

A Bias Towards Business? Assessing Interest Group Influence on the U.S. Bureaucracy

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We test the proposition that the federal bureaucracy exhibits a “bias toward business” during notice and comment rulemaking. We analyze over 30 bureaucratic rules and almost 1,700 comments over the period of 1994 to 2001. We find that business commenters, but not nonbusiness commenters, hold important influence over the content of final rules. We also demonstrate that as the proportion of business commenters increases, so too does the influence of business interests. These findings contrast with previous empirical studies and generally suggest that notice and comment procedures have not succeeded in “democratizing” the agency policymaking process to the extent sometimes suggested in the normative rulemaking literature.

Government regulations are pervasive and touch every aspect of American life, and those regulations are given their final form at the agency, not the legislative, level. Bureaucratic rules, which are legally binding on regulated entities to the same extent as legislation, govern a broad swath of issues, ranging from the legally permissible number of holes in Swiss cheese to safety requirements for child car seats (Skrzycki 2003). In fact, over the past several decades federal agencies have adopted 10 times as many rules as Congress has passed laws (Coglianese 2004, 5). It is thus unsurprising that federal agencies are often subject to intense pressure from constituents who stand to win or lose with the promulgations of a particular rule.

Federal agencies are required by law to solicit and take into account the views of concerned citizens prior to the promulgation of most final agency rules. Proponents of these so-called “notice and comment” procedures argue that such procedures promise to neutralize the natural advantage of business interests by equalizing opportunities to participate in, and to influence, the formation of agency policy (e.g., Croley 2000; Harris and Milkis 1989). In this view, notice and comment rulemaking is a “refreshingly democratic” means of formulating and implementing public policy that can be “vastly superior to the unstructured and chaotic procedures of legislatures” (Asimow 1994, 129). And indeed, it has even been

suggested that the European Union (E.U.) adopt American-style notice and comment rulemaking as a way to cure the E.U.’s supposed “democratic deficit” (Bignami 1999).

The limited existing empirical literature on rulemaking appears to support this broader, more theoretical view that notice and comment procedures are normatively desirable. This literature generally finds that notice and comment rulemaking does not systematically favor business interests (Cropper et al. 1992; Golden 1998; Magat, Krupnick, and Harrington 1986; Nixon, Howard, and DeWitt 2002), suggesting that notice and comment procedures may succeed in giving less-privileged constituents, representing the broader public, meaningful influence within the policymaking process. However, such findings—and the normative conclusions that one might draw from them—stand in sharp contrast to the larger interest group literature, which emphasizes the persistent advantages that business interests enjoy within the policymaking system (Baumgartner and Leech 1998, 2001; Schlozman 1984; Schlozman and Tierny 1986).

In this article, we test the following hypothesis: business interests dominate bureaucratic policymaking at the expense of the broader public. Our own conclusions are markedly less optimistic than the extant empirical rulemaking literature. We analyze an original data set of over 30 rules and almost 1,700 public comments from four U.S. federal agencies, covering

the period 1994 to 2001. We present statistical evidence that business interests enjoy disproportionate influence over rulemaking outputs despite the supposedly equalizing effects of notice and comment procedures.

Notice and Comment Rulemaking and the Existing Empirical Evidence

The Administrative Procedure Act (APA) governs notice and comment rulemaking. The APA was enacted in 1946 in order to constrain agency autonomy over regulated industries and to legitimate agency actions during rulemaking. The Act represented Congress' attempt to make agency "decision-making procedures open, accessible, and fair" (Croley 2000, 47). In essence, the APA mandates two main procedures that agencies must follow when engaged in most rulemaking (Kerwin 2003; West 1995). First, the agency must provide notice of a proposed rule in the Federal Register. Notice must include "either the terms or substance of the proposed rule or a description of the subjects and issues involved" (APA § 553(b)). Second, the agency must "give interested persons an opportunity to participate in the rule through submission of written data, views, or arguments" and must consider "the relevant matter presented" (APA § 553(c)).

These two obligations are not, on their face, very rigorous. However, in the 1970s courts began reinterpreting Section 553 to require agencies to compile extensive paper records of their rulemakings in order to facilitate both judicial review and meaningful public participation (McGarity 1992, 1997; Rabin 1986; Shapiro 1988). These court-enhanced rulemaking procedures, it has been argued, may encourage participation in and influence over the rulemaking process by weakly organized groups and individuals that may normally be frozen out of the policymaking process (Croley 2000; Harris and Milkis 1989).

Golden (1998) provides the most methodologically sophisticated attempt to test for the equalizing effects of notice and comment procedures on rulemaking. Using a sample of 10 rules, she finds that business interests are the most frequent participants during the notice and comment period of rulemaking. More importantly, however, Golden finds "no clear pattern" of business influence over the final rules in her sample.¹ In other words, she finds no evidence

of a systematic bias toward business interests. Other scholars report similar results. Cropper et al. evaluate the participation of commenters in rulemaking, concluding that both nonbusiness interests (environmental groups) and some business interests (farming groups) "not only participate actively in the regulatory process but do so quite effectively" in pesticide regulation (1992, 195). Magat, Krupnick, and Harrington (1986) find that business comments submitted during the notice and comment period of rulemaking to the Environmental Protection Agency (EPA) were generally not effective at influencing the rules in their sample. And Nixon, Howard, and DeWitt (2002) find that when the Securities and Exchange Commission identified comments from self-regulated organizations (presumably business interests), the agency rejected these arguments at a higher rate than the category of "all commenters."

These extant studies thus support the view that notice and comment procedures may inhibit a business bias in bureaucratic rulemaking. Yet, how convincing is this evidence? Golden's (1998) analysis, which represented an important step forward, faces a number of limitations. For instance, it does not provide a discussion of the method of coding for the key explanatory variable nor does it include intercoder reliability measures. Moreover, the study's sample of rules is small and is drawn from one calendar year. Other empirical analyses of commenter influence during the notice and comment period also suffer from serious measurement weaknesses. In their study of pesticide regulation, Cropper et al. (1992) analyze comments from environmental and farm groups, but do not assess the influence of a key affected business industry—pesticide manufacturers. Magat, Krupnick, and Harrington (1986) use an "admittedly simplistic" count measure of the volume of business comments in their study of business influence over EPA policy. Likewise, Nixon, Howard, and DeWitt (2002) do not evaluate the actual text of the public comments; instead they base their analysis on the Security and Exchange Commission's truncated interpretation of commenter views.

These serious problems have led one scholar to despair that we actually know little about business influence during notice and comment rulemaking. "Should we conclude from these cases that business lacks influence in the rulemaking process?" Kerwin asks. "Certainly not," he answers. "From this handful of cases no generalizations about the overall influence of business interests can be drawn" (2003, 204).

In fact, the larger literature suggests that business interests may be powerful sources of influence over all

¹Golden's null finding may have resulted from the study's small sample size.

stages of the policymaking process, including rule-making. Early theories of bureaucratic policymaking, with their striking images of “agency capture” (Berstein 1955; Huntington 1966; Stigler 1971) and “iron triangles” (Freeman 1958; Seidman 1977) viewed the regulatory stage as a relatively closed universe, which was primarily accessible to certain privileged and powerful interests.² Studies adopting a collective action framework also suggested a closed regulatory stage: only groups able to overcome collective action problems should be able to organize effectively in order to lobby agencies to act on their members’ behalf (Olson 1965), supporting Schattschneider’s (1960) observation: the representation of latent interests is not automatic because the interests of the broader public are likely to remain unorganized (but see Dahl 1961; Truman 1951). In fact, a number of scholars have found evidence of a “bias toward business” in the formation of interest groups (Gais 1996; Rozwell and Wilcox 1999; Salisbury 1984; Schlozman 1984; Schlozman and Tierney 1986).³ Yet, as Salisbury (1990) and Gray and Lowery (2001) highlight, bias in the formation of groups does not necessarily mean bias in government outputs. Our study responds to this concern by testing the influence of different kinds of constituents on the formation of government regulations.

Towards a Testable Hypothesis

We test the hypothesis that the U.S. federal bureaucracy exhibits a “bias toward business” during notice and comment rulemaking. We first suggest two reasons why business comments may influence the content of bureaucratic rules.

First, agencies are likely to be influenced by the number of comments coming from business interests. We can expect business interests to dominate the process in terms of the number of comments submitted and the percentage of total comments. Indeed, to the extent that there are still sufficiently high costs to participating in notice and comment rulemaking, it can be expected that business interests will be able to pay

these high costs while individual citizens and poorly funded public interest groups will continue to face hurdles to participation. Costs to participation may remain high due to the need to monitor the Federal Register for notices of proposed rulemaking, to access and comprehend complex supporting technical and scientific data, and to draft a convincing argument for changes in the proposed rule (Kerwin 2003; Rossi 1997; West 1985).

The courts have construed APA Section 553 to require agencies to adequately respond to adverse comments. While in theory this requirement applies to *all* adverse comments, including lone comments by individual citizens, it should be much more difficult for an agency to explain satisfactorily to a reviewing court why it ignored a particular suggested change when numerous commenters, rather than a single commenter, suggested the change. If business interests submit the majority of comments, then agencies ignore these recommendations at their peril. Of course, not all business comments will be unified in their suggestions for change and the degree of consensus in their messages should affect the ability to persuade agencies. However, on average, we may expect more cohesion in matters of regulatory policy between business interests than other groups of potential participants.⁴

Second, comments from business-related interests provide more information and signal a greater level of commenter expertise, causing agencies to respond to the requests made by business commenters. One of the important theoretical justifications for notice and comment procedures, in addition to their supposed ability to “democratize” the policymaking process, is that they improve agency decision making by providing agencies with better quality information about the consequences of their policy proposals (Rossi 1997). By “facilitating consideration of more interests and viewpoints [and by] increasing the number of points of access, participation [in notice and comment procedures] makes it more probable that information will be heard and considered by decisionmakers” (Rossi 1997, 186).

However, the additional information generated by notice and comment procedures is not necessarily of uniform quality, and agencies may be better able to ignore poor-quality comments than comments that

²And while some scholars, such as Hecl (1978) and Heinz et al. (1993), suggest that no one actor controls policymaking, the bureaucratic control literature (Calvert, McCubbins, and Weingast 1989; McCubbins and Schwartz 1984; McCubbins, Noll, and Weingast 1987, 1989) provides a prominent role for some types of organized interests.

³See Hart (2004) and Smith (2000) for spirited discussions regarding what is considered “business” lobbying.

⁴Some scholars (e.g., Buchanan and Tullock 1975), however, have argued that different types of business interests may lobby for dissimilar government benefits, and Golden (1998) posited a similar hypothesis. We return to this matter later when we test our assumption of business commenter unity in the models.

provide relevant data or persuasive arguments. For example, some comments may provide information that the agency already possesses. Other comments may fail to buttress their arguments with technical and scientific data. Some comments may offer only a single, small point; others may raise multiple issues. However, as Kerwin observes, "A strong case can be made that" businesses' and business-related trade associations' "superior resources and experience lead to a degree of influence in rulemaking that others cannot match" (2003, 183).

Business interests are likely to be able to provide higher quality comments than other kinds of commenters for at least three reasons. First, business interests are more likely to have the capacity to understand the complex, technical data and studies that the agency may cite in support of its proposed rule. Second, business interests are likely better placed to respond to agency data with their own scientifically sound technical data. In fact, as Magat, Krupnick, and Harrington (1986, 13) note, businesses and industries often hold data and expert information that the agencies want and need to promulgate rules. Third, business interests are more likely to have access to lawyers, lobbyists, or experts who are trained in drafting convincing arguments on fine technical points. If business interests *are* better able to provide agencies with higher-quality comments than nonbusiness interests, and if the quality of comments influences the probability that agencies will incorporate changes contained therein into the final rule, then it is likely that business interests will enjoy disproportionate influence over agency outputs.

Data and Methods

Our analysis relies on an original data set that categorizes the participants in notice and comment rulemaking for 40 rules promulgated by four separate agencies over a seven-year period. The rules were promulgated by the U.S. Department of Labor's (DOL) Occupational Safety and Health Administration (OSHA) and Employment Standards Administration (ESA), and the U.S. Department of Transportation's (DOT) Federal Railroad Administration (FRA) and Federal Highway Administration (FHWA) from 1994 to 2001. The agencies were selected based on a pre-arranged set of criteria, including both substantive and pragmatic concerns.⁵

⁵We chose these agencies for four primary reasons. First, each agency wrote more than 10 substantive rules from 1994 to 2001.

In selecting the specific rules, we studied all rules receiving less than 200 or more than one comment. Rules generating uncharacteristically large amounts of comments were removed in part for coding convenience and in part due to our preference to focus on the "everyday business" of agency rulemaking that has often been neglected in the extant literature, which generally tends to focus on rules that are atypically and extremely controversial or prominent.⁶ The selected rules totalled 40 with 1,693 comments. While this is a relatively small sample, we do make a significant advancement by studying over three times the number of rules considered by similar research (e.g., Golden 1998).

To test the relative influence of participants in notice and comment rulemaking, multiple independent coders used content analysis to transform the rules and their associated comments into quantitative data. Content analysis is a "research technique for making replicable and valid inferences from data" (Krippendorff 1980, 21). This technique allows scholars to analyze the substance of large collections of oral or written information in a systematic fashion and has been successfully used by political scientists to code diverse sources of information (Hill, Hanna, and Shafiqat 1997; Jenkins-Smith, St. Clair, and Woods 1991; Searing 1978). Each coder went through a training session and received detailed instructions and a codebook. The coders analyzed each rule and its comments along two axes: the extent to which the rule changed between its proposed and final forms and the extent to which various kinds of commenters

The quantity requirement was necessary to collect a large enough sample to complete statistical analysis. The time frame was necessary because a key predictor variable (OMB significance) is only available for recent years. Second, all of the chosen agencies are found within executive departments, and the "OMB significance" variable is only available for such departments. Third and fourth, the departments were selected to provide a diverse set of policy areas that covered both regulatory and distributive policymaking and to avoid outliers with respect to annual budgets or personnel. We used the Federal Register Index to identify the final rules promulgated by OSHA, FRA, and ESA in a given year, while we obtained the information for FHWA from the DOT web site. The FHWA rules were put online in a random fashion; however, the information concerning rules promulgated before 1998 was limited. The FHWA list spanned the same timeframe as the other agencies.

⁶A list of the selected rules is available from the authors. Rules receiving less than two comments were removed because of the difficulty of making inferences about the degree of comment influence on the basis of a very small number of comments. Eleven rules had more than 200 comments, including four OSHA rules, four ESA rules, and three from FHWA. Missing data also required us to exclude two additional rules from OSHA, two from ESA, and one from FRA. Sensitivity analysis uncovered no patterns in the missing information.

requested such changes. These axes provided the dependent and key predictor variables. Additionally, we placed each commenter into one of three identity categories: “business interests” (members or representatives of a trade association or individual business); “government interests” (state and local government officials and members of Congress and federal agencies); and “nonbusiness/nongovernment” interests (citizens, public interest groups, academia, think tanks, professional associations, or unions). We generated intercoder reliability scores to verify the accuracy of the coding. These scores indicate a statistically acceptable level of agreement between the coders.⁷

The Dependent Variable. Government Involvement, the dependent variable, measures the extent to which each rule changed from its proposed to its final, promulgated version. To construct this measure, coders read each rule in its proposed and final versions. The coders then used a three-point scale to evaluate each rule and to assess whether the final rule changed from the proposed rule in terms of the level of government regulation embodied in the rule. Rules that changed to provide for *more* government regulation were coded as “+1,” rules whose level of government regulation did not change were coded as “0,” and rules whose level of government regulation *decreased* where coded as “-1.”

The Main Predictor Variable. Business Interests, our main predictor variable, uses the same three-point scale to measure the extent to which each comment advocated a change in the level of regulation from a rule’s baseline—that is, from the level of regulation in the proposed rule. We used these evaluations to calculate a rule-level mean score of the average change advocated by our three types of commenters: business interests, government interests, and nonbusiness/non-government interests. The correlations between the preferences of business interests and the other non-

business interests were quite low, suggesting that as a general matter business interests do not represent nonbusiness interests by proxy.⁸

Our predictor variables, like all useful variables in the social sciences, are a simplification of reality. We recognize that some businesses have more authority, access, or resources than others, and we recognize that some trade associations have a larger workforce aimed at regulatory monitoring than other business interests. Such attributes, however, are not measurable from the face of submitted comments, and we were unable to differentiate between different kinds of business interests. Additionally, the community of business commenters to any particular rule may not send a consistent or unified message to agencies, and thus, in some models, we also include a variable to assess the variance in the messages sent by business commenters. (In fact, over 83% of the business commenters in the study sought less regulation in final rules.) Nevertheless, we maintain that the mean score provides a good approximation of the overall message from the business community provided to agency officials during the notice and comment period because it appropriately captures the expectation that the central message (for more or less regulation) of business commenters affects the content of final rules. While our measures of participant influence are admittedly imperfect, these measures are an improvement over existing quantitative studies and set the stage for the development of more differentiated measures in the future.

The Control Variables. Each of our models also contains a set of control variables, including measures of public salience and technical complexity (Gormley 1986; Ringquist, Worsham, and Eisner 2003). The public salience and technical complexity variables were created by having the independent coders evaluate the “salience” and “complexity” of each rule on a four-point scale, ranging from “low” (1) to “high” (4).⁹ Alternative measures of salience and complexity did not substantively affect our reported results.¹⁰ We also

⁷To create the intercoder reliability measures, we selected six rules (15%) to be coded by two individuals. The sample included one rule from OSHA, one from ESA, and two rules from FRA and FHWA. We used Eijk’s (2001) measure of agreement for all ordinal variables in the analysis, which ranges from -1.0 to 1.0. We used percent agreement to score nonordinal variables. The degree of agreement in the subsample for the public salience measure is high at .95. Likewise, the degree of agreement between the government regulation scores at the rule level is high at .92, while the likelihood that a commenter is placed correctly in the 10-point classification of commenter type is .85. Moreover, in the later model specification, we included a variable to assess any differences between the coders. The inclusion of this measure did not affect the results.

⁸The correlation between business and nonbusiness/nongovernment interests is -.13, and the correlation between business and government interests is .09. The correlation between nonbusiness/nongovernment and government interests is low at .11.

⁹The coders relied on Gormley’s definitions of salience and complexity. In his words, “[a] highly salient issue is one that affects a large number of people in a significant way” and “a highly complex issue is one that raises factual questions that cannot be answered by generalists or laypersons” (1986, 598).

¹⁰For instance, we coded a rule as salient when the Office of Management and Budget had determined that a given rule was “significant” in its economic impact or policy implications. Our

controlled for the department promulgating the rule. Given the degrees of freedom in the analyses, we use a single dummy variable for the DOL agencies in place of three agency specific effects. We obtained comparable results with the inclusion of three agency variables.

Results—Who Participates?

Our first point of interest is the relative degree of participation in notice and comment rulemaking by each of our three categories of commenters. We found that business interests submitted 966 of the 1,693 public comments in our data set—over 57%.¹¹ In our sample, government interests submitted 327 comments, or 19% of the total comments. Nonbusiness/nongovernment interests submitted 373 comments, or 22%. Of those nonbusiness/nongovernment interests, public interest groups provided only 95 comments, or 6% of the total comments. In accord with previous research (see Kerwin 2003), it appears from our sample that notice and comment procedures do not equalize participation in terms of volume of comments submitted. Moreover, the participation rates suggest that while notice and comment procedures may have lowered the costs of participating in agency policy-making, the costs of such participation remain sufficiently high that individual citizens and public interest groups remain disadvantaged in their ability to participate.

Some might view the apparently low level of non-business participation as disappointing. However, we caution that our results as to the level of participation are difficult to interpret. In the absence of a baseline expectation of what the level of nonbusiness participation should be (or would be absent notice and comment procedures), we are hesitant to qualify the level of nonbusiness participation as necessarily low. Rather, we believe the more interesting question is whether those participants, despite participating less frequently than business interests, are nonetheless able to persuade agencies to change their policies.

alternative measures of complexity were the page length of the final rule and the number of weeks between the publication of the proposed and final rules.

¹¹Interestingly, this finding generally matches research by Schlozman and Tierney (1986) and Baumgartner and Leech (2001), both of which find that business interests dominate the lobbying community to approximately the same degree.

Results—Who Influences?

We use ordered probit to examine the relative influence of each category of commenter.¹² The results are presented in Table 1. The dependent variable in each of the five models is “Government Involvement.” Models A, B, and C consider the individual influence of each kind of commenter on final agency rules. The sample size in Table 1 varies because some rules received no comments from particular types of commenters.¹³ In Model A, the key predictor variable—Business Interests—is statistically significant. While ordered probit coefficients are not directly interpretable, the significance of the Business Interests variable indicates that the comments from business-related interests directly affect the regulatory nature of final rules. The chi-squared statistic indicates a good model fit, and the results hold up to a number of robustness checks,¹⁴ including the inclusion of a variable tapping the standard deviation of the main predictor variable, Business Interests.¹⁵

Figure 1 displays Model A’s predicted probabilities to aid in interpreting the ordered probit results. We used the data generated by our analysis to plot the predicted probabilities of our dependent variable, Government Involvement, while varying the Business Interest variable across its entire range (and while holding the remaining control variables to their mean values). As we explain below, the figure shows that business commenters are able to shift agency rules toward their desired level of government regulation.

The X-axis plots the degree to which business commenters, on average, desired more or less

¹²Ordered probit is the correct statistical method due to the ordered nature of the dependent variable. We recognize that our sample size is relatively small for the use of maximum likelihood techniques. As an additional robustness check, we ran the analyses using ordinary least squares regression, and similar results were obtained.

¹³For example, Model A’s sample size of 39 indicates that one rule received no comments from business interests.

¹⁴The parallel regression assumption is not violated in Model A. Additionally, auxiliary regressions did not suggest collinearity to be a problem. Several control variables were included to check the robustness of the findings. For instance, we introduced a dummy variable that measures whether the rule was subject to public hearings or not. We also created a dummy variable for rules that had very few public comments (under three) and another dummy variable for rules with many comments (over 100). The inclusion of these variables yielded similar results.

¹⁵The inclusion of the standard deviation (and an interaction term between the standard deviation and Business Interests) indicates that neither the variance around the Business Interests variable nor the interaction term is a statistically significant predictor variable.

TABLE 1 The Government Involvement Dependent Variable

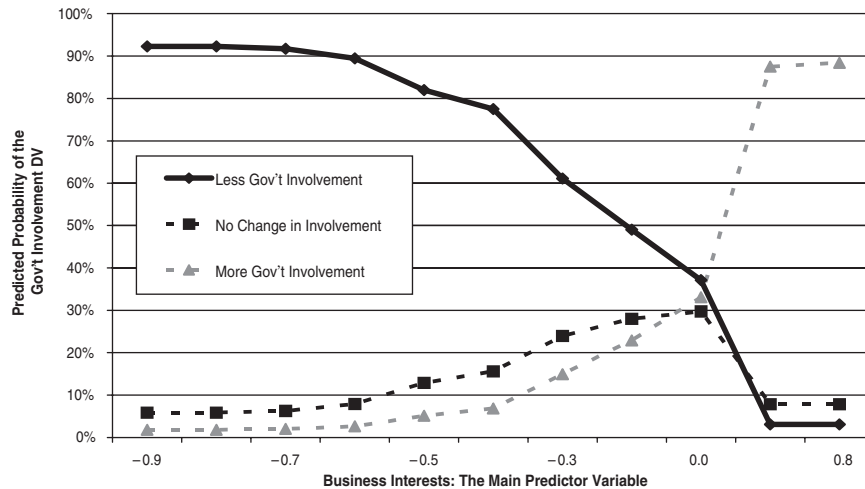
INDEPENDENT VARIABLES	Model A:	Model B:	Model C:	Model D:	Model E:
	The Influence of Business Commenters	The Influence of Nonbusiness/ Nongov't Commenters	The Influence of Gov't Commenters	Competing Influence of Commenters	The Influence of Business Commenters with Percentage of Business Commenters
Business Interests	1.900* (.505)	—	—	4.342* (1.560)	1.259* (.424)
Nonbusiness/ Nongovernment	—	.018 (.3640)	—	-1.197 (1.004)	—
Government Interests	—	—	.846* (.437)	1.083 (.763)	—
Proportion of Comments from Business Interests	—	—	—	—	-2.167* (1.108)
Public Salience	-0.176 (.246)	.007 (.247)	.043 (.287)	-0.510 (.667)	-0.335 (.270)
Complexity	-0.557* (.231)	-0.022 (.199)	.059 (.220)	-1.182 (.719)	-0.750 (.282)
DOL Dummy	1.001 (.568)	-0.228 (.466)	-0.159 (.473)	.807 (1.023)	—
Cut-Points	-1.450, -0.644	.151, .683	.347, .980	-4.347, -3.204	-3.382, -2.583
Sample Size	39	33	33	26	39
LR χ^2 ; Prob. > χ^2	18.09, .00	.25, .99	4.65, .33	24.51, .00	18.91, .00

Source: Authors' data set.

Notes: Ordered probit coefficients with standard errors in parentheses. Two-tailed tests.

* $p \leq .05$.

FIGURE 1 Tapping the Bureaucracy's Responsiveness to Comments from Business Interests



Source: Authors' data set. N = 39.

government regulation in the final rule. These averages can, in theory, take any value along the range of our three-point predictor variable, from -1.0 to 1.0 . At the zero point, business commenters on average desired *no* change in the proposed rule. At points to the right of the zero point, business commenters were increasingly united in their desire for *more* government regulation in the final rule. At points to the left, business commenters were increasingly united in their desire for *less* government regulation. The Y-axis plots three predicted probabilities: that the agency will change its final rule to include either (1) more government regulation, (2) less regulation, or that the agency will (3) not change the final rule.

When business commenters are united in their desire to see less regulation in a final rule (near the -0.9 mark on the X-axis), the figure shows that they will receive less regulation over 90% of the time. As preferences for less government involvement decline, so too does the probability that the agency will change the rule to provide less regulation. The pattern of predicted probabilities for “more government involvement” is the converse: an agency is more likely to change its final rules toward “more government involvement” when business comments show a desire for more government involvement. And finally, when business commenters on average desire no change in a rule, the agency is somewhat unlikely to change the rule. In short, Figure 1 illustrates the degree to which agencies appear to change rules to reflect the desires of business commenters.¹⁶

In Table 1, Model B the main predictor variable, Nonbusiness/Nongovernment Interests, is insignificant and the model fit is poor. The main predictor variable in Model C, Government Interests, is significant, indicating that the agencies in the sample were responsive to comments by government officials. However, Model C’s low chi-squared statistic also suggests a poor model fit. The results for Models A and B together imply that claims of the equalizing effects of notice and comment procedures on agency outputs are largely misplaced. The agencies in our sample appear to consistently alter their final rules to reflect the comments of business interests; on the other hand, we find no statistically significant relationship between nonbusiness/nongovernment comments and changes in the final rule.

¹⁶We conducted similar probability analyses for comments by nonbusiness/nongovernment interests. As the probit results for Models B and D would suggest, there was no clear pattern of influence by public interest group and citizen commenters on agency outputs.

Model D analyzes the competing influence of business interests, nonbusiness/nongovernment interests, and government interests. The results for this model suggest that when business, nonbusiness/nongovernment, and government comments are considered jointly, business commenters continue to exercise a strong influence on final rules, while comments from other constituencies have little discernable statistical influence.¹⁷ We caution that these results do not necessarily mean that business influence comes at the expense of nonbusiness preferences. Instead, the results suggest that business commenters are able to influence the content of final rules even when controlling for the preferences of other types of commenters. (Of course, our analysis does not speak to the possibility that nonbusiness interests hold key—and perhaps superior—influence over policy outputs at other stages of the policymaking process.)¹⁸

Why Business Interests? Possible Explanations of the Bias

The implication of our empirical results is relatively clear: agencies appear to alter final rules to suit the expressed desires of business commenters, but do not appear to alter rules to match the expressed preferences of other kinds of interests. Our results thus support our main hypothesis and appear to contradict findings in the extant empirical rulemaking literature. Our results are particularly surprising from a formal institutional perspective, as they suggest that the APA’s legal framework for promoting public participation in rulemaking does not succeed in equalizing the influence of all types of participants. In other words, just because the notice and comment period may appear “refreshingly democratic” (Asimow 1994, 129) in its call for public participation during agency decision making, this does not mean that the interests of the broader public are furthered in agency rulemaking.

What explains this apparent bias toward business? As we suggested previously, one possibility is that

¹⁷The chi-squared statistic indicates that the fit of the model specification is good. Given the relatively small number of degrees of freedom, we ran a number of reliability tests, and we found, for instance, the same results when two of the three possible groupings were included in the analyses.

¹⁸Notice and comment rulemaking is but one of a large number of possible institutional arrangements that offer participation in and influence over government policy outputs, and whether a similar “bias toward business” affects other policymaking arenas—such as agency adjudications, the rule formation stage, advisory boards, or so called “negotiated rulemaking”—remains to be seen (Balla and Wright 2001; Chubb 1983; Langbein and Kerwin 2000).

TABLE 2 Predicted Probabilities of Government Involvement Dependent Variable

Proportion of Comments from Business Interests	Categories of the Dependent Variable		
	Less Government Involvement	No Change in Government Involvement	More Government Involvement
Low (about 10% Business Comments)	37%	28%	35%
Middle (about 50% Business Comments)	65%	22%	13%
High (about 90% Business Comments)	86%	10%	4%

Source: Authors' data set.

Notes: The changes in the predicted probability of the dependent variable were generated while varying one independent variable (the Proportion of Comments from Business Interests) from a low proportion of business commenters to a high proportion. All other variables were held to their mean values when generating the results.

business commenters enjoy strength in numbers, with their influence arising from the fact that business interests typically submit the majority of comments to a given rule. Another possibility is that business interests have disproportionate influence on final rules because business comments provide the agency with higher quality information. We assess each of these possible explanations.

We find solid support for the explanation that business influence is enhanced when there are a high proportion of business comments submitted during the public comment period. To test this first explanation, we generated a new variable that measures the proportion of business-related comments to each rule, and we then included this variable in the basic model.¹⁹ The results are shown in Table 1, Model E and indicate that the proportion of comments from business interests is a significant predictor variable in the analysis. Again, the sign and magnitude of these ordered probit coefficients are difficult to interpret directly. To better understand these relationships, we generate a number of predicted probabilities for the dependent variable while varying the proportion of business commenters. Table 2 provides these results.

The findings in Table 2 indicate that as the proportion of business commenters increases, agency outputs become increasingly skewed toward providing less government involvement in final rules. This movement in agency outputs matches the desired level of government involvement expressed by the vast majority of business commenters in the sample. These results suggest that an agency's favorable disposition toward business comments may be a reaction to the

proportion of business comments submitted to a rule. Comparable results occur when we include a frequency variable tapping the number of business comments to a rule; however, this variable falls short of the level of statistical significance established for the article.

In contrast, we found no support for our second explanation regarding business bias: that business commenters communicate a greater level of information and expertise to agencies than do other commenters. To assess these relationships, we used five separate, independent measures to test the informational quality of the business comments: whether the commenter identified him or herself as an "expert";²⁰ whether the commenter submitted a comment of over one page in length (assuming that longer comments contain more information); whether the commenter attached any additional documents, such as a scientific study, to the comment; whether the commenter suggested more than one change within the comment; and whether the commenter was a Washington D.C. "insider."²¹ Of course, these variables are imperfect proxies for commenter information and expertise. However, our ability to construct better indicators was limited by our need to construct the measures from the comments themselves.²²

²⁰"Expert" includes commenters identifying themselves as lawyers, physicians, Ph.D.s, or scientists.

²¹"Insiders" includes commenters listing a Maryland, Virginia, or Washington D.C. address.

²²In theory it might be possible to construct alternative measures of information and expertise using such information as the "size" of the commenter (perhaps measured by a business's annual revenue or number of employees), but such information is not contained in the public comments, and is not otherwise available for many of the commenters, particularly those that are not public corporations.

¹⁹The results do not include a dummy variable for DOL agencies due to collinearity. However, similar results are obtained with the inclusion of the three agency specific effects, leading to a high level of confidence in the findings.

We then used correlation analysis to determine the level of association between each of these five characteristics and the likelihood that a comment came from a business interest. We found no statistically significant relationship between any of our measures of comment quality and the fact that the comment was written by a business interest.²³ If business comments are generally of no higher quality than the comments of other kinds of commenters, then it is unlikely that business expertise is behind the disproportionate influence of business commenters.

Conclusion

Students of politics have long been concerned with the role of interest group influence on government policymaking, yet few scholars have examined the effect of lobbying by organized interests on the promulgation of regulations. This is surprising given the fact that there is an established legal institution—the APA and its notice and comment requirements—that provides a unique, legally mandated opportunity for concerned groups to participate in the agency policymaking process. Some have argued that notice and comment procedures may accordingly serve to help neutralize the natural advantage business interests seem to hold in lobbying generally. However, our analysis largely confirms both Stewart’s observation that “[b]road participation rights do not, by any means, ensure that all relevant interests will be represented before the agencies” (1975, 1763) and Pika’s conclusion that “meaningful public participation is easier to mandate than to achieve” (1983, 310).

That said, we emphasize that our conclusions are not wholly pessimistic as to the democratizing capacity of notice and comment procedures. On the one hand, individual citizens and public interest groups *are* able to participate in rulemaking, and although they tend to do so at what some might consider a fairly low level, that participation may, by itself, be of normative democratic value. On the other hand, our analysis shows that the APA has at least partially accomplished one of its primary, original goals: limiting the ability of federal agencies to regulate with impunity. Indeed, agencies do respond to the overall messages found in comments from certain kinds of constituents—business interests—whether those

comments are filtered through business groups or are provided by individual business commenters.

Our analysis is not, nor should it be, the last word on this subject. For instance, more work needs to be done to better understand the *reasons* for the disproportionate influence of business interests over notice and comment rulemaking. We argued, for instance, that business influence stems from “strength in numbers” and that business comments contain higher quality information than comments from other kinds of rule-making participants. Our analysis demonstrates that a greater proportion of business interests within the public comments allow business commenters to better pursue their preferred level of government involvement in agency rules. This finding suggests that if other types of participants become more active in their submission of comments, business influence over agency policy outputs may decrease during the notice and comment period. In this regard neither our findings nor the conclusions we draw from them are incompatible with Carpenter’s (2004) recent proposed alternative to classical “capture” theory.²⁴ However, our initial investigation into comment information and expertise casts doubt on our second explanation regarding business influence.

We emphasize that our findings may be contingent on our choice to focus on the relatively low salience rulemakings that dominate most agencies’ regulatory agendas. Future studies would do well to focus on high salience, controversial rules over which nonbusiness interests may enjoy more influence, and to expand the analysis to investigate, in tandem, the influence of business and nonbusiness interests at other stages of the policymaking process, such as on the drafting of the original legislation. Additionally, we caution that our results may be historically contingent and should not necessarily be taken as proof that the federal bureaucracy has always responded to commenters in the manner shown here. Our data set covered a period of years in which the Congress was largely controlled by Republicans and President Clinton occupied the White House. We can only speculate whether we

²³No item was correlated at a rate of over .13 with the business interest’s variable. We were unable to combine the five measures of comment quality into a composite measure because the measures do not scale together sufficiently well to create a statistically reliable composite measure.

²⁴To simplify his argument, Carpenter suggests that even “neutral” regulators may face rational incentives to pursue policies that systematically favor certain kinds of interests. Such incentives might arise in part where regulators are more familiar with the reputations of certain regulated entities and are better able to accurately assess the quality of the information that those entities provide the agency. Carpenter focuses his argument on the regulatory drug approval process, and extending his analysis to notice and comment rulemaking, where the rules of the game differ quite substantially, would require another paper and another data set. In brief, though, we are agnostic as to whether our results lend support to “capture” theory or to Carpenter’s revision of it.

would have uncovered a similar pattern of business influence in another era in which institutional arrangements, or the political climate, might differ. In the future, researchers should collect data to take advantage more fully of shifts in congressional politics and presidential administrations. Finally, whether notice and comment procedures themselves may be more effectively designed to equalize participation and influence is perhaps the question most worthy of further evaluation and empirical scrutiny.

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