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Agency Design as an Ongoing Tool of Bureaucratic Influence

Theoretical work assumes that legislators use ex ante design to gain bureau-cratic influence, not only at an agency's appointment stage but also as an ongoing tactic. Yet no empirical work has investigated whether or not legislators prefer to use design to exert influence after an agency's appointment stage. Using a mail survey of more than 2,500 legislators, we model legislators' preferences for ex ante design as a function of both institutional factors and individual legislators' characteristics. Our results suggest that the feasibility of agency design as an ongoing tactic of bureau-cratic influence is more limited than theoretical work indicates and that both institutional- and individual-level factors explain legislators' preferences.

Introduction

Recent studies of legislative control of the bureaucracy stress the value of ex ante agency design as a tool for legislators seeking bureau-cratic responsiveness. Ex ante tactics allow legislators to alter an agency's structure and procedures in an attempt to shape bureaucratic discretion and ultimately decrease the likelihood of undesirable policy outcomes. Theoretical treatments have produced various expectations regarding the conditions that influence legislators' choices either to enhance or to restrict bureaucratic discretion through agency design (Bawn 1995; Epstein and O'Halloran 1994, 1999; McCubbins, Noll, and Weingast 1987, 1989). Empirical work on this matter suggests that institutional- (Huber, Shipan, and Pfahler 2001; Potoski 1999) and individual-level factors (Balla 2000; Bawn 1997) influence the level of discretion that legislators seek to obtain through agency design.

Yet both the theoretical and empirical studies simply assume that legislators prefer ex ante design as a tactic of bureaucratic influence. There is reason to believe, however, that given the relatively rare opportunities to alter agency structure and procedures (Arnold 1987;

Spence 1997), legislators may not prefer ex ante design as an ongoing tactic to achieve influence (Robinson 1989). If this is the case, then the utility of ex ante design may be overstated in theoretical treatments (Robinson 1989).

In this paper, we seek to answer two questions: to what extent do state legislators prefer to use ex ante design as an ongoing tactic of bureaucratic influence, and what factors condition these preferences? Focusing on environmental policy, we use a mail survey of more than 2,500 legislators in 24 states to collect data on state legislators' preferences toward various ex ante tactics of bureaucratic control, their policy preferences, and other individual-level characteristics. Using the survey data, we create an index that measures state legislators' preferences for using ex ante tactics to influence state environmental agencies. We then combine these data with state-level institutional data to test whether or not individual and institutional differences explain legislators' preferences for ex ante tactics.

Exploring the Assumptions of Ex Ante Design Tactics

The literature on bureaucratic responsiveness suggests that ex ante design reduces the costs that legislators incur when they delegate authority to bureaucratic agents (Bawn 1995, 1997; Calvert, McCubbins, and Weingast 1989; Epstein and O'Halloran 1994, 1995, 1996, 1999; Huber and Shipan 2000; McCubbins, Noll, and Weingast 1987, 1989). Such ex ante limitations on bureaucratic behavior involve the construction of bureaucratic procedures, organizational mandates, and a variety of other passive attempts at control (Calvert, McCubbins, and Weingast 1989). Proponents argue that ex ante design is a cheaper, more efficient alternative to other tactics that require costly monitoring and ex post punishment. With ex ante design, legislators are said to be able to decrease the informational asymmetries and agent shirking inherent in delegation; they do so by structuring an agency's rules and procedures in such a way as to reduce "the ability of an agency or other executive actors to enact outcomes different from the policies preferred by those who originally delegated power" (Epstein and O'Halloran 1994, 699).

Empirical research suggests that the legislative application of ex ante tactics to alter agents' discretionary environments is generally influenced by both institutional- and individual-level characteristics. Taken together, these factors condition the level of discretion that legislatures seek to obtain through their design of an agency's structures and procedures. State-level research capitalizes on the institutional variation across the states. This research suggests that the saliency and complexity of the policy area (Potoski 1998), the institutional characteristics of the

legislature [such as legislative professionalism (Huber, Shipan, and Pfahler 2001; Potoski 1998], and the nature of partisan agreement between the legislature and the executive may condition the discretionary levels that legislators permit when they employ ex ante design (Huber, Shipan, and Pfahler 2001).[1] In contrast, national-level studies suggest that characteristics specific to individual legislators also influence their decisions to enhance or restrict bureaucratic discretion. Membership on oversight committees (Bawn 1997), personal ideology, ideological position within committees and in Congress more generally, and electoral security (Balla 2000) have all been linked to representatives' opinions as to the optimal levels of discretion to establish through ex ante design.[2]

Both the theoretical and empirical studies assume that legislators routinely apply ex ante tactics. In fact, compared to the more expensive and resource-intensive ex post tactics of monitoring and oversight, ex ante design is portrayed as *the* optimal tactic (McCubbins, Noll, and Weingast 1987). Calvert, McCubbins, and Weingast (1989) suggest that ex ante methods used during the appointment stage of an agency, which includes the "structuring of the agency itself, the denomination of its powers and jurisdiction, the specification of administrative procedures to be followed, and the type of personnel with which the agency is to be staffed," (Calvert, McCubbins, and Weingast 1989, 604) are the most efficient influence tactics that legislators can pursue. Proponents suggest that, even after the appointment stage, design alterations afford legislators the same benefits as ex post techniques. The theoretical works on ex ante design further assume that legislators are aware of design as a tool of influence and prefer to use it as an ongoing control device after an agency's appointment stage.[3] Yet the empirical works provide no evidence of this preference. On the contrary, there is reason to suspect that the use of ex ante design may be less attractive than other methods as an ongoing tactic of bureaucratic control.

There are at least two reasons why the assumptions made in this previous research may be problematic. First, individual legislators may not have the motivation to engage in ex ante design. Personal factors may influence legislators to be more or less active in attempting to influence bureaucratic policymaking through ex ante design. A variety of individual-level characteristics, including members' policy preferences in relation to those of the agency's, can affect whether or not legislators deem ex ante design a worthy expenditure of their time and resources. Even within a single chamber, not all legislators are equally likely to use ex ante design. If legislators with particular policy preferences are more likely to use design, then this tactic may afford smaller numbers of legislators with shared interests or preferences the opportunity

to influence policy. We know from other research that varying motivational levels encourage some legislators to be more active in the origin and markup of legislation, thereby giving them a greater impact on the eventual product (see, for example, Hall 1996 and Hall and Wayman 1990).

If members' motivations, and therefore participation, in ex ante design tactics do vary systematically, then ex ante design and the bureaucratic responsiveness it engenders may reflect particular policy preferences and not the preferences of the legislature as a whole or even of the majority party. Work that ignores legislators' motivations to use ex ante tactics fails to account for the fact that some legislators play more active roles in agency design than others because of a desire to accomplish policy goals. As a result, such work may mistakenly conclude that the use of ante design reflects the collective preferences of the chamber when in fact it reflects the preferences of a few highly motivated, active members pursuing their own or their constituents' policy preferences.

Second, state legislators have vastly different resources to draw on for the costly activities of bureaucratic monitoring and oversight. In some states, legislators have resources rivaling those of the U.S. Congress; in others, resources are quite limited. Given that legislative resources like professional staff and legislative review powers may condition legislators' decisions to use ex ante tactics, we believe that legislators' preferences toward ex ante design should vary across states accordingly. Lacking the resources to pursue more costly monitoring and ex post punishment, legislators may opt for the more attractive alternative of ex ante design to gain influence over the bureaucracy.

Both these reasons are consistent with the criticism by some scholars that design, although useful in the creation of an agency, is less practical as an *ongoing* tactic of influence over the bureaucracy (Robinson 1989). Furthermore, unlike reauthorization and budgetary decisions that typically require annual or biennial debate and action, opportunities to alter agency structure and procedures are relatively rare events (Arnold 1987; Spence 1997). If legislators do not prefer ex ante design as a routine tactic of bureaucratic influence, then proponents may have overstated its utility (Robinson 1989).

In this paper, we test the assumption that legislators prefer ex ante design as a tactic of bureaucratic influence. First, we describe the preferences of legislators for ex ante mechanisms to address the possibility that legislators do not prefer ex ante design as an ongoing tactic of bureaucratic influence. Second, we use an individual-level approach to examine how the institutional characteristics of the legislature and the individual characteristics of legislators influence members' attitudes toward ex ante tactics of bureaucratic influence.

Explaining Preferences for Ex Ante Tactics

Extrapolating from prior work, we expect that legislators' preferences toward ex ante design will reflect its relative costs and benefits (Bawn 1997).[4] We apply a cost-benefit framework to individual state legislators' preferences, ensuring that the costs and benefits of bureaucratic delegation vary not only across states and institutions but also across members themselves. Generally, these factors include the costs of an agency that deviates from legislators' preferences, the opportunity costs and direct costs of engaging in ex ante design, the costs associated with the technical expertise trade-off, the costs of political drift, and the benefits associated with using ex ante design in the absence of ex post options.

Costs of an Agency's Activities

The costs of delegated authority to an agency differ among legislators. As a legislator's ideal policy location moves away from the agency's ideal point, that legislator, fearing political costs, will be inclined to restrict the discretion with which that agency can make policy decisions (Epstein and O'Halloran 1994, 1999). Ex ante design is one of the tactics that legislators may use to accomplish these restrictions. Legislators with conservative preferences on environmental policy will likely view the regulatory agency of a more liberal gubernatorial administration as politically unappealing and, as a result, will be motivated to alter that agency's design. Therefore, we expect that members whose ideal policy preferences are further away from the ideal location of the agency will be more likely to exhibit favorable preferences toward ex ante design.

Hypothesis 1: Legislators whose policy preferences are further removed from the ideal location of the agency will be more likely to prefer ex ante design as a bureaucratic influence tactic.

Costs of Ex Ante Design

Ex ante tactics also have costs associated with them. For instance, overhauling the procedures that an agency employs to modify or initiate policy proposals presents a substantial cost to legislators attempting to influence an agency. Engaging in such tactics may require a legislator to possess a higher level of expertise about the policy area as well as the agency's status quo structure and procedures (Spence 1997). Experienced

legislators with policy-specific knowledge and expertise may be able to overcome the costs in time and resources associated with researching and writing detailed legislation that alters an agency's structure and procedures. Senior legislators should have greater experience and expertise in the policymaking process (Hibbing 1991, 1993; see also Bratton and Haynie 1999) and, as a result, they should be better able to overcome the costs of engaging in ex ante design. Therefore, we expect that more-senior legislators will prefer ex ante tactics to influence bureaucratic policymaking.

Hypothesis 2: Legislators with greater tenure in office will be more likely to prefer ex ante design as a bureaucratic influence tactic.

Opportunity Costs

Ex ante design has been portrayed as a cheap and efficient alternative to ex post oversight tactics (Calvert, McCubbins, and Weingast 1989; McCubbins, Noll, and Weingast 1987, 1989). Legislators who have limited resources, particularly staff, will value ex ante design as an attractive alternative to resource-intensive monitoring as well as potential hearings and investigations (Elling 1984). The availability of staff lowers the opportunity costs of engaging in ex post tactics, thereby making ex ante techniques less attractive. Thus, we expect that legislators who have access to staff will be less likely to prefer ex ante tactics of bureaucratic control.

Hypothesis 3: Legislators who have access to staff resources will be less likely to prefer ex ante design as a bureaucratic influence tactic.

The Technical Expertise Trade-off

With ex ante design, legislators can alter regulatory agents' discretionary environments. Restrictions on bureaucratic discretion, however, may hinder policy production and implementation: under highly restrictive conditions, bureaucratic agents cannot capitalize on their expertise to deliver informed policy, and the resulting inefficiency produces distributive losses (Bawn 1995).[5] Legislators face the dilemma of balancing the transaction costs of high discretion with the distributive losses incurred by an overly restrictive design (Bawn 1995, 1997; Ringquist, Worsham, and Eisner 2002). We therefore expect that when agencies deal with technically complex issues and the possibility for distributive losses is great, legislators will hold less favorable preferences toward ex ante design tactics.[6]

Hypothesis 4: As the complexity of the policy area increases, legislators will be less likely to prefer ex ante design as a bureaucratic influence tactic.

The Potential for Political Drift

Another cost that legislators face is associated with the political drift of agency policy, or the unfavorable policy changes that may be implemented by new political coalitions that come to power (Horn and Shepsle 1989; Shepsle 1992). In a politically competitive environment, legislators will be less certain about the stability of bureaucratic outputs and their continued ability to monitor and influence bureaucratic agencies. They may therefore seek to insulate themselves from such political drift. If legislators believe that an agency's policies are likely to deviate because the political environment is unstable, then they will be more likely to prefer ex ante design as a mechanism for restricting the agency's discretion.

Hypothesis 5: As the potential for political drift increases, legislators will be more likely to prefer ex ante tactics as a bureaucratic influence tactic.

The Existence of Ex Post Options

Having the opportunity to correct the actions of an agency that deviates from a legislator's ideal policy location lowers the marginal benefits of that legislator engaging in ex ante tactics (Bawn 1997). The opportunity to use ex post options, such as legislative vetoes or legislative reviews of agency rules (Balla 2000), will condition a legislator's decision to redesign an agency because, for legislators, "ensuring that the agency behaves in the desired way is less urgent when there will be opportunities to correct for 'mistakes' after the fact" (Bawn 1997, 108). Hence we expect that legislators will hold less favorable preferences toward ex ante design tactics when they have the ability to review and correct agency decisions.

Hypothesis 6: If legislators have the opportunity to engage in ex post review of agency policy, then they will be less likely to prefer ex ante design as a bureaucratic influence tactic.

Research Design

To test our expectations, we collected data on state legislators' individual characteristics, policy preferences, and their attitudes toward various tactics of bureaucratic control.[7] The survey, conducted in the summer and fall of 2000, was mailed to more than 2,500 state legislators—all members of the lower houses of 24 state legislatures.[8] We randomly selected the 24 state legislatures from several strata organized according to such contingencies as party control of the chamber and legislative professionalism, thus ensuring variation in the resulting sample of state legislators. More than 500 legislators responded to the survey, an overall response rate of about 21%. Although we took numerous steps to encourage survey response,[9] this response rate is somewhat low, even for a survey of political elites. We thus employed a Heckman selection model (discussed in our "Statistical Model" section) to correct for possible selection bias resulting from the low response rate.

Using survey data, we created an index that assesses legislators' preferences toward ex ante tactics. We then modeled the effects of legislative context, including legislative capacity and ex post veto power, as well as the effects of individual-level factors, including members' policy preferences and members' preferences for ex ante tactics of bureaucratic control.

Dependent Variable

Our dependent variable measures the preferences of an individual legislator toward ex ante control tactics. We asked state legislators five questions to determine their preferences for ex ante tactics for influencing environmental agencies, such as altering the organization of the agency, changing the method of selecting the head of the agency, altering the regulatory scope of the agency, changing the agency's decision-making procedures, and requiring the agency to report to the legislature.[10] For each tactic, respondents who indicated they were very likely to use the tactic scored two points, those who said they were somewhat likely scored one point, and those who were not very likely scored zero points. To measure members' preferences toward ex ante tactics, we constructed a simple additive scale, weighting each of the five items equally.[11]

Table 1 lists the five ordinal items that compose the index, as well as their means, standard deviations, and corrected scale-item correlations. All five items are positively correlated with each other, and all the corrected scale-item correlations (the correlation of the item with

TABLE 1
Items and Index of Legislators' Preferences
toward Ex Ante Tactics

Variable	Mean	Range	Standard Deviation	Corrected Correlation[a]
Alter the organization of the agency	.57	0–2	.69	.53
Change method of selecting agency head	.29	0–2	.62	.39
Alter the agency's scope of authority	.89	0–2	.69	.49
Require the agency to report to the legislature	1.60	0–2	.63	.31
Alter the agency's decision-making procedures	.77	0–2	.72	.47
Index of preferences for ex ante control[b]	4.10	0–10	2.22	

Note: All items are ordinal variables.
[a]Correlation between the item and the corrected index of preferences for ex ante control (the index computed without the item).
[b]α coefficient of reliability is .68.

the scale computed without the item) are also positive, indicating that the items reflect an underlying dimension. The large and significant coefficient of reliability for the scale ($\alpha = .68$) also supports this conclusion. The index ranges from zero, indicating that the member does not at all prefer to engage in ex ante tactics, to 10, indicating that the member greatly prefers ex ante tactics as a means for influencing the bureaucracy.

Independent Variables

Environmental Policy Preferences Relative to the Agency. We assess the political costs of having an active agency by measuring the legislators' environmental policy preferences relative to the position of the agency. First, we measured legislators' environmental policy preferences using an additive index of environmental policy conservatism composed of six ordinal items indicating legislators' support or opposition to principles of environmental regulation.[12] The resulting index ranges from 0, the most liberal position on environmental policy, to 12, indicating the most conservative environmental policy preferences.

Next, we determined the position of the environmental agency with a dichotomous variable indicating the presence of a Democratic governor in the state. Agencies operating under Democratic governors

should be more active in regulating environmental conditions. We assessed the legislators' preferences relative to the agency by including the interaction of members' environmental policy preferences with the presence of a Democratic governor.[13] We expect that conservative legislators will be motivated to engage in ex ante tactics when a Democratic governor holds office since it is likely that the governor will pursue goals divergent from these legislators' in agency policy.

Legislative Seniority. To assess the costs associated with engaging in ex ante design, we included a measure of legislative seniority, defined as the number of continuous years of service in the legislature. We collected this measure from the official websites of the various state legislatures and the Project Vote Smart database of state legislators.

Legislative Staff. To assess the opportunity costs of engaging in ex ante design, we measured the legislative capacity or the resources available to legislators by noting whether or not individual members have staff working in their capitol offices. We collected this dichotomous measure of staff from the survey of state legislators.[14]

Entropy. We measure the technical expertise tradeoff that a legislator faces when engaging in ex ante design by measuring the environmental policy complexity within the state. Specifically, we measure the entropy of the state's air emissions.[15] If a state's air emissions derive from a single source, then this measure is zero; the measure increases as both the total number of categories increases and the distribution across different categories becomes more evenly distributed.[16] This measure is essentially a diversity index of the state air emissions sources within each state. Higher state entropy scores represent extremely complex policy environments, suggesting that legislators are not likely to have the technical knowledge to understand all the ramifications of their decisions. Increased complexity should be related to a decreased preference on the part of legislators toward ex ante design. We calculated the measure using data from the *EPA's Toxic Release Inventory CD-ROM* (EPA 1999).

Potential for Political Drift: Political Uncertainty. We measure the potential for the bureaucracy to drift by assessing the uncertainty that arises from political competition. We use the Ranney index of party competition in each state between 1994 and 1998 (Bibby and Holbrook 1999). The Ranney index incorporates the proportion of party successes in executive and legislative elections and the duration of

party control of these bodies (see Bibby and Holbrook 1999 for a complete description). The folded Ranney index, or the Ranney competition index, indicates the degree of competition in the state political institutions, regardless of party. This measure ranges from .5 to 1, where .5 represents no competition and 1, perfect competition. We use the data as collected and reported by Bibby and Holbrook (1999).

Legislative Review Powers. We measure the availability of statutorily defined ex post powers by including a three-category ordinal variable that measures the powers of the legislature to review administrative rules. This variable ranges from the legislature having no agency review powers (0), to advisory powers only (1), to formal review powers of agency rules (2). We collected these data from the *Book of the States* (Council of State Governments 2000–01).

Statistical Model

Because we rely on survey data, especially for the measure of the dependent variable, we think it important to consider how the choice of respondents to participate in the survey potentially influenced the data and the results of the analysis. If certain types of respondents were less likely to participate in the survey, then survey nonresponse can introduce selection bias into even a random sample and ultimately threaten the inferential value of survey analysis (see Groves, Cialdini, and Couper 1992). In order to test and correct for possible selection bias, we used a Heckman selection model. The Heckman selection model estimates a system of equations while using full information maximum likelihood. In this case, the system includes a selection equation predicting the probability that a member of the sample responded to the survey and is included in the second equation, which predicts members' preferences for ex ante measures of bureaucratic control. This procedure corrects for the selectivity bias and produces consistent, asymptotically efficient parameter estimates (Greene 1993, 708–14).

In order to use a Heckman selection model, one must first specify the selection equation, which predicts whether or not a member of the sample will respond to the survey. Literature on survey nonresponse suggests that sociodemographic characteristics like age, gender, and socioeconomic status are important predictors of the decision to participate in a survey (see, for example, DeMaio 1980 and Smith 1983). In addition to these general characteristics, the professionalism of the legislature and members' legislative seniority may also influence the likelihood that members will participate in the survey. We expect that members who serve in more professional legislatures—institutions that

generally have higher workloads and meet for longer sessions—may be less likely to complete and return the survey given the numerous demands on their time.[17] More-senior members may also be less likely to participate because they may be more involved in the decision making of legislature. In addition, party may affect the decisions of members to participate in the survey. Consequently, we model the decision to participate in the survey as a function of age, gender, socioeconomic status, the professionalism of the legislature, legislative seniority, and party affiliation.[18] The overall model estimates robust standard errors that are corrected for clustering by state to account for the fact that observations may not be independent within states.

Results

We begin with a brief discussion of the legislators' preferences toward ex ante design. First, we find that legislators, on average, do not exhibit extraordinarily favorable attitudes toward ex ante design tactics. Figure 1 shows the distribution of members' scores on the index. The histogram suggests that there is a good deal of variation along this dimension, but most of the legislators' scores fall in the lower half of the scale, indicating that a substantial number of state legislators reported they were not very likely to use ex ante tactics as an ongoing method of influence. This pattern suggests that previous theoretical work may have overstated the uniformity and strength of legislators' preferences for ex ante tactics as an ongoing tool of influence. Far from appearing to embrace ex ante design as the optimal control tactic after the appointment stage, state legislators seem to be generally reluctant to engage in it.

In addition, Table 2 presents both the mean and standard deviation of index scores for legislators by state. Average scores differ widely across the states, from a low of 3.00 in Colorado, indicating that members of the Colorado legislature have less favorable views of ex ante design, to a high of 5.43 in Idaho, suggesting that legislators in Idaho have much more favorable views of ex ante controls. Table 2 also demonstrates the marked differences in preferences for ex ante design within states. The relatively large standard deviations suggest that the costs and benefits associated with agency design vary across legislators within the same institution. The variation both across and within states suggests that institutional and individual factors likely explain members' preferences toward ex ante controls.

To explore this possibility, we turn now to our multivariate analysis. Table 3 lists the results of our analysis. Note that age and education have significant effects on the likelihood of responding to the survey.

FIGURE 1
Distribution of Preferences for Ex Ante Control
over State Environmental Agency
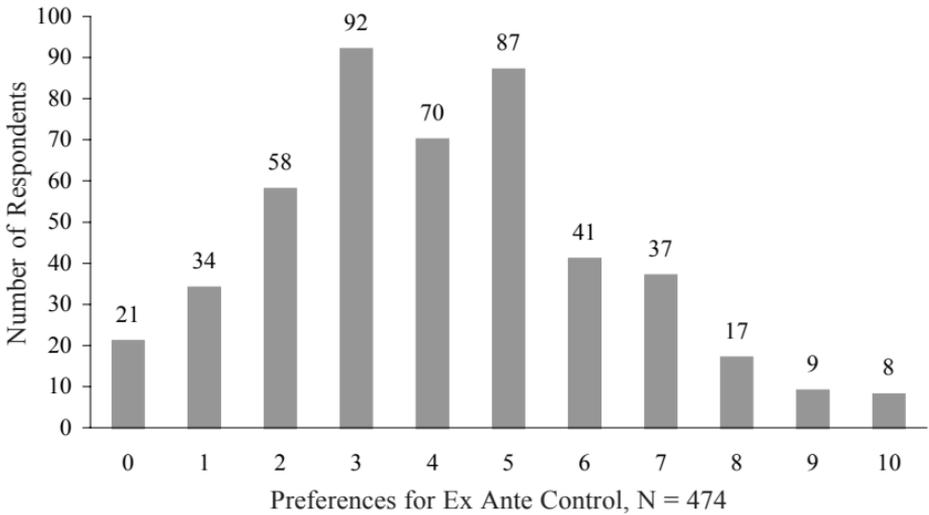
Older and more highly educated respondents are more likely to participate in the survey, and more senior members and those from more professional legislatures are less likely. In addition, party also has an effect on the likelihood of members participating in the survey. Nonpartisan legislators and those affiliated with third parties are less likely to participate in the survey.

The estimate of ρ reflects the correlation of the error terms of the selection model and the substantive regression equation. If ρ equals zero, then ordinary least squares (OLS) estimation is appropriate; if, however, ρ does not equal zero, then OLS will produce biased parameter estimates. In this case, the estimated ρ is .11, indicating that the error terms are related, although not strongly. In addition, the Wald test of independent equations (the χ^2 statistic presented in the final row of the first column) is not large enough to reject the null hypothesis that ρ equals zero and that the two equations are independent. Although the overall selection model parameters suggest that it was not necessary, we employed a Heckman selection model for this analysis because of the significance of the individual coefficients in the selection model and the correlation between some of these significant factors and key independent variables in the substantive equation.

TABLE 2
Legislator Preferences toward Ex Ante Tactics,
by State

State	Mean[a]	Standard Deviation[b]	Valid N
Arkansas	4.12	2.52	17
California	3.36	1.96	11
Colorado	3.00	1.66	9
Connecticut	3.77	1.80	31
Delaware	4.40	2.07	5
Idaho	5.43	1.91	14
Illinois	3.88	1.81	8
Louisiana	4.57	.98	7
Maine	4.33	2.04	45
Michigan	4.37	2.48	19
Missouri	3.36	2.22	22
Montana	5.25	2.56	24
North Dakota	4.23	1.84	31
Nebraska	4.35	1.66	17
New Jersey	3.82	2.71	11
Ohio	4.57	2.71	14
Pennsylvania	3.61	2.36	46
South Carolina	3.28	2.85	18
South Dakota	3.05	1.65	22
Tennessee	4.00	1.73	17
Texas	4.75	2.38	12
Vermont	4.61	2.58	36
West Virginia	5.00	2.32	17
Wyoming	3.52	1.69	21
All states	4.10	2.22	474

[a]Mean score on index of ex ante control for all legislators within a particular state.
[b]Standard deviation of scores on index of ex ante control for all legislators in a state.

TABLE 3
State Legislators' Preferences toward Ex Ante Tactics

Variable		
	Ex Ante Preferences Index[a]	
	b	se(b)
Entropy	.98	(.76)
Costs of an active agency		
Environmental policy conservatism	.08*	(.05)
Democratic governor	−1.63	(1.37)
Env. policy conservatism × Dem. governor	.15	(.20)
Legislative staff	−.48*	(.28)
Legislative seniority	.01	(.01)
Ranney index of party competition	−.64	(1.54)
Review power	−.52**	(.23)
Constant	4.92	

Uncensored observations = 353
χ^2 = 70.69***

	Selection Model	
	b	se(b)
Age	.02***	(.004)
Education	.27***	(.09)
Gender (female)	−.01	(.08)
Party		
Democrat	−.03	(.09)
Other party	−5.94***	(.15)
State legislative professionalism	−.55	(1.02)
Years served in legislature	−.01	(.01)
Constant	−1.68	

Total observations = 1,852
ρ = .11
$\chi^2(\rho = 0)$ = .06

Note: Robust standard errors in parentheses corrected for clustering on states. Results generated using Heckman selection model.

[a] Five-item additive index of members' willingness to engage in ex ante control of state environmental agency.

*p < .10, **p < .05, ***p < .01, two-tailed tests.

The results of the substantive equation predicting the members' preferences for ex ante design suggest that both individual-level legislator characteristics and institutional context have a significant influence on members' preferences toward ex ante control. Legislators' environmental policy opinions and whether or not they have staff in the capitol are factors that affect members' preferences for agency design. Whether or not the legislature has the power to review agency decisions, a characteristic that differs only across legislatures, also significantly conditions members' preferences toward agency design to influence state environmental agencies.

We now turn to our specific hypotheses on individual legislator characteristics. Members who hold more conservative opinions on environmental policy have more favorable preferences for ex ante tactics to influence state environmental agencies than do their liberal counterparts. The interaction of members' preferences and the presence of a Democratic governor, however, is not statistically significant. The preferences of legislators with conservative environmental policy preferences are not significantly more inclined toward ex ante design when the legislators face a Democratic governor than when they face a Republican governor. This finding suggests that perceived policy differences between a legislator and an environmental agency do not influence legislator preferences. It does appear, however, that conservative legislators are likely to incur greater costs for active environmental agencies and therefore to favor ex ante tactics to control these agencies more than their liberal counterparts. For example, an average legislator with the most liberal environmental policy preferences has a predicted score on the ex ante index of only 3.46, indicating that he or she is unlikely to employ these tactics.[19] An average legislator with the most conservative environmental preferences has a predicted score of 4.42, indicating that he or she is more likely to consider agency design as a strategy for influencing bureaucratic decisions. This disparity suggests that legislators may very well consider the use of ex ante tactics as a means of *restricting* rather than *enhancing* agency discretion. Therefore, regardless of who is in the governor's mansion, a legislator with conservative views in environmental policy prefers to use ex ante design to gain influence over the agency.

A legislator's tenure in office does not affect the costs that are assigned to ex ante tactics. Although the coefficient is in the predicted positive direction, legislative seniority does not appear to significantly reduce the costs of ex ante design. Therefore, enhanced skill and experience in the policy area does not seem to offset the costs of engaging in ex ante design.[20]

With regard to legislative context, the negative coefficient for legislative staff is statistically significant, suggesting that access to staff makes ex ante design substantially less attractive to legislators. This finding is particularly interesting when we consider expectations about the importance of legislative resources in conditioning legislators' use of ex ante design (McCubbins, Noll, and Weingast 1987; 1989). Indeed, recent research suggests that enhanced resources provide legislators with the tools they require, in the face of partisan conflict, to produce lengthy and detailed legislative grants of discretionary authority to state agencies (Huber, Shipan, and Pfahler 2001). Counter to these findings, our results suggest that legislative resources increase the opportunity costs of engaging in ex ante design by increasing legislators' ability to monitor agencies directly and employ ongoing ex post tactics (Aberbach 1990). The impact of staff would be particularly felt among legislators attempting to engage in those design tactics that are higher in relative cost.

The effect of entropy is not negative, as we expected, or statistically significant. It appears that the complexity of state environmental policy, at least as it varies across the states in a single policy area, does not decrease legislators' preferences toward ex ante design. The greater possibility of distributive losses associated with an overly restrictive design posed by ex ante manipulation of agencies does not appear to inhibit members' preferences toward ex ante controls in the environmental policy arena. This null finding may, however, reflect the fact that variation in policy complexity may be greater across different policy areas than across states within the same area.

Also contrary to our expectations, the coefficient for the Ranney index of party competition is not statistically significant, signifying that the increased potential for political drift that accompanies greater party competition does not appear to motivate legislators to pursue ex ante design as a tactic to influence bureaucratic affairs. This finding supplements previous research, which showed that the potential for political drift influences how much discretion legislators allow when they alter an agency's design (Epstein and O'Halloran 1999; Huber, Shipan and Pfahler 2001). We take these results to mean that, although uncertainty about the political future affects the application of design, it does not influence legislators' willingness to use it.

Finally, whether or not the legislature has the ability to review and correct agency decisions after the fact significantly influences legislators' preferences toward ex ante measures. As expected, members in states with legislative review powers are significantly less likely to pursue agency design than are members without these review powers. For example, an average legislator who has formal review

powers has an index score of 3.49, indicating a less favorable view of ex ante tactics. In comparison, an average member with only advisory powers has a score of 4.00 on the index, and an average member with no review powers has a score of 4.52. Members with weaker or no ex post powers at their disposal are more likely to turn to ex ante means to guarantee their interests are represented in agency policy.

Conclusion

Our analysis has implications for studies of legislative control of the bureaucracy. First, our analysis demonstrates that the feasibility of agency design as a tactic of ongoing legislative influence over the bureaucracy may be more limited than national-level theoretical work would suggest. This finding is consistent with the previously untested expectations of scholars who argue that the availability of opportunities to alter design is limited and that theoretical work must consider this issue (Arnold 1987; Robinson 1989; Spence 1997). Our findings generally support such critiques and suggest that, while ex ante design is theoretically appealing, legislators do not seem to prefer ex ante design as an ongoing means of reining in the bureaucracy. We do not believe that legislators simply abdicate program responsibility however (Kiewiet and McCubbins 1991); it may be that legislators prefer to make use of other, perhaps more accessible, methods of influence rather than ex ante design. For example, legislators may simply wait for the opportunity to punish or reward agencies through the relevant budgetary authorizations or some other oversight instrument.

Second, our individual-level analysis allowed us to test for the impact of both statewide contextual and legislator-specific factors on legislators' preferences for ex ante tactics. We found that characteristics that vary across states and individual legislators are important in understanding legislators' preferences over ex ante design. Preferences toward the use of design are a function of a legislator's environmental policy preferences. Legislators with conservative environmental preferences appear more likely to prefer ex ante design to influence environmental agencies than their more liberal colleagues.

In addition, access to legislative resources (such as staff) and the power to review agency decisions reduce the marginal costs of engaging in ex post tactics, making ex ante tactics less attractive. When legislators have the resources, they may be more likely to assign staff to monitoring and oversight than to rewriting complex design legislation (Aberbach 1990). We do not wish to argue, however, that staff does not behave in the manner suggested by Huber, Shipan, and Pfahler (2001). Staff

operates differently in these two contexts. In our study, staff independently lowers the costs of engaging in other control mechanisms, such as ex post tactics, thereby diminishing preferences toward ex ante design as an ongoing tool of influence. In Huber, Shipan, and Pfahler's study, staff conditionally reduces the costs that a legislator bears for writing the extensive language required to restrict agency discretion.[21] Therefore, state legislators with greater legislative staff are less likely to prefer ex ante design as an ongoing tactic of influence but, when given the opportunity (for example, a bill initiating a new program in an agency comes under review) and if motivated by political conflict, they are able to write more detailed legislation. Simply put, staff operates in a more complex manner than previous theory suggested.

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NOTES

1. See also Epstein and O'Halloran 1999 and Ringquist, Worsham, and Eisner 2002 for recent evidence at the national level.

2. Many of these assumptions may be valid for the highly professional environment of the U.S. Congress, but they are unverified assertions for most state legislatures. Individual-level surveys of state legislators' perceptions of effective control instruments have found that legislators' attitudes toward various ex post tactics vary; these studies do not, however, include ex ante design tactics (Elling 1984; Pearson and Wigginton 1986).

3. Most of the work that refers to the appointment stage applies this term to both the initial creation of an agency and the addition or transfer of a new program to a pre-existing agency.

4. Bawn's model derives predictions for the ideal level of statutory control that a legislator would like to see established in the legislation affecting an agency's mission (Bawn 1997, 107). We extend her general framework to a legislator's preference toward ex ante methods.

5. Terry Moe describes the extreme case of such overrestriction: "In the interest of public protection, agencies are knowingly burdened with cumbersome, complicated, technically inappropriate structures that undermine their capacity to perform their jobs well" (Moe 1990, 228).

6. Here, *complexity* refers to "the degree to which specialized technical knowledge is necessary to craft effective policy solutions or understand the policy area" (Ringquist, Worsham, and Eisner 2002, 6–7; see also Gormley 1986).

7. The use of either macro-level (Balla 1998; Epstein and O'Halloran 1999; Huber, Shipan, and Pfahler 2001; Potoski 1998, 1999; Spence 1999) or individual-level research (Balla 2000; Bawn 1997) at the national level does not provide sufficient variation in important explanatory variables, such as legislative resources and policy salience. These factors vary considerably across the states, permitting us to test how variation in these factors influences legislative decisions about ex ante design. Thus, states are a more appropriate setting for tests of ex ante design tactics.

8. The set of 2,526 legislators includes the populations of legislators from the lower houses of the following state legislatures: Arkansas, California, Colorado, Connecticut, Delaware, Idaho, Illinois, Louisiana, Maine, Michigan, Missouri, Montana, Nevada, New Jersey, North Dakota, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Vermont, West Virginia, and Wyoming.

9. First, we gave legislators advance notice of the survey. Approximately one week later, we mailed the survey questionnaire along with a cover letter indicating that we would make a report of the results available to the legislators upon completion of the project. We mailed a reminder postcard and second letter and copy of the survey questionnaire to nonrespondents approximately two and four weeks later, respectively.

10. Members were given the following instructions: "We are interested in the techniques that you use to ensure that state government agencies do what you want them to do. For each of the three state government agencies listed below, please circle a (1) if you are not likely, a (2) if you are somewhat likely, or a (3) if you are very likely to use the following techniques to keep that agency in check."

11. We recognize that the costs associated with using ex ante tactics differ across types of individual control technology. Our survey included ex ante tactics with higher relative costs, such as reorganizing an agency, and lower relative costs, such as requiring a report from an agency. Because of this variation in cost, we created an additive scale to measure a legislator's underlying propensity toward these tactics generally.

12. We asked legislators if they favored, neither favored nor opposed, or opposed six principles regarding environmental policy in their states. Legislators scored two points per principle when they opposed funding for pollution prevention programs, supported requiring cost-benefit analysis of proposed environmental regulations before implementation, supported pollution credit programs that allow industries to purchase additional pollution beyond their permitted levels, supported "self-audit" legislation that creates incentives for industries to audit themselves and clean up pollution, supported requiring the state to compensate citizens when environmental regulations limit uses of privately owned land, and opposed state environmental regulations being stricter than federal law. Legislators scored one point when they neither favored nor opposed a principle, and zero otherwise. All six items were positively correlated with one another, and all their corrected scale-item correlations were positive. These results, along with the high and significant coefficient of reliability ($\alpha = .66$), lead us to conclude that the items do reflect members' underlying attitudes about environmental policy.

13. We also included an indirect measure of members' policy preferences regarding the environment: their constituents' environmental policy preferences. We use the percent of the state house legislative district employed in the manufacturing sector as a proxy for constituency interests regarding this policy area. This variable reflects 1990 figures for state house districts that appear in Lilley, DeFranco, and Diefenderfer 1994. Data for 1999 through 2000 are not available, but other demographic characteristics with comparable

data for both time periods appear to be relatively stable over time. For example, the correlation of 1990 and 1997 figures for district average income and the percent of the population with college education is approximately .97 for all 2,526 state house districts in the study. Using the indirect measure of member policy preferences and its interaction with the presence of a Democratic governor yields nearly identical results to our original findings, so we report the result using the direct measure of members' preferences.

14. We asked members, "About how many full-time, part-time, or volunteer staff do you have working in your district or capitol offices?" We then created a dichotomous variable indicating whether or not members had staff in their capitol offices. We chose to use the availability of staff in the capitol office to assess each member's individual resources rather than a measure indicating the staffing for each legislature. In some legislatures, members can choose how to apportion their staff between their district and capitol offices. We also used an updated professionalization index, which measures the aggregate resources of the state legislature (Squire 1992). The measures produced similar results.

15. The complexity of a state's environmental policy area is arguably more comprehensive than only those complexities resulting from air pollution regulation. Nevertheless, the technical challenges that state legislators face with air pollution control require the highest level of technical knowledge. Compare air pollution control to mining regulation, for example (Gormley 1986; Ringquist, Worsham, and Eisner 2002). Using this measure of policy complexity allows us to assess the high end of the complexity scale for each state.

16. The formula used to calculate Potoski's entropy measure is $E = -\sum_{i=1}^{n} p_i \ln(p_i)$, where p represents the probability of the ith Standard Industrial Classification (SIC) source category. Each state's total air emissions are broken down into two-digit SIC codes. These two-digit codes represent the ith category in the equation.

17. In addition to typically higher workloads and longer sessions, professional state legislatures are also characterized by higher salaries, greater financial benefits, and more staff and support facilities (Squire 1988a, 1988b).

18. The measure of socioeconomic status is a dichotomous measure of education taken from the survey; the variable is coded as one if the member has at least a college degree and as zero otherwise. The measure of state legislative professionalism, developed by Squire (1992), reflects three main components: member salary, session length, and staff support. States are compared to the U.S. Congress on all three attributes; the state legislature's score on each attribute was converted into a percentage of Congress's score. For each state, the three percentages were then averaged. We updated this professionalism index using data on Congress and the 50 state legislatures from 1993 to 1997. Squire's original measure, using 1986–88 data, and our updated measure, computed using 1993–97 data, are highly correlated (.96).

19. An average legislator is defined as one with mean values on all remaining interval-level independent variables, median values on all ordinal-level variables, and modal values on dichotomous variables. In this study, an average legislator has an entropy score of .68, a score of 6.8 points on the environmental policy index, and a score of .86 on the Ranney index of party competition. This average legislator also has approximately eight years in the state legislature, access to legislative staff at the capitol, a Republican governor, and the power to review agency decisions.

20. For an alternative measure of expertise, we used a dummy variable to indicate if the legislator served on a relevant oversight policy committee (Bawn 1997). This variable was not significant either.

21. Unlike our measure, which varies across individual legislators, Huber, Shipan, and Pfahler's (2001) measure varies only across chambers. As a result, the difference in these findings may be a function of both the level and form of analysis.

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