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The Effect of Direct Democracy on the Size and Diversity of State Interest Group Populations

Frederick J. Boehmke
University of Iowa

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This article studies the effect of direct democracy on the size and diversity of state interest group populations, providing an empirical test of a formal model of how access to the initiative process affects group formation and activities (Boehmke 2000). The model predicts that more groups mobilize and become active in initiative states; this prediction is confirmed by the regression analysis in this paper: direct democracy increases a state's interest group population by about 17%. With an additional assumption, I also generate and test the hypothesis that the increase is disproportionately centered among traditionally underrepresented citizen groups, relative to business and economic groups. This hypothesis is also empirically supported: citizen interest group populations are increased by 29% whereas the increase is only 12% for economic groups, suggesting that direct democracy increases diversity in interest group representation.

The bias in the interest group system is a well-documented phenomenon. Every systematic study of interest group populations has found that business groups and corporations are overrepresented and broad-based membership groups are underrepresented.[1] This is a result of the collective action problem inherent in mobilizing broader-based groups: while the benefits of their actions can be enjoyed by anyone, the costs are borne solely by the members (Olson 1965). There are many ways to increase the incentives for individuals to join and mobilize groups; scholars have examined how interest groups offer a mix of selective and purposive benefits to attract potential members (Chong 1991; Moe 1980; Rothenberg 1992). Little work has been done, however, on the role of political institutions in mobilization and formation decisions, but recent re-

[1] Investigated first by Schattschneider (1960), the first broad empirical study was performed by Schlozman and Tierney (1986), whose findings have been repeated by Walker (1991) and Heinz, Laumann, Nelson and Salisbury (1993), among others.

search suggests that interest group formation is influenced by the opportunities that these institutions create.[2] This article tests two predictions about the relationship between interest group mobilization and the direct initiative process: first, that direct democracy states have more interest groups and second, that the additional groups come disproportionately from underrepresented categories.

The logic behind the first prediction is relatively straightforward: by offering interest groups another method of influencing policy, direct democracy increases the expected benefits of mobilizing.[3] Potential groups that are considering whether the costs of mobilization are warranted will take this extra incentive into account, and some of them become active whereas without direct legislation options they would not have. Previous research on group formation, however, has not examined the potential link between institutions and interest group mobilization.

Besides an increase in the absolute number of groups, I also develop and test a hypothesis regarding the influence of the initiative process on the composition of state interest group populations. The debate over whether the initiative process benefits economic and business interests rather than the broad-based citizen groups that it was originally intended to help continues today as money becomes increasingly important in initiative politics. By focusing on group mobilizations, I explore this issue from a different angle. If the initiative process is better suited to use by citizen groups, then the additional groups that mobilize due to it should reflect this fact. The data confirm this hypothesis. By disproportionately advantaging citizen groups over economic groups, direct democracy helps reduce bias in interest representation, bringing states with direct initiative provisions closer to the pluralist ideal (Dahl 1961; Truman 1951).

Besides providing evidence for how political institutions shape the interest group universe, the empirical results in this paper raise important issues about the consequences of direct democracy for state politics. Most of the current work focuses on whether the initiative process has been co-opted by economic interests (Broder 2000; Smith 1998) or whether it is still an institution that primarily benefits citizen groups, as its founders intended (Gerber 1999). If access to the initiative process increases the number of groups that are active, particularly citizen groups, then the consequences of the initiative process cannot be measured solely by initiatives observed on the ballot. These additional groups are also involved in other aspects of state politics and can influence nonballot outcomes.

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[2] While Walker (1991) examines the effect of patrons, including the government, on interest group mobilization, a more closely related study is Gais (1996), which shows how government regulations influence political action committee (PAC) formation.

[3] In particular, this article focuses on the effects of statutory and constitutional initiative provisions by which citizens, after meeting certain signature and language requirements, can place potential statutes and constitutional amendments directly on the ballot for voters to pass. See Magleby (1984) and Cronin (1989) for more information.

To demonstrate the effect of the initiative on the number and composition of state interest group populations, I outline the theory behind the prediction that direct democracy leads to increased mobilization and the related hypothesis that it is more beneficial for traditionally underrepresented membership groups. I also discuss other relevant theories about aggregate interest group populations and how they are operationalized in the empirical model. Using these theories, I present the data that are used to test their predictions. Regression analysis of the total number of interest groups in each state confirms the first hypothesis. Then, to examine the effect of the initiative on the diversity of representation, I decompose the total number of groups into two subpopulations representing economic and citizen interests and examine these separately, demonstrating support for the second hypothesis.

The Initiative and State Interest Group Populations

As previously stated, the central prediction being tested is relatively straightforward: states with provisions for direct initiatives should have more interest groups. This prediction is taken directly from Boehmke (2000), which develops a formal model of the initiative process.[4] The model is developed from the point of view of an interest group that wishes to gain adoption of a policy that the legislature (treated as a unitary actor) would prefer not to adopt. Both are uncertain about whether a majority of voters prefer adopting the policy. Without the initiative process, the interest group can only use monetary contributions to convince the legislature to move policy. With the initiative process, though, the group has an additional avenue of policy influence that benefits it in two ways. First, when the legislature refuses to cooperate, the group can appeal directly to voters by proposing an initiative in the hope that voters will support adopting the policy. The second benefit is the leverage that the threat of proposing an initiative provides to the group in its negotiations with the legislature. Since the legislature knows that if it demands too much the group will bypass it, the legislature may be willing to accept fewer monetary contributions in exchange for adopting the policy.

After developing the model and equilibrium, one of the results is that the interest group's expected utility is at least as great with the initiative process than without it.[5] Put another way, groups that are seeking to change policy prefer, ceteris paribus, to operate in states with the initiative process. Translated into the mobilization decision, this means that since the expected benefits are greater for groups in initiative states, more groups expect that the benefits

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[4] Related models of the initiative process (Gerber 1996; Matsusaka and McCarty 2000) have not been applied directly to this issue.

[5] That is, groups that are willing to pay the cost of an initiative are always better off with the option of proposing one, but those that are not willing to pay it are neither better nor worse off. See Proposition 2, Boehmke (2000).

of mobilization exceed the costs of mobilization, thereby producing a larger interest group population.[6] As the costs for qualifying an initiative for the ballot increase, however, the net benefit for groups will decrease. This means that the effect of access to the initiative process on group mobilizations will depend on both its presence and the cost of accessing it.

To determine whether the influence of the initiative is greater among citizen groups than among economic groups requires an additional assumption to those in the model. At least three assumptions are individually sufficient to generate this hypothesis. First, since Gerber (1999) finds that citizen groups are more effective at using the initiative process, its presence may provide a greater benefit for them, which would lead to a disproportionate increase in their mobilizations relative to business groups. Second, if economic groups are more successful at achieving their policy goals than citizen groups, then the presence of the initiative matters little to them as they prefer to defend the status quo. Citizen groups may more often be in the position of benefiting from the opportunity to bypass the legislature, thereby disproportionately being conferred the advantages of the initiative process. The third possible assumption is that since the collective action problem is more easily overcome by business groups, fewer potential groups may be left to be mobilized by access to the initiative. Citizen groups, however, can use the initiative process to overcome the collective action hurdle (to some degree) since it increases the benefits of success relative to the costs of joining.

Besides the initiative process, there are other important factors to consider based on existing theories of interest group mobilization. Work by Olson (1982) predicts that the number of groups increases in stable societies over time. Once the fixed costs of mobilization are overcome, groups tend to stay active, leading to an accumulation of groups over time. I include indicator variables for each year in the sample period to account for this.

Shortly after Olson's work, the Virginia School (Coughlin, Mueller and Murrell 1990; Mitchell and Munger 1991; Mueller and Murrell 1986) began modeling the incentives of government officials to attract groups and their money, concluding that legislators would offer policy in exchange for electoral resources: states that spend more should attract more groups. To capture this effect, I include state and local government expenditures as a percentage of gross state product (GSP).

Last, one of the more detailed attempts to understand aggregate interest group populations adapts biological theories of species' diversity and density to interest group populations (Gray and Lowery 1996). This model, dubbed the Energy-Stability-Area (ESA) model, posits that the number and type of interest groups in a state are a function of three key components: 1. the energy available for consumption, which is government output; 2. the stability of the environment,

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[6] While the model does not explicitly consider the costs of mobilization, the prediction holds as long as they are not systematically different in initiative states than in noninitiative states.

or how similar the political landscape looks from year to year; and 3. area, a state's carrying capacity or total economic activity. Since government spending has already been considered to test the Virginia School's hypothesis, I also include real gross state product and its square to measure carrying capacity and an indicator variable for divided control of state government to help measure energy.

Before proceeding, it is important to consider whether other consequences might lead some groups to exit or refrain from mobilizing because of the initiative process. Consider the situations that a group favoring the status quo faces. First, it may not yet have mobilized. If the addition of the initiative leads an opposition group to mobilize, the status quo-preferring group might be spurred to mobilize to counter its opponent's efforts. Alternatively, if the status quo-preferring group has already mobilized, then the addition of opposition only gives it reason to stay that way. In either case, the prediction remains that access to the direct initiative process serves to increase the number of interest groups.

State Interest Group Populations

Direct democracy states are predicted to have more interest groups than other states for all of the reasons laid out above. To test this prediction, I use data on the number of interest groups registered to lobby in each state in 1975, 1980, and 1990, taken from Gray and Lowery (1996), which constitute the most complete picture of state interest groups over time.[7] Table 1 shows the average number of groups registered to lobby in initiative states and noninitiative states for each of the three cross-sections.[8] To test the diversity hypothesis, I use Gray and Lowery's categorization of the groups into ten subpopulations by partitioning them into economic and citizen-oriented groups, so I present the average number of groups in these subcategories as well.

First, I examine the average number of interest groups in initiative states and noninitiative states over the entire time period, presented in the first row of Table 1. While there are 384 groups per state on average, initiative states have more groups than noninitiative states, with 459 and 337 groups, respectively. A

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[7] While Gray and Lowery (1996) note that there are "variations in the restrictiveness of lobbying registration laws as well as variations in the rigor of their enforcement" (8), they conduct tests (Appendix 1) and conclude that "the impact of lobbying regulation on registrations appears to be minimal and of uncertain direction" (257).

[8] Because of missing data, there are six states for which these numbers are not available in 1975 and 1980 (Alabama, Hawaii, Nevada, Rhode Island, Utah, and West Virginia). Multiple imputation was performed due to missingness in GSP, but there were not enough observations to impute the number of groups in these six states as well. See Honaker et al. (2000) for the methodology used in the imputation. Gray and Lowery (1996) confront this problem by using 1977 GSP in its place.

TABLE 1

Average Size of Interest Group Populations

	Initiative States	Noninitiative States	All States	T-statistic[#] (w/Florida)	T-statistic[#] (w/o FL in 1990)
All Groups	459	337	384	−2.07**	−1.62*
	(448)	(242)	(340)		
All Groups, 1975	236	170	196	−1.77**	
	(160)	(85)	(122)		
All Groups, 1980	374	322	342	−0.95	
	(190)	(168)	(176)		
All Groups, 1990	735	496	587	−1.85**	−1.30
	(624)	(288)	(456)		
Economic Groups	307	242	267	−1.72**	−1.20
	(276)	(176)	(221)		
Citizen Groups	152	95	117	−2.66**	−2.52**
	(176)	(71)	(125)		

Source: Gray and Lowery (1996). Standard errors in parentheses.

[#]T-statistic for test of equality of means with equal variances; alternate hypothesis is that there are more interest groups in initiative states.

*Significantly different from zero at 10% level.

**Significantly different from zero at 5% level.

t-test of these two populations indicates that initiative states have significantly more groups at the 5% significance level.[9]

One concern exists with these numbers, however. As Gray and Lowery (1996) note, "Florida proved to be an outlier in the 1990 sample, with nearly twice as many registered interest organizations as any other state" (86).[10] Since Florida allows constitutional initiatives, my results could be affected if it is an outlier, so to be conservative the last column repeats the *t*-tests without Florida's 1990 numbers. The results are now slightly weaker: the test statistic is only significant at the 10% level. Looking at the numbers for the three cross-sections yields less conclusive results. In 1975, 1980, and 1990, there are always more groups in initiative states, with the differences ranging from 34 more groups in 1975 to 239 more groups in 1990. Separate *t*-tests for each year support my predic-

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[9]The *t*-test is performed under the null hypothesis that the average number of groups is the same and the alternate hypothesis that there are more groups in initiative states (implying a one-tailed test). I assume equal variances for the two populations.

[10]Florida's 1990 population has 2,969 registered groups, compared to 872 in 1980 and 596 in 1975. While Florida also had the largest populations in these two years, they were only slightly bigger than those in the second biggest state. Gray and Lowery (1996) conclude that it is an outlier since the increase does not seem to be caused by registration laws.

tion in 1975 and 1990, but not in 1980. Again, excluding Florida's 1990 population reduces the significance level, and the difference is not quite significant at the 10% level ($p = 0.1004$).

I also present the average number of groups in each of the two subpopulations that I examine. Using the ten subcategories in Gray and Lowery (1996), I have grouped them into economic-oriented groups and citizen groups.[11] Eight of the ten subpopulations have been categorized as economic groups and contain 267 of the 384 groups, or 69%. This percentage is slightly lower in initiative states at 67% and slightly greater in noninitiative states at 71%. While the *t*-test supports my prediction among economic groups when Florida is included, it does not support it when Florida is excluded ($p = 0.12$). Among citizen groups, however, the test statistic is significant at the 5% significance level with or without Florida, suggesting that the effects of direct democracy are more widespread among these types of groups.

While these results provide some evidence for the effect of the initiative on both the absolute number of groups and an asymmetric effect among citizen groups, the theories outlined in the previous section suggest that other variables need to be controlled for in the regression analysis. To test my first hypothesis, I use as my dependent variable the total number of groups in each state, while to test the second hypothesis, I run similar analyses on the citizen and economic subpopulations and compare the magnitudes of the effects of the initiative in each. To test these hypotheses, I include an indicator variable, *Initiative State*, which takes the value of 1 if a state allows either statutory or constitutional initiatives.[12] To determine how the number of interest groups mobilized by the initiative varies with the cost of using the initiative process, I attempted to include a variable that indicated the signature requirement necessary to qualify an initiative for the ballot. Due to extremely high collinearity between these two variables (the correlation is 0.935), however, they cannot both be included in the model. The coefficient for the initiative indicator should therefore be interpreted as the average effect of the initiative.[13] To test Olson's accumulation hypothesis, I include indicator variables for both *1980* and *1990*. To test the Virginia School's hypothesis, I include the variable *Government Expenditures*, which is state and local government expenditures as a percentage of gross state product. Gross state product is included as *Real GSP* and *Real GSP*^{2} to test the ESA model's density dependence hypothesis, and its energy component is measured through the variable *Divided Government*, which takes the

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[11] The economic subgroups are agriculture, mining, construction, finance, trade, service, transportation, and manufacturing. Social and government groups comprise the citizen category.

[12] Initiative provisions taken from Gerber (1999), Table A.1. I explored whether statutory and constitutional initiative provisions have distinct effects and found they do not.

[13] Signature requirements taken from Gerber (1999), Table A.3. For states that allow both statutory and constitutional, I took the minimum of the two signature requirements. Other configurations did not solve the collinearity problem.

value of 1 unless the governorship and the state legislature are controlled by the same party.[14]

Besides these theoretically important variables, some other factors may need to be accounted for. As already discussed, it appears that Florida is an outlier in 1990. To be cautious, I present and focus on an alternate specification that includes an indicator variable *Florida in 1990*.[15] There is also the possibility that initiative states differ in other ways from noninitiative states that may influence citizens' decisions to form interest groups, particularly liberal citizen groups, so I also include a variable to control for this. *Ideology* is the Erikson, Wright and, McIver (1993) measure of the difference between the percentages of state liberal identifiers and state conservative identifiers.[16]

Taking these factors into account leads to the following empirical model:

$$Population\ Size_{i,t} = \alpha + \beta_1 \times Initiative_i + \beta_2 \times 1980_t + \beta_3 \times 1990_t$$

$$+ \beta_4 \times \frac{Government\ Spending_{i,t}}{Gross\ State\ Product_{i,t}} + \beta_5 \times Real\ Gross\ State\ Product_{i,t}$$

$$+ \beta_6 \times Real\ Gross\ State\ Product^2_{i,t} + \beta_7 \times Ideology_i$$

$$+ \beta_8 \times Divided\ Government_{i,t} + \epsilon_{i,t}.$$

Besides estimating an alternate model that controls for Florida's possible outlier status in 1990, I run an additional variation on the basic model that allows for possible nonlinearities in the functional form.[17]

Estimation issues aside, I expect, based on the predictions of the relevant theories, that the coefficients for all the variables are positive except for the square of GSP. Most important, I predict that the presence of the initiative process in a state significantly increases the total number of interest groups of any type.

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[14] The government spending data are taken from the *Statistical Abstract of the States* (U.S. Bureau of the Census, various years) and represent nominal state and local general expenditures. Gross state product is taken from the *State Politics and Policy Quarterly* Data Resource: http://www.unl.edu/sppq and is then deflated to 1983 dollars. CPI and divided government variables also are taken from the *Statistical Abstract of the States*.

[15] I have to note that Florida's adoption of the constitutional initiative was quite recent (1972) and that perhaps part of the increase could be attributed to this fact. The results with this variable should therefore be regarded as conservative estimates of the impact of the direct initiative process on group mobilization.

[16] Including the ideology variable also leads to the loss of observations on Alaska and Hawaii, though Hawaii is already missing in 1975 and 1980. I also tried to control for regional effects by including an indicator variable for the South in an alternate specification, but it did not have a significant effect and does not influence the interpretations of the other variables.

[17] While a fixed effects model might seem appropriate, it would not be identified due to the inclusion of the state dummies and the initiative indicator (which does not vary in the sample and is the main variable of interest).

Regression Results

The results for the three models are presented in Table 2. Overall, the presence of the initiative process is found to significantly increase the number of interest groups in each model, and the other variables perform similarly across models. Since the conclusions are quite similar across models, I will discuss the findings for each variable in turn rather than one model at a time. The basic model indicates that initiative states have about 117 more interest groups, though the coefficient is only significant at the 0.10 level.

The second model, which controls for Florida in 1990, produces similar results. The indicator variable for Florida has a large and strongly significant coefficient, and the model's R^2 increases from 0.54 to 0.82. Since Florida has provisions for constitutional initiatives, removing its 1990 effect reduces the

TABLE 2

Regression Results for All Groups

	All States	Florida Outlier	Box-Cox
Initiative State	117.17*	66.58**	1.00**
	(68.75)	(34.03)	(0.33)
1980	137.17**	137.62**	2.42**
	(19.95)	(18.31)	(0.39)
1990	374.19**	328.68**	4.43**
	(59.36)	(38.71)	(0.39)
Real GSP	33.12**	22.93**	0.30**
	(12.88)	(6.39)	(0.06)
Real GSP^2	−0.37	−0.17	−0.00**
	(0.24)	(0.12)	(0.00)
Gov't Expenditures	70.31	−256.63	−2.88
	(1191.31)	(1011.92)	(10.83)
Divided Gov't	−45.43	1.62	−0.11
	(63.64)	(29.67)	(0.32)
Florida in 1990		2176.90**	8.56**
		(57.26)	(1.87)
Ideology	1.28	3.25	0.05**
	(2.90)	(2.06)	(0.02)
Constant	1.71	104.77	9.97**
	(174.96)	(134.57)	(1.34)
Average R^2	0.54	0.82	0.74

N = 134. Robust standard errors are reported in parentheses.
*Significantly different from zero at 10% level.
**Significantly different from zero at 5% level.
Average λ in Box-Cox model: 0.26.
Due to missing data, results are based on multiple imputation using Amelia (Windows version). See King et al. (2001) for more information.

estimated number of groups added by the initiative process from 117 to 67, but it is now significant at the 0.05 level.

The last model allows for possible nonlinearities in the functional form of the model by estimating a Box-Cox regression model. This allows the relationship of the dependent variable to the independent variables to vary from inverse to linear to logarithmic.[18] The average estimate of λ for the Box-Cox transformation of the dependent variable is 0.26, which is close to a logarithmic transformation, suggesting that this model provides a better fit to the data than the linear model.[19]

The results for the Box-Cox regression indicate once again that the effect of the initiative is positive and significant at the 0.05 level. Since the effect of the coefficients on the number of interest groups is difficult to determine by inspection, I perform a series of simulations to estimate the net change in the number of groups due to the initiative for different values of the signature requirement variable. These results are presented in the top part of Table 5. Because of the nonlinear relationship, the effect of the initiative depends on the value of the other variables, including the year indicators. I therefore present the results for all three years and set the other independent variable at their mean (continuous) or median (dichotomous) values for initiative states in each year.[20]

The results of the simulations indicate that the number of interest groups is significantly increased in each year by the presence of the initiative process. In 1975 I estimate 45 more groups per state with a standard error of 16 groups. This increases to 72 more groups in 1980 with a standard error of 25 and 104 more groups in 1990 with a standard error of 37. The results for the initiative indicator from the Box-Cox model appear to be statistically stronger than in the two linear specifications, though the average estimated increase in the number of groups is about the same.

Turning to the other variables, the results are quite similar across models, so I will summarize them rather than go through the variations in detail. Olson's

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[18] The possibility of incorrect functional form is suggested by evidence of heteroskedasticity in the linear model. This heteroskedasticity is removed by the Box-Cox transformation, which additionally eliminates the skewness of the dependent variable. I also estimated the linear model with panel corrected standard errors (Beck and Katz 1995), which lead to conclusions similar to the Box-Cox model. Given the small number of time periods, the Box-Cox results are probably more reliable.

[19] Since the dependent variable has been transformed, the R^2 cannot be compared to the one from the linear model—and the fact that it decreases slightly to 0.74 should not be construed as evidence against the Box-Cox model.

[20] These simulations were performed by generating 1,000 draws of the coefficient vector and computing the value for the transformed dependent variable, applying the inverse transformation to return to the original scale, and then computing the average difference and its standard error. Resampling of the coefficient vector done using CLARIFY (Tomz, Wittenberg, and King 2001). For the GSP^2 variable, I set it equal to the square of the average value of GSP rather than the average value of the square.

prediction of a positive time trend is also upheld as there are 137 more groups per state in 1980 and 374 more groups per state in 1990, with both coefficients more than doubling their standard errors in all three specifications. Government expenditures as a percentage of gross state product has no effect on the number of groups in any of the three models, which is contrary to the predictions of the Virginia School and the ESA model's constituency interest hypothesis.[21]

The next variable, real GSP, tests the ESA model's prediction about the effect of area on the number of organizations, whereas the inclusion of its square controls for density dependence, or a decreasing marginal effect of increasing state economic activity. Both of these hypotheses receive some support: real GSP always has a positive and significant coefficient while its square has a negative coefficient that is nearly significant at the 0.10 level for the linear models and is significant at the 0.05 level for the Box-Cox model. There is no evidence that divided control of state government has an effect on the total number of interest groups registered to lobby. The coefficient never reaches half the size of its standard error. These results are consistent with those of Gray and Lowery (1996). Finally, the ideology variable is not found to have an effect in the linear specifications, though it is close in the Florida outlier model, but it is positive and significant at the 0.05 level in the Box-Cox model. These results indicate that more liberal states may have more interest groups.

Before moving on to the analysis of the two subpopulations, I should point out that I also ran alternate specifications to determine the effect of features of the initiative process besides the signature requirement (which could not be included due to near-collinearity with the initiative indicator), including provisions for preelection review, postelection restrictions, and frequency of use. I did not find any significant effects in the linear or Box-Cox specification and the interpretations of the other variables remained similar, but these null results do not undermine the support obtained for the main variable in the model. The finding for frequency of use (measured as average number of initiatives in the previous five years) is of particular interest since models of the initiative predict that it is the possibility, not the use of the initiative, that is important for groups. The results in the two subpopulations are also robust to these variables, and they do not alter the conclusions, so I proceed with the same basic model.

Differences Across the Subpopulations

The Asymmetry of Initiative Mobilizations

The ten different subpopulations allow me to determine how the effect of these variables differ across groups. The influence of the initiative process

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[21] Gray and Lowery (1996) state that this variable provides a crude measure of constituency interest whereas it provides a direct test of the Virginia School's hypothesis.

on group formation decisions is expected to be greatest among the subpopulations that are disproportionately comprised of citizen groups since they have a harder time mobilizing, relative to economic groups. I thus expect that citizen groups should benefit more from its presence. Looking over the ten categories, the two that are most likely to be comprised mostly of broad-based membership groups are the social and government subpopulations, so I group them together in the citizen group category. The other eight subpopulations are grouped together in the economic group category. This partitioning is somewhat subjective, and there are undoubtedly some groups within these categories that are misplaced. It is, however, the most appropriate division of the ten categories, and any miscategorizations across the two subpopulations are likely to bias the results against my hypothesis of an asymmetric effect.

It is important to keep in mind that none of the theories discussed so far directly discriminate between the two categories of groups. In conjunction with any one of the three possible assumptions discussed previously, however, the prediction about how direct democracy influences the absolute number of groups generates the hypothesis that citizen groups are likely to benefit more from it and thus the increase in their numbers is greater. There is empirical support for this hypothesis as well: Gerber (1999) confirms the potential for an asymmetric effect when she states: "Direct legislation outcomes show that economic groups find it very difficult to pass new initiatives, whereas citizen groups are much more successful at modifying policy through the direct legislation process. Economic groups are more successful at blocking measures through opposition spending" (119).

This conclusion provides evidence that at least one of the sufficient assumptions is valid. If citizen groups can use the initiative more effectively to alter the status quo, then the increase in the expected benefit of mobilization is greater for them than for economic groups, which should lead to more citizen groups mobilizing because of access to the initiative. Alternatively, if economic groups generally use the initiative to preserve the status quo, then the initiative's usefulness as a policy modification tool is not relevant to them as often as it is to citizen groups: the policy-altering benefits of access to the initiative only accrue to groups that are fighting the status quo. In sum, then, the increased mobilizations found in the previous section should be disproportionately composed of citizen groups.

This extra assumption does not appear to influence the predictions of the other theories, nor do they offer any direct implications for how they might vary between economic and citizen groups. Because of this, and since they are not the primary focus of the analysis, I maintain the same predictions about how the other variables influence the two different types of groups in the estimations to follow. I do expect, though, that the initiative indicators are positive and significant and that the increased mobilizations are disproportionately located in the citizen subpopulation.

Citizen Group Responsiveness to the Initiative Process

The results of estimating the basic model and the same two alternate specifications are presented in Table 3 for economic groups and Table 4 for citizen groups. Once again, all of the models produce similar results within subpopulations, so I will only summarize the findings. The results are consistent with those for the total group populations and indicate that the two different types of groups respond to similar factors, though to somewhat different degrees. What is important, however, is the finding that the effect of the initiative process is similar in the two types of groups.

The magnitude of the initiative indicator is similar within models for economic and citizen groups. The estimated coefficient is significant for economic groups only in the Box-Cox model, whereas it is significant in all three models

TABLE 3

Regression Results for Economic Groups

	All States	Florida Outlier	Box-Cox
Initiative State	62.13	33.89	0.81**
	(38.88)	(22.12)	(0.32)
1980	92.88**	93.13**	2.35**
	(13.01)	(12.17)	(0.38)
1990	253.65**	228.24**	4.42**
	(37.90)	(27.37)	(0.38)
Real GSP	24.74**	19.05**	0.34**
	(7.43)	(4.26)	(0.06)
Real GSP^2	−0.30**	−0.19**	−0.00**
	(0.14)	(0.08)	(0.00)
Gov't Expenditures	300.17	117.69	0.97
	(762.13)	(658.59)	(10.66)
Divided Gov't	−22.06	4.20	−0.06
	(35.66)	(18.52)	(0.31)
Florida in 1990		1215.20**	7.58**
		(38.01)	(1.82)
Ideology	0.19	1.29	0.04
	(1.74)	(1.41)	(0.02)
Constant	−34.81	22.72	8.57**
	(109.31)	(87.99)	(1.32)
Average R^2	0.59	0.80	0.74

N = 134. Robust standard errors are reported in parentheses.
*Significantly different from zero at 10% level.
**Significantly different from zero at 5% level.
Average λ in Box-Cox model: 0.28.
Due to missing data, results are based on multiple imputation using Amelia (Windows version). See King et al. (2001) for more information.

TABLE 4

Regression Results for Citizen Groups

	All States	Florida Outlier	Box-Cox
Initiative State	56.39*	34.01**	0.77**
	(30.95)	(13.86)	(0.20)
1980	43.40**	43.59**	1.35**
	(7.97)	(7.17)	(0.24)
1990	119.15**	99.03**	2.27**
	(22.57)	(12.65)	(0.24)
Real GSP	8.34	3.84*	0.11**
	(5.60)	(2.32)	(0.03)
Real GSP^2	−0.07	0.01	−0.00
	(0.11)	(0.04)	(0.00)
Gov't Expenditures	−230.10	−374.71	−5.39
	(450.49)	(376.32)	(6.27)
Divided Gov't	−22.20	−1.39	−0.08
	(28.73)	(12.64)	(0.19)
Florida in 1990		962.78**	4.75**
		(23.51)	(1.13)
Ideology	1.17	2.04**	0.05**
	(1.24)	(0.76)	(0.01)
Constant	37.63	83.21*	5.85**
	(68.54)	(49.62)	(0.80)
Average R^2	0.42	0.82	0.67

N = 134. Robust standard errors are reported in parentheses.
*Significantly different from zero at 10% level.
**Significantly different from zero at 5% level.
Average λ in Box-Cox model: 0.18.
Due to missing data, results are based on multiple imputation using Amelia (Windows version). See King et al. (2001) for more information.

for citizen groups. In the Florida outlier model, the coefficient is about 34 for both subpopulations. This is again smaller than in the basic model that omits Florida in the 1990 indicator, but about the same magnitude as in the Box-Cox model. Table 5 includes the simulation results for the two subpopulations, calculated in the same fashion as for the total number of groups. The estimated increases due to the initiative process start at 26 for economic groups and 18 for citizen groups in 1975, increase to 40 and 33 in 1980, and reach 58 and 48 in 1990. All of these are significant at the 0.05 level. The fact that the numbers are similar across subpopulations provides evidence in favor of my second hypothesis concerning an asymmetric effect.

With respect to the other theories, virtually identical patterns obtain. Real GSP has a positive, marginally decreasing influence among economic and citizen groups. There is also evidence that density dependence is a factor for eco-

TABLE 5

Marginal Effect on Initiative from Box-Cox Model

	All Groups	Economic Groups	Citizen Groups
1975	44.63	25.69	18.54
	(15.68)	(11.15)	(5.47)
1980	71.54	39.99	32.85
	(25.39)	(17.52)	(9.88)
1990	104.17	58.42	47.89
	(37.20)	(25.79)	(14.38)

Based on 1,000 simulations of estimated coefficients using CLARIFY (Tomz, Wittenberg and King 2001). All other independent variables set at their mean (continuous) or modal (discrete) value for each year.

Standard errors are reported in parentheses.

nomic groups, but not for citizen groups since the squared real GSP term is significant in all three specifications for the former but only the Box-Cox model for the latter. This suggests that there may not yet be enough citizen groups to have reached the stage of decreasing marginal mobilizations, or density dependence in Gray and Lowery's (1996) terms. As might be expected the magnitude of the linear effect is much greater among economic groups than among citizen groups—at least three times as large in all models. The opposite pattern emerges for ideology: more liberal states have significantly more citizen groups in the Florida outlier and Box-Cox models, whereas there is no effect among economic groups. In terms of actual mobilizations, the coefficient of about two for citizen groups implies that a two standard deviation increase in state ideology (equivalent to going from California to Louisiana) adds almost 30 citizen interest groups.

Turning to the other variables, again there is no evidence that changes in government expenditures as a percentage of gross state product influence interest group mobilizations. There is also no evidence that divided control of government has any effect on either type of group. Olson's theory is again supported in both subpopulations with the coefficients for the economic groups a little more than twice as large as those for the citizen groups and all significant at the 0.05 level.

Returning to my second hypothesis, the fact that the average effect for the initiative in the two subpopulations is about the same for the linear model and the Box-Cox predictions in Table 5 provides strong support. Even ignoring the fact that the increase is statistically weaker for economic groups and assuming that there are 34 more economic groups as a result of direct democracy, the effect is still stronger among citizen groups numerically and proportionately. Initiative states have 152 citizen groups, so if 34 of these groups mobilized due to the presence of the initiative, then there is an increase of 29%. Similarly,

there is an increase of only 12% among economic groups. This confirms my second hypothesis by demonstrating that the initiative process does disproportionately induce citizen groups to mobilize.

Conclusions: More Diversity versus More Discord in the Political Discourse

Interest groups are sensitive to the political and economic context in deciding whether to become active. Not only do they respond to economic incentives, as previous theoretical and empirical work has shown, but they also respond to the opportunities that political institutions offer them. By giving groups another way to affect policy, the direct initiative process increases their potential to achieve policy influence, which I show results in more groups being active. Overall, I take these findings as strong evidence of the effect of direct democracy on interest group populations.

I also find that the initiative process serves another role in these states: it increases the diversity of state interest group populations. Partitioning the group populations into economic and citizen groups allows me to show that the effect of the initiative varies by group type and that citizen groups are disproportionately mobilized by access to the initiative. In fact, while the effect of direct democracy is strong for citizen groups, it is statistically much weaker among economic groups once Florida's outlier status in 1990 is controlled for, suggesting that the benefits of direct initiative provisions accrue mainly to citizen groups. The numbers indicate that direct initiative provisions increase the proportion of citizen groups from 28% to 33% percent of a state's total interest group population.

This is an important finding for two reasons: first, it shows how institutions can reduce the observed bias in interest representation and second, it demonstrates an important and heretofore unstudied consequence of the initiative process for state interest groups. Since one of the progressives' goals was to return politics to the common man, it appears that despite criticisms of one of their solutions they may have achieved some degree of success in at least increasing the ability of citizen groups to mobilize and, potentially, to get their voices heard.

These findings also bring to mind Walker's (1991) discussion about the trade-off between representation in the interest group universe and the ability to resolve political conflicts in a reasonable amount of time. Given the repeated finding of overrepresentation by business and economic groups, the increased diversity provided by direct democracy may be beneficial in terms of representation, but if the added groups clog the arteries of the political process, as Olson (1982) claims they do, then the net benefit for direct democracy states on this one dimension is unclear. More voices does not necessarily translate into more representative policies and they almost certainly do not speed up conflict resolution. The problem could actually be exacerbated by the very nature of the initiative process: if the additional groups slow down conflict reso-

lution, groups may increasingly depart from the traditional center of conflict management—the legislature—for the initiative process itself.

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Frederick J. Boehmke is assistant professor of political science, University of Iowa, Iowa City, IA 52242.