Taking the Law to Court: Citizen Suits and the Legislative Process

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Abstract: The institution of citizen suits is a decentralized form of public participation that allows citizens to influence the implementation of public laws in courts. How does this institution influence policymaking? This article proposes a model of citizen suits. It then analyzes how this institution influences legislative decisions. The legislature bargains to choose the budget, distributive spending, and spending on an ideologically contested public good (e.g., health care or environmental protection). I find that citizen suits enable courts to forge a compromise between opponents and proponents of the public good by responding to the diverse claims of citizens. Anticipating the mobilization of citizens in courts, legislators in turn craft more socially efficient bills, with less distributive spending, which better represent the distribution of preferences for the public good compared to when citizens have no role in the implementation of legislation.

Replication Materials: The data, code, and any additional materials required to replicate all analyses in this article are available on the *American Journal of Political Science* Dataverse within the Harvard Dataverse Network.

itizen participation in policymaking comes in many guises. On June 30, 2014, the Aransas Project, a diverse coalition of citizens and towns, came before the Fifth Circuit's Court of Appeals. Twentythree of the world's only wild flock of whooping cranes that most majestic of birds—had died because, they alleged, the government of Texas had issued permits for excessive water withdrawal. Their action constituted a "taking" of cranes' habitat, in violation of the Endangered Species Act. The group lost as judges deemed the causal relationship too tenuous (Aransas Project v. Shaw 2014). A few days earlier, a district court of Colorado had ordered the cessation of all coal mining exploration on a swath of wild public land at the bequest of High Country Conservation Advocates. The permits had not evaluated the harm to the climate from the mines' release of methane (High Country Conservation Advocates v. United States Forest Service 2014). So it is that multiple times a week, in the United States, citizens of all stripes dispute public policy matters in court via the institution of citizen suits. Judges rule, and their decisions, from broad matters of rule making to specific issues of enforcement, affect the

reach of a myriad of public goods and their associated funds.

Sometimes called *public law litigation*, what I call citizen suits includes any form of contestation of public policy by citizens in courts. The details vary: Litigation may be justified by an appeal to constitutional rights, by a statute that empowers citizens to enforce its terms, or by administrative law, which guarantees fair consideration of all relevant interests in agencies' decisions. In U.S. environmental law, these suits sum to about 1,500 decisions a year. The practice is taking hold in new democracies such as India and Brazil (Brinks and Gauri 2010), as well as in the European Union (Kelemen 2006). To some, this institution has normative appeal: It constitutes, for example, one of the three clauses of the Aarhus Convention, which focuses on the public's rights regarding environmental governance (Rose-Ackerman and Halpaap 2004). Qualitative studies depict citizen suits as a vibrant activity, which feeds into the rest of the political process (e.g., Barnes 2004; Feeley and Rubin 2000; Melnick 1983). Yet, we know little about how citizen suits affect policy.

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¹Litigants must demonstrate standing. Standing doctrine has oscillated over time from narrow—requiring a personal material interest in the case—to much broader—granting standing for general aesthetic, scientific, and other cultural interests.

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As one step toward understanding the role of citizen suits in democracies, this study analyzes the way they influence decision making in legislatures governed by majority rule. The criticisms this institution attracts from some industries and political representatives suggests that it is not neutral.² It has an impact on the enforcement of laws. This article proposes a model of citizen suits' direct impact on the implementation of laws. It then uses this model to understand their indirect political impact: How do citizen suits affect the power balances that underpin the legislative process itself? Citizen suits are likely to affect legislative decision making because legislators and their constituencies are acutely aware that litigation will transform the bills they draft. Indeed, the Congressional Record exhibits that members of Congress engage in lengthy discussions about the past effects of citizen suits to try to anticipate their future effect on the bills they negotiate.³ Already in 1972, in House hearings of the Clean Water Act, legislators took note of the way jurisprudence had developed around an earlier act, the Refuse Act of 1899. They noted that it had reinforced it, but also "created the political climate" for broadening antipollution policies (118 Cong. Rec. E5597, 1972). In other words, litigation had changed the terms of the political bargain.

I here formally analyze how litigation can change the political bargain. More precisely, the article helps develop hypotheses to answer the following questions. How do citizen suits affect the outcomes of legislation? If legislators anticipate their laws being litigated, how does this affect the decisions they make? Who can we expect to benefit from the institution? And who should we expect to promote or oppose it?

The model focuses on situations where actors are in conflict over a public good. To model citizen suits, I consider a process in which, throughout the nation, people advance claims in courts regarding the public policy's proper interpretation. Judges resolve ambiguities in myriad ways (Sunstein 1995). As the examples of the cranes and of the coal mine demonstrate, both proponents and opponents of the public policy may win or lose in court, depending on the merits of their claim and the values of

the judges. Gradually, these individual decisions cumulate to form the concrete reach of policies on the ground. A compromise emerges between the law as originally legislated and the distribution of citizens' and judges' preferences. I find that citizen suits shift a very ambitious or very unambitious policy toward the center. Extreme legislation (including legislative inaction) does not survive civil society's downstream response: It is by force moderated by the diversity of citizens who seek reform in courts.

In the legislative stage, legislators are also in conflict regarding the public good, with some supporting and others opposing it. The legislative and the litigation stages are coupled as one sequential game: Legislators anticipate downstream litigation as they bargain over legislation. This assumes that citizen suits are exogenous to the legislative bargaining game. In reality, legislators spend considerable time negotiating the fine print of citizens' legal rights in the implementation process (Farhang 2009). For this reason, I endogenize the choice of the institution at the end of the article. However, citizen suits are also fruitfully seen as an exogenous institution. In some countries, citizen suits are a constitutional part of the policy process (e.g., India). Internationally, they have emerged as a norm of good governance (cf. the Aarhus Convention). In the United States, they have become institutionalized by the Administrative Procedures Act, early court rulings (e.g., Sierra Club v. Morton 1972), and their embrace by civil society. Thus, in the main analysis, legislators do not control the litigation process but anticipate its effect as they draft legislation.

The legislature bargains to choose the budget, as well as spending on a public good and particularistic goods. Legislators are in conflict regarding the public good, some supporting and others opposing it. The legislative bargaining game involves choosing the budget, public good spending, and the distribution of particularistic goods. As in Volden and Wiseman (2007), legislators can forge agreements from a rich menu, since a proposer can offer a mixture of the public good and of transfers to secure the agreement of a diverse coalition. Absent citizen suits, I show that legislative bargaining by majority rule leads to socially inefficient policy. Because of its majority voting rule, the legislature alone is often pulled by the extreme of one party, while at the same time dedicating a large part of the budget to distributive spending and logrolling.

In the coupled institutional system, the legislature strikes bargains that are usually more socially efficient. This is due to the direct effect of citizen suits that temper policy and to the way they weaken the bargaining position of legislators who make extreme proposals. There are two important consequences. First, citizen suits increase the bargaining power of those who support the

²Industries are lobbying against this institution, arguing that these suits lead to opaque backdoor deals with advocacy groups (e.g., Chamber of Commerce 2013 report, "Sue and Settle: Regulating behind Closed Doors"), echoed by diatribes of some in Congress, for example, "the hell or high water bill permits citizen's suits [...] opening the door for an unprecedented rash of legal harassment" (120 *Cong. Rec.* 23682, 1974).

³For example, in *Amending the Endangered Species Act of 1973: Hearings before the Subcommittee on Resource Protection of the Committee on Environment and Public Works*, Senate, 95th Congress (1978); in amendments of CERCLA (131 *Cong. Rec.* 24747-24749, 1985); and in *Jobs for America Act* (160 *Cong. Rec.* H7773-H7819, 2014).

public good and lessen the ability of proposers to extract constituency rents. This often leads to more public good spending and less distributive spending. Second, the bargaining position of the minority improves in some scenarios, which allows for more compromise. My analysis thus lends credence and precision to the claim that active courts contribute to the search for compromise by empowering a plurality of citizens (Barnes 2004; Sunstein 1995) and thereby enhance welfare.

The model developed in this article differs in several ways from the prevalent approach of modeling legislature-court interaction as zero sum, with each branch contributing a veto player to the policy game (e.g., McCubbins and Rodriguez 2006; Shipan 2000). Instead, I capture important differences between the legislature and the courts in a non-zero-sum context. This model is closest to Rogers and Vanberg's (2007), who show that judicial review by a diverse court improves the efficiency of a majority group's decision. Unlike them, I portray the legislature and the courts as representative of the same public, but representing it in different ways. Both are imperfect representatives, yet diversely imperfect, and I ask how well they work together. I thus depart from the traditional concern over "unguided" judicial review, in which an unelected Supreme Court irrevocably modifies policy. The courts here are guided, since citizens set the agenda. In a seminal article, McCubbins, Noll, and Weingast (1987) argue that citizen suits and other procedural controls of rule making empower the interest groups that initially favored the legislation. Unlike them, I consider the implications of citizen suits given that they empower all interests.

Far from pitching the legislative and the judiciary branches against each other, to gauge their relative merits as fora of policymaking, my analysis considers them as a system. It thus contributes to a growing literature interested in the properties of systems of diverse institutions (e.g., Bednar 2008), and specifically how the legislature functions in a larger institutional context. Examples include Matsusaka's (2005) analysis of citizen initiatives, McCarty's (2000) analysis of the presidential veto, or Ting's (2012) model of bureaucratic allocation of the legislature's distributional spending. The findings in this article also cohere with those of the popular constitutionalism scholarship. That scholarship finds that courts, although staffed with unelected judges, are responsive to and representative of the plurality of citizens' preferences (e.g., Eskridge and Ferejohn 2010; Friedman 2009). Since legal action is an advocacy strategy, this article contributes to the literature on advocacy groups. A key question in this literature concerns the relative effectiveness of different advocacy strategies. For example, is

the private politics approach (Baron 2001) more effective than political lobbying? Some analyses find that they discourage government action when it is warranted (Kim and Urpelainen 2013). My analysis instead highlights the capacity of downstream legal action to constructively restructure the political conflict between proponents and opponents in the legislature.

The Model

The model combines legislative bargaining over public and particularistic goods with a model of citizen suits. The outcome of the game is a budget and its allocation between a public good and particularistic funding across *n* districts. This outcome is determined first by legislation decided by the legislature and, second, by the implementation phase in which citizens can influence the enforcement of the legislation by presenting claims in courts. The decisions made by these courts together affect the effective level of the public good. There are two types of legislators and citizens. Type 1 legislators support investment in the public good and Type 0 oppose it. Therefore, the marginal valuation for the public good of Type 1 legislators and citizens is positive $(q_1 > 0)$ and that of Type 0 legislators and citizens is negative ($q_0 < 0$). These valuations can arise from ideology, or they can reflect the economic repercussion of the public good on a district. The legislature is of size n and is composed of a majority n_M of legislators and a minority of size $n_m = n - n_M$.

The legislative bargaining part of the model is a variant of Baron and Ferejohn (1989). Bargaining happens via a closed rule process and majority rule voting. The horizon of play is indefinite, with the legislature moving on to a new round until a proposal is accepted by a majority of legislators. To simplify the model, I assume that legislators do not discount between rounds of bargaining. In each period, a legislator is recognized at random to make a proposal. The proposal consists of a level of public good provision and nonnegative transfers to all legislators. We will denote y_i the public good proposed by legislator i and $\{x_{ij}\}$ all the transfers to the other legislators (indexed by j). The public good and the transfers determine the overall budget raised by the proposer: $B_i = y_i + \sum_{j \in \text{legislature}} x_{ij}$.

How do citizen suits shape the effective reach of the public good on the ground? Citizens present a claim to a judge as to the proper reach of the law in their specific case. This claim can be lower or higher than the level *y* decided

⁴This allows me to focus solely on the role of internal divisions. Allowing for discounting would simply exacerbate the proposer's power.

by legislators. In deciding whether to accept the claim, judges weigh both the text of the statute, which specifies y, and their policy preferences. A large number of these lawsuits happen in the society, in a variety of courts, each with a different result, the distribution of which will depend on the distribution of judge and citizen preferences. I model the effective scope of the public policy as the average of the results of this flow of disputes. In general, this effective level—denoted \tilde{y} —will differ from the original legislation y. Since the public good requires investments, litigation also affects the budget. Importantly, it does not bear on the distributive transfers $\{x_{ij}\}$, which are not part of the statute governing the public good, but rather part of the spending bill, or other appropriations' bills.

The impact of court decisions on the public good bears discussion before presenting the litigation process more formally. In the legislature, statutes are crafted as complex bundles of many narrower policies. In other words, y represents an overall ambition level for achieving a public goal, and it encompasses a large number of specific policies. In contrast, each court case questions the implementation of a specific policy point within the broader legislation and often addresses contingencies that arise from local contexts. For example, in Aransas Project v. Shaw, the court decided whether water withdrawals had a sufficiently strong causal impact on cranes' habitat, given what was known about the hydrology of that region. All such decisions are to some extent local decisions, but they also affect the overall public good. The Aransas Project v. Shaw decision not only determined the local distribution of water, but it also contributed to the reach of the Endangered Species Act by shaping the fate of an endangered species and by establishing a general rule regarding the necessary strength of the causal relation between habitat quality and the human actions to be regulated. The local and national scales are thus inherently intertwined in any implementation of a public good (Zemans 1983). As another example, each decision taken to implement the Americans with Disabilities Act affects the working conditions of a particular individual in a particular company, but at the same time determines, on average, the equality of opportunity of individuals with disabilities in the United States. Citizens may be motivated to bring suit either to affect the national-level goal (e.g., large nonprofit advocacy groups) or to shape the local or private consequences of the public good legislation (e.g., a firm seeking to lower its cost of compliance; also see Kagan 2001). In either case, citizens, and courts' actions shape \tilde{y} in a way that affects everyone.

To formalize this process, a citizen suit i consists of a litigant making a claim c and a judge who chooses $l_i \in \{c, y\}$. In other words, the judge adjudicates between the

petitioner's claim and the status quo y, determining the scope l_i of the public good in that particular decision. The formal letter of the law is thus fixed, and the concrete caseby-case implementation varies. I assume that judges have idiosyncratic preferences about the public good but also care about respecting the statute. Thus, in each decision, the judge maximizes $u_i^I(l_i) = -(l_i - \frac{y + y_i^*}{2})^2$, where y is the legislation (known by the judge) and y_i^* is the a priori policy preference of the judge involved.

The policy preferences of judges are distributed uniformly on some interval that lies between 0 and proponents' ideal level of the good: $y_i^* \sim U(a, b)$ with [a, b]included in $[0, y_1^*]$. Therefore, the ideal points l_i^* of judges (decisions about l_i that maximize $u_i^J(l_i)$) are uniformly distributed on $\left[\frac{a+y}{2}, \frac{b+y}{2}\right]$. In other words, the ideal points represent an equal weighing of judges' a priori preferences y_i^* and the legislation y. The judiciary is composed of a diverse set of judges. Yet all judges' preferences are pulled toward what the statute stipulates, so that the final distribution of judicial preferences is partially exogenous and partially influenced by y. This assumption is supported by recent work, which shows that judges' decisions are shaped both by the law and their personal policy attitudes (Bailey and Maltzman 2011; Epstein and Knight 2013).

Denote r the proportion of citizens who oppose the public good. In all the results presented, we will assume that legislators represent their constituencies and so $r = \frac{n_m}{n}$. Of course, the model also allows us to decouple the distribution of legislators' and engaged citizens' preferences. Petitioners choose c to shape \tilde{y} to their liking. For ease of exposition, we will assume that the petitioners can ascertain the judge's preference ahead of making their claim. Since most disputes are negotiated with a judge and settled, it seems plausible that petitioners are able to learn the judge's preference and tailor their claim accordingly. None of the results will hinge on this assumption though, and results based on alternative assumptions in which citizens have much less information about judges' preferences are presented in the supporting information.

The effective reach of the policy y arising from a multitude of petitioner claims and judicial decisions is the additive effect of all the disputes. Assuming a continuum of judicial preferences and a very large number of disputes, \tilde{y} can be modeled as the integral over the range of citizen and judicial preferences. This integral creates a mapping $l: y \mapsto \tilde{y}$. The litigation process also modifies B. The effective budget is $\tilde{B} = B - y + \tilde{y}$, such that the budget

⁵The results are qualitatively the same if I assume a smoother distribution.

is increased if litigation expands the scope of the public good, and decreased if litigation contracts it.⁶

The utility of a legislator j from the proposal made by legislator i and resulting in \tilde{y}_i , \tilde{B}_i , and x_{ii} is

$$u_j = q_j \tilde{y}_i + x_{ij} - k \tilde{B}_i^2, \tag{1}$$

where k is a coefficient reflecting the marginal rate of increase of the cost of raising public funds. Equation (1) holds both with and without citizen suits. In the baseline without citizen suits, legislation is implemented perfectly. In that case, $\tilde{y} = y$ and $\tilde{B} = B$. If bargaining fails, legislators receive 0.

The legislative model is largely based on Volden and Wiseman (2007). However, there are three crucial differences. First, the budget is endogenous. This has the effect of attenuating the power of proposers, since everybody bears the costs of raising funds. Second, legislators are divided in their valuation of the public good, and the members of the minority have some probability of making proposals. We are therefore not in a fully majoritarian setting, while at the same time, the often partisan conflicts over support for public goods are taken into account (as in Krehbiel, Meirowitz, and Wiseman 2015). Third, legislated and implemented policies may differ because of downstream societal contestation.

The sequence of the game is as follows. All moves are perfectly observable.

- 1. Legislation—Recognition Stage: In a given round, a legislator is recognized to make a proposal. The recognition probability is $\frac{1}{n}$ for all legislators across all rounds.
- 2. *Legislation—Proposal Stage*: The recognized proposer makes a proposal $(y_i, \{x_{ij}\}_{j \in \text{legislature}})$.
- 3. Legislation—Voting Stage: Each legislator casts a vote for or against the proposal. If a majority is in favor, the proposal passes and bargaining ends. If a majority opposes the proposal, the game returns to Step 1.
- 4. *Litigation*: Litigants throughout the population, independently and in parallel, file claims in different courts. Each judge chooses whether to accept the claim received. These decisions are reached independently of other judges and independently of other suits. The aggregation of all these decisions yields an effective public policy $\tilde{y} = l(y)$ and effective budget \tilde{B} .

I characterize the stationary symmetric subgameperfect equilibrium (SSPE) of the legislative game with and without the litigation stage. Legislators' strategies are defined by a proposal strategy that is a best response to the proposal strategy of the other group. Since it is an SSPE, the strategies do not depend on the history of legislative play, and legislators of the same type are treated identically. I will thus index the actions and payoffs of legislators by their group membership $\in (M, m)$. In particular, x_{ij} with $i, j \in (M, m)$ will denote the transfers from legislators of group i to members of group j who are in the coalitions of group i proposers, and $x_{i,p}$ will denote transfers to group i proposers. Strategies in the litigation stage consist of (1) the judge's decision to accept or reject a claim given the legislated value of y and the judge's own a priori policy preference and (2) Type 1 and Type 0 litigants' choice of claim given the legislated value of y and given their estimates of a judge's a priori policy preference.

Strategies and Equilibria

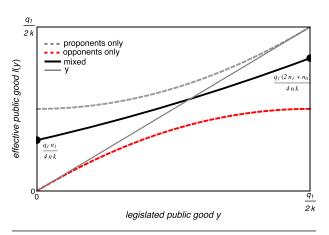
This section lays the groundwork for the main results, in which I will show that citizen suits moderate public policy in ways that usually enhance welfare. We start by analyzing how citizen suits reshape legislation (i.e., we obtain the mapping $l: y \to \tilde{y}$), and then we define the strategies and equilibria of the legislative game.

The Reshaping of Legislation by Citizen Suits

To simplify the analysis, I assume that litigants can ascertain the policy preferences of the judge and therefore anticipate the judge's decision. None of the results qualitatively change if this assumption is relaxed, as shown in the supporting information, which provides two alternative versions in which citizens are imperfectly informed. Given the utility function of judge i, litigants will obtain their claim if it is closer to the judge's ideal point than the status quo (i.e., if $|c-l_i^*| < |y-l_i^*|$). Litigants with claim c will thus win for any claim that lies between the legislation and the judge's a priori policy preference because such a claim strikes a balance between the law and the judge's preference. Therefore, if the judge is in favor of a policy that is more ambitious than the statute $(y_i^* > y)$, then c will be successful if $y < c \le y_i^*$. Conversely, if the judge wants a less ambitious policy $(y_i^* < y)$, c will be successful if $y_i^* \le c < y$. As a result, the best optimal action for Type 1 litigants who want to expand the legislation is

⁶In practice, decisions by courts regarding public goods feed back indirectly into the budget via agencies' annual budget requests, which then feed into the bargaining over the budget between the executive and legislative branches.

FIGURE 1 The Mapping from Legislated Public Good to Effective Public Good



Note: Three scenarios are shown: All citizens are opponents (r=1, dotted red line), all citizens are proponents (r=0, dotted gray line), and a mixed scenario where opponents are a minority $(r=\frac{n_0}{n}=0.4, \text{ full black line})$. In the mixed scenario, the extreme policies 0 and $\frac{q_1}{2k}$ are both pushed toward more moderate values (black dots), according to the formulas for l(0) and $l(\frac{q_1}{2k})$, which are both displayed (and used in the subsequent analysis).

to present a claim $c = y_i^*$ to any judge i with $y_i^* > y$ and no claim to judges whose preference is $y_i^* < y$. Similarly, Type 0 litigants who want to limit the legislation should present claim $c = y_i^*$ to any judge with $y_i^* < y$ and none to judges whose preference is $y_i^* > y$.

To obtain $l: y \mapsto \tilde{y}$, the average of all these local disputes, I integrate over the preferences of judges and citizens:

$$l(y) = \frac{1}{b-a} \left(r \int_{a}^{b} (y_{i}^{*} \mathbb{1}_{\{y_{i}^{*} < y\}} + y \mathbb{1}_{\{y_{i}^{*} \ge y\}}) dy_{i}^{*} + (1-r) \int_{a}^{b} (y \mathbb{1}_{\{y_{i}^{*} \le y\}} + y_{i}^{*} \mathbb{1}_{\{y_{i}^{*} > y\}}) dy_{i}^{*} \right)$$

$$(2)$$

Figure 1 illustrates Equation (2) (see the supporting information for the functional form). If the nation were fully inhabited by litigants of Type 1, the policy would be inflated (gray line), the more so the lower the initial legislation. Vice versa, if the nation were fully inhabited by litigants of Type 0, the policy would be deflated (red line). The central line represents the outcome in a mixed nation. We see that the decentralized litigation process tends to level policy, bringing it away from extremes. The reason is that the public good results from many local implementation actions and the aggregation of these diverse

viewpoints. The reason why diverse viewpoints are considered is that citizen suits give citizens access to decision makers without the difficulties and corresponding limits of collective action. This form of public power is widely dispersed in the population.

We obtain qualitatively similar curves when varying the amount of information citizens have about judges' preferences. Better information means citizens can better target their claims. With perfect information, every claim is accepted. In contrast, if citizens only have imperfect expectations about a judge's preference, some claims are rejected, so the effect of litigation is weaker. However, the same qualitative insight remains: If litigants are diverse, litigation levels policy.

Legislative Decision Making

To focus the analysis and hone intuition, we consider here the legislative equilibria that arise in the case where public good proponents are a majority. Similar results arise in the minority case (see the subsection "The Minority Case" in the discussion). Therefore, in what follows, $q_M \geq 0$ and $q_m \leq 0$.

We show here that the equilibrium is unique but that depending on the parameter values, three different types of equilibrium occur. In two of them, proposers maximize distributive spending to their constituency and are able to do so thanks to their proposer power. This is in line with the literature on noncooperative legislative bargaining (Baron and Ferejohn 1989; Volden and Wiseman 2007) and empirical studies (Knight 2005). One of these equilibria is purely distributive. The other exhibits some public good spending, but this spending is purely opportunistic: The public good is used by the majority proposer to build a majority coalition at a lesser cost, a strategy made possible by the presence of a minority who opposes the public good. In the third equilibrium, the majority group chooses its preferred public good spending level and ignores the wishes of the minority. In the presence of citizen suits, the same equilibria arise, but we will see that the level of spending on the public good versus private goods changes.

The recognized legislator must build a coalition of at least (n-1)/2 legislators, by offering them enough to make them indifferent between the proposal and their continuation payoffs. The coalition of a majority proposer will consist of other majority legislators. That of a minority proposer will also always include majority members, and possibly contain minority legislators as well. Table 1 summarizes the possible strategies for each type of legislator. The essential difference between these strategies

| Majority Proposer | | Minority Proposer | |
|-------------------|--|-------------------|---|
| Strategy | Description | Strategy | Description |
| С | Majority proposer invests fully in the PG. | О | Minority proposer maximizes $q_m y_m$, giving transfers x_{mM} to some majority members. |
| P | Majority proposer uses the PG to get | A | Minority proposer minimizes x_{mM} , using the |

D

TABLE 1 The Strategies of Both Types of Players

resides in the coalition-building instrument used to gain the support of majority legislators: Either the proposer gains their support by investing in the public good or by handing them transfers.

majority members' support.

D

Majority proposer uses transfers to obtain

support of $\frac{n-1}{2}$ members and $y_M = 0$.

To understand why these two instruments are mutually exclusive, consider the continuation payoffs of a random legislator from the majority and minority groups given, respectively, by Equations (3) and (4). These are the payoffs a legislator would receive if the proposal is rejected. They reflect the possibility that the legislator will become a proposer in the future, in addition to the possibility that they will incur the consequences of a majority proposal (with probability p_M) or those of a minority proposal (with probability p_m). And if a minority proposal, the majority payoffs also reflect the possibility that the majority member will be part of the minority's coalition and receive transfers (with probability $p_c = 1 - \frac{n-1}{2n_M}$). We see that the utility functions and the continuation payoffs are linear in the public good and in particularistic goods. Hence, one of the two coalition-building instruments dominates.⁷

$$v_{M} = p_{M} \left(q_{M} \tilde{y}_{M} - k \tilde{B}_{M}^{2} \right) + p_{m} \left(q_{M} \tilde{y}_{m} - k \tilde{B}_{m}^{2} \right)$$

$$+ p_{c} x_{mM} + \frac{1}{n} (\tilde{B}_{M} - \tilde{y}_{M})$$

$$(3)$$

$$v_m = p_M \left(q_m \tilde{y}_M - k \tilde{B}_M^2 \right) + p_m \left(q_m \tilde{y}_m - k \tilde{B}_m^2 \right)$$

$$+ \frac{1}{n} (\tilde{B}_m - \tilde{y}_m - n_M p_c x_{mM})$$
(4)

When the public good is more valuable than particularistic goods (i.e., q_M is at least larger than 1), majority proposers will maximize the part of the utility coming from the public good. They will therefore try to invest maximally in the public good (their ideal level is $y_M = B_M = \frac{q_M}{2k}$). Following Volden and

Wiseman (2007), I call this the "collective strategy" (C), which gets support from all majority legislators. When $q_M < 1$, majority proposers seek to maximize spending for their constituency and must choose whether to buy the support of other majority members by handing out transfers ("distributive" strategy D) or investing in the public good ("public" strategy P). Turning to minority proposers, they can obtain the support of majority members by manipulating their public good proposal y_m in the direction favored by the majority, which avoids having to pay transfers x_{mM} to $p_c n$ majority members. I call this the "acquiescence strategy" (A) because it consists in acquiescing to the preference of the majority. Alternatively, the minority proposer can increase transfers to some majority members and choose a public good level y_m that yields higher value to the minority even though it is less favorable to the majority. I call this the "opposition strategy" (O) because the minority proposer attempts to push policy in the direction opposite to the wishes of the majority.

PG to satisfy majority members.

Minority proposer uses transfers to obtain support of $\frac{n-1}{2}$ members and $y_m = 0$.

Remark 1 below summarizes the equilibria that arise from the combination of these strategies. Recall that \tilde{y}^* and \tilde{B}^* indicate the *effective* values of the legislated public good and budget, after implementation (the star indicating the equilibrium). Without citizen suits, this is equivalent to the legislated values: $\tilde{y}^* = l(y^*) = y^*$ and $\tilde{B}^* = B^*$. But with citizen suits, $\tilde{y}^* = l(y^*) \neq y^*$ and $\tilde{B}^* = B^* - l(y^*) + y^*$ with $l(\cdot)$ given by Equation (2). All transfers not explicitly stated are equal to 0.

Remark 1. *In the majority case, there are three equilibria:*

- For 0 ≤ q_M < q̄^P_M, the equilibrium is DD where both types of proposers use the D strategy. It yields
 ỹ̄^{*}_i = l(0), B̄̄^{*}_i = n+1/4nk and x^{*}_{ij} = n+1-l(0)/4n²k to n-1/2 legislators, for i, j ∈ (m, M).
- 2. For $\bar{q}_M^P \leq q_M < \bar{q}_M^C$, the equilibrium is PO, where majority proposers use the P strategy and minority proposers use the O strategy. It yields

⁷See Remark SI.1 in the supporting information.

(b) with litigation (a) without litigation DD DD РО РО CA majority budget (B...) effective public good (y) and budget (B) · = · = · majority public good (y_m) minority budget (Bm) · = · = · minority public good (v...) 0.5 majority valuation (q_M)

FIGURE 2 Equilibrium Values of the Budget and the Public Good for the Majority Case

Note: The x-axis shows the valuation q_M of the majority and the threshold values at which the equilibria change. The wedges between the budget and the public good correspond to distributive transfers. Panel (b) shows how these equilibrium values change with citizen suits. In both panels, n = 21, $n_M = 12$, k = 0.1, and $q_m = -.5$.

valuation (a_M)

- $0 < \tilde{y}_M^* < \tilde{B}_M^* = \frac{q_M}{2k}$, $x_{M,p}^* = \tilde{B}_M^* \tilde{y}_M^*$ for majority proposals;
- $\tilde{y}_m^* = l(0) < \tilde{B}_m^*$, $x_{mM}^* > 0$ to $\frac{n-1}{2} n_m$ for majority proposals, and $x_{m,p}^* = \tilde{B}_m^* (\frac{n-1}{2} \frac{n_m}{2})$ n_m) x_{mM}^* for minority proposals.
- 3. For $\bar{q}_M^C \leq q_M$, the equilibrium is CA, where majority proposers use the C strategy and minority proposers use the A strategy. It yields
 - $\tilde{y}_i^* = \tilde{B}_i^* = l(\frac{q_M}{2k})$ for $i \in (m, M)$.

For any set of parameters, these equilibria are unique (see the supporting information). They are separated by threshold values of q_M , the valuation of the pro-public good majority proposer (as shown by annotations on the x-axis of Figure 2). These equilibrium thresholds are affected by downstream litigation because litigation changes the relative attractiveness of different strategies in ways that will soon become clear.

I now discuss the key features of these three equilibria, with and without citizen suits. Figure 2 shows the equilibrium outcomes of B and y for selected parameter values under both institutional environments. The DD equilibrium occurs when the public good has little value to the majority. The proposer finds it cheaper to build a coalition with transfers to (n-1)/2 legislators, and the minority does so as well since there is no public policy to oppose or acquiesce to. The equilibrium values correspond to standard results of distributive bargaining games, in which the proposer obtains a large share of spending. Importantly, citizen suits induce positive investments in the public good ($\tilde{y} = l(0) > 0$ as long as there are proponents among litigants) without affecting the budget. This lowers the total amount of distributive spending relative to when the legislature acts alone.

When the majority proposer uses the public strategy, the minority proposer's best response is to use the opposition strategy (see the supporting information). We thus obtain the PO equilibrium. In this equilibrium, the minority proposer sets $y_m = 0$ and makes transfers to $\frac{n-1}{2} - n_m$ majority members, keeping the rest as rents. This strategy lowers the continuation payoffs of the majority members, which strengthens the bargaining power of the majority proposer, who is able to set $y_M^* < B_M^*$ and keep the difference as constituency spending. The effect is the wedge between B_M and y_M in panel (a) of Figure 2. The public and opposition strategies mutually reinforce each other: The fact that the majority proposer extracts rents at a cost to others makes it easier for the minority to use the opposition strategy, which in turn weakens majority members, making it easier for the majority proposer to pursue the public strategy and impose costs on the rest of the majority coalition. Citizen suits transform $y_m = 0$ into $\tilde{y}_m = l(0)$. This leads to an increase in \tilde{y}_M as well and a decrease in the amount that proposers can extract for their constituencies. We see in Figure 2, panel (b) that the wedges between the budgets and the public good investments of each proposer type are much smaller relative to the case where the legislature acts alone.

When the majority proposer uses the C strategy, the minority must acquiesce and we obtain the CA equilibrium. Minority proposers have no other choice than to acquiesce because the majority is united in purpose. Indeed, if they tried to limit the scope of the public policy (by offering transfers to some majority members), majority members would be assured of a better outcome by voting down such a proposal since all majority members want the same outcome. Both types of legislators therefore enact $y = B = \frac{q_M}{2k}$. As stated in Remark 1 and visible in Figure 2, citizen suits reduce these values to $\tilde{y} = \tilde{B} = l(\frac{q_M}{2k})$.

Main Results

The results in this section compare the outcomes of legislation with and without citizen suits. It shows that citizen suits change the bargaining power of different legislators, in turn modifying the balance of public good and distributive spending, as well as the representation of the minority's preferences. Overall, the effect is to moderate public policy, forging a better compromise between the majority and minority. Importantly, citizen suits also reduce the advantage of proposers and their ability to impose costs on others by obtaining rents for their own constituency. The superscript *l* is used to denote the institutional environment with litigation.

The first result shows that in the *DD* and *PO* equilibria—the equilibria in which there is no or minimal spending on the public good—citizen suits increase the level of public good provision, even though proponents and opponents have equal access to courts.

Result 1. In the DD and PO equilibria, citizen suits increase public good provision by both types of legislators: $\tilde{y}_{M}^{l} > y_{M}$ and $\tilde{y}_{m}^{l} > y_{m}$.

This result arises because citizen suits preclude the extreme position y=0. As we saw, in the PO equilibrium without citizen suits, majority members have a weak bargaining power relative to the proposer due to the opposition strategy of the minority. By ensuring that \tilde{y} is at least l(0) in the case of a minority proposal, citizen suits increase the continuation payoffs of majority legislators. This forces the proposer to invest more in the public good. In the DD equilibrium, citizen suits simply force both groups to dedicate some level of funding to the public good and reduce the amount spent in particularistic spending. It does not change legislators' bargaining power because citizen suits affect the proposals of both

types of legislators equally (since they pursue the same distributive strategy).

The empirical implication is that we expect citizen suits to boost public good provision in a context where some but not all policy makers support the public good and where the strength of that support is weak relative to the desire to obtain particularistic goods. A possible contemporary example is that of climate change mitigation in the United States. A majority of the population weakly supports investments to mitigate climate change (Lorenzoni and Pidgeon 2006). Starting with Massachusetts v. EPA in 2007, some court decisions compelled the government to regulate large emitters. These court cases should have signaled to legislators that climate change policy could be influenced by citizen suits in the future. If so, Result 1 says that it should have become easier for supporters of climate change policy to request somewhat more ambitious investments in mitigation. Indeed, legislated spending on mitigation substantially increased after 2007, although, of course, we cannot ascertain whether the mechanism underlying Result 1 played a substantial role in that trend without a detailed study of that particular policy process.

The second important result concerns the *CA* equilibrium. In the *CA* equilibrium without citizen suits, the majority is cohesive, and as a result it unyieldingly brings the public policy to its maximal value. With citizen suits, such a high level of investment meets the resistance of some citizens in courts. The minority gets a voice, a voice it absolutely lacked in the legislature. As a result, the public good–level investment is more moderate, as stated in Result 2.

Result 2. When $q_M \ge 1$, citizen suits decrease public good provision by both types of legislators: $\tilde{y}_M^{CA,l} < y_M^{CA}$ and $\tilde{y}_m^{CA,l} < y_m^{CA}$.

This result indicates that no matter how strong the support for a piece of legislation is, citizens who oppose it can minimize its reach thanks to participation in the courts. Indeed, there are many instances of court cases in which limits were put on the implementation of statutes. In the eyes of proponents, this will be seen as a problem. However, in contexts where there is genuine disagreement about the value of the public good, it can be seen as a valuable mechanism to reach compromise.

The third result concerns the majority proposer's ability to exploit divisions within the legislature in the *PO* equilibrium to extract rents. Result 3 says, first, that as divisions grow (i.e., the size of the minority increases) and as the public good valuation of the majority *increases*, the *share* of funds going toward the public good *decreases*, and a greater proportion of the budget is appropriated

by the proposer as rent. Second, and most importantly, it says that this proposer power, source of inefficiency, is reduced by citizen suits.

Result 3. *In the PO equilibrium, the share of the public good* relative to the budget decreases as the size of the minority opposition increases and as the majority's valuation of the public good increases:

- $\frac{\frac{d(B_M \gamma_M)}{dn_m}}{\frac{d(B_M \gamma_M)}{dq_M}} > 0, and$ $\frac{\frac{d(B_M \gamma_M)}{dq_M}}{\frac{d(B_M \gamma_M)}{dq_M}} > 0.$

Both effects are dampened by citizen suits:

- $\frac{d(B_M y_M)}{dn_m} > \frac{d(\tilde{B}_M^l \tilde{y}_M^l)}{dn_m}, \text{ and}$ $\frac{d(B_M y_M)}{dq_M} > \frac{d(\tilde{B}_M^l \tilde{y}_M^l)}{dq_M}.$

The first part of the result is related to the central result of Volden and Wiseman (2007), showing that proposer power can greatly compromise spending on public goods. In the present model, proposer power stems from the divisions within the legislature. Since only a fraction of majority members receives transfers in any minority proposal featuring $y_m^{PO} = 0$, the probability that a given majority member will benefit from the minority's compensatory transfers in a future minority proposal is low ($p_c = 1 - \frac{n-1}{2n_M}$). This probability decreases the larger the size of the minority group, so the continuation value Equation (3) decreases as n_m increases. This explains why the amount of rents extracted by the majority proposer increases with n_m .

Result 3 also states that although public good provision in the legislature monotonically increases with its value, its share of the total budget decreases as q_M increases. The reason is that as q_M increases, proponents require a lesser proportion of the budget spent on the public good to compensate for the opportunity costs of raising the funds. This outcome is similar in spirit to that in Volden and Wiseman (2007), but it differs in one important way: They found that the *net* value of y (as opposed to its share of the budget) can decrease with its marginal value. The reason for the difference is that here the budget is endogenous—the cost of raising the budget serves as a disciplining device.

Litigation increases the continuation value of proponents, so they require more public good to accept spending for the proposer's constituency, even as the marginal value of the public good increases and they are less affected by increases in the size of the minority. The result is further reinforced by the fact that l(0) increases with q_M , so the bargaining power of proponents actually increases as the public good becomes more valuable. The wedge between the budget raised by the proposer and the level of the public good in the PO equilibrium is therefore far smaller in the presence of citizen suits, and this decrease is strongest for larger values of q_M (which can be observed by comparing panels (a) and (b) in Figure 2).

Empirically, Result 3 implies that citizen suits will not only boost public good provision but also reduce particularistic spending. Indeed, the equilibrium budget is the same in both institutional environments, but less of it is appropriated as private spending by the proposer. The last result shows that proposer power and the role of citizen suits in mitigating it depend on how divided the legislature is regarding the public good. In particular, a larger opposition causes more funds to be dedicated to particularistic spending, especially in the baseline institutional environment. In the coupled institutional environment, downstream litigation dampens the effect of the opposition on public good provision.

In summary, citizen suits do not modify the types of equilibria of the legislative game, but they change the characteristics of these equilibria. The equilibria in the baseline legislative environment can be summed by two characteristics: (1) When the public good is merely attractive as a coalition-building tool, much of the budget raised is allocated to the proposer's constituency because the proposer is able to exploit the divisions in the legislature, and (2) there are areas of the parameter space where the minority has no voice at all. Citizen suits change the balance of power in the legislature, thereby changing public policy. Policies get pulled to the center in the second stage of the game. This undermines the bargaining power of legislators who benefit from extreme positions (minimal or maximal values of y). As a result, proponents of the public good are empowered in the equilibria where they otherwise had little power, which increases the share of spending on the public good relative to distributive spending (Result 3). Finally, for $q_M > 1$, the minority now gets a voice and the legislature enacts a compromise, as indicated in Result 2.

The most important testable hypothesis is that the broader citizens' standing to sue in the process of implementing a statute that legislates the provision of a public good, the more funding we expect to go toward the public good and less toward particularistic spending, with the difference being more acute when the legislature is more polarized. This hypothesis could be tested in a number of ways. First, at the federal level, it is possible to use the variation in the standing doctrine of the Supreme Court, interacted with the variation across statutes in the breadth and importance of citizen suits. Indeed, we expect that funding in the appropriations bills for the agencies enacting each statute should decrease in periods when the courts use a narrow standing doctrine and increase when

the standing doctrine is broader, but more so for statutes that include strong citizen suits clauses. State laws also vary in their use of citizen suits, both at the constitutional level (e.g., granting a right to a clean environment backed by citizen suits) and for individual statutes. Thus, cross-sectional variation could shed light on the value of the hypothesis. Many states adopt the same standing test as the federal courts. The approach sketched above for the federal level (using longitudinal variation in standing interacted with the importance of the citizen suit provision in the enforcement of the statute) should therefore also work at the state level.

Discussion

The Minority Case

The mechanisms described carry over to the minority case; equivalent results are proved in the supporting information. In these equilibria, the majority uses the D strategy. In most of the q_m space, minority proposers use the A strategy (see Figure SI.2): They invest just enough in y to get the support of other minority members; most funds go to particularistic goods. The cost of building a coalition for more public good investment is very high, so only when q_m is significantly larger than 1 do minority proposers switch to the opposition strategy; they then maximize public good spending and use transfers to buy the support of some majority members. In all cases, public good investments are much lower in the minority case than in the majority case (for comparable valuations).

Citizen suits here again boost the public good, both directly and by increasing the bargaining power of minority members. Thus, Result 1 generalizes to all the minority equilibria. Result 3 also generalizes to the minority equilibria that feature some investment in the public good (*DA* and *DO* equilibria; see Result S1.2. in the supporting information).

Welfare Implications

What are the implications of citizen suits for social welfare given the framework developed in this article? For a large range of parameter values, citizen suits enhance the efficiency of investments and thereby improve welfare. However, neither institution is very sensitive to the relative intensities of the two groups. This is why neither institution dominates the other over the whole parameter range. The legislature generally tends to underinvest in the public good, so as soon as some public investment is efficient for the legislature as a whole, the coupled

system tends to fare better. Conversely, because citizen suits allow some mobilization by proponents even when they value the good moderately and are not very numerous, the legislature alone outperforms the coupled system when efficiency requires that there be no or limited public good investment.

The following result gives the conditions under which the system with citizen suits dominates the legislature alone. The definition of welfare employed is the weighted average of the expected utility of majority and minority districts, $W = \frac{n_M}{n} E(u_M) + \frac{n_m}{n} E(u_m)$. \bar{q} denotes the average valuation in the legislature.

Result 4. The decisions of the legislature coupled with citizen suits yield greater welfare than the decisions of the legislature alone only if

1.
$$\bar{q} > \frac{1}{n}$$
 when $q_M < \bar{q}_M^C$;
2. $\bar{q} < \frac{3}{4} n_M q_M$ when $q_M \ge q_M^{C,l}$ (CA equilibrium).

The first part of this result indicates that litigation increases welfare only if some investment in the public good is Kaldor improving. The 1/n factor corresponds to the funds redirected toward the public good by citizen suits that would otherwise have benefited 1 in *n* districts. On the contrary, in the CA equilibrium, the condition is that the average value of the public good must not be too high, since litigation lowers it. The condition holds for a very large range of parameter values. Note that these are necessary conditions. They are also generally sufficient except in two regions: (1) in the small region $\bar{q}_M^C \leq q_M \leq \bar{q}_M^{C,l}$, in which litigation discourages the proposer from using the collective strategy that can reduce welfare even though the parametric conditions of Result 4 are satisfied, and (2) in the regions where $\bar{q}_M^{\,P} \leq q_M \leq q_M^{\,P,l}$ or $\bar{q}_m^{\,A} \leq$ $q_m \leq q_m^{A,l}$, in which litigation encourages the proposer to use the distributive strategy instead of investing in the public good, which reduces welfare if $\bar{q} > 0$.

Figure 3 illustrates the difference in welfare between the two institutional environments. For low values of q_M , citizen suits decrease welfare because they force a minimum positive level of y even though the preference of the opposition is more intense than that of proponents. In the PO equilibrium, the improvement is due to Result 1. In the CA equilibrium, the coupled institution fares better because y is not as extreme as in the legislature alone, imposing a lesser cost on the minority. In the minority case, without citizen suits, the payoffs of most non-proposers are negative because a high budget is raised and channeled in large part toward distributive spending. Citizen suits force some funds to be channeled in the public good, which minimizes this loss. But we also see that the equilibria are shifted, with a greater part of the

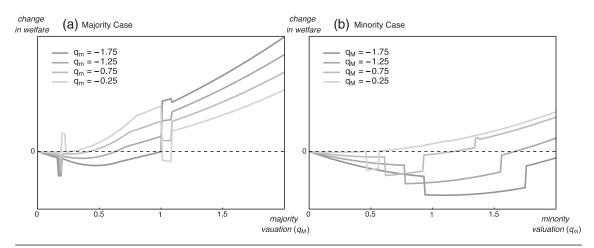


FIGURE 3 Change in Expected Welfare from Citizen Suits

Note: Changes in expected welfare for different values of the minority and majority valuations (k = 0.1 and $n_M = 12$) are shown. The discontinuities are due to the shifts in thresholds.

parameter space occupied by more distributive strategies, which decreases welfare.

Endogenizing Citizen Suits

When and by whom can we expect citizen suits to be instituted? *Ex ante* the institution is expected to be more often beneficial than not; therefore, legislators might support a general procedural law that promotes citizen suits. In the United States, the Administrative Procedures Act (APA) requires the courts to review agency decisions if a litigant can demonstrate that the agency's rule was "arbitrary or capricious." We can interpret the APA as coordinating legislators around procedural rules that benefit everyone in a repeated-game context, or "behind a veil of ignorance."

But individual statutes vary in how much they allow citizens and courts to intervene in their implementation. Therefore, the endogeneity question should also be asked at the level of individual pieces of legislation. The legislative histories of major amendments of environmental statutes reveal that there were strong advocates for and against the institution.⁸ Remark 2 shows that the only situations in which proposers would champion citizen suits is when the majority wants to promote the public good and expects that without this institution, implementa-

tion will be weak. Consider an extended action space in which each type of proposer either includes the institution in the bill or does not. Denote these two actions $\{L_i = 1, L_i = 0\}$ for $i \in (m, M)$.

Remark 2. If implementation is expected to be unbiased, $(L_M = 0, L_m = 0)$ is an equilibrium, whereas $(L_M = 1, L_m = 1)$ is not.

If implementation is expected to be biased toward weak implementation, $(L_M = 1, L_m = 1)$ is an equilibrium while $(L_M = 0, L_m = 0)$ is not in the MAJ case when the majority values highly the public good $q_M \ge 1$.

Remark 2 implies that the vigorous support for citizen suits found in the congressional record for a number of environmental statutes, for example, cannot be explained if legislators expect laws to be implemented without bias in the absence of citizen suits. In the bills in which citizen suits were proposed and defended, legislators favoring the public good feared that implementation would be dominated by the influence of firms, consistent with findings that business groups dominate both administrative and legislative lobbying (e.g., Boehmke, Gailmard, and Patty 2013). Citizen suits are seen as a way of equalizing access to the policy process.

Conclusion

This article has presented a model of legislative bargaining in a situation of conflict over the provision of a public good, in an institutional context in which citizens can subsequently influence the policy in courts of law.

⁸These quotes from the legislative history of the Clean Air Act Amendments of 1990 demonstrate it: "If we are taking action for strong clean air legislation, then we must also ensure that the resulting legislation is fully enforceable. Clean citizen suit provisions are the key to that," said a proponent, whereas opponents complained that "since the bill expressly provides for citizen suits [...] the real driving force behind this bill will be the National Environmental lobbies with their army of attorneys."

Citizen suits are found to strike a compromise between the formal legislation and the diverse preferences of citizens. I showed that in some circumstances, when the majority stands to benefit from the public good, the proposers of the majority and the minority groups in the legislature synergistically undermine the representation of the majority's interest, diverting a large proportion of funds toward particularistic spending. Citizen suits were shown to alleviate this problem by enabling some minimum degree of public policy investments, thereby strengthening the majority's voice. In other circumstances, the legislative process is found to be very weakly responsive to the minority's interests. Citizen suits can, though imperfectly, help temper this characteristic of majority institutions. They do so by forcing all legislators to take some account of the full spectrum of citizen preferences rather than singly reflecting that of their own constituency. Section 6 of the supporting information further argues that these results are robust to changes in some of the assumptions made about the legislative process (in particular, the recognition rule) and the assumptions made about the litigation process and the manner in which litigation affects policy.

Court action following legislation is often criticized for not faithfully representing legislative intent, and the internal bargains struck by legislators (Rodriguez and Weingast 2006). The diversity in court rulings is brandished as evidence that judges are policy motivated and not disciplined by the law, and are therefore usurping legislative powers. Others consider it natural that the courts take on legislative roles if a certain policy question calls for a justification other than a majority justification, such as a moral justification (Ferejohn 2002). The analysis I provide here suggests instead that courts may be able to productively tackle the same policy disputes as the legislature, and in doing so help the legislative process. Citizen suits are, of course, not the only formal means citizens have of shaping the implementation of laws. This analysis is only a first step in more systematically understanding how the social processes by which laws are implemented affect a law's original content as well as its ultimate effect on society.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

- The Reshaping of Legislation by Citizen Suits
- Legislators' Strategies
- Main Results
- Welfare Analysis
- Endogeneity of Citizen Suits
- Robustness of the Model