (Baseline). If the developer is closely aligned with the decision maker ($x_D < \hat{x}_D$, where $\lambda_{DM}(\hat{x}_D) = q_0$), she crafts a policy at $y^* = x_D$ with quality $q^* = q_0$, and the decision maker's utility is $q_0 - \lambda_{DM}(x_D) > 0$. If the developer is not closely aligned ($x_D \geq \hat{x}_D$), she crafts a policy at y^* from equation (1) with quality $q^* = \lambda_{DM}(y^*)$, and the decision maker's utility is 0.

Figure 1 illustrates the model when the developer is not closely aligned with the decision maker. The developer has informal agenda power due to her ability to craft high-quality policies—the decision maker could choose any other ideology but does not have the capacity to develop quality on his own. The shaded region above his indifference curve through $(0, 0)$ is the set of policies that he is willing to enact in lieu of his own ideal point with zero quality. The developer's indifference curves for policies she creates are shown by dashed lines. Because quality is costly, her indifference curves slope down and she prefers to develop a policy on a lower curve. Her optimal policy to develop is (y^*, q^*) , the point of tangency between her indifference curves and the set of enactable policies. At this point, the marginal benefit of obtaining an outcome closer to her ideal point exactly balances the net marginal cost of creating a higher-quality policy along the decision maker's indifference curve.

Variants of this baseline model can be used to generate many empirical implications. For example, Hitt et al. (2017) derive comparative statics about the effects of variation in legislators' skill at designing proposals, and Triossi, Valdivieso, and Villena-Roldan (2013) study voting in the Chilean Senate. For our purposes, the key implication of the model is the

Figure 1. Baseline. Actors have quadratic preferences, with ideal points $x_{DM} = 0$ and $x_D = 1$. Developer's cost of producing quality is $c_D(q) = 2q^2$. Shaded area represents policies that the decision maker would accept. Dashed lines are developer's indifference curves. Equilibrium policy is $y^* = 2^{-2/3}$, $q^* = 2^{-4/3}$.

simplest one: unless the developer and decision maker have closely aligned preferences, the decision maker receives no benefit from the developer's efforts to craft high-quality proposals. Indeed, he is no better off than he would be if the developer did not exist. This adverse consequence is a direct effect of the developer's monopoly on the technology of quality production—she can exercise informal agenda power and extract all of the benefits of quality in the form of ideological rents.

DISCUSSION OF ASSUMPTIONS

Before analyzing institutional responses to the problem of policy-development monopoly, we briefly remark on the model's key assumptions, empirical domain, and place in the literature.

Assumptions about quality

The model makes two key assumptions about quality, or more precisely the results of the monopolist's effort. The first is that effort produces something that is valued by all players. The substantive interpretation of this assumption is not that every feature of a policy that the monopolist considers to be high quality is also high quality from the perspective of the decision maker. Rather, it is that there are some features that are valued by both the monopolist and the decision maker and that these features can be improved via the monopolist's effort.

The second assumption is that the quality produced by the monopolist cannot be transferred to alternative policies—even those that are ideologically very similar. Our model is thus tailored to empirical domains in which experts' costly investments in good policies are largely specific to those policies and cannot be easily used to improve other alternatives. We make the arguably extreme assumption that quality is fully policy specific, for the same reason that a literature building on Crawford and Sobel (1982) and Gilligan and Krehbiel (1987) makes the opposite extreme assumption that policy-relevant information is fully transferable—namely, to simplify the analysis. However, we note that our results continue to hold if quality is partially transferable across policies, as long as it is not too transferable.³

For empirical applications, an additive-shock model in the tradition of Crawford and Sobel (1982) is appropriate when all actors' induced preferences over a spatial policy are affected by the same piece of information. For example, information about the degree to which global warming is a serious threat should affect induced policy preferences on carbon emissions for both liberals and conservatives. Our model, in contrast, is

3. Our analysis is completely unchanged if the rate at which quality is lost as a result of shifts away from y_D is greater than $\lambda'_{DM}(y_D^*)$, because in this case the decision maker will not alter $b_D^* = (y^*, q^*)$.

more appropriate for situations in which actors work to improve aspects of a specific policy proposal. Some examples of quality include cost savings, efficient implementation, making a policy more appealing to voters, reducing the variance of outcomes in a model with risk-averse policy preferences, tailoring a policy to local circumstances, or coming up with a coherent design for a policy. A policy with a complicated set of interactive components requires quite a bit of effort to design and cannot be easily altered without negative repercussions. A recent example is the difficulties that Republicans encountered in 2017 as they tried to partially dismantle the “Obamacare” Affordable Care Act’s “three-legged stool” of (i) requirements that insurers cover all people, including those with preexisting conditions; (ii) a mandate that individuals buy coverage; and (iii) subsidies for low-income individuals. For additional discussion of the empirical domain for our model, see Hirsch and Shotts (2012).

Assumptions about bargaining power

In our model there are potential mutual benefits from the monopolist creating high-quality policies—the monopolist may not value quality enough to develop such policies on her own but may be willing to do so in exchange for ideological concessions. However, the degree to which each player benefits from policy development depends on the ideological location and quality of the final policy. These in turn depend on our assumptions about how bargaining takes place between the decision maker and the monopolist.

Similar to classical informational models in the tradition of Crawford and Sobel (1982), our formal bargaining protocol gives the decision maker complete freedom to ignore the monopolist’s proposal and choose any other point in the ideological spectrum. As noted by Callander (2008) and Hirsch and Shotts (2012), this assumption typically allows decision makers to expropriate the benefits of an expert’s expertise, thereby reducing her incentive to acquire it. However, this dynamic fails to hold in our model because of the “exogenous features of policy-making expertise” (Gailmard and Patty 2012, 374)—specifically, that quality is policy specific. Instead, because the monopolist knows the decision maker cannot transfer her quality to another policy and must ultimately choose the best policy available to him, she develops something no more appealing than his best outside option (0, 0) and extracts the full surplus for herself. Thus, as suggested by Weber, a decision maker’s subordinate ends up with more real authority than her nominal superior, despite a lack of formal authority.⁴

4. This implication lends support to Niskanen’s (1971) assumption that budget-maximizing bureaucrats control the budgetary agenda by virtue of

Our model also implicitly prevents the decision maker from taking other steps to wrest surplus from the monopolist. Specifically, we assume that the decision maker cannot go back to the developer and ask her to create something different, and he cannot credibly commit *ex ante* to reject certain proposals that are better than his best outside option. While strong, these assumptions seem natural in political contexts. Decision makers, be they presidents, legislators, or senior bureaucrats, by definition have the final say in policy making and generally lack the ability to tie their own hands *ex ante*. Often, they face formal and informal constraints that make them less patient than policy developers, including statutory deadlines, finite tenures, and the fleeting nature of “policy windows” (Kingdon 1984). And policy developers—be they politicians’ nominal subordinates or independent actors like lobbyists—are generally free to generate policy alternatives before the process concludes.

Nevertheless, in some empirical contexts decision makers may possess commitment power that enables them to wrest some of the surplus for themselves. For example, legislators can delegate decision-making authority over interest-group proposals to like-minded bureaucrats, while constraining the bureaucrats’ choices with statutory language that allows courts to strike down certain policies. After developing our model, we briefly consider a variant in which the decision maker can commit *ex ante* to reject certain policies, even ones he would prefer over his best outside option.

Assumptions about institutional structure

As a starting point to study institutional design, our model assumes a specific “original arrangement”—a developer with preferences distinct from a decision maker’s has expertise, and the decision maker has only limited ways of influencing her. This approach is common in the bureaucratic politics literature; for example, Banks (1989), Gailmard (2002), and Gailmard and Patty (2013b) examine how decision makers can manage such agents by collecting independent information. However, other scholars (e.g., Banks and Weingast 1992; Gailmard and Patty 2012) analyze the fundamental design of bureaucracies. In the context of our model, it is reasonable to ask why the decision maker does not just alter the original arrangement—why not instead choose a developer who shares his preferences or deprive a nonaligned developer of resources for policy development?

their expertise. Banks’s (1989) transferable information model is the canonical microfoundation for Niskanen’s assumption; our model provides an alternative. In our setting Niskanen’s “budget” would be the ideological dimension (over which players disagree), and “quality” would be the bureaucrat’s efforts to improve the associated program. As in Banks (1989), the bureaucrat’s real authority over the politician is substantial but not unlimited.

The justification for our approach is twofold. First, in many empirical settings decision makers cannot freely alter these features. For example, in Japan in the 1960s the tremendous power of the economic bureaucracy relative to the Diet (legislature) was inherited from a postwar occupation in which American forces reinforced the bureaucracy's power at the expense of Japanese politicians, who were seen as being potentially dangerous (Johnson 1982). In the context of bureaucracies, staff and institutional structures are typically inherited from previous administrations, and a full organizational overhaul is often politically or legally impossible (Carpenter and Krause 2014; Moe 1985). And in the context of lobbying, outside groups have independent policy development capacity and are not reliant on politicians for resources. Nor can they be prohibited from offering policy alternatives—for example, although bills typically must be proposed by members of a legislature, there is nothing to stop members from proposing bills drafted by interest groups (Kroeger 2016).

Second, several scholars have shown that under certain conditions a principal may benefit from the expertise of non-aligned agents and even design bureaucratic institutions to recruit and insulate them (Bendor and Meirowitz 2004; Bubb and Warren 2014; Gailmard and Patty 2007; Turner 2017). While the informational assumptions of these works differ substantially from ours, this phenomenon can also occur in our setting, particularly when the institutional responses that we analyze are available. A comprehensive analysis of these questions is beyond the scope of our article, but we note that if the decision maker could choose the preferences of both the monopolist and a counterbalancing delegate to select policy, he would choose them to be extreme in opposite directions. The same is true if he could choose the preferences of competing policy developers (Hirsch and Shotts 2015).

INTERNAL CAPACITY

We now analyze how the decision maker can rein in the monopolist. In informational models, one way that a decision maker can manage agency problems is by acquiring independent information (see, e.g., Gailmard 2002; Gailmard and Patty 2013b). In our policy-development framework, we explore this idea by analyzing a model in which the decision maker or his staff can independently produce high-quality policies. This process has two stages. First, the decision maker can invest up front at fixed cost $k > 0$ to establish foundational organizational capacity. Next, the decision maker can use this capacity to develop a policy if he is dissatisfied with the developer's proposal; doing so entails paying a cost $c_{DM}(q)$ satisfying the same assumptions as the developer's cost $c_D(q)$.

Quality is policy specific, so if the developer and decision maker develop different policies, $y_D \neq y_{DM}$, the decision maker

does not benefit from the developer's efforts. We also assume investments are noncumulative if they develop the same policy $y_D = y_{DM}$. The game proceeds as follows. (1) The decision maker decides whether to establish capacity. (2) The developer crafts a policy $b_D = (y_D, q_D)$. (3) If he established capacity, the decision maker decides whether to craft an alternative $b_{DM} = (y_{DM}, q_{DM})$. (4) The decision maker enacts b_D , b_{DM} , or any zero-quality policy $(y, 0)$.

We first characterize the actors' behavior after the decision maker has established capacity. The key question is whether the developer, in stage 2, will develop a policy that is sufficiently appealing to preempt the decision maker from developing his own policy. If the decision maker develops a policy, it will be at his own ideal point, $x_{DM} = 0$, with quality q_{DM}^* that equates his marginal benefit and marginal cost of quality. This determines the utility, which we denote as s^* , that the developer's policy must give the decision maker if she wishes to preempt.⁵ If the decision maker establishes capacity and the developer is close to him (x_D less than a cut-point $\bar{x}_D$ defined in the appendix), then she will not preempt because she benefits from quality that the decision maker generates and preempting requires costly effort. But if the developer is further away from the decision maker, she would be quite dissatisfied with the policy that the decision maker would develop, so she preempts, giving him utility at least as large as s^* . Figure 2A depicts an equilibrium where the decision maker establishes capacity and the developer preempts. The optimal preemption policy $y_{preempt}^*$ satisfies a first-order condition, $c'_D(\lambda_{DM}(y_D) + s^*) - 1 = (\lambda'_D(x_D - y_D))/(\lambda'_{DM}(y_D))$, balancing ideological benefits against the costs of producing enough quality to get the decision maker to adopt it.

We next analyze the decision maker's decision about whether to establish capacity. If the decision maker is sufficiently aligned with the developer to prefer her unconstrained best policy (x_D, q_0) to developing something himself, then he does not establish capacity; he anticipates that capacity would either have no effect on the outcome or induce costly free riding. However, if the decision maker and developer are not very closely aligned, then the decision maker anticipates that using his own capacity will yield the same utility s^* that he could achieve absent the developer—either the prospect of the decision maker's policy development will deter the developer, or she will preempt by crafting a policy that offers him exactly the same utility. Finally, if the decision maker does not establish capacity, his utility is the same as in the baseline model: strictly positive if the developer is closely aligned with him, and zero if she is not closely aligned. The decision maker thus

5. Specifically, $s^* = q_{DM}^* - c_{DM}(q_{DM}^*)$ and $c'_{DM}(q_{DM}^*) = 1$.

Figure 2. Internal capacity. A, Equilibrium where the decision maker establishes capacity and the developer preempts. Shared parameters are identical to figure 1. Decision maker's costs are $c_{DM}(q) = .685q^2$ and $s^* \approx 0.365$. Equilibrium policy is $(y_{preempt}^*, q_{preempt}^*) \approx (.444, .562)$. Policy absent internal capacity is depicted as $\circ$. B, Equilibria as a function of the developer's ideal point (x_D) and the decision maker's capacity costs (k).

establishes capacity if and only if the cost k of doing so is less than

$$k(x_D) \equiv (\mathbf{1}_{x_D < \bar{x}_D} \cdot s^* + \mathbf{1}_{x_D \geq \bar{x}_D} \cdot \max\{q_0 - \lambda_{DM}(x_D), s^*\}) - \max\{q_0 - \lambda_{DM}(x_D), 0\}.$$

We now summarize these results and illustrate them in figure 2B.

Proposition 2 (Internal Capacity). The equilibrium depends on the developer's ideal point and the decision maker's cost of establishing capacity.

1. **(No Capacity)** If $k > k(x_D)$, the decision maker does not establish capacity, and outcomes are the same as in the baseline model.
2. **(Capacity and Development)** If $k \leq k(x_D)$ and $x_D < \bar{x}_D$, the decision maker establishes capacity and uses it to develop policy.
3. **(Capacity and Preemption)** If $k \leq k(x_D)$ and $x_D \geq \bar{x}_D$, the decision maker establishes capacity, but the developer preempts with policy $y_{preempt}^*(x_D)$ and enough quality to give the decision maker utility exactly equal to s^* .

Next we analyze how capacity affects the actors' utilities.

Proposition 3 (Effect of Capacity). If the cost of establishing capacity decreases from $k_2 > k(x_D)$ to $k_1 < k(x_D)$, the decision maker establishes capacity and strictly benefits from doing so. For the developer, there is a cut-point $\check{x}_D \in [0, \bar{x}_D)$. If the developer is sufficiently close to the decision maker ($x_D < \check{x}_D$), she benefits from

the decision maker's capacity. Otherwise she is worse off.

The reasoning behind this result is straightforward. The decision maker benefits when he establishes capacity, because he either develops a high-quality policy or induces the developer to develop something more appealing. If the developer is very ideologically close to the decision maker, she benefits when the decision maker establishes capacity and develops a high-quality policy himself. However, if the developer is sufficiently far away ($x_D > \bar{x}_D$), then her ideological rents from monopoly outweigh her cost savings from relying on the decision maker for policy development. In this case, the decision maker's internal capacity forces the developer either to accept his less appealing policy or to work harder to preempt it; hence, she is worse off. It is also worth noting that internal capacity does not fundamentally mitigate the problem of monopoly in the following sense: whenever the developer preempts, she does so with a policy that leaves the decision maker no better off than he would be using his own capacity.

We now illustrate how reductions in the internal capacity of a decision-making institution can benefit noncentrist policy developers by increasing their ability to exert informal agenda power.

TERM LIMITS AND STATE LEGISLATURES

Across the United States, there is enormous variation in the professionalization of state legislatures—some are full of career politicians, whereas others have short-term part-time citizen-legislators. Because it takes years to acquire policy-making expertise, scholars have expressed concerns that term limits weaken legislative capacity. In the words of Polsby

(1993, 106), term limits have the potential to “create turbulence in congressional organization and reduce the number of experienced members having independent knowledge of policy” and as a consequence “strengthen the dependence of members on interest groups.”

In his comprehensive study of state legislatures, Kousser (2005) develops a model in which legislators allocate their time between developing policy and seeking reelection. Using the model, Kousser formalizes the premise of Polsby’s argument that term-limited legislators are less motivated to devote themselves to policy innovation. However, Kousser’s model cannot speak directly to Polsby’s conclusion about the behavior of interest groups because it does not characterize incentives for other actors who may also develop policies. Our model, in contrast, describes how extralegislative policy developers respond when term limits reduce intralegislative capacity.

The most natural way to apply our model is to have the decision maker represent the key legislative actor on a particular issue, whether it be the majority party leader, a committee chair, or the median. The developer is an external actor who can develop proposals (e.g., the governor or an interest group). Kousser’s reasoning suggests that term limits effectively raise the cost of establishing internal capacity by reducing the expected time horizon over which the capacity can be used. Our model then predicts that, as feared by Polsby, an external policy developer will step in and fill the gap—this effect is illustrated in figure 2*B*. This is consistent with empirical findings that term limits reduce the power of legislatures and increase the power of governors and interest groups (Carey et al. 2006; Moncrief and Thompson 2001).

As an example of a group that can benefit from state legislatures’ diminished internal capacity, consider the American Legislative Exchange Council (ALEC), a corporate-funded non-profit organization that promotes “free markets and limited government.” ALEC drafts detailed legislative language on complicated policy issues and has a substantial impact, as state legislatures enact around 200 ALEC-inspired bills each year.⁶ Effectively, what ALEC does is to subsidize costs of policy development, but only on a specific set of carefully chosen legislative proposals. Hertel-Fernandez (2014) finds that low-capacity state legislatures rely on ALEC, and Kroeger (2016) finds that Republicans introduce more ALEC bills in legislatures with term limits.

Existing work paints a sanguine picture of “subsidy lobbying” by groups like ALEC. Despite some distortions in policy, Hall and Deardorff argue that subsidies mainly “enable legislators to do a *better* job as representatives” by “assist[ing]

natural allies in achieving their own, coincident objectives” (2006, 81, 69). However, to reach this conclusion, Hall and Deardorff develop a model in which the set of available policies a legislator can work on is exogenous—thus, they effectively assume that a lobbyist can only help a legislator achieve goals that he wants to achieve anyway.

Our model reaches a very different conclusion because it allows for the more realistic possibility that an interest group can choose from a range of policy options that are more or less reflective of a legislator’s interests. Indeed, the ability to craft policies that diverge from the decision maker’s preferred ideological outcome is the foundation of the policy developer’s informal agenda power. Thus, our interpretation of the consequences of subsidy lobbying in states where term limits have reduced legislatures’ internal capacity is much less optimistic: proposition 3 predicts that term limits will make legislators worse off if it becomes prohibitively costly to invest in establishing legislative expertise. Moreover, our model predicts that noncentrist groups like ALEC will reap large rewards by stepping into the gap with policies that promote their own ideological agendas. This prediction is normatively troubling if legislators are better aligned with voters’ interests than lobbying groups.⁷

However, this pessimistic implication of our model does not apply universally, for two reasons. First, in legislatures with substantial institutional policy-development capacity (e.g., by expert staff), our model predicts that term limits have a smaller effect, which comports with Kousser’s (2006) empirical findings. Second, the pessimistic implication is limited to situations in which the interest group environment is so asymmetric that one group can act as a monopolist, which is essentially a scenario of client politics (Wilson 1989). As we show later, competition between policy developers can produce benefits for decision makers, so our model’s predictions are much more optimistic when interest groups are active on opposite sides of an issue.

DELEGATION

Our second extension is a model in which the decision maker can delegate decision-making authority to an agent. Through-

7. Any cost increase that induces the decision maker not to invest in capacity is bad for a representative voter at $x_v = 0$ who does not pay costs of policy development. In fact, the harm to the voter is strictly worse than the harm to the decision maker because the decision maker saves on costs when relying on the developer’s policy. More subtly, holding cost k fixed, the developer’s presence can make the voter strictly worse off. In figure 2, this happens if absent the developer the decision maker would establish and use capacity, and either (i) the developer’s presence discourages the decision maker from establishing capacity, i.e., $x_D \in (0, \hat{x}_D)$ and $k \in (k(x_D), s^*)$, or (ii) the decision maker establishes capacity but the developer preempts the decision maker’s use of capacity, i.e., $x_D > \hat{x}_D$ and $k < k(x_D)$.

6. See <http://www.alec.org/about-alec/history/> (accessed May 27, 2015).

out the rest of the article we focus on specific parametric forms: all actors have quadratic preferences and the developer's cost function is linear, $c_D(q) = \alpha_D q$, with $\alpha_D > 2$.⁸ This simplifies the analysis in several ways, including that the developer will not develop quality for its own sake. To analyze delegation, we add an initial stage in which the decision maker selects an agent with any ideal point $x_A \in \mathbb{R}$ to choose the final policy or retains authority himself ($x_A = x_{DM} = 0$). The game proceeds as follows. (1) The decision maker chooses the agent's ideal point x_A . (2) The developer crafts a policy $b_D = (y_D, q_D)$. (3) The agent enacts b_D or any zero-quality policy ($y, 0$).

We first characterize the developer's optimal policy given the agent's ideal point x_A . Because the agent can adopt his own ideal point with zero quality, the developer must endow a policy at ideological location y_D with quality at least equal to $(y_D - x_A)^2$ to persuade the agent to adopt it. The developer's ideological utility from such a policy is $-(y_D - x_D)^2$, her cost of producing the quality is $\alpha_D(y_D - x_A)^2$, and her benefit from that quality is $(y_D - x_A)^2$. Thus, her overall utility from developing the minimum-quality acceptable policy at ideological location y_D is

$$-(y_D - x_D)^2 - (\alpha_D - 1)(y_D - x_A)^2.$$

The first-order condition yields the optimal ideology and quality for the developer to produce

$$y_D^*(x_A) = \frac{1}{\alpha_D} x_D + \left(1 - \frac{1}{\alpha_D}\right) x_A \text{ and } q_D^*(x_A) = \left(\frac{x_D - x_A}{\alpha_D}\right)^2. \quad (2)$$

The ideological location of the developer's policy is thus a convex combination of the developer and agent's ideal points, weighted by $1/\alpha_D$.

We now consider the decision maker's choice of an agent. The decision maker expects that an agent at x_A will induce the developer to craft a policy that gives him utility equal to

$$s^*(x_A) \equiv q_D^*(x_A) - (y_D^*(x_A) - 0)^2 = \left(\frac{2}{\alpha_D} - 1\right) x_A^2 - \frac{2x_A x_D}{\alpha_D}. \quad (3)$$

The decision maker will therefore choose an agent who maximizes equation (3). Figure 3 depicts an example of the optimal agent x_A^* and resulting policy outcome $(y_{agent}^*, q_{agent}^*)$.

From equation (3) we see that the decision maker will never choose an agent who shares the developer's policy

Figure 3. Delegation. Preferences are identical to figures 1 and 2; developer's cost of producing quality is $c_D(q) = 4q$. Optimal agent is $x_A^* = -0.5$. Equilibrium policy is $y_{agent}^* = -0.125$, $q_{agent}^* = 0.141$, and equilibrium policy absent delegation is depicted as $\circ$.

leanings; for any $x_A > 0$, he can do better by delegating to an agent at $-x_A < 0$. This is intuitive—the best use of the agent is to counterbalance the developer's ideological preferences. Taking the first-order condition yields the ideal point of the optimal agent, which is $x_A^* = -x_D/(\alpha_D - 2)$. The trade-offs underlying this choice can be seen in equation (2): a more extreme counterbalancing agent forces the developer to craft a higher-quality policy, but an agent who is too extreme will pull policy so far from the decision maker's ideal point that the added quality will be insufficient to outweigh the ideological losses. Using the above results, we now summarize the equilibrium.

Proposition 4 (Delegation).

1. The decision maker's optimal agent is $x_A^* = -\frac{x_D}{\alpha_D - 2}$.
2. The equilibrium policy outcome is $y_{agent}^* = -\frac{x_D}{\alpha_D(\alpha_D - 2)}$, with quality $q_{agent}^* = \frac{x_D^2}{\alpha_D^2} \left(\frac{\alpha_D - 1}{\alpha_D - 2}\right)^2$.
3. The decision maker's expected utility is $\frac{x_D^2}{\alpha_D(\alpha_D - 2)} > 0$.

This proposition allows us to analyze how delegation affects the ideology and quality of policies, relative the baseline model in which $y^* = x_D/\alpha_D$ and $q^* = (x_D/\alpha_D)^2$. Delegation typically results in a more moderate ideological outcome ($|y_{agent}^*| < |y^*|$ if and only if $\alpha_D > 3$) because the optimal counterbalancing agent pulls policy away from the developer and closer to the decision maker. Delegation also results in a higher-quality policy. Combining these two effects yields a simple but important result: the ability to give up his decision-making authority always strictly benefits the decision maker.

Somewhat surprisingly, part 3 of the proposition implies that the decision maker benefits more from delegation when the developer is more extreme (i.e., a higher x_D). Intuitively,

8. The assumption that $\alpha_D > 2$ is made for technical convenience; it means that investment in quality cannot yield infinite joint utility for the developer and decision maker.

a more extreme developer is more willing to make quality investments to gain ideological concessions. When she is a monopolist, she extracts all of the gains for herself. Delegation allows the decision maker to get hold of some of the gains and benefit from the developer's greater motivation.

The most important takeaway is actually the simplest one: the optimal agent is a counterbalancing one, on the opposite side of the decision maker from the developer. This result also holds for more general utility and cost functions. It resonates with Moe's (1985) argument that presidents politicize the bureaucracy with appointees who share their views, as well as Bawn's (1995) argument that the optimal agency is typically at the ideal point of the political coalition that created it. However, our result actually goes further. If bureaucratic appointees are not simply creating policy but also selecting among policies proposed by powerful interest groups, the best appointees are not clones of the decision maker; rather, they are people who can counterbalance those powerful groups.⁹

FINANCIAL REGULATION

Many critics argue that financial regulation in the United States is handled by captured regulators who are biased in favor of the banking industry. For example, in the aftermath of the 2008 financial crisis, Massachusetts Senator Elizabeth Warren criticized the New York Federal Reserve, asserting that "regulators care more about protecting big banks from accountability than they do about protecting the American people from risky and illegal behavior on Wall Street" (quoted in Schroeder 2014).

Counterintuitively, however, the extant theoretical work suggests that this state of affairs is actually in the public's interest. The essence of the argument is that banks possess policy-relevant information (e.g., about consequences of regulatory rules) and can help less informed regulators choose better policies. By favoring banks, biased regulators encourage them to truthfully reveal their information, thereby benefiting all parties. Dessein (2002) shows that a decision maker can improve information transmission by delegating to an agent

who is biased in the direction of an informed party. McCarty (2017) develops a quality-based model in which the principal delegates to a pro-industry agency to encourage industry effort on self-regulation. Boehmke et al. (2005) make a related argument using a hard information model, and Gailmard and Patty (2013a) apply this model and provide rich case study evidence that in the 1930s communication with the banking industry was facilitated by the fact the newly created Securities and Exchange Commission (SEC) was headed by a wealthy financier, Joseph P. Kennedy.¹⁰

Our model of delegation may also be applied to the choice of financial regulators. Congress and the president are the decision maker, and they design an agency and appoint its head (the agent). The developer is the regulated industry, which has expertise that can be used to craft higher-quality policies. All actors prefer competently designed regulations over low-quality ones but disagree on how strict the regulations should be. With this setup, the conclusion of our model is exactly the opposite of the extant theoretical literature and concordant with the conventional wisdom: the optimal regulator is not a pro-industry insider but rather an anti-industry skeptic, who counterbalances banks and forces them to produce proposals that are better for the public. Because there is no public policy justification for creating a pro-industry agency in our model, the only possible explanation would have to be something outside it, such as political influence by the industry.

What accounts for the starkly differing conclusions between our model and previous models? The answer lies in differing assumptions about the nature of the industry's expertise. In many extant models, the industry's information is transferable across policies;¹¹ the industry thus worries that if it tries to push for its preferred policy, anti-industry regulators will instead implement something else that it strongly dislikes, which attenuates its willingness to acquire or share information. In contrast, in our model quality is policy specific, so the industry's effort on a proposal cannot be applied to policies elsewhere in the ideological spectrum. The industry tries to exploit this fact to exert informal agenda power, and an anti-industry regulator improves public welfare by de-

9. Several scholars uncover similar findings in related and concurrently developed work. Tai (2013) analyzes a hard-information model in which a principal delegates to an agent who holds a biased researcher to a high standard of proof. Jo and Rothenberg (2014), Turner (2017), and Warren (2012) analyze three-level bureaucratic hierarchies in which a principal has or can appoint a supervisor who can counterbalance a biased subordinate. Our model is closest to Turner (2017), although his developer is effectively constrained to propose a policy at her ideal, and his supervisor acts as a veto player rather than a true delegate. More broadly, our model differs from the aforementioned works in that the developer (i) may not be a subordinate but rather an actor outside of government and (ii) obtains informal authority via effort on policy development.

10. Although the substantive application differs, Bubb and Warren's (2014) model of a three-level bureaucratic hierarchy is also relevant. Applied to the current setting, their agent is the interest group, their reviewer is the regulator, and they too find that pro-industry regulators are optimal.

11. Although their setup differs from the canonical informational framework, Bubb and Warren's (2014) model shares a key property: once produced, an agent's information about a regulatory opportunity can be expropriated by the decision maker, who can then choose any level of regulation. Somewhat differently, in Boehmke et al.'s (2005) model information may not be transferable, but a group that lobbies to activate the policy-making process cannot restrict the policies subsequently chosen. The group is thus similarly reluctant to share information with an anti-industry regulator.

manding greater quality investments and making fewer ideological concessions.

Our analysis shows that a theory-guided assessment of the consequences of pro-industry regulators ultimately depends on the underlying nature of the industry's expertise and investments in policy. Adjudicating this question requires careful quantitative and qualitative investigation beyond the scope of this article. However, examples of both transferable and policy-specific investments are easy to identify. As noted by McCarty, one form of effort that is consistent with his model is adoption of transparent business practices; this is a component of industry self-regulation that also makes it easier for an agency to develop regulatory policies. However, other types of effort are more similar to our model. For example, firms may build an industry association and stock it with people who share their preferences. This association may craft detailed technical rules to implement the industry's preferred level of regulation, and the industry can reach out to other groups to assemble a coalition in support of its approach. All of these types of effort are primarily useful for the industry's preferred approach and not especially helpful for an agency that decides to implement a different policy.

Interestingly, conflicting evidence is present in Gailmard and Patty's (2013a, 251–54) case study about the early years of the SEC. While the actual operation of the SEC provided evidence to support the argument that pro-industry regulators facilitated communication, the politics of the agency's creation were more consistent with our model. President Roosevelt and most members of Congress initially wanted regulation to be handled by the progressive Federal Trade Commission to counterbalance the power of the financial industry. However, bankers vehemently opposed this idea, and ultimately the pro-industry SEC was established in a political compromise. Whether the politicians were initially right about the best regulators to protect the public remains an open question.

COMPETITION

Our final extension is to add a second policy developer, the *competitor*. Like the original developer and decision maker, the competitor values quality and has quadratic preferences. Her ideal point is the mirror image of the original developer's, $x_C = -x_D$. She faces a linear cost of producing quality, but her cost is higher than the developer's, $\alpha_C \geq \alpha_D$; that is, she lacks some of the developer's resources for efficiently crafting high-quality policies.¹² The game proceeds as follows. (1) The developer and competitor simultaneously craft poli-

cies $b_D = (y_D, q_D)$ and $b_C = (y_C, q_C)$. (2) The decision maker enacts b_D , b_C , or any zero-quality policy $(y, 0)$.

The effect of competition is not *ex ante* obvious, and previous theories offer differing predictions.¹³ In our model, intuition suggests competing effects. A high-quality competitor policy b_C could demotivate the developer, who values quality on the competitor's policy and does not want to work on a policy b_D that will not be enacted. However, competition might benefit the decision maker by forcing the developer to craft a more moderate proposal or invest more in quality.

At a technical level, the model with competition is an all-pay contest with spillovers (Baye, Kovenock, and de Vries 2012; Siegel 2009). Although our setup is simple and similar to previous sections, equilibrium analysis is much more complicated because there is no pure strategy equilibrium. In the model, an actor's quality investments are lost if her opponent's policy is adopted, and the outcome is predictable once both proposals are known. Thus, a developer who knows her policy will not be enacted has a strict incentive either to develop something barely good enough to beat her competitor or to simply drop out of the contest and avoid paying the costs of developing a proposal.

To characterize the unique mixed strategy equilibrium, we use results from Hirsch (2015) and Hirsch and Shotts (2015). An example is shown in figure 4. The players mix over ideology and quality of their policies, as well as the utility that their policies generate for the decision maker. The policies produced by the developer are along the thick dotted curve on the right, and the policies produced by the competitor are along the thick dashed curve on the left. The developer always produces a policy that is better for the decision maker than $(0, 0)$. The competitor sits out some of the time (depicted by the large filled circle at the origin), but any policy she produces is one that the decision maker prefers over $(0, 0)$. The effects of competition are as follows.

Proposition 5 (Competition). The model with competition has a unique equilibrium.

1. The developer always produces a policy. Her policy is always more ideologically moderate than in the absence of competition.
2. If the competitor's costs are the same as the developer's ($\alpha_C = \alpha_D$), they both always produce

12. If a competitor is more efficient, the model would still apply, just by switching their labels.

13. It can be either beneficial or harmful to have an exogenous outside option (Bendor et al. 1987) or bureaucratic redundancy (Ting 2003). Dewatripont and Tirole (1999) show that it is useful to have non-policy-motivated effort-averse information gatherers act as advocates. However, Moe (1989) forcefully argues that interest group competition leads to ineffective policies.

Figure 4. Competition. Competitor is at $x_C = -x_D$ and faces higher costs than the developer, $\alpha_C > \alpha_D$. Developer mixes over the policies on the thick dotted curve on the right. Competitor sometimes is inactive (depicted by a filled circle at the origin) and otherwise mixes over policies on the thick dashed curve on the left. Equilibrium policy in the baseline model is depicted as $\circ$.

a policy, and their strategies are symmetric (i.e., using the same distribution over ideological extremity and quality). Each actor's policy is enacted with probability 1/2.

3. A competitor with a cost disadvantage relative to the developer ($\alpha_C > \alpha_D$) mixes between producing a policy and sitting out. The policies she mixes over are (first-order stochastically) more moderate and lower quality than the developer's policies. The decision maker enacts the developer's policy more than half of the time but sometimes enacts the competitor's policy.
4. Competition increases the decision maker's utility and decreases the developer's utility.

A key takeaway is that competition always benefits the decision maker—note that in figure 4 the developer's policy always lies above the decision maker's indifference curve through the equilibrium policy in the baseline model. The main reason that competition is beneficial is that policy developers are ideologically motivated to invest in quality, in order to prevent each other's policies (which they find ideologically unappealing) from being enacted by the decision maker.

Two additional subtle aspects of competition are worth noting. First, the competitor does not have to be on a level playing field (i.e., with the same policy-development costs as the original developer) for the decision maker to benefit from competition.¹⁴ Second, the decision maker is better off with a competitor whose ideal point is $x_C = -x_D$ than with

a competitor at his own ideal point.¹⁵ In fact, a competitor at $x_C = x_{DM} = 0$ is unwilling to pay the cost of developing a policy, so the decision maker does not benefit from her presence. A competitor at $x_C = -x_D$, in contrast, is quite dissatisfied with the monopoly policy from the baseline model and is willing to exert effort to craft a policy that the decision maker finds more appealing.

RULE-MAKING PROCEDURES

We now apply our model to analyze how competing interest groups affect regulatory rule making, that is, the process by which US bureaucratic agencies write administrative law and make crucial decisions about how laws will be implemented. Two major extant theoretical perspectives on this topic are deck-stacking theories and information-acquisition theories.

Deck-stacking theories (McCubbins, Noll, and Weingast 1987, 1989) focus on battles between interest groups on either side of an issue, both at the legislative stage where administrative procedures are designed and at the subsequent rule-making stage in which an agency follows those procedures. Procedures are not neutral but rather can be used to favor one group over another, so legislators may engage in deck stacking to affect the outcomes of the rule-making process. This can be accomplished by making it easier for a favored group to participate, for example, by creating advisory panels or other institutions to advocate for them or by making it more difficult for their opponents to participate. In contrast to deck-stacking theories, information-acquisition theories (Austen-Smith and Wright 1992; Gilligan and Krehbiel 1989; Krishna and Morgan 2001) typically allow for the existence of partially

14. The basic pattern of results also does not require ideological symmetry ($x_C = -x_D$), just that the developer and competitor are on opposite sides of the decision maker (see Hirsch 2015).

15. This is shown in Hirsch and Shotts (2015) proposition 4.

shared interests in policy making and predict that a decision maker will be better informed when receiving information from competing interest groups.

We now evaluate the extent to which deck-stacking theories, information-acquisition theories, and our model can account for two key empirical regularities in the politics of regulatory rule making. The first regularity is that political decision makers often enact rules that facilitate broad participation in a wide range of rule-making settings, for example, the Administrative Procedures Act as characterized by McCubbins, Noll, and Weingast or the Federal Advisory Committee Act as characterized by Balla and Wright (2001). This is straightforward to explain via informational theories, which emphasize that competition yields more accurate information and thereby benefits decision makers. However, it is difficult to explain via deck-stacking theories because, as argued by Balla and Wright, “the deck-stacking hypothesis implies that representation is to be restricted to legislative winners” (801).

The second regularity is that when interest groups try to influence the design of rule-making procedures, they do not try to facilitate participation by their opponents. Rather, they try to ensure that their opponents are excluded. This is straightforward to explain via deck-stacking theories but is difficult to rationalize with standard informational models building on Crawford and Sobel (1982). In such models, lobbying by opposing experts is good for both the decision maker and the experts because it reduces the variance of policy outcomes. Thus, these models (e.g., Gilligan and Krehbiel 1989; Krishna and Morgan 2001) actually predict that an interest group wants the decision maker to also be lobbied by an ideological opponent.¹⁶

Our model simultaneously fits both of these regularities. Proposition 5 shows that a decision maker always benefits from competition in policy development; that is, he has an interest in facilitating broad participation. However, it also shows that a policy-development monopolist is hurt by competition—she has to work harder on a more moderate policy to be successful, and when she fails the outcome is something she finds ideologically unappealing. The monopolist thus prefers to shut her opponents out of the rule-making process.

Another new insight from our model is that the decision maker benefits from competition even when it is highly asym-

metric. This result is of particular empirical relevance because asymmetric competition is quite common in regulatory politics, where concentrated business interests square off against dispersed interests like consumers or environmentalists. On many issues, firms have a natural advantage because they are more willing to pay fixed costs and more able to overcome collective action problems. Our model shows that competition benefits the decision maker even if rule-making procedures cannot fully level the playing field between business and advocacy groups.

ALTERNATIVE ASSUMPTIONS ABOUT BARGAINING

Although the decision maker in our model has formal authority to choose policy, the fact that quality is policy specific implies that a policy-development monopolist has informal agenda power. In our discussion of the baseline model, we argued that there are good reasons to model policy development and choice this way. However, it is worthwhile to explore the implications of other assumptions about the decision maker’s capabilities that may be more appropriate in some empirical settings.

One natural possibility is that the decision maker can demand that the developer craft a certain proposal (y_D, q_D) by committing to reject any other policy she may develop, even those that would be better than the decision maker’s best available alternative. In some sense, this assumption about bargaining is the polar opposite of our main model—it allows the decision maker to dictate how the benefits from policy development will be split. It does not give the decision maker unlimited power over the developer, however, because he cannot commit to implement something other than his best available alternative if he rejects the developer’s proposal.¹⁷

We now discuss the intuition for how the model works under this alternative assumption; mathematical details are in the appendix. In particular, we analyze whether the institutional responses that enable a decision maker to counteract the developer’s informal agenda power in our main model are still useful if the decision maker can commit to demands.

In the baseline model, the decision maker effectively threatens to adopt (0, 0) if the developer does not create a policy of his choosing. With linear policy development costs $c_D(q)$, the decision maker will optimally demand a policy with the same ideology y^* as in the original model but with enough quality to extract all the benefits of policy development for himself. In contrast to the main model, the possibility of policy development strictly benefits the decision maker.

16. One informational model in which opposing groups do not benefit from each other’s participation is Austen-Smith and Wright’s (1992), which uses foundations that differ dramatically from both Crawford and Sobel’s (1982) and our models. Austen-Smith and Wright’s model assumes away the possibility of shared interests in good policy making because lobbyists’ preferences are state independent, while our model includes shared interests but still yields the result that competing groups dislike competition.

17. If the decision maker could make such commitments, he could extract unbounded quality from the developer by threatening to otherwise implement an arbitrarily extreme policy.

Internal capacity is counterproductive for a decision maker who makes policy-development demands. If he establishes internal capacity, he cannot credibly threaten not to use it to improve his own policy in the event that he rejects the developer's policy. This makes the threat of rejecting the developer's policy less effective at extracting quality.¹⁸

In contrast, our results on delegation are largely unchanged by allowing whichever actor holds decision-making authority to commit to a demand. Should the decision maker delegate authority to an agent, the agent will demand a policy that leaves the developer no better off than with the agent's ideal point and 0 quality. The resulting policy will be different from that in the baseline model, but a counterbalancing agent's demand will be better for the decision maker than the decision maker's own demand because the agent's ideal point is worse for the developer than the decision maker's ideal point. In fact, the optimal counterbalancing agent is more extreme than in our original model. The comparative statics for the optimal agent are similar to those that follow from proposition 4.

CONCLUSION

In this article, we have developed a theory in which a decision maker must rely on bureaucratic agencies or interest groups to design policy proposals. In situations when people have partially shared interests, everyone can benefit from the creation of high-quality policies. However, if only one actor can develop policies, she can obtain informal agenda power by ensuring that the only well-designed option is one that also promotes her own objectives.

We explore multiple institutional tools that a decision maker can use to mitigate the adverse consequences of policy-development monopoly. One approach is to establish internal capacity, in the form of personal expertise or specialized staff. Another approach is to restrain the monopolist by credibly threatening to implement an outcome that she dislikes unless she develops a high-quality alternative that promotes the decision maker's objectives. This can be accomplished by delegating authority to an agent who counterbalances the monopolist. It can also be accomplished by fostering policy-development competition, for example, by adopting administrative procedures that facilitate participation by interest groups with different visions for public policy.

A key assumption underpinning our model is that investments made by policy developers are policy specific. Our model is not intended to supplant classical models in which

information is transferable across policies; indeed, in many empirical contexts classical models are a better fit. However, in contexts in which the product of an actor's effort and expertise is tailored to a particular policy option, our model is more appropriate and yields substantially different implications.

Recent work by Hirsch and Shotts (2012) showed that with policy-specific quality, open rather than closed rules are optimal for encouraging legislative committees to invest in expertise, a result that contrasts sharply with Gilligan and Krehbiel's (1987) classic results on procedural choice with transferable information. Relatedly, Ting (2011) showed that a principal never wants to delegate to a bureaucrat who can invest in capacity that is targeted to a specific policy, a result that contrasts sharply with traditional spatial models of delegation (Bendor and Meirowitz 2004). Along with our results in this article, these results suggest that a much more general dynamic is at play: when an expert's investments are policy specific rather than transferable, a decision maker can benefit from adopting institutions that make the expert's life more difficult.

Our analysis demonstrates the power and flexibility of simple models of policy-specific investments and can be extended in several directions. Although we have explored three important institutional responses to policy-development monopoly, there are others that we have not analyzed (e.g., the use of budgets as a tool for controlling bureaucrats). Another possible extension is to examine trade-offs or interactions between different institutional responses—for example, if a decision maker can either delegate to an agent or facilitate competition among policy developers, which approach or combination of approaches will best serve his interests?

Another topic worthy of further study is the politics of institutional choice. In our model, the policy-development monopolist dislikes all of the institutional responses we have discussed. Thus, she and the decision maker have divergent preferences, not just over policy but also over the design of policy-making institutions. A direct implication is that powerful bureaucracies and interest groups will often try to block adoption of these institutional responses.

Finally, we note that although we have applied our theory to modern, developed democracies, it also applies to countries in which decision makers lack institutional capacity and must rely on policy development by elites or business interests. For example, in ancient Athens, competing orators with different interests and visions for public policy crafted proposals and advocated for them in front of the demos, who benefited as a result of this competition (Ober 1989). In a very different context, our model sheds light on a key question in the political economy of development: why citizens choose populist leaders. The literature on electoral accountability sug-

18. The decision maker may establish capacity and develop a policy. But because making demands absent capacity yields a higher decision maker utility than in proposition 1, the range of cost parameters for which he establishes and uses capacity is smaller than in proposition 2.

gests several explanations for populism: politicians may pander to citizens who misperceive their interests (Canes-Wrone, Herron, and Shotts 2001), voters who worry that politicians will be bought off by lobbyists may elect politicians who oppose the lobbyists (Besley and Coate 2001), and politicians may posture to show that they are not serving elites (Acemoglu, Egorov, and Sonin 2013; Fox 2007). Our model of delegation provides a different explanation: citizens may elect populist leaders to counterbalance the power of elites who hold a near monopoly on resources for policy development.

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