United but Unequal: State Population Size, Public Opinion and Representation in America's Federal System[1]

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ABSTRACT: The most important division between states at the Constitutional Convention were between large and small states. The tension between the two resulted in a bicameral legislature embodying two different conceptions of representation: one based on equality of place and another on equality of the individual. Does state population size still matter for issues of representation? We examine trust, efficacy, and responsiveness judgments concerning the U.S. states and the federal government. Our results show that small state residents regularly espouse more negative opinions about the federal government, regardless of the structural advantage they receive in the U.S. Senate and presidential electors. We argue that state population size is still a central lens through which citizens view participation in America's federal republic.

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United but Unequal: State Population Size, Public Opinion and Representation in America's Federal System

The division between small and large population states in America is as old as the nation itself (Zagarri 1987). The most contentious debate at the Constitutional Convention was over representation in Congress: should the people be represented based on geography (the state) or population? At the time, the population disparity between the largest state (Virginia) and the smallest (Delaware) was 700,000 people. Instead of resolving the conflict, the Constitution embodies it, with population-based representation ruling in the House and state-based representation in the Senate. This debate over representation pitted the large population states against those from small population states resulting in the Connecticut Compromise creating America's unique bicameral Congress.

Since electors are assigned to states according to Congressional delegations, this conflict is evident in presidential elections as well. To win, a U.S. presidential candidate must receive a majority of the votes in the Electoral College, which are awarded to states based on the size of their congressional delegation. The result is structural underrepresentation of residents of states with large populations in national politics. The conventional wisdom is that federalism, especially the Senate and the Electoral College, protects the interests of small population states. Research has found small population states benefit from the distribution of federal funds to the states, for example (Lee 1998). On the other hand, large population states have more influence in national politics given significantly larger congressional delegations. Are residents of small states over-represented or under-represented in Congress and national politics? Do residents of small or large population states have more trust and confidence in the federal government?

We argue that state population is an important lens through which to view American politics and evaluate government in a federal system. Because the representational system is built on the states, which have radically different population sizes, Americans have very different experiences with government depending on the size of their state. We find that state population size is positively and significantly associated with evaluations of representativeness of Congress and trust in the federal government, but with weaker or no evidence for a similar effect on the state level. As a state becomes larger, its constituency becomes more similar to the federal constituency, and its political issues become more similar to federal issues. Conversely, small states, regardless of their resource advantage from the Senate or the Electoral College, are perpetually in danger of being swallowed up--culturally, economically, and politically--by the large states. Thus more than 200 hundred years after the Constitutional Convention, we argue a similar dynamic between large and small population states occurs in shaping political trust and efficacy, mirroring the contours of the debates between the Federalists and the Anti-federalists. The demographic disparities between states we highlight may in part explain growing distrust in the federal government since the 1960s (Putnam 2000; Levi and Stoker 2000; Nye, Zelikow and King 1997).

State Population Size

Not only has political science not considered state population size as a meaningful variable, scholars have largely overlooked the potential role of state population in affecting political behavior or public opinion about government. When state population is studied, it is done so indirectly through federal electoral institutions such as the Electoral College or the U.S. Senate (Dahl 2003). Even disproportionality from the Electoral

College has not been studied for over forty years (Kau and Rubin 1976; Banzhaf 1968; Bickel 1971, Sayre and Parris 1970, for an exception see Neubauer and Zeitlin 2003). However, some previous research on the Senate suggests population size may influence evaluations of elected officials, policy and information recall during campaigns (Hibbing and Alford 1990; Oppenheimer 1996; Lee and Oppenheimer 1999) and the distribution of federal funds to the states (Lee 1998). Recent work on the population (or constituency size) of U.S. House districts shows similar effects (Frederick 2007; 2009).

Despite these important works, most public opinion and legislative research in the United States has not explored state population size as a theoretically important concept key to understanding representation in a federal system. This is in sharp contrast to demographers who view the population of states and nations as an important force shaping society, economics and politics, and to America's founders, who viewed variation in population size across the independent states as the central difficulty in forming the federal system (Zagarri 1987).

This paper sheds new light on how citizens experience representation in a federal system. We contend state population size may be a key determinant of citizen perceptions of representation, political efficacy, and political trust, and is a particularly important factor in explaining differences in such attitudes across levels of government in the federal system (states versus the national government). Since very few surveys contain questions on state level trust, efficacy, and responsiveness, almost no published research has compared these attitudes across multiple levels of government (Uslaner 2001; Hetherington and Nugent 2001 are exceptions).

Scholars have long maintained that the way citizens interact with politics and the

political system is influenced by their state of residence (e.g., Key 1949; Elazar 1966; Putnam 2000; Gelman et al. 2008). Individuals may experience government (at both the state *and* federal levels) as a citizen of a state, and thus evaluate government at least partially in terms of state-based self-interest (Tolbert, Redlawsk, and Bowen 2009; Tolbert, Smith and Green 2009). One way to define state self-interest is in terms of sheer size and electoral influence in national politics. Because of our federal system built on the states, which have radically different population sizes, Americans have very different experiences with government depending on the size of their state.

We draw on a unique national survey of Americans conducted during the 2010 midterm elections merged with data measuring characteristics of respondents' states, including state population size. Unique survey questions designed by the authors measure trust in state and federal governments, as well as efficacy at both levels of government and responsiveness of state legislatures and of Congress. Ordered logistic regression analysis is used to assess whether state population size colors citizens' views of representation in a federal system.

The Meaning of Representation for Small versus Large States

Zagarri (1987) argues that the division between large and small states in the U.S. was not simply a matter of political self-interest. Rather, the division arose from a real difference in the meaning of representation among the original 13 colonies. For large, diverse states like Massachusetts, the *individual* was understood to be the proper sovereign unit worthy of representation. For many small states, which tended to be homogeneous, *places* were the appropriate unit of representation. This difference is visible in the location of state capitals after Independence: states following the

representation of population ideal tended to locate the state government in population center of the state, often in major cities. Conversely, states following the British view of representation of place tended to seat state governments in the geographic center of the state; representation in such states was "equal" because all communities' representatives had to travel similar distances to get to the legislature.

The same division was famously manifested during the Constitutional Convention. Small states, who were granted equal voting rights with large states under the Articles, voiced concerns that the constitutional plan of Madison and Randolph (both from the large state of Virginia) which favored a legislature with equal representation of population. William Patterson, a delegate from New Jersey and proposer of the small state-favoring New Jersey Plan:

> …considered the proposition for a proportional representation as striking at the existence of the lesser States… He held up Virga. Massts. & Pa. as the three large States, and the other ten as small ones; repeating the calculations of Mr. Brearly as to the disparity of votes which wd. take place, and affirming that the small states would never agree to it… N. Jersey will never confederate on the plan before the Committee. She would be swallowed up.

The large state perspective can be seen clearly from the arguments of large state delegates like James Wilson of Pennsylvania, who:

> …entered elaborately into the defense of a proportional representation, stating for his first position that as all authority was derived from the people, equal numbers of people ought to have an equal no. of representatives, and different numbers of people different numbers of representatives… Are not the citizens of Pena. Equal to those of N. Jersey? Does it require 150 of the former to balance 50 of the latter?[1]

Instead of resolving this division, the Constitution cemented it by establishing an upper chamber apportioned equally by state, a lower chamber apportioned (mostly) based on the principle of equal population, and the election of the president through the

Electoral College, where a state's voting power equals its representation in Congress. This compromise left much to be desired. Small states were still at risk of being "swallowed up" by coalitions of the few largest states, with only the Senate safeguarding their interests. Residents from large states, conversely, are structurally underrepresented in the Senate and in electing the president.

Population size continued to divide the states under the new constitution. Zagarri (1987) finds members of Congress voted in blocs based on state size in three key issues into the mid-19th century: the makeup of House districts, selecting presidential electors, and House apportionment. Small states elected House members by at-large districts representing the entire state, ensuring that the majority party in the state would win each House seat. Large states, however, tended to use geographical districts to select House members, allowing minority parties to win some seats. Zagarri argues that both large states and small state realized this difference as an attempt to increase small-state power in the House. The same story holds for presidential electors. Small states selected electors at large, allowing the state preference for president to be expressed as a one unit. Large states chose to select electors based on geographic districts. Eventually the large states, worried about loss of influence to the small, increasingly adopted at-large congressional elections and at-large selection of presidential electors, in a sense to "beat [the small states] at their own game" (Zagarri 1987, 133).

The divide between small and large states after the Convention existed primarily in relation to key issue of representation: selection of representatives and apportionment of House seats. The "politics of size" as Zagarri puts it, diminished only when

sectionalism conflict between North and South came to the fore prior to the Civil War, and regional cleavages dominated definitions of state interests.

Small States Disadvantaged under Federalism?

These issues matter today just as they did during the Constitutional Convention, although the issues of size are not as visible as before. Unequal population growth has led to an increasing disparity between large and small states in the Union and influence in Congress. As Table 1 shows California has a population of 37.5 million residents while Wyoming is only 1/65th of that size, with fewer than 500,000 residents. As of 2010, the population of Texas was 25 million, Florida and New York at roughly 20 million and Illinois at 13 million residents. But seven states have fewer than 1 million residents, and 14 have fewer than 2 million. At the time of the Constitutional Convention in 1787, the largest state was only ten times larger than the smallest state in terms of population

The demographic trends can be visualized in Figure 1. While there have always been divides between large states and the rest of the country, the general inequality between the states in terms of population is growing as the big states get bigger. In Figure 1 the population growth of each state is illustrated by a separate line, graphing the change in population from 1800 to 2010 with data from the U.S. Census Bureau's decennial census apportionment data. Over the past half century, the population of four states (CA, TX, NY and FL) have grown exponentially. Adding to that, the growth in population from the second tier states including Illinois, Ohio and Pennsylvania that occurred over the past century, shows a stark divided between the largest states and the rest.

And these population disparities transfer into political power and representation in Congress. In Figure 2, the light grey lines show the percent of seats in the U.S. House of

Representatives apportioned to each state (each state is a separately line) over time from 1800 to 2010. The black circles indicate the first decennial apportionment for newly-created states. As the grey lines illustrate, the distribution is changing over time in the proportion of seats given in the House across the states. There is significant variation across the states, with some states gaining and some losing seats in the House. But what is significant is the thick black lines illustrating how many times larger (in terms of House seats) the largest state is compared to the median state (solid line) or state at 25th percentile (dashed line). Since 1900, the largest states are increasingly more powerful than the median state or 25th percentile state. And the gap between the median and the 25th percentile is also growing.

Figure 2 illustrated that while America has always had big states and a combination of the biggest states could always overwhelm a coalition of the smallest states in the House, over time population is growing in the largest states much faster than in the smallest states. Comparing the largest state in the union to the median or 25th percentile shows that the largest of the large states is increasingly more powerful in terms of its delegation in the House than the typical small state. The trend for growing representation in Congress of the largest states compared to small states is almost monotonic. Given these data, there are good reasons for residents of small population states to distrust national government.

Large States Disadvantaged under Federalism?

However, federalism can also disadvantage large population states. There is little doubt that due to the way presidential electors are allocated under the Electoral College and the intentional equal allocation of Senate seats across the 50 states, residents of states

with large populations are structurally *underrepresented* in American national politics. Under these systems of representation—one grounded in the indirect election of the president, the other respecting constitutional federalism—residents of larger states, contrary to popular opinion, may be understood as structural losers (Karp and Tolbert 2010). When it comes to both the Electoral College and the US Senate, on a per capita basis, Californians are the least-represented and residents of Wyoming are the most-represented in federal elections. In terms of Electoral College constituency size (state population size divided by number of electors) each Wyoming citizen has the voting power of approximately seventeen Californians when deciding who should be president of the United States.

Figure 3 graphs Electoral College constituency size over time from 1790 to 2010 based on population and apportionment data from the U.S. Census Bureau. Larger circles denote the state contains a larger percentage of the U.S. population in a given year. From the founding of our nation until 1900, there were very small differences in Electoral College constituency size across the states, but after 1950, this pattern changed dramatically due to unequal population growth across the states and the freezing of the size of the U.S. House at 435 (see Kromkowski and Kromkowski 1991; Ladewig and Jasinski 2008; Neubauer and Zeitlin 2003).

The effects of deviations from apportionment based on equal population in the Senate and the House are especially apparent in the Electoral College. Table 2 lists the 50 states by the number of electors (US House members plus US Senators) in the Electoral College and constituents per elector over the past century: 1900, 1950 and 2010. In 1900, 34,000 citizens were represented by every elector in Wyoming in presidential elections

compared to 186,000 New Yorkers. Thus Wyoming had five times the representation on a per capita basis as New York in choosing presidents. By 1950 the population of Wyoming had tripled to 97,000 constituents per elector compared to California which had 331,000 constituents per elector. In 2010 189,000 Wyoming citizens were represented by each member of the Electoral College, compared to 679,000 California residents. While our focus is on state population size in general, gauging how population size works through national electoral institutions, such as the Electoral College, illustrates the power of demographics in shaping federalism in America.

These disparities matter in terms of substantive representation. Frances Lee (1998, see also 2000) finds evidence that small states build coalitions to secure sweeter distributions of federal funds. Small states, empowered by the equal representation of states in the Senate, cut deals so that the majority of states (not residents) benefit from the funding formulas. Such maneuvering advantages small states over large ones.

Previous research on the US Senate also suggests constituency size may influence evaluations of elected officials, expectations of behavior, and information recall during campaigns with citizens of smaller states benefiting (Hibbing and Alford 1990; Lee and Oppenheimer 1999). Scholars studying the presidential nomination process have suggested that opinions on reforming that process varies of state, with state population being a deciding factor (Karp and Tolbert 2010; Redlawsk, Tolbert and Donovan 2011; Tolbert, Bowen and Redlawsk 2009). Given these trends there are good reasons for residents of large populations to distrust Congress and the federal government: when compared to individuals from small states, large state voters' opinions matter less for policy-making and voters' have less say in who makes national decisions.

State Self-Interest

Do respondents from large versus small population states have different evaluations of government, political trust and efficacy? An explanation that may motivate public opinion focuses on group or state based self-interest (Tolbert, Smith and Green 2009). While short-term concerns about what party wins or loses may be important in shaping attitudes about government (Citrin 1974; Anderson et al 2005; Anderson and Guillory 1997; Anderson and LoTempio 2002; Bowler and Donovan 2007), citizens may also favor rules that assure that they are able to influence the political process (Hibbing and Theiss-Morse 2002). Individuals who believe that their state exercises little influence under the current institutional arrangements (such as federalism) should have lower levels of trust and efficacy compared to those who believe that their state exercises a great deal of influence. Scholars studying public opinion on electoral systems, for example, find significant variation in support for reforming the presidential nomination process based on whether an individual's state wins or loses under current rules (Tolbert et al 2009; Redlawsk, Tolbert and Donovan 2010; Tolbert et al 2010), as well a support for a national referendum (Smith et al 2010) and eliminating the Electoral College in favor of a national popular vote (Karp and Tolbert 2010). Such reforms would presumably help large state residents and hurt those from small states, as candidates would focus their campaigns on large population states and urban areas to gain a national majority. Evidence of state based self-interest suggests sophisticating reasoning by the mass public in terms of attitudes about government.

Such reasoning, however, assumes residents in different types of states evaluate group self-interest in the same way. But both contemporary and historical evidence

suggests otherwise. The quotes from small and large state delegates at the Constitutional Convention combined with Zagarri's (1987) arguments about differences in core conceptualizations of representation suggest that perspectives on fairness and equality also may vary by state context. Small state residents may compare the influence of their *state* to those of other states in the nation, while large state residents may view equality as an issue of *individual* political power when comparing individuals across states. The work by Lee and Oppenheimer on the Senate and state population size (Oppenheimer 1996; Lee 1998; Lee and Oppenheimer 1999) provides evidence that Senators from small states secure federal spending for their states at higher levels than large state senators do, provide greater contact with their constituents, and report that their citizens *expect* a different sort of representational style. This reasoning leads to two contradictory hypotheses:

Representation of place hypothesis: *individuals from small states should have lower trust in the federal government, less efficacy, and more negative evaluations of legislative responsiveness than do individuals from large states*. Since small state residents compare the political power of their state with that of other states, treating each state as a distinct entity worthy of representation, those residents will likely feel underrepresented in the federal government due to the importance of population for apportioning the House and Electoral College.

Representation of population hypothesis: *individuals from large states should have less trust in federal government, less efficacy, and lower evaluations of legislative responsiveness than do individuals from small states*. Large state residents should be more likely to think of fair representation in terms of population equality. Large state

residents are systematically underrepresented in the Senate and the Electoral College; such underrepresentation may lead large state residents to distrust government, feel Congress is less representative to their interests, and feel less ability to influence the federal government.

Data and Methods

To explore these questions we draw on a national survey of Americans conducted during the 2010 midterm elections merged with characteristics of respondents' states, including population size. We draw on the 2010 Cooperative Congressional Election Study (CCES) of 55,000 respondents. Such large samples are made possible by the survey's unique sample methodology.[2] The sample includes respondents from all 435 US House districts. Statistical models are estimated using the survey weights to make the sample representative of the registered voter population.

Unique survey questions designed by the authors ran on a 1000 person national representative sample of the survey. Questions were asked in the October 2010 pre-election wave. The questions measure trust in state legislatures, Congress and elected officials, as well as efficacy and responsiveness. Unique parallel questions ask respondents to evaluate responsiveness, external efficacy and trust of their state legislature/government compared to Congress/federal government, allowing a baseline for comparison. Few national surveys ask parallel questions about both multiple levels of government.

Respondents were asked how much they agree (or disagree) with the following statements on a five point scale from agree to disagree: "My representatives in the *state legislature* are responsive to the desires and concerns of their constituents"; "My

representatives in *Congress* are responsive to the desires and concerns of their constituents." Respondents were also asked about efficacy and the degree to which they can influence government officials: "People like me can influence my *state government*;" and "People like me can influence the *federal government* in Washington DC." Finally, respondents were asked about political trust at both levels of government; "My *state government* can be trusted to do what is right;" and "The *federal government* in Washington DC can be trusted to do what is right." These questions serve as outcome variables in the analysis, while the population of citizens' states is the primary explanatory variable, along with a host of demographic and attitudinal control variables. Since the variables are measured on an ordinal scale from disagree (coded 1) to agree (coded 5), ordered logistic regression models are reported.

These data have a nested structure, with individuals clustered within states. Such a structure tends to bias standard error estimates of aggregate level covariates downward, resulting in biased significance tests and increased Type-I error. To account for the nested structure of the data, we employ clustered standard errors (Steenbergen and Jones 2002; Primo et al. 2007).[3]

Several key aggregate level variables are included in the model to account for other potential influences on evaluations of government. Party competition should influence attitudes about government, particularly efficacy. Uncompetitive elections make it impossible for changes in public opinion to be translated into changes in leadership and policy, potentially influencing opinions on government (Miller 1974; Kelleher and Wolak 2007). On the other hand, competition may lead to high-profile disagreements and gridlock, resulting in less trust and efficacy (Hibbing and Theiss-

Morse 1995; 2002). State unemployment rates in 2010 are also included in the model, as economic circumstances have been shown to influence trust in government (e.g., Stimson 2004) and may signal governmental incompetence at multiple levels of government. The size of the African American and Latino populations are controlled for, given the effect of race on public policy and realized government outcomes in the states (Hero and Tolbert 1996; Hero 2007). Finally, state median income is included to capture any differences between residents of wealthy and poor states.

Standard socio-economic status variables of gender, income, education, age, race, interest in politics, and marital status account for basic demographic differences across respondents.[4] Respondent partisanship and ideology are incorporated into the models. Party is incorporated through dummy variables for partisanship (Republican) and non-partisanship (Independents), with Democrats as the reference category. Democrats were electoral winners at the federal level at the time of the survey; thus we expect Republicans and independents to have more negative evaluations of Congress, less trust in government, and feel less efficacious (Clarke and Acock 1989; Morrell 1999). Electoral winner status at the state level is measured as a dummy variable coded 1 if the respondent's party had unified control of state government and 0 otherwise. We expect electoral winners at both levels of government to show higher levels of trust and efficacy (Bowler and Donovan 2002; Anderson and LoTiempo 2002). Ideology is included to capture respondent preferences for less government or devolution and is measured using a five-point ordinal scale where higher values denote more conservative self-identification. Finally, a dummy variable for being currently unemployed and an ordinal measure of evaluations of the national economy are included to capture individual level

variance in the experience of economic factors known to influence evaluations (Stimson 2004).[5]

Results: Descriptive Statistics by State Population Size

Table 3 provides the mean score on our three measures of attitudes about state government compared to the federal government broken down by quartiles of state population size. Table 3a shows mean citizen evaluations of whether their representatives in the state legislature (column 1) or Congress (column 2) are responsive to the desires and concerns of their constituents. Respondents from small states have lower average evaluations of Congress than residents of larger states. The final column presents the mean of the absolute value of the difference between evaluations of the state legislature and Congress across differently-sized states. A clear pattern emerges, where residents of smaller states have significantly more variation in opinions of their state government compared to the federal government than residents of large population states, who had virtually identical evaluations of both levels of government.

Table 3b uses the same format to explore levels of external efficacy—"people like me can influence my state government" (column 1) or the "federal government in Washington DC" (column 2) and the difference between these evaluations (column 3). Here a stronger pattern emerges with citizens from small states reporting higher levels of efficacy about their state government compared to residents of large states, and at the same time citizens from small population states have lower efficacy towards the federal government compared to large state residents. That is, residents of large states believe they have more power to influence the federal government. Again, column 3 shows a much larger difference (absolute value) in levels of efficacy for residents of small

population states compared to larger states.

Table 3c reports average levels of political trust in state government (column 1), federal government (column 2) and the difference in evaluations (column 3) broken down by respondents' state population size. Following the same pattern, citizens residing in the smallest population states have much higher levels of trust in their state government than those from the largest population states. Citizens from large states have higher levels of trust in federal government than residents of small population states. Citizens from small and large population states clearly seem to reason differently about government, representation and responsiveness. In measuring differences in political trust between state and federal government we see the largest variation among citizens residing in small states and the smallest variation among those living in large states. These are new patterns that have not been reported in the published literature.

Table 4 breaks the states down into two groups, defined as large population states with 18 or more Electoral College votes and all others (16 or fewer Electoral College votes) to conduct a difference of means test. The outcome variable is the difference in evaluations of state compared to federal government (absolute value) based on representativeness, external efficacy (influence government) and political trust. The outcome variable thus measures the variability in evaluations of state versus federal government as reported in third column of Table 3. This measure also standardizes evaluations of government based on individual differences.

While there is more variation in evaluations of state lawmakers versus Congress in terms of representativeness for residents from small states, this difference is not statistically significant using a two sample t-test (with equal variances) as shown in Table

4a. Table 4b reports the mean difference in evaluations of efficacy for small states versus large population states and the difference between the groups is highly significant ($t=4.19$, $p<.000$). Individuals from small population states have lower efficacy toward the federal government compared to their state government, than resident of large states. Table 4c reports a similar pattern. Citizens of smaller population states report much larger mean differences in trust in their state government compared to the federal government than citizens in large states ($t=4.21$, $p<.000$). These data suggest that state population size may be an important factor in understanding political trust and public opinion about government.

Results: Predicting Evaluations of State and Federal Government by State Population

The ordered logistic regression models presented in Tables 5-8 test various aspects of our two hypotheses. Table 5 regresses the difference between evaluations of state and federal government, with the representativeness model shown in the first column, efficacy in the second, and political trust in the third. Table 5 largely confirms the bivariate mean comparison analysis of Table 3: the difference between evaluations of state and federal government decreases with state population growth. In other words, representativeness, efficacy, and trust judgments between state and federal government are significantly more similar for residents of large states than for residents of small ones. State population size is a negative and significant predictor of the deviation between all three types of evaluations. For the representativeness and trust models, the relationship is significant at the .05 level (two-tailed test), while in the efficacy model the relationship is moderately significant ($p<.077$).

Table 5 provides evidence that the types of evaluations being made about government varies by the size of the respondent's state, controlling for other predictors of attitudes about government. This corresponds nicely to the theory presented here. Population size acts a lens which colors citizens' perception of representation at multiple levels of government. We would expect small state residents' evaluations of state government and state institutions to deviate from opinions of the federal government to a greater extent than do the evaluations of their counterparts in large states. Further, the analysis certainly is in accordance with the notion that small and large state residents evaluate the federal government using different conceptualizations of representation. If small state residents view representation at the state level as an issue of equal voice across other individuals within the state but view representation at the federal level as an issue of sharing power across *states* (not individuals), this same divergence in evaluations could be possible.

Tables 6 and 7 move to testing our two hypotheses more explicitly. In Table 6 we find evidence in support of the first hypothesis: population size is positive and significantly related to positive evaluations of representativeness in Congress. The relationship between representativeness and population size is also significant and positive at the state level. Table 7 shows the findings for trust in the federal and state governments, with similar results. Population size of the respondents' state is a significant and positive predictor of trust in the federal government, but not trust in the respondent's state government. These results were foreshadowed by the bivariate results showing a monotonic positive relationship between size and trust in the federal government.

What should we make of these results? First, our survey respondents from large states show no evidence of being under-represented in the US Senate and the Electoral College. In fact, large state residents boast higher approval of Congress than residents from small states do, and trust the federal government to a greater extent than do residents from small states. We thus find no negative effects of the Great Compromise on attitudes toward the federal government for large state residents.

On the other hand, these results fit with the representation of place hypothesis. Americans in small states find their members of Congress to be less responsive. This finding is at odds with work on constituency size in Congress and the state legislatures (Dahl and Tuft 1973; Hibbing and Alford 1990; Lee 1998; Lee and Oppenheimer 1999; Oppenheimer 1996; Squire 1993; Frederick 2007; 2009). The constituency size literature suggests a stronger representational link in smaller polities or districts. These findings make sense in light of the representation of place hypothesis: for small states, federal politics is, at some level, is a fear of losing to the populous states. Even the most representative and conscientious Senator or House member would not be able to alter the perception that national issues and forces are largely acting *on* the small states, rather than being driven *by* them.

Figure 4 illustrate the changes in predicted outcomes for the opinions about representation and trust due to state population size. Increased state population size lead to decreased negative evaluation of Congress at the individual level, rather than more positive assessments of responsiveness and trust.

Table 8 presents models the impact of state population size and on individual levels of external efficacy at both the state and federal levels. The first two columns

repeat the models from Tables 6 and 7 with efficacy as the dependent variable but with quite different results. Population size is not significantly related to efficacy at either levels of government. This is somewhat surprising, given the consistent patterns found the previous tables.

Efficacy, however, differs from the other attitudes in that respondents think about citizen's abilities to have a say in government, rather than simply to offer an assessment of government. The survey was also conducted at the height of the 2010 midterm elections, an election in which a major partisan shift was about to occur. In the second two columns of Table 8 we show the results from an interaction between partisan competition of a state and its population size. The results are strong. Both constituent terms are negative and significant ($p<.01$) at both the federal and state levels. The interaction term is positive and highly significant at both levels. Substantively, population size is associated with a reduction in external efficacy when competition is absent and is associated with increased efficacy when competition is present. Thus large population states that are highly competitive on national politics (such as FL, OH, Pennsylvania) experience the highest levels of efficacy towards the federal government. Large population states that are not battleground states experienced decreased levels of external efficacy about the federal government.

Figures 5 and 6 illustrate these effects in graphical form. Residents of small states report higher efficacy when their state is *not* competitive; the opposite is true for residents of large states. The latter need competition in order feel like people like them can have a say in government. For small state residents, "people like them" can only influence government *when the state acts as one united political community*. This homogeneity is

particularly important for efficacy at the federal level: residents of the smallest states are predicted to agree with the efficacy statement strongly 70% of the time when partisan competition is absent and only 35% of the time when competition is high.

Conclusion

Does federalism advantage residents of large population states because of large delegations in the House and numbers of electors? Or does federalism advantage individuals from small states because of overrepresentation in Congress due to malapportionment from the Senate in the Electoral College? Because the structure of national electoral institutions has remained constant for over two hundred years in the face of explosive demographic change, an erosion of representation via national electoral institutions has resulted in malapportionment at the state level. This is seen in growing Electoral College constituency size. Large population states are structurally underrepresented in the federal government.

Yet despite this structural underrepresentation, we find little evidence citizens respond with lower trust or less efficacy. In fact, small state residents consistently show evidence of alienation, echoing the concerns of small states from a time in which the small state-large state divided loomed large and national unity was in doubt. Our findings provide evidence that federalism distinctly colors perceptions of representation – individuals reflect on issues of power and trustworthiness in part by understanding how their state relates to others. This perception is dominated by state size.

Drawing on 2010 survey data, we find that state population size is positively and significantly associated with evaluations of representativeness of Congress and trust in the federal government, but with weaker or no evidence for a similar effect on the state

level. As a state becomes larger, its constituency becomes more similar to the federal constituency, and its political issues become more similar to federal issues. Conversely, small states are perpetually in danger of being swallowed up--culturally, economically, and politically--by the large states. State population may be an important lens through which to view American politics and evaluate government.

Table 1. State Population Size in Millions of Persons

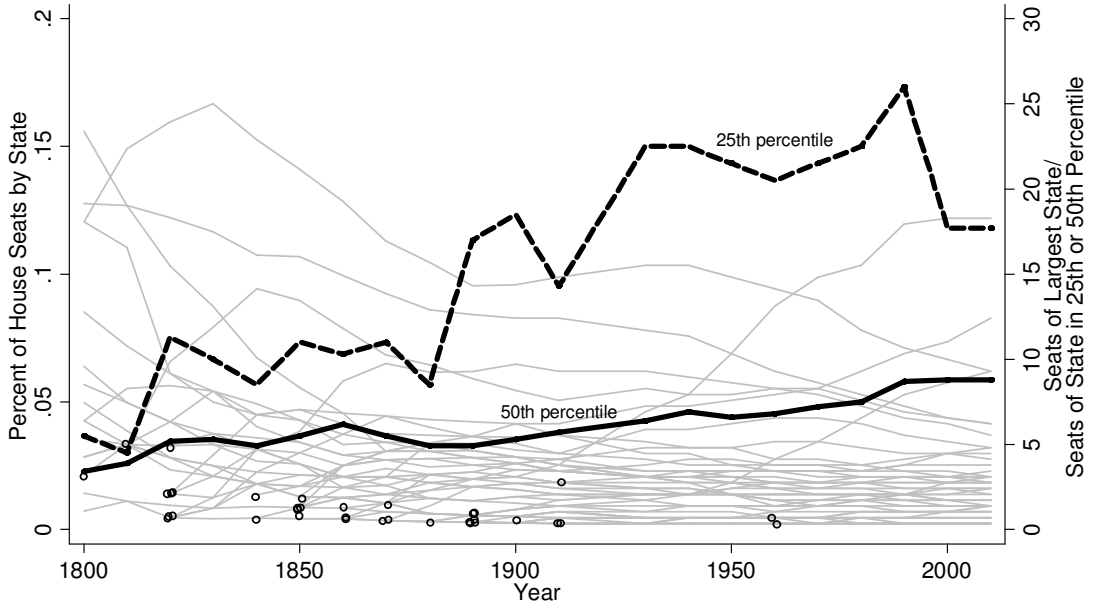
State	1800		1900		2010	
	Pop.	Rank	Pop.	Rank	Pop.	Rank
Alabama			1.8	18	4.8	23
Alaska					0.7	47
Arizona					6.4	16
Arkansas			1.3	25	2.9	32
California			1.5	21	37.3	1
Colorado			0.5	31	5	22
Connecticut	0.3	8	0.9	29	3.6	29
Delaware	0.1	16	0.2	42	0.9	45
Florida			0.5	32	18.9	4
Georgia	0.2	12	2.2	11	9.7	9
Hawaii					1.4	40
Idaho			0.2	43	1.6	39
Illinois			4.8	3	12.9	5
Indiana			2.5	8	6.5	15
Iowa			2.2	10	3.1	30
Kansas			1.5	22	2.9	33
Kentucky	0.2	9	2.1	12	4.4	26
Louisiana			1.4	23	4.6	25
Maine			0.7	30	1.3	41
Maryland	0.3	7	1.2	26	5.8	19
Massachusetts	0.4	5	2.8	7	6.6	14
Michigan			2.4	9	9.9	8
Minnesota			1.8	19	5.3	21
Mississippi			1.6	20	3	31
Missouri			3.1	5	6	18
Montana			0.2	41	1	44
Nebraska			1.1	27	1.8	38
Nevada			0	45	2.7	35
New Hampshire	0.2	11	0.4	36	1.3	42
New Jersey	0.2	10	1.9	16	8.8	11
New Mexico					2.1	36
New York	0.6	3	7.3	1	19.4	3
North Carolina	0.5	4	1.9	15	9.6	10
North Dakota			0.3	39	0.7	48
Ohio			4.2	4	11.6	7
Oklahoma					3.8	28
Oregon			0.4	35	3.8	27
Pennsylvania	0.6	2	6.3	2	12.7	6
Rhode Island	0.1	15	0.4	34	1.1	43
South Carolina	0.3	6	1.3	24	4.6	24

South Dakota			0.4	37	0.8	46
Tennessee	0.1	14	2	14	6.4	17
Texas			3	6	25.3	2
Utah			0.3	40	2.8	34
Vermont	0.2	13	0.3	38	0.6	49
Virginia	0.8	1	1.9	17	8	12
Washington			0.5	33	6.8	13
West Virginia			1	28	1.9	37
Wisconsin			2.1	13	5.7	20
Wyoming			0.1	44	0.6	50

Figure 1: State Population Size Over Time, 1800-2010

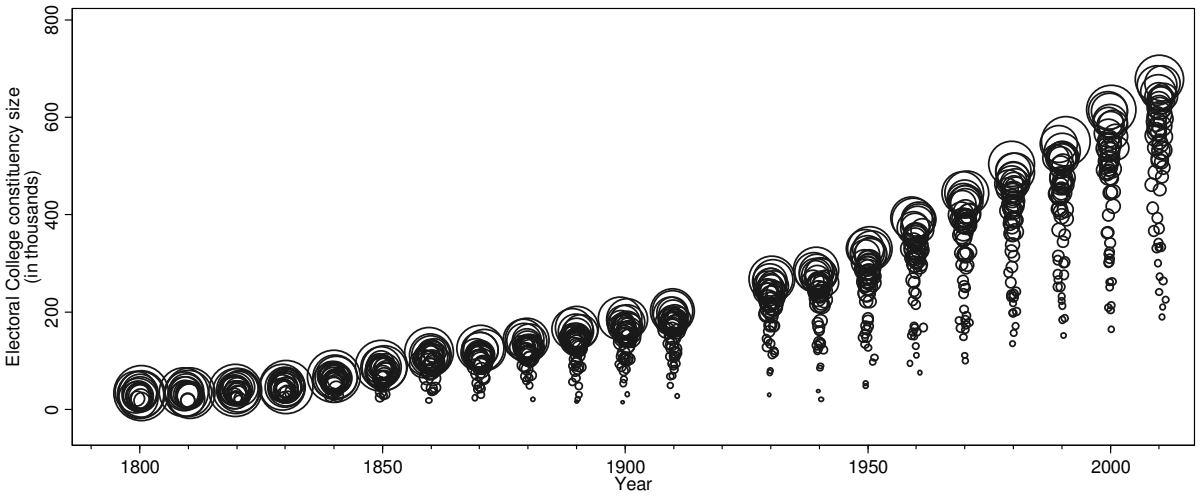
Note: Population by state, over time. Data from U.S. Census Bureau's decennial census apportionment data. Population growth of each state is illustrated by a separate line. Since 1950 the population of four states (CA, TX, NY and FL) have exploded.

Figure 2. Seats Allocated to each State in the U.S. House Over Time, 1800-2010



Note: Grey lines show percent of seats in the US House of Representatives apportioned to each state (each state is a separately line), over time. Black circles show the first decennial apportionment for newly-created states. Thick black lines illustrate how many times larger (in terms of House seats) the largest state is compared to the median state (solid line) or state at 25th percentile (dashed line). Since 1900, the largest states in the top 25th percentile are many times more powerful in terms of representation in the House than the median state.

Figure 3. Electoral College Constituency Size Over Time, 1790-2010



Note: Points are weighted by state population, where larger circles denote the state contains a larger percentage of the U.S. population in a given year. 1920 is left off the graph due to Congress' failure to apportion House seats to the states during that decade. Population and apportionment data are from the U.S. Census Bureau.

Table 2. Electors in the Electoral College and Number of Constituents per Elector, by State

	1900		1950		2010	
	Electors	Constituents per Elector	Electors	Constituents per Elector	Electors	Constituents per Elector
Alabama	11	166	11	278	9	534
Alaska					3	241
Arizona			4	188	11	583
Arkansas	9	146	8	239	6	488
California	10	149	32	331	55	679
Colorado	5	108	6	221	9	561
Connecticut	7	130	8	251	7	512
Delaware	3	62	3	106	3	300
Florida	5	106	10	277	29	652
Georgia	13	170	12	287	16	608
Hawaii					4	342
Idaho	3	54	4	147	4	393
Illinois	27	179	27	323	20	643
Indiana	15	168	13	303	11	591
Iowa	13	172	10	262	6	509
Kansas	10	147	8	238	6	477
Kentucky	13	165	10	295	8	544
Louisiana	9	154	10	268	8	569
Maine	6	116	5	183	4	333
Maryland	8	149	9	260	10	579
Massachusetts	16	175	16	293	11	596
Michigan	14	173	20	319	16	619
Minnesota	11	159	11	271	10	531
Mississippi	10	155	8	272	6	496
Missouri	18	173	13	304	10	601
Montana	3	81	4	148	3	331
Nebraska	8	133	6	221	5	366
Nevada	3	14	3	53	6	452
New Hampshire	4	103	4	133	4	330
New Jersey	12	157	16	302	14	629
New Mexico			4	170	5	413
New York	39	186	45	330	29	670
North Carolina	12	158	14	290	15	638
North Dakota	4	80	4	155	3	225
Ohio	23	181	25	318	18	643
Oklahoma			8	279	7	538
Oregon	4	104	6	254	7	550
Pennsylvania	34	185	32	328	20	637
Rhode Island	4	107	4	48	4	264

South Carolina	9	149	8	265	9	516
South Dakota	4	101	4	163	3	273
Tennessee	12	168	11	299	11	580
Texas	18	169	24	321	38	665
Utah	3	92	4	172	6	462
Vermont	4	86	3	126	3	210
Virginia	12	155	12	277	13	618
Washington	5	104	9	264	12	563
West Virginia	7	137	8	251	5	372
Wisconsin	13	159	12	286	10	570
Wyoming	3	31	3	97	3	189

Note: Apportionment data are from the U.S. Census Bureau. Constituents per elector is calculated by dividing the state population by the number of electors in each state, presented in thousands of constituents.

Table 3a: Means Score [1-5] “My representatives in the state legislature are responsive to the desires and concerns of their constituents” versus "My representatives in Congress are responsive to the desires and concerns of their constituents" by State Population Size of Respondent (Quartiles)

R’s State Population Size	Responsive State Legislature	Responsive Congress	Mean Difference (Absolute value)
Smallest	2.62	2.48	.14
Medium Small	2.92	2.77	.15
Medium Large	2.71	2.69	.01
Largest	2.66	2.64	.01

Table 3b: Means Score [1-5] “People like me can influence my state government” versus “People like me can influence the federal government in Washington DC” by State Population Size of Respondent (Quartiles)

R’s State Population Size	Efficacy State Government	Efficacy Federal Government	Mean Difference (Absolute value)
Smallest	3.31	2.85	.45
Medium Small	3.38	2.90	.47
Medium Large	3.45	3.10	.35
Largest	3.20	3.00	.20

Table 2c: Means Score [1-5] “My state government can be trusted to do what is right” versus “The federal government in Washington DC can be trusted to do what is right” by State Population Size of Respondent (Quartiles)

R’s State Population Size	Trust State Government	Trust Federal Government	Mean Difference (Absolute value)
Smallest	2.33	1.75	.57
Medium Small	2.44	1.81	.62
Medium Large	2.30	1.96	.33
Largest	2.15	1.95	.20

Note: Evaluations of government from Agree (5), Somewhat agree (4), Neither agree nor disagree (3), Somewhat disagree (2), Disagree (1).

Table 4a: Difference of Means: Difference in Evaluations of Representatives in the State Legislature versus Congress in terms of Responsiveness to the Desires and Concerns of their Constituents, by State Population Size

	Number of Observations	Mean Diff	Standard Error	Two Sample t-test with equal variances	P-value
Citizens in **small** state (16 or less EC votes)	459	.097	.045		
Citizens in **large** states (18 or more EC votes)	438	.014	.044		
Mean difference between groups	987	.060	.033	1.22	.217

Table 4b: Difference of Means: Difference in External Efficacy (Influence Government) of State Government versus Federal Government, by State Population Size

	Number of Observations	Mean Diff	Standard Error	Two Sample t-test with equal variances	P-value
Citizens in **small** state (16 or less EC votes)	555	.419	.039		
Citizens in **large** states (18 or more EC votes)	436	.197	.032		
Mean difference between groups	991	.322	.026	4.19	.000

Table 4c: Difference of Means: Difference in Trust in State Government versus Trust in Federal Government, by State Population Size

	Number of Observations	Mean Diff	Standard Error	Two Sample t-test with equal variances	P-value
Citizens in **small** state (16 or less EC votes)	553	.504	.049		
Citizens in **large** states (18 or more EC votes)	434	.200	.051		
Mean difference between groups	987	.371	.036	4.21	.000

Table 5: Predicting Difference Between Evaluations of Federal and State Government, 2010

	Representativeness of Legislature/Congress		Responsiveness/ Ex. Efficacy		Trust in Government	
	b/se	P	b/se	p	b/se	p
State Level						
State Population size	-.021	.037	-.021	.077	-.035	.021
	(.010)		(.012)		(.015)	
Partisan competitiveness	-.986	.412	1.411	.210	1.983	.188
	(1.202)		(1.125)		(1.505)	
Unemployment	.081	.096	-.001	.983	-.099	.120
	(.049)		(.069)		(.064)	
Pct. black	-1.720	.248	-.650	.657	-.633	.680
	(1.490)		(1.463)		(1.535)	
Pct. Latino	.058	.959	.733	.534	2.652	.085
	(1.121)		(1.179)		(1.542)	
Median income	-.000	.048	.000	.291	-.000	.000
	(.000)		(.000)		(.000)	
Individual Level						
Political Interest	.488	.005	.274	.018	.457	.002
	(.173)		(.116)		(.147)	
Ideology	.116	.201	.115	.153	-.065	.396
	(.091)		(.080)		(.077)	
Electoral winner (state)	.218	.426	.269	.396	.634	.006
	(.274)		(.318)		(.231)	
Republican	.334	.401	.993	.002	.705	.027
	(.398)		(.314)		(.319)	
Independent	-.342	.418	.176	.480	-.082	.792
	(.422)		(.249)		(.312)	
Electoral winner X Rep.	.011	.972	-1.274	.003	.278	.531
	(.296)		(.436)		(.444)	
Economic Evaluation	.277	.015	.155	.196	.162	.044
	(.114)		(.120)		(.080)	
Unemployed	-.577	.269	.422	.321	.396	.292
	(.523)		(.425)		(.376)	
Male	.385	.080	.270	.260	.148	.444
	(.220)		(.240)		(.194)	
Married	-.293	.177	.169	.523	-.414	.088
	(.217)		(.265)		(.242)	
Age	.021	.654	-.160	.000	-.009	.833
	(.047)		(.036)		(.042)	
Age squared	.000	1.000	.001	.000	.000	.795
	(.000)		(.000)		(.000)	
Education	.077	.124	.165	.074	.079	.223
	(.050)		(.092)		(.065)	
Family income	-.010	.771	-.040	.378	.036	.333
	(.034)		(.046)		(.037)	
Black	.254	.554	.161	.690	.181	.561
	(.429)		(.402)		(.312)	
Hispanic	-.065	.952	-1.131	.199	.286	.483
	(1.082)		(.881)		(.407)	
Adj. R-Squared	.079		.073		.095	
Observations	949.000		952.000		948.000	

Note: Dependent variables (5 pt scale) are the absolute value of the difference between each attitude on the federal level and the state level. Unstandardized ordered logistic regression coefficients with standard errors clustered by state in parentheses. Probabilities based on two-tailed tests. 2010 Cooperative Congressional Election Study (CCES). Coefficients for cut points not reported to save space.

Table 6: State Population Size and Representativeness of Federal and State Legislatures, 2010

	Congress		State Legislature	
	b/se	p	b/se	p
State Level				
State Population size	.021	.018	.023	.052
	(.009)		(.012)	
Partisan Competitiveness	-.177	.892	1.600	.294
	(1.302)		(1.524)	
Unemployment	-.128	.003	-.079	.116
	(.044)		(.050)	
Pct. black	.444	.710	-.425	.749
	(1.196)		(1.329)	
Pct. Latino	-1.751	.007	-3.302	.000
	(.653)		(.886)	
Median income	-.000	.545	-.000	.332
	(.000)		(.000)	
Individual level				
Political Interest	-.005	.959	-.034	.709
	(.091)		(.090)	
Ideology	-.096	.282	-.005	.957
	(.089)		(.083)	
Electoral winner (state)			.665	.004
			(.228)	
Republican	.217	.452		
	(.288)			
Independent	-.348	.058	-.095	.691
	(.184)		(.240)	
Economic Evaluation	.487	.000	.324	.000
	(.131)		(.089)	
Unemployed	-.337	.208	-.184	.567
	(.268)		(.322)	
Male	-.114	.577	-.142	.461
	(.204)		(.193)	
Married	-.431	.057	-.479	.055
	(.226)		(.250)	
Age	-.011	.708	-.062	.045
	(.030)		(.031)	
Age squared	.000	.494	.001	.021
	(.000)		(.000)	
Education	-.073	.239	-.028	.632
	(.062)		(.058)	
Family income	.014	.687	.053	.100
	(.036)		(.032)	
Black	.724	.006	.563	.019
	(.261)		(.240)	
Hispanic	.302	.366	.237	.435
	(.334)		(.303)	
Adj. R-Squared	.053		.046	
Observations	950		952	

Note: Dependent variables measured on a 5-point ordinal scale. Unstandardized ordered logistic regression coefficients with standard errors clustered by state in parentheses. Probabilities based on two-tailed tests. 2010 Cooperative Congressional Election Study (CCES). Coefficients for cut points not reported to save space.

Table 7: State Population Size and Trust in Government, 2010

	Federal Government		State Government	
	b/se	p	b/se	p
State Level				
State Population size	.034	.028	.026	.148
	(.016)		(.018)	
Partisan Competitiveness	.020	.988	2.080	.237
	(1.374)		(1.759)	
Unemployment	.104	.136	.009	.908
	(.070)		(.079)	
Pct. black	-.755	.660	-2.151	.150
	(1.718)		(1.494)	
Pct. latino	-4.841	.001	-3.279	.038
	(1.481)		(1.583)	
Median income	.000	.163	-.000	.071
	(.000)		(.000)	
Individual Level				
Political Interest	-.359	.000	-.082	.466
	(.093)		(.112)	
Ideology	-.164	.037	.034	.548
	(.079)		(.056)	
Electoral winner (state)			.930	.000
			(.250)	
Republican	-.573	.029		
	(.262)			
Independent	-1.042	.007	-.387	.189
	(.388)		(.295)	
Economic Evaluation	.888	.000	.551	.000
	(.115)		(.108)	
Unemployed	-.147	.736	.084	.795
	(.436)		(.323)	
Male	-.149	.466	-.122	.386
	(.204)		(.141)	
Married	-.406	.096	-.413	.094
	(.244)		(.247)	
Age	.019	.670	-.013	.742
	(.044)		(.039)	
Age squared	-.000	.804	.000	.554
	(.000)		(.000)	
Education	-.038	.660	-.065	.337
	(.087)		(.067)	
Family income	-.014	.740	.013	.728
	(.043)		(.038)	
Black	.669	.029	.823	.001
	(.307)		(.258)	
Hispanic	1.006	.000	.743	.005
	(.248)		(.265)	
Adj. R-Squared	.177		.072	
Observations	951		950	

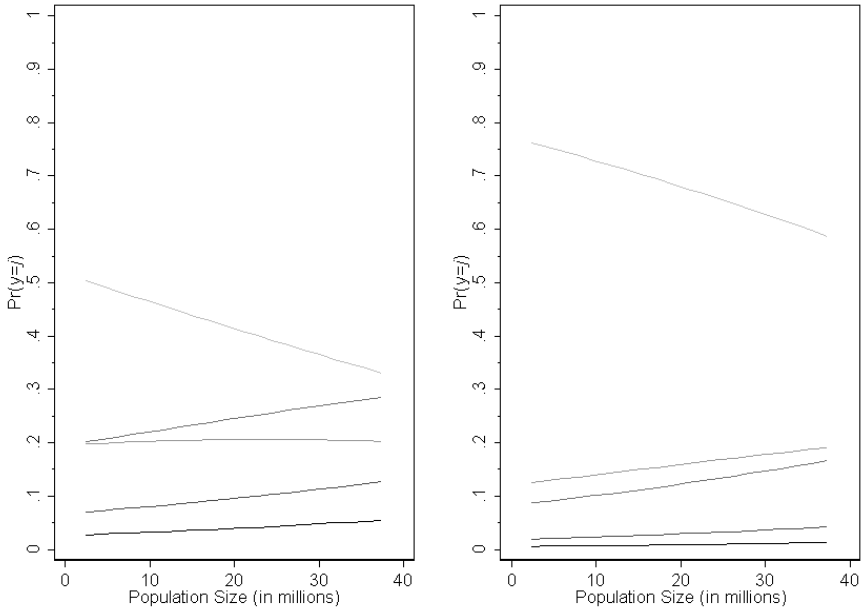
Note: Dependent variables measured on a 5-point ordinal scale. Unstandardized ordered logistic regression coefficients with standard errors clustered by state in parentheses. Probabilities based on two-tailed tests. 2010 Cooperative Congressional Election Study (CCES). Coefficients for cut points not reported to save space.

Table 8: State Population Size & Responsiveness/Efficacy/Influence: Federal and State Government 2010

	No Interaction				Interaction			
	Federal		State		Federal		State	
	b/se	p	b/se	p	b/se	p	b/se	p
State Level								
State Population size	-.003	.814	-.013	.356	-.324	.000	-.397	.000
	(.012)		(.014)		(.061)		(.065)	
Partisan Competitiveness	.508	.705	.299	.839	-4.187	.009	-5.349	.003
	(1.340)		(1.476)		(1.598)		(1.785)	
Population X Competitiveness					.403	.000	.482	.000
					(.075)		(.081)	
Unemployment	-.032	.560	-.016	.769	.011	.819	.035	.447
	(.054)		(.055)		(.049)		(.046)	
Pct. black	2.290	.045	1.191	.288	1.522	.193	.303	.779
	(1.140)		(1.121)		(1.169)		(1.084)	
Pct. Latino	-.220	.826	-.569	.632	-.668	.366	-1.130	.206
	(1.000)		(1.189)		(.739)		(.893)	
Median income	.000	.130	.000	.055	.000	.040	.000	.007
	(.000)		(.000)		(.000)		(.000)	
Individual Level								
Political Interest	.395	.000	.484	.000	.380	.000	.471	.000
	(.091)		(.093)		(.090)		(.091)	
Ideology	.074	.393	.132	.054	.080	.363	.132	.055
	(.087)		(.068)		(.088)		(.069)	
Electoral winner (state)			.084	.730			.037	.862
			(.245)				(.214)	
Republican	.005	.980			-.033	.873		
	(.206)				(.209)			
Independent	-.336	.303	-.341	.314	-.332	.306	-.324	.344
	(.327)		(.338)		(.324)		(.342)	
Economic Evaluation	.305	.010	.214	.088	.292	.017	.205	.110
	(.119)		(.125)		(.122)		(.129)	
Unemployed	-.181	.403	.149	.529	-.241	.275	.095	.711
	(.216)		(.236)		(.221)		(.256)	
Male	.010	.956	.060	.758	-.003	.987	.033	.863
	(.172)		(.193)		(.173)		(.191)	
Married	-.364	.087	-.396	.065	-.400	.053	-.448	.033
	(.213)		(.214)		(.206)		(.210)	
Age	.076	.020	.033	.315	.077	.018	.034	.298
	(.033)		(.033)		(.033)		(.033)	
Age squared	-.001	.013	-.000	.230	-.001	.011	-.000	.218
	(.000)		(.000)		(.000)		(.000)	
Education	-.061	.322	.021	.746	-.059	.365	.028	.674
	(.062)		(.066)		(.065)		(.066)	
Family income	-.003	.923	-.012	.687	-.007	.838	-.017	.567
	(.031)		(.029)		(.032)		(.030)	
Black	1.165	.000	.928	.001	1.132	.000	.907	.002
	(.269)		(.279)		(.275)		(.286)	
Hispanic	.498	.116	.346	.367	.539	.076	.421	.254
	(.317)		(.383)		(.304)		(.369)	
Adj. R-Squared	.051		.054		.057		.062	
Observations	953		955		953		955	

Note: Dependent variables measured on a 5-point ordinal scale. Unstandardized ordered logistic regression coefficients with standard errors clustered by state in parentheses. Probabilities based on two-tailed tests. 2010 Cooperative Congressional Election Study (CCES). Coefficients for cut points not reported to save space.

Figure 4: Population Size and Representativeness of Congress (left) and State Legislature (right). Lines colored by levels of representativeness, with darker lines showing probability of saying the legislature is representative, medium lines show a neutral response, and light lines show the probability that the legislature is not representative.



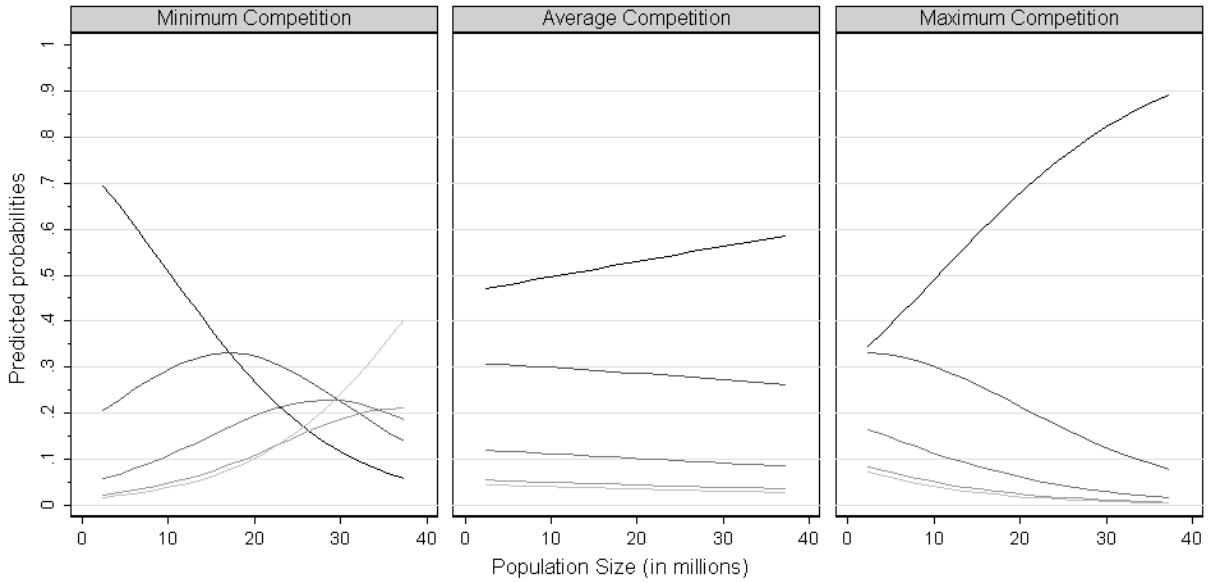


Figure 5: Population Size, Partisan Competition, and Efficacy (Federal Government). Darker lines show the probability of choosing a response option of greater efficacy, while lighter lines show less efficacy. Graphs vary by level of partisan competition In the state, determined by the presidential vote margin in 2008.

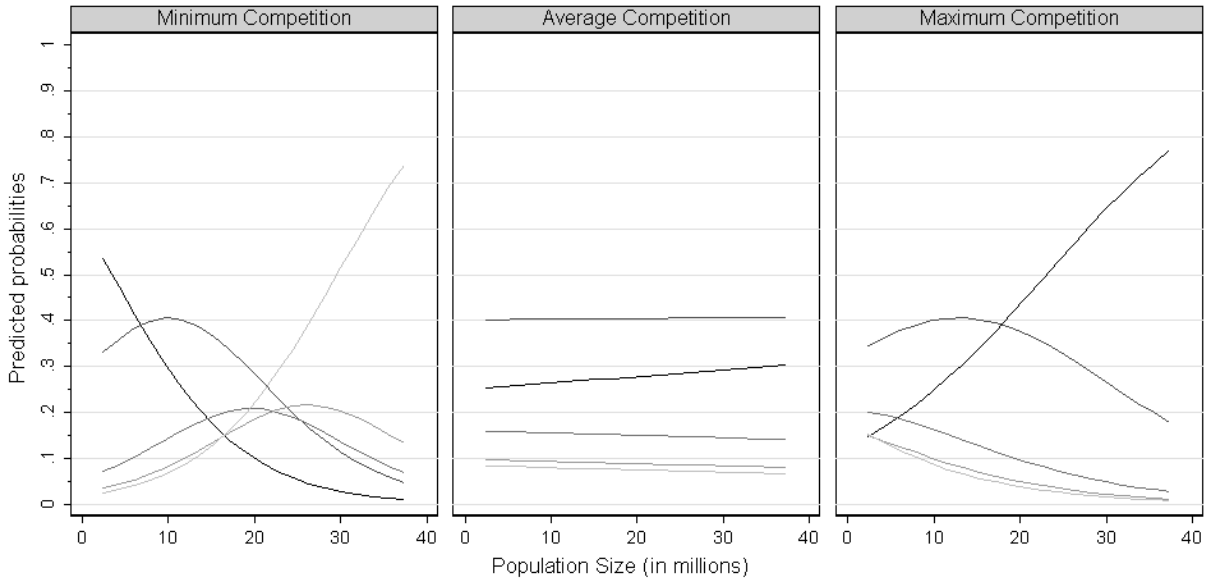


Figure 6: Population Size, Partisan Competition, and Efficacy (State Government). Darker lines show the probability of choosing a response option of greater efficacy, while lighter lines show less efficacy. Graphs vary by level of partisan competition In the state, determined by the presidential vote margin in 2008.

[1] Both quotations are James Madison's summaries of the speeches given on June 9, 1987 during the Constitutional Convention. Compiled and published in Farrand (1937), Vol. I, pp. 177-178 and 179-180, respectively.

[2] The CCES is an internet survey which randomly selects names from large population lists and then matches those randomly selected names with respondents who have opted into similar surveys. The matching is based on demographic, geographic, and attitudinal data, including political interest. Sample matching was used to construct the sample (Vavreck and Rivers 2008). The sample was stratified by state to ensure large sample sizes of both large and small states. More information regarding sample matching is available at http://web.mit.edu/polisci/portl/cces/material/sample_matching.pdf. The models are estimated using survey weights. Using this same technique, the 2006 Cooperative Congressional Election Survey (CCES) produced more precise estimates than more conventional probability designs such as random digit dialed (RDD) phone surveys (Vavreck and Rivers 2008).

[3] Initial models were run as multilevel linear regressions. Likelihood ratio tests showed no significant deviation from traditional, unilevel models.

[4] Gender is measured with a dichotomous variable with males coded 1 and females 0. Income is measured with a 14-point ordinal scale ranging from less than $10,000 (1) to over $150,000 (14). Education is a six-point ordinal scale ranging from 1 (no high school degree) to 6 (post-graduate education). Age is age in years. Age squared is also included to capture non-linear effects of age. Marital status is a dichotomous variable with married respondents or those in a domestic partnership coded 1, all other respondents coded 0. Dummy variables for black and Latino respondents are also included.

[5] Measured with a six-point ordinal scale, with higher values showing the respondent thought the economy has gotten better, and lower values signifying the respondent thinks the economy has gotten worse.