

1-27-03
WORKSHOP IN POLITICAL THEORY
AND POLICY ANALYSIS
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**Institutional Rules and Legislative Outcomes:
A Look at the Influence of Chamber Size
in the State Legislatures**

by
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Presented at the Institutional Analysis and Development Mini-Conference and
TransCoop Meeting, Humboldt University/Indiana University,
December 13th, 14th, and 16th, 2002, Workshop in Political Theory and Policy Analysis,
Indiana University, Bloomington, Indiana, USA

Rules make up a dominant part of how legislatures operate and legislators behave, and it is important to understand how these rules structure the operations within a legislature and the incentives for legislative members. At the state legislative level, membership size is determined in each state constitution. Some constitutions provide for specific legislative sizes while others allow more flexibility by setting parameters and allowing the decision to be made at the collective choice level of the legislators or the people (Hamm and Squire 2001). From these constitutional rules, a clear and observable variation exists for the membership size of the state legislatures. However, political scientists have devoted little attention to this variation with a few studies finding that size is an important factor in Congress (Lee and Oppenheimer 1999; Baker 2001).

Forty-nine states dictate an institutional framework of a legislative branch divided between two chambers. Within each of these states are separate criteria and provisions for the size of these chambers, which create varying opportunities for office seekers and influences on political actors in the strategic environment of the capital. As Table 1 shows, state legislatures have a large variation in their total membership with an average membership of 150 with a standard deviation of 58. The senate averages 40 members with a standard deviation of 10 while the house averages 111 members with a standard deviation of 56.¹ However, the house is skewed a bit because of the unusually large New Hampshire House, which consists of 400 members. By dropping New Hampshire, the house averages 105 members with a standard deviation of 37. Even without New Hampshire included, the lower chambers are still over 2.5 times larger than the senates. The size differences between the chambers' average nearly 72

¹I refer to the lower chamber throughout this paper as the "House," but in fact 5 states (CA, NV, NJ, NY, and WI) they are referred to as the Assembly and in 3 states (MD, VA, and WV) they are referred to as the House of Delegates.

members with a standard deviation of 55 (without New Hampshire the numbers are 65 and 33 respectively). What are the implications for these size differences? In this paper, I examine the implications for such variation on the common constitutional rule.

[Insert table 1 about here]

The paper proceeds as follows. The first section lays out a theoretical argument that suggests smaller chambers, in general, and upper chambers, more specifically, offer more benefits to legislators. I discuss the issue institutionally from a bicameral perspective and then discuss how this institutional variation may structure member behavior of not only ambitious politicians looking to climb up the political power ladder but also for those career politicians who make their home in the state capitals. In the second section, I specifically examine the hypotheses derived from the previous discussion. I then lay out the analysis undertaken and the data used, and test several indicators of legislator preference between the chambers. A discussion of the results follows with a concluding section focused on the implications of my findings and potential extensions of this research.

Bicameralism and Institutional Structure

Lijphart (1999) establishes three types of bicameralism that differ on three fundamental characteristics: the distribution of formal constitutional powers between the chambers, the selection mechanism of the upper house, and the electoral formula used for electing the upper house. From these different characteristics, Lijphart proposes two classifications for the different types of bicameral systems: symmetric/asymmetric and congruent/incongruent. Symmetric legislatures are those in which both chambers are democratically elected and the constitutional powers between the chambers are fundamentally equal. Asymmetric legislatures have either non-democratically elected upper houses or unequal constitutional powers between the

chambers. Congruent legislatures are those with similar electoral formulas and similar constituencies to represent. On the other hand, incongruent legislatures use an electoral formula in the upper house designed to over-represent minorities (i.e. territorial, ethnic, cultural, or traditional) and leads to different constituencies between the chambers.

From this classification system, 49 of the state legislatures fall into the symmetric and congruent category with Nebraska being the lone unicameral system. This category suggests the most similarity between the chambers as a similar constituency elects both chambers and shares almost equal constitutional powers.² Unlike the other types of bicameral systems, the state legislatures (symmetric and congruent) do not have the distinctions that set upper chambers apart as being the more powerful or historically significant within a legislature. However, conventional wisdom and scholars alike suggest that state senates and houses are not equal and, in fact, the senates are the upper chamber in terms of power and prestige. For example, in discussing the appeal of public office and public ambition, Rosenthal states, "Members of the house tend to run for the senate when a seat becomes open; members of both bodies often jump at a chance to run for a congressional seat or for statewide office" (1996: 115). From an ambitious state legislator's perspective, it is easy to understand the political benefits of seeking a congressional seat or statewide office, but a closer theoretical examination is needed to understand the gain of moving within the legislature from the lower to upper chambers.

Throughout this paper, I work from the assumption that legislators are strategic about their political careers (Schlesinger 1966) and assume a general rational-choice approach that people pursue their ends through strategic, instrumentally rational behavior and attempt to

² Some states dictate that certain bills must start in a specific chamber, most notably budget bills in the house, or other chamber specific rules. However, the fundamental constitutional power is equal between the chambers.

¹ For other examples presenting the senate as the upper chamber in terms of benefits or power see: Squire 1992: 1032, Soule 1969: 442-443, Francis and Kenny 1997: 248

maximize their preferences (Friedman 1996; Hibbing 1999). From this working assumption, it is important to recognize the role of ambition in the strategic preferences of legislators.

Schlesinger (1966) presents a typology of progressively ambitious politicians, static politicians, and discrete politicians. Ambitious politicians "aspire to attain an office more important than the one he now seeks or his holding," static politicians are content to make a "long run career out of a particular office," and discrete politicians only seek office for a limited time with limited strategic plans (Schlesinger 1966: 10). From a legislative perspective, it is important to understand that the membership of a legislature will not be a random assortment of career ambitions rather the majority will generally have the same goals (Squire 1988). Relevant to this paper, an ambitious politician's calculation of whether to enter the state legislature, make a career of the position, and then whether to leave for higher positions or retire will be shaped by not only the election and campaigning process but the characteristics of the state and institutional structure of the office (Berkman 1994). Few studies have investigated the effect of structural factors on individual career opportunities and member retention in legislatures (Squire 1988), and if we are to understand why legislators stay, move up, or drop out, we need to explore the career incentives embedded in legislative structures (Polsby 1968).

In several key areas, the differences between the chambers are negligible: compensation, service time, and professionalization. Neither legislator compensation nor length of session differs between chambers; the one exception is Virginia, where senators make only \$360 more a year (National Conference of State Legislators, 2001). Professionalization of the legislature becomes an important factor in the ambitious politicians' career decisions. Studies suggest that professionalized legislatures attract more ambitious politicians since they offer not only good legislative learning experiences but also a livable wage and as they wait for the opportunity to

advance towards Congress (Berkman 1994). If long-term advancement beyond the state house looks promising, ambitious politicians also use the legislature as a training ground to improve their political skills, and if circumstances change and the advancement opportunity does not present itself, they use the state legislature for long-term service (Squire 1992). Fowler and McClure (1989) suggest that this works in the other direction as well. For the less professionalized states, ambitious politicians are more likely to skip the state legislatures in their move up the career ladder as they are seeking a more challenging position. In each of these ways, the upper and lower chambers appear quite similar.

However, term length and chamber size are two important constitutional provisions that differentiate the chambers from one another. As at the Congressional level, most state senates offer a longer term than in the house, but none are as drastic as the 6-year to 2-year term differences offered in the Congress. Table 2 shows thirty-two states provide for longer terms in the senate with thirty states having 4-year senate terms and 2-year house terms. New Jersey and Illinois offer two-year house terms with staggered senate terms of two 4-year terms and one 2-year term within each member's electoral cycle. Nineteen states have equal terms for both chambers with twelve states having 2-year terms and five providing 4-year terms. As discussed earlier, all state senates are smaller than their respective lower house, but not in a uniform manner. Table 3 provides the size information for the state legislatures, and 46 of the 49 states have lower chambers that are at least twice the size of the senates. Of these 46 states, 16 states have lower chambers at least three times larger than the senates. The benefit a legislator gains from a longer term is most evident in the electoral safety it brings as the individual avoids the potential for defeat at the polls. However, the benefits of a smaller membership are not quite as obvious.

[Insert table 2 about here]

[Insert table 3 about here]

From a democratic theory perspective, the ability of any decision-making body to govern effectively is often tied with the quality of deliberation within the group. This concern about deliberative quality often revolves around a formation of a size principle that addresses the question of optimal group decision-making size (Ostrom 1987). *The Federalist* address such a principle when discussing the appropriate size of the House of Representatives, and conclude that bigger groups may hurt the quality of deliberation (Ostrom 1987). The preference for smaller legislative bodies is easily understood from this concern of deliberative quality within the group, and the importance of deliberation on passing better public policy.

The structure and size of the legislature is important not only in democratic theory but to the ambitious as well as the static politician. Francis (1985) identifies one of the major benefits of serving as a state legislator is policy success and a major cost as amount of days spent in session. While session length is equal across the chambers, chances for policy success are not. The senate offers a better chance for achieving policy success as it has fewer members who pass more legislation, per capita, than their house counterparts, per capita (Rogers 1998; Tucker 1989; Francis 1985). While the house generally has a higher volume of legislation both introduced and passed, when this is broken down per member individual senators have a better chance of gaining policy success. According to Francis, "The fact is that most legislators want to initiate change in the status quo. The agenda for most legislators is an agenda for change" (1985: 629). The easiest way for legislators to initiate change is through policy proposals, and the smaller senates provide a greater opportunity for this policy success.

While policy success is an important benefit, it is not the sole advantage for a legislator to decide to move-up to the senate from the house. Gaining information and cues for decision-making is important for any legislator who hopes to be well informed and effective. Studies have shown that acquaintances and friendships are important in the decision making process of legislators (Caldeira and Patterson 1987; Jewell and Patterson 1985; Uslaner and Weber 1981). These studies coupled with the findings that many friendships are of those with which interaction is the highest (Patterson 1972) suggests that the fewer members a legislator works with would allow them a greater chance of having individual interaction with a greater percentage of their fellow legislators and gaining important cues in the policy process. *The Federalist* (58) argues "the larger the number, the greater will be the proportion of members of limited information and of weak capacities" (Ostrom 1987: 96). Therefore, a chamber of 40 members, as compared to one of 100 members, will be a much easier environment for an individual to not only establish friendly communications but will also reduce the number of potential adversaries for getting proposed legislation killed in committee or on floor votes. The specialization argument, especially for Congress, posits the lower house has more political power than the upper house since it is easier to specialize and dominate specific policy areas (Brams 1989; Konig and Brauning 1996). However, specialization appears much more important at the Congressional level than state legislative level, and does not guarantee greater policy success for a member. Overall most arguments point towards the smaller senates being the preferred chamber to the larger lower chambers.

A similar type argument can be made in terms of group size and principal-agent relationships. It is well known that as group size increases, the potential for free riding increases (Olson 1965). With free riding comes increased costs of policing, monitoring, and enforcing,

and this implies that agreements made between smaller groups, such as committees, may be difficult to carry out in large legislatures (Shepsle and Weingast 1984). Legislators are primarily on their own when it comes to carrying out promises and agreements (they could face some types of punishment from caucuses or leadership). Therefore, they must develop a trust in carrying out these deals and arrangements, and the way many members develop this trust is by "subjective, reputational characteristics in judging one another's trustworthiness, e.g., brand names" (Shepsle and Weingast 1984: 213). From a theoretic group size point of view, the smaller the chamber the less free riding and the more likely agreements and deals will be kept. Put simply, the fewer members the more likely any one legislator will have of developing trust and enforcing agreements that can lead to a greater chance of policy success and consensus building.

The obvious benefit of a smaller chamber is the chance for greater policy success; moreover, fewer members allow easier access to cues and information and make the enforcement of informal agreements more likely. Theoretically, senate membership is more beneficial since it is equal to the house in several regards but offers more benefits in a few key areas important to legislators.

An Empirical Look at the Influence of Chamber Size

Hypotheses

To examine the influence of size in the legislature, I examine several empirical hypotheses. I test two hypotheses using aggregate legislative data to look for broad patterns of policy outcomes and legislative turnover. I then focus on individual member behavior to test for the importance of size in senators' career paths and previous legislative experience.

The ability to pass legislation and avoid gridlock is an important component for any legislature to govern effectively. The size of the legislature can hinder this process as the

democratic concerns of concentration of power by a few must be balanced with the concerns of establishing a legislative body that remains small enough to govern (Ostrom 1987). Previous studies show that the fewer members in state senates pass more legislation per member than do the members in the larger lower chambers (Rogers 1998; Tucker 1989; Francis 1985). Smaller legislatures, as a whole, should then have greater success at passing legislation than larger legislatures.

HI: States with smaller legislatures will produce greater policy success rates than states with larger legislatures.

Another factor for effective governance in the legislature is the stability of its membership as it is hard for any decision making body to function with a frequent and sizable turnover of its members (Squire 1988). Hyneman (1938) began political scientists study of the implications of membership turnover and the outcomes of public policy by identifying an initial problem with sizable turnover. Most studies argue that more stable memberships are necessary to produce less amateur legislatures and better public policy with a focus on the growth of careerism and professionalization in the U.S. House of Representatives (Polsby 1968; Kernell 1977). In addressing this question of turnover, I rely on Squire's (1988) typology of legislatures based on advancement prospects in the state and members' career goals. He identifies career legislatures as those that foster static politicians in its memberships, springboard legislatures that facilitate ambitious politicians and their move up the political ladder, and dead end legislatures that probably best appeals to discrete politicians, as it does not foster advancement or provides incentives to make a career.. I argue that the senates in both career and springboard legislatures should see less turnover due to greater benefits of the chamber for both the ambitious and career minded legislator.

H2: Senates in both career and springboard legislatures will show greater membership stability.

My second set of hypotheses shifts away from the state and chamber level of analysis to the individual level. Not only should size influence policy outcomes at the aggregate level but it should also enter into legislator's career decisions. For the progressively ambitious legislator, the senate is a step up in their climb on the political ladder (Squire 1992), and for the legislator content to serve their careers in the state capitol, the senate offers more potential for policy success (Francis 1985). However, while all state senates have fewer members, the size difference varies across the country. These variations will change not only the electoral opportunities in a state but the power and prestige relationship between the chambers. States with similar sized chambers should both offer similar benefits for its members, and house members looking to either advance beyond the state house or those looking to make a career in the legislature should have no incentive to move up to the senate. In states with the smallest senates and largest houses, both ambitious and static legislators should prefer to move up to the senate for the added benefits given the electoral opportunity to make the jump. If the senate is not a more beneficial chamber then neither ambitious nor career legislators should risk electoral defeat to make a lateral move that does not provide greater benefits.

H3: States with largest ratio of house to senate members will have more senators with previous legislative experience in the house.

While size is an important institutional structure within the legislature, several other key variables should also influence legislator's career paths. Professionalization is an important institutional variable to test for the differences between the types of legislators running for office, and the variations are great between the most professionalized states of full-time legislatures and those of the least professionalized citizen legislatures (King 2000). Legislators who only seek a

discrete term in office will not have the same benefits as either those who are using the state legislature as a stepping-stone in their political careers or those who seek to make a career in the state capitol. Therefore, the citizen legislators found in the least professionalized states will not place such an importance on which chamber they serve their time in office since they are only in office for a small amount of time. In addition, the most professionalized legislatures may offer a career for the legislators. For these career legislators, the senate should be the preferred chamber for them to make their legislative livelihood.

H4: The more professionalized state legislatures will have more former house members serving in the senate.

Term limits are becoming an important part of the institutional make-up of state legislatures as the 1990's saw 21 states adopt some form of term limits on their state legislators (NCSL 2001).⁴ We do not fully know how these limits affect the political environment as many have only recently or are yet to take effect. However, legislators must be aware of these new rules, as they must plan their electoral future knowing they cannot be static in their current positions (Francis and Wayne 1997). House members are either being forced or will be forced in the near future to look for other opportunities for their political careers. The senate is one logical place for these actors to turn.

H5: States with term limits will have more senators who have served in the house.

Term length is a common factor all legislators' must consider when making their electoral decisions. Most state legislative elections are won by large margins and most legislators occupy safe seats (Ray and Havick 1981; Francis 1993); however, a longer term offers politicians more time to avoid the potential of electoral defeat. Once again not all senates offer more of a benefit with a longer term, but in no state does the house offer a longer term.

⁴ Four states (ID, MA, OR, WA) had their term limits repealed either by the courts or legislative proposals.

H6: Senates with longer terms than the house will have more members with previous house experience.

Research Design

My analysis of the impact of chamber size uses both aggregate state legislative data and individual member data to test the general hypothesis that smaller chambers provide more benefits for legislators and these institutional factors influence members' behavior. My first hypothesis concerns policy passage rates. Unfortunately, at this time, I do not have access to either chamber or individual member policy passage data. For an initial look at my first hypothesis, I use data from Rosenthal, et al. (2003) that gives statewide but not chamber-specific policy enactment figures for 1998 and 1999 regular sessions. I expect the smaller chambers to produce greater passage rates than larger chambers. To examine this, I compare policy passage rates to total legislative size. This analysis provides a broad look at chamber size across legislatures, but does not take an in-depth look at the question. However, in conjunction with the rest of my analysis, this test shows an influence for the importance of size.

My second hypothesis focuses on legislative turnover. For this hypothesis, I move to the chamber level to examine the common institutional rule that all state senates are smaller than their respective lower chambers. I use data on the different types of legislatures identified from Squire (1988) and turnover data from the National Conference of State Legislatures for the period of 1987-1997 to gauge the importance of smaller chambers on membership stability between career, springboard, and dead-end legislatures. The use of turnover data from this period is appropriate as only two states had effective term limits during this period (California and Maine).

To test my last four hypotheses of the impact of institutional designs and rules on individual member behavior I formulate a model and test it using logit regression techniques. I

will discuss each variable used in the model and discuss specific questions regarding my dependent variable.

Previous Lower Chamber Experience

My dependent variable is whether a senator had previously served in their states lower house. This is coded as 1 for house experience and 0 if not. I coded this data using member biographies from Project Vote Smart and from state web pages for all state senators (except Nebraska) serving during the 2000 sessions. Nearly 43% of all state senators had previous house experience compared to less than 2% of all state house members having previous experience in the senate. This provides an initial indication of some structuring for legislative career paths based on chamber and that the senate is the upper chamber.

While theoretically state senates should be the more desirable post for legislators, I need to address the question of chamber size difference and the simple opportunity for advancement. Assume we have two legislatures (A and B) both with 1 member senates and state A has a 4 member house while state B has a 2 member house. In legislature A each senate district encompasses 4 house districts and in legislature B each senate district only encompasses 2 house districts. In this case, legislature A will have double the experienced legislators that can run for the senate seat. Mathematically, at least, this suggests that more experience in small senates may simply come from the greater opportunities for experienced legislators to fill the seats than from any intentional gain legislators have to move up to the upper chamber. However, while more opportunities may indeed be available, there still must exist some advantage for house members to leave their house seats and run for the senate. In fact, Squire shows, "There is virtually no correlation (.02) between these two variables [the ratio of higher elective positions to seats in the lower house and the percentage of those higher positions held by former members of the house]."

That is, there is no linear relationship between the number of positions available for advancement and the percentage of those positions filled by former lower house members" (1988:68).

The huge incumbency advantage at the state legislative level provides another insight into this question. First, in states without term limits, legislators can generally stay in their seats, regardless of chamber, until they decide to leave. Secondly, the most competitive races are found in open seat districts. In either a race with an incumbent or an open seat, house members need some incentive to take the electoral risk to move from their house seat to the senate. If the senate does not provide some greater benefit, then more house members should not necessarily fill the senate seats in those states with more opportunities. If the senate does provide a greater benefit, then house members should plan their electoral strategies as to maximize their chances to move-up to the senate. Overall, a mathematical explanation may account for some of the experienced senators in states with greater opportunities. However, I argue that the theoretical explanation for the benefits of the senate provides a strong basis for empirically testing previous house experience in hypotheses for influences of institutional structure on member behavior.

Difference in Chamber Size

As my measure of differences in chamber size, I am using the ratio of house membership to senate membership as presented by Hamm and Squire (2001). From earlier, table 3 presents these ratios. The higher the ratio the more beneficial the senate is for a legislator as the ratio represents the how many times larger the house is over the senate. In my analysis, I expect to find a positive relationship between this ratio and the experience of individual members. The states with the smallest ratios are those closest in size, and those that offer the most similarities

between their upper and lower houses. Therefore, as the house gets larger in comparison to the senate the less beneficial it is and the more members should move up to the senate.

Professionalization

To measure the professionalism of each state I turn to King's (2000) measure for legislative professionalism. This measure takes into account three factors: compensation (salary and living expenses), days in session, expenditures for services and operations. These factors are common across the chambers. Thus, each state has one score, a percentage ranking, with the most professionalized states scoring the highest. Each individual receives the professionalization score for their state.

Term Limits

Table 4 shows the states with term-limited legislatures. I have not differentiated between the types of term limits (consecutive or lifetime) or when the limits affected the states. My main concern is between the fundamental difference of those states that have them in place and those that do not to test whether or not term limits are significant in the determining if a state has more senate members with house experience. Since term limits are such a recent development, the possibility exists that the effects may not be fully apparent yet. However, legislators must account for the term limits in their decisions to seek either higher office or re-election to their current positions. In term-limited states, house members must start looking for the best opportunities to stay an elected official once they are term limited out of office from their current position. So, they may run for the senate before they are officially term limited out of the house if the electoral environment presents a friendly situation for success. For my analysis, the term limit variable is coded as a dummy variable with states having term limits receiving a 1 and those that do not a 0.

[Insert table 4 about here]

Term Length

Table 2 gives the term length for each chamber. Thirty-two states give their senate members a longer term than the house while of the other 17, in five states both chambers have four-year terms and in the other 12 both chambers have two-year terms. For my analysis the term length variable was coded as dummy variable of 1's for states with the longer senate terms and 0's for states with even term lengths.

Analysis

Statewide Analysis

My first analysis focuses on policy passage rates in the legislatures. Table 5 is a simple regression between policy passage rates and state legislative size. I found that without controlling for any other variables, my model predicts nearly 20% of the variation in policy passage rates.³ My coefficient suggests that for every 10 members added to the legislature policy passage rates will drop by nearly 2 percent. Perhaps, more interesting is figure 1, which shows the actual and predicted passage rates. The actual rates show quite a bit of variation as is expected without controlling for any other factors. However, it is clear that as the legislatures get larger than the average size of 150 members (indicated by the vertical line) states are passing less than expected numbers of bills. This gives an initial indication that size influences the percent of policy passed in legislatures, and smaller legislatures have more success than the larger bodies.

[Insert table 5 about here]

[Insert figure 1 about here]

Chamber Analysis

³I drop the outlier New Hampshire from the analysis.

Moving to relationships between chambers within a state, I look at turnover rates in Squire's (1988) career, springboard, and dead end legislatures. As expected table 6 shows turnover is greater in the lower chambers for both springboard and career legislatures as members have either an ambition to move up the political ladder or incentive to stay in the institution. Dead end legislatures show an almost equal amount of turnover. This once again is expected, as these members tend not to stay around long enough to be concerned over which chamber they serve. Taking a closer look at only the senate turnover rates offers support for my theory that both ambitious and career members should prefer the smaller chambers. The career legislatures have the lowest amount of turnover in their senates at 61% over 10% greater than springboard and 17% greater than dead end legislatures. This suggests that career members are getting to the senates and staying longer, and springboard members with ambition to move beyond the legislature are making the move from the lower chamber to upper chamber and awaiting their chance to move out of the state capitol to higher office.

[Insert table 6 about here]

Individual Analysis

I examine how institutional rules and structure influences legislative behavior. As explained above, my dependent variable measures whether a senator has previous experience in the house and moving up to the senate suggest a preference for that chamber in the legislature. • To test for influences on members' behavior, I am using logit regression on the following model:

$$E = a + b_1(R) + b_2(P) + b_3(\text{Limit}) + M(\text{Length}) + \text{error}$$

Where: E = Previous Legislative Experience (1 if previous house membership, 0 if not)

a = Constant

R = Ratio of House size to Senate Size

P = Professionalization (score from King 2000)

Limit = Term Limits (1 if a state has term limits, 0 if not)

Length = Term Length (1 if the senate has a longer term than house, 0 if not)

Notably absent from my discussion and analysis up to this point is both political and social variables. Theoretically, I cannot explain why political factors such as party or social characteristics such as gender and race would influence a member's decision to move up to the senate or stay in the house. For example, the senate is not a fundamentally Democratic chamber; nor is the House a better place for women or minorities to serve. The argument could be made that legislators would not want move up from a chamber in which their party is the majority to the senate if they would then be in the minority party. While plausible, any party influence should cancel out, as there is not a bias for one party controlling one chamber over another across the country. Also, only New York and Delaware have consistently had split legislative control in which one party has dominated one chamber over another. Furthermore, empirically tests do not support the inclusion of these variables. Of the 809 senators with house experience, it is a nearly even split between Democrats and Republicans with 48% of these senators being Republicans and 52% being Democrats. As for party membership, both parties have 42% of their elected senators having previous house experience. Therefore, I proceed by only examining the key institutional factors I identified as theoretically important.

[Insert table 7 about here]

Table 7 shows the results from the model.⁶ The results show highly significant coefficients going in the hypothesized directions; however, logit coefficients do not present a straightforward explanation and these results tell us little else as is. Therefore, figures 2-4 and table 8 present predicted probabilities of a senate member having lower chamber experience under varying institutional conditions.

⁶ Once again, I drop New Hampshire from the analysis.

Each of the institutional factors shows a significant influence on member behavior.

Figure 2 shows that a senator in states with the most similar sized chambers are 20% less likely to have served in the house than those in states with the largest difference in their chamber sizes. In figure 3, senators in the most professionalized states are 40% more likely than those in the least professionalized legislatures to have house experience. As for the influence of term limits and term lengths, table 8 shows that senators in term limited states are close to 12% more likely to have served in the lower chambers while senators from states with longer senate terms are 14% more likely.

[Insert figures 2 & 3 about here]

[Insert table 8 about here]

These results support each of my four hypotheses on the impact of structure on member behavior. Given the significant results of each of these factors, I focus on size and take a closer look at the interactions between these institutional variations. To examine the interactive influence of these variables, I use predicted probabilities to look at the circumstances that should produce the least favorable senate structure for member movement and the most favorable and look at the influence of size in these situations. For the least favorable circumstance, my earlier results show that senate members in the least professionalized states, states without term limits, and states with equal term lengths between chambers had the lowest probability of having served in the lower chamber. Conversely, senators in the most professionalized states with term limits and longer senate terms should have the highest probability of house experience. Figure 4 shows these situations under varying size conditions. These circumstances produce quite different probabilities for previous house experience; however, the influence of size remains quite constant at around a 20% increase for house experience between the smallest and largest

chambers. These results show the importance of each of the institutional factors with a near constant size influence regardless of the other variations in the legislature. This near constant influence shows that importance of size is not washed away by other institutional factors.

[Insert figure 4 about here]

Discussion and Conclusion

The analysis of institutional variations at the state, chamber, and individual level has produced strong confirmation for my hypotheses about the importance of rules in structuring legislative outcomes and influencing member behavior inside the legislature. In particular, chamber size is an important constitutional rule for legislative policy outputs, chamber turnover, and the legislative experience of members in the senate. Smaller chambers appear better able to produce the outcomes that democratic theory calls for in an effective legislature. Smaller legislatures pass a larger proportion of introduced bills, smaller senates have less turnover than the larger houses, and proportionally smaller senates have more legislators with past legislative experience.

My analysis raises several important questions and opens areas for further research. While I show that size is a significant institutional variable, much more work is needed to better understand the implications of size from both a policy outputs and member behavior perspective. In addition, as term limits become fully in effect across the country, a more in-depth analysis can explore what happens to the make-up of the chambers when term limits force out all members. One interesting question is whether term limited state senators will run for the lower chamber, and if so, what influence will this have on the balance of power between the chambers. While my results show the importance of size and institutional factors on individual career paths, what difference does this make for the institutions? Do senates with more experienced members have

a stronger influence in controlling the policy agenda or outcomes, and how does this experience influence relations with the house? These findings suggest more work needs to be done to explore these questions to better understand the implications of bicameral legislatures both within and across the states.

This paper shows that chamber size, specifically, and institutional structure, generally, is an important influence in legislatures. At the state legislative level, this paper presents a theoretical and empirical argument to confirm conventional wisdom that state senates are the upper chamber in more than name alone as the senates offer a more beneficial position for legislators based partly on their smaller size. For legislative studies more broadly, I show that in comparative studies across both legislatures and chambers accounting for the institutional variation of common rules can lead to significant and interesting results at various levels of legislative study.

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Table 1: Summary Statistics of Legislative Membership

n=49	Average Size	Standard Deviation	Minimum	Maximum
Both Chambers	150.51	58.80	60	424
Senate	39.49	10.63	20	67
House	111.02	55.93	40	400

Source: National Conference of State Legislators

Table 2: Legislative Term Lengths

Term (Lower/Upper)	States	Totals
2 years/2 years	AZ, CT, GA, ID ME, MA, NY, NC, RI, SD VT	12
2 years/2-4 years staggered	NJ, IL	2
2 years/4 years	AK, AR, CA, CO, DE, FL, HI, IN, IA, KS, KY, MI, MN, MO, MT, NV, NM, OH, OK, OR, PA, SC, TN, TX, UT, VA, WA, WV, WI, WY	30
4 years/4 years	AL, LA, MD, MS, ND	5

Source: Book of the States

Table 3: Chamber Size in the State Legislatures

State	Senate Seats	House Seats	Total Seats	Difference Between Chambers	Ratio of House Size to Senate Size
Alabama	35	105	140	70	3
Alaska	20	40	60	20	2
Arizona	30	60	90	30	2
Arkansas	35	100	135	65	2.86
California	40	80	120	40	2
Colorado	35	65	100	30	1.86
Connecticut	36	151	187	115	4.19
Delaware	21	41	62	20	1.95
Florida	40	120	160	80	3
Georgia	56	180	236	124	3.21
Hawaii	25	51	76	26	2.04
Idaho	35	70	105	35	2
Illinois	59	118	177	59	2
Indiana	50	100	150	50	2
Iowa	50	100	150	50	2
Kansas	40	125	165	85	3.13
Kentucky	38	100	138	62	2.63
Louisiana	39	105	144	66	2.69
Maine	35	151	186	116	4.31
Maryland	47	141	188	94	3
Massachusetts	40	160	200	120	4
Michigan	38	110	148	72	2.89
Minnesota	67	134	201	67	2
Mississippi	52	122	174	70	2.35
Missouri	34	163	197	129	4.79
Montana	50	100	150	50	2
Nevada	21	42	63	21	2
New Hampshire	24	400	424	376	16.67
New Jersey	40	80	120	40	2
New Mexico	42	70	112	28	1.67
New York	61	150	211	89	2.46
North Carolina	50	120	170	70	2.4
North Dakota	49	98	147	49	2
Ohio	33	99	132	66	3
Oklahoma	54	101	155	53	2.10
Oregon	30	60	90	30	2
Pennsylvania	50	203	253	153	4.06
Rhode Island	50	100	150	50	2
South Carolina	46	124	170	78	2.70
South Dakota	35	70	105	35	2
Tennessee	33	99	132	66	3
Texas	31	150	181	119	4.84
Utah	29	75	104	46	2.57
Vermont	30	150	180	120	5
Virginia	40	100	140	60	2.5
Washington	49	98	147	49	2
West Virginia	34	100	134	66	2.94
Wisconsin	33	99	132	66	3
Wyoming	30	60	90	30	2

Source: National Conference of State Legislatures and Hamm and Squire (2001)

Table 4: States with Term Limits

Arizona
Arkansas
California
Colorado
Florida
Idaho
Louisiana
Maine
Michigan
Montana
Nevada
Ohio
Oklahoma
Oregon
South Dakota
Utah
Wyoming

Source: National Conference of State Legislatures

Table 5: Influence of Total Legislative Membership on Policy Passage Rates

	N=48	Total Members	Constant	Adj. R-Squared
Policy Passage Rates		-.0017*** (-.0005)	.537*** (.076)	.1844

OLS Regression

Standard Errors in Parentheses

*p<.05

**p<.01

***p<.001

Table 6: Average Turnover Rates 1987-1997 in Career, Springboard, and Dead End Legislatures

Type of Legislature	Number	Mean House Turnover	Mean Senate Turnover	Mean Difference
Career	8	71.13 (6.42)	61.00 (8.11)	10.13 (7.53)
Springboard	4	85.00 (5.83)	71.5 (12.87)	13.50 (7.23)
Dead End	12	80.00 (7.33)	78.08 (7.88)	1.92 (8.05)

Standard deviations in parentheses

Table 7: Effects of Institutional Structure on Senators Legislative Experience

Variable	Previous House Experience
Ratio of House to Senate	.170*** (.059)
Professionalization	2.144*** (.340)
Term Limits	.456*** (.102)
Term Length	.588*** (.104)
Constant	-1.90*** (.210)

Logit Regression
 N=1911
 Log Likelihood = -1242.6568
 Standard Errors in Parentheses
 *p<.05
 **p<.01
 ***p<.001

Table 8: Influence of Term Limits and Term Length on Membership Behavior

Institutional Design	Probability of House Experience
Term Limits	0.4883
No Term Limits	0.377
Longer Senate Term	0.4648
Equal Terms	0.3253
Term Limits and Longer Senate Term	0.5405
No Term Limits and Equal Terms	0.2929
Term Limits with Equal Term Length	0.3951
Equal Term Length without Term Limits	0.4273

Figure 1: Observed and Predicted Policy Passage Rates by State

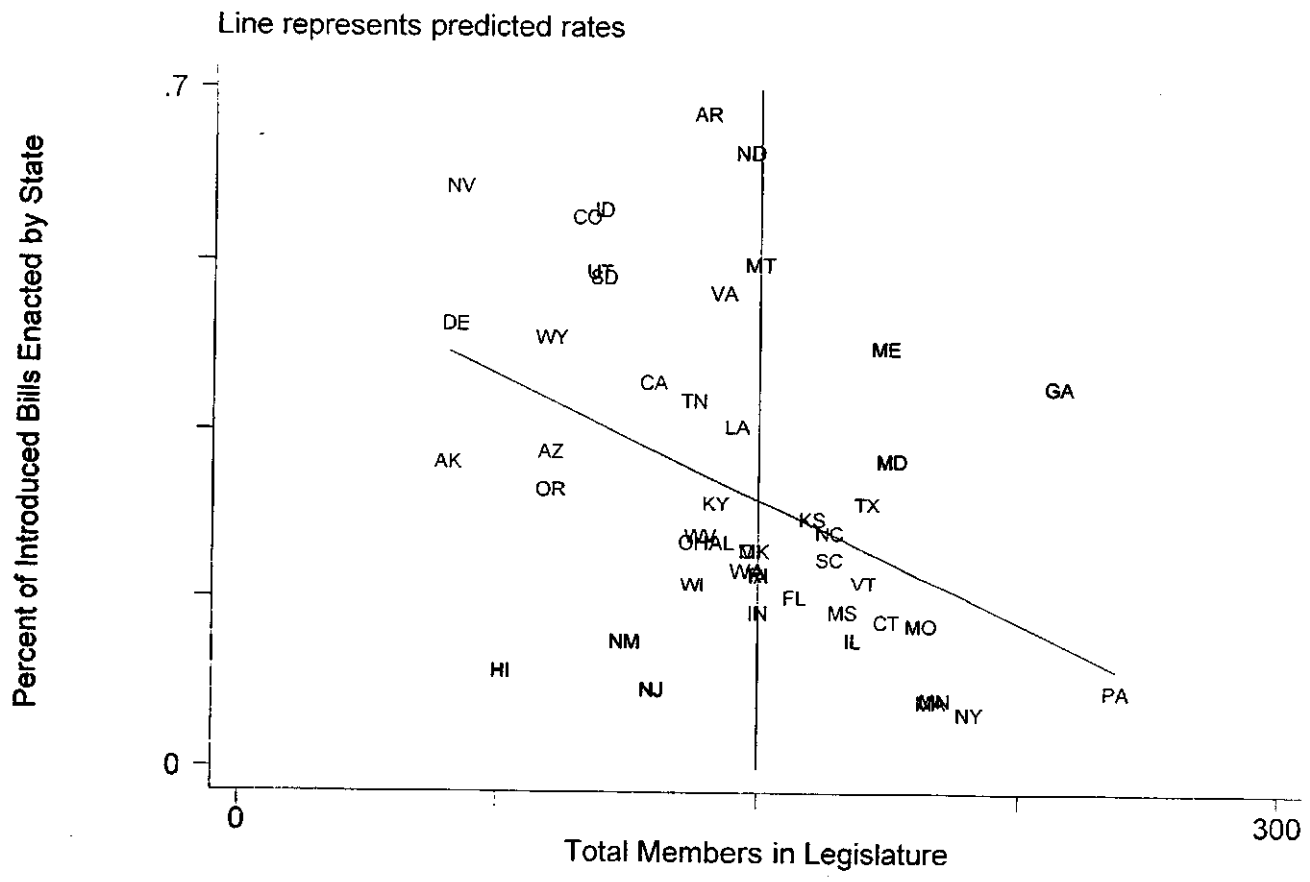


Figure 2: Influence of Chamber Size on Senator's Previous House Experience

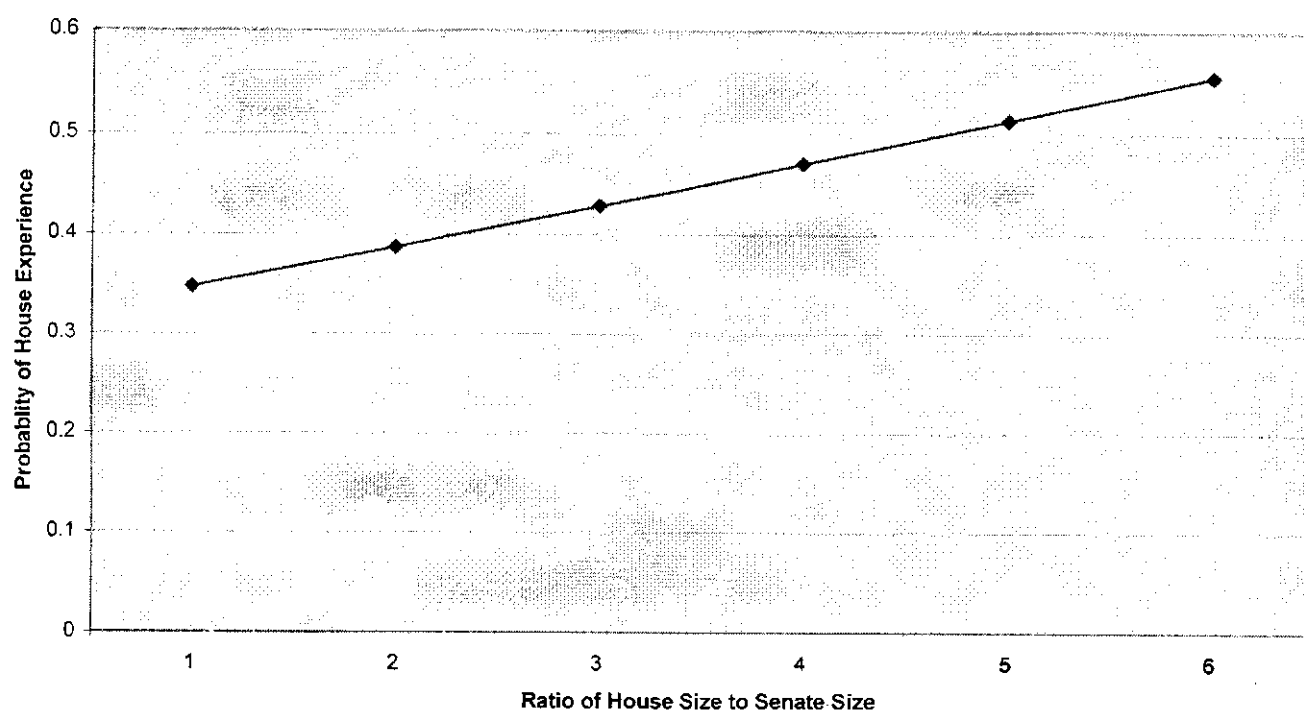


Figure 3: Influence of Professionalization on Senator's Previous House Experience

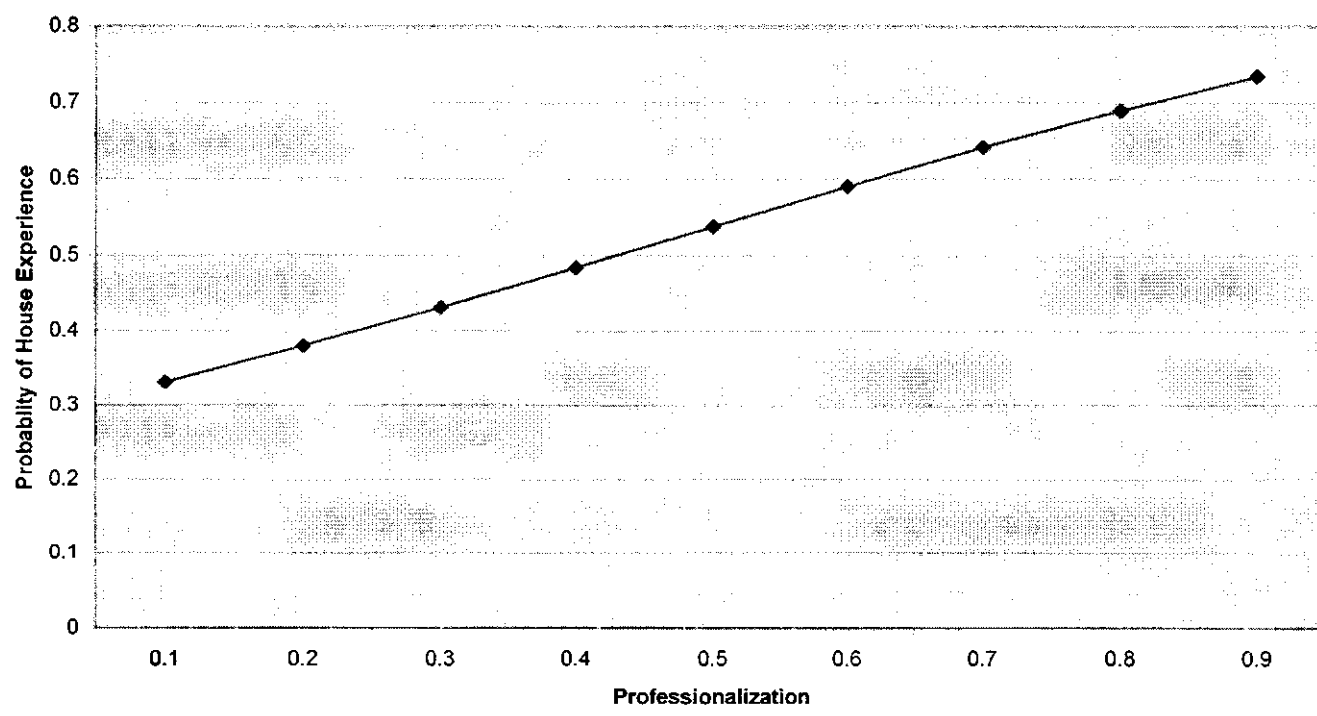


Figure 4: Influence of Chamber Size on Senator's Previous House Experience in Varying Institutional Arrangements

