We investigate various theories of legislative coalition formation in a bicameral context. More specifically, we employ a quasi-experimental design to examine the size of coalitions in both the House and Senate across the late nineteenth and early twentieth centuries. This offers us considerable analytical leverage in investigating how changes in key institutional decision rules (the adoption of the Reed’s Rules in the House and the passage of cloture in the Senate) affect the likelihood of passing major policy reform. Our findings indicate that when the size of the majority party is adequately controlled for, changes in institutional structures do not have a significant effect on cross-chamber coalition formation.

On January 28, 2009, the Democratic-led House of Representatives passed H.R. 1, the American Recovery and Reinvestment Act. The act, commonly referred to as the Stimulus Bill, was the centerpiece of President Barack Obama’s economic recovery plan. What was most notable to analysts was not the bill’s ultimate passage by Congress, but that the enacting coalition included no minority-party Republicans. The Republicans had expressed concern over the size of the stimulus package and a desire to shift the expenditures towards more tax cuts (Otterman 2009). However, the decision to withhold support from the Stimulus Bill was a strategic one as well. By staying unanimous in their opposition, House Republicans placed pressure on the White House and sought to portray the bill’s supporters as left-wing ideologues. Obama’s chief of staff, Rahm Emanuel, quickly defended the package in a statement declaring that “the most important number here for this recovery plan is how many jobs it produces, not how many votes it gets” (Calmes 2009).1

The partisan enacting coalition in the House led to a great deal of speculation as to whether the roughly $900 billion bill would pass the U.S. Senate. Unlike the House, the Senate lacks a simple-majoritarian method for ending debate (Oleszek 2007). To secure a final passage vote on the measure, majority party Democrats would need to secure the support of 60 senators. At the time, the party held only 58 seats.2 Thus, the majority party needed the support of some Republicans. In exchange for votes from three moderate Republican senators, the Democrats agreed to cut nearly $110 billion from the measure (Hulse and Herszenshorn 2009). After doing so, the measure passed the Senate 61 to 37.

The debate over the Stimulus Bill underscores two important observations about how policy is made in the U.S. Congress. First, it shows how different institutions, and the interactions between those institutions, can directly affect policy outcomes. The Senate’s filibuster required Democratic leaders to present a more moderate bill in the Senate than they had in the House. Without spending cuts, a

1Data and supporting materials necessary to reproduce the numerical results will be posted online at www.journals.cambridge.org/JOP. These data will also be made available at http://ajmadonn.myweb.uga.edu/ no later than January 1, 2012.

2Senators Joe Lieberman of Connecticut and Bernie Sanders of Vermont were technically Independents, but caucus with the Democrats. A Minnesota Senate race, later declared to be won by Al Franken (D), had not been decided in time for him to be seated.
filibuster-proof Senate coalition would not have been possible and the bill would have failed. Second, it illustrates why so much research has examined the size of legislative coalitions. Scholars can use coalition sizes to assess the impact that institutions, like the filibuster, have on policy outcomes. If Senate coalitions are, on average, larger than those in the House, this provides evidence for the predicted moderating effect that the Senate’s supermajority voting rule has on U.S. lawmaking.

Prior research has made use of coalition size to explore the integral role that a variety of institutions have on policy outcomes—e.g., the presidential veto and the Senate filibuster (Krehbiel 1998; Wawro and Schickler 2004, 2006). These studies suggest that changes in House and Senate voting rules will lead to clear changes in the size of enacting coalitions. By examining how coalition size has responded to rules changes throughout congressional history, scholars have argued for a parsimonious model of U.S. policymaking—relying on member ideology and formal rules. However, recent work has highlighted potential problems in using coalition size to test for the policy implications of institutional change (see, e.g., Lawrence 2004; Madonna 2011; Roberts 2007; Smith 2007). In particular, these scholars point out that congressional rules changes do not occur in a vacuum. Throughout American history, the issues and agendas considered by Congress are constantly changing. At the same time, changing legislative practices mean that issues and bills that did not receive a recorded vote in the past may be more likely to receive a recorded vote today.

Coalition sizes have consistently increased throughout the history of the U.S. Congress. Do differences in rules alone account for this increase? Or do changing issues and legislative practices explain larger enacting coalitions over time? If instabilities in the legislative agenda and in the roll-call-generating process have served to inflate the size of coalitions in both the House and the Senate, then scholars may have falsely concluded that changes in institutional rules changes alone have led to a more consensual lawmaking process.

While prior work has taken important steps in advancing our theoretical understanding of how institutions affect policy outcomes, this research has largely studied institutions in isolation from one another and assumed that the historical roll-call record has remained consistent across the history of Congress. To clearly understand the role of rules of procedures, changes in agendas and legislative practices across institutions must be accounted for. In this article, we reassess the effect of institutional rules changes while controlling for these historical issues by employing a quasi-experimental design to examine how changes in institutional rules affect the passage of major legislation. To do this we take advantage of pairs of “matched” votes that occur in both the House and Senate. By comparing the coalition sizes of these vote pairs, we are able to assess the role of institutional change while controlling for changing historical circumstances.

We identify all bills that were considered and passed in both chambers from the 39th to the 78th Congresses (1865–1945). By modeling the difference in coalition size between the House and Senate, we can control for both the content of the legislative agenda and the underlying roll-call generating process. This allows us to test the effect of congressional rule changes, while mitigating the risks posed by historical changes in agenda and congressional voting practices. We examine the effect that two major institutional reforms have had on policymaking—the adoption of Reed’s Rules in the House and the passage of cloture reform (Rule XXII) in the Senate. Our findings indicate that when changing agenda and organizational factors are adequately controlled for, changes in institutional structure do not have a significant effect on cross-chamber coalition formation. However, we find that the size of the majority party in both the House and Senate directly affects coalition formation.

### Theories of Coalition Formation: Parties and Institutions

Beginning with William Riker’s classic 1962 book, *The Theory of Political Coalitions*, legislative scholars have maintained a consistent focus on the politics of coalition formation (see, e.g., Hinckley 1972, 1981; Koehler 1972, 1975; Riker and Ordeshook 1968). As with any coalition that forms in Congress, emphasis is often placed on the winners and losers. Although there are potential electoral costs associated with being on the wrong side of a legislative coalition, Mayhew (1974, 118) argues that it would be hard to imagine a situation where a legislator would be punished for being on the losing side of an issue. That being said, there are numerous incentives for being on the winning side. For instance, winners are more likely to be seen by their constituents as influential, especially when it comes to providing distributive benefits within the district (Balla, et al. 2002). Further, legislators who...
win more often are generally able to accumulate more power within the chamber (Cox and McCubbins 2005). As a result, legislators on the winning side of coalitions play a far greater role in dictating policy outcomes in Congress.

Numerous scholars have argued that parties influence how legislators behave, as well as how the institution of Congress is organized and maintained (see, e.g., Aldrich and Rohde 2000; Cooper and Brady 1981; Cox and McCubbins 2005; Finocchiaro and Rohde 2008; Sinclair 1995; Smith 2007). More specifically, parties influence policy outcomes in a variety of manners including the formulation of rules and procedures (Binder 1997; Cox and McCubbins 2005; Dion 1997), the allocation of committee assignments (Cox and McCubbins 1993; Deering and Smith 1997; Hall and Grofman 1990), and how legislators vote on key issues (Cox and Poole 2002; King and Zeckhauser 2003). Additionally, implications from these theories bear directly on the formation of coalitions. Parties want to maximize the number of winners within their ranks, and to do so, they need to assemble the largest possible coalition within the party. At the simplest level this suggests that the size of the winning coalition should approximate the size of the majority party in Congress.

In contrast to partisan accounts, Krehbiel (1998) offers a theory of coalition building that stresses institutional constraints. His central argument is that legislation must bypass numerous veto players in the legislative process before it becomes law. The pivotal player is then determined using a two-step process. First, legislators are ordered by ideology using a unidimensional, spatial model. Once this is accomplished, the most applicable decision rule is applied. An example from the U.S. House in Figure 1 illustrates how this works.

In Figure 1, the status quo is assumed to be on the left. The president’s ideal point, $P$, is to the right, and thus, the veto is not a threat. Given this, the applicable decision rule is the House’s simple majority rule ending debate. Thus, the House median is the pivotal player. Policy enacted should mirror the ideology of the House median, and the enacting coalition should be comprised of all members ideologically positioned such that their ideal point is closer to the bill than the current status quo. If policy is located at the House median and the status quo point is close to that median, then enacting coalitions should be close to a bare majority. Conversely, if the status quo point is far from the median, then a bill located at the median will garner a large enacting coalition.

Krehbiel generates three hypotheses from his pivotal politics theory. First, and of primary importance to this study, winning coalitions should be smaller in the House than the Senate. As the Stimulus Bill example demonstrates, cloture necessitates a larger majority to ensure final passage in the Senate. The Stimulus Bill passed the House with approximately 56% in favor, while 62% of those voting in the Senate voted in favor of it. Second, enacting coalitions should be smaller after the party of the president changes. The selection of status quo points should be wider under a new administration, and as such, the veto should be less of a threat. Finally, Krehbiel argues that winning Senate coalitions should be smaller after the cloture threshold was reduced.

Krehbiel reports some empirical support for the pivotal politics theory using enacting coalition-size data from landmark legislation.

Wawro and Schickler (2004, 2006) apply Krehbiel’s approach to more historical data. Specifically, they examine the effect the adoption of Rule XXII (cloture) had on the formation of winning coalitions in the Senate. They theorize that the adoption of the rule served to institutionalize obstruction in the chamber, whereas before, threats of unorthodox rules changes and reciprocity norms restrained senators from

3Veto points include the president, the Senate filibuster pivot, House, and committee medians.

4In the contemporary Senate, if the veto is not a threat, the pivotal player should be the sixtieth most conservative or liberal member depending on the location of the status quo. This is because the modern cloture rule requires “three-fifths of the Senators duly chosen and sworn” to end a filibuster (Binder and Smith 1997). If the measure or motion involves amending the Senate’s rules, then two-thirds of the Senators present and voting are necessary to end debate.

5Prior to the 94th Congress (1975-76), two-thirds of the senators present and voting was required to end debate. The threshold was lowered to three-fifths of senators duly chosen and sworn during that Congress.

6This list of significant enactments is taken from Mayhew (1991).
engaging in dilatory behavior (Matthews 1959). Thus, the Senate went from a simple majoritarian legislative body to one requiring a supermajority to end debate.

Much like Krehbiel, Wawro and Schickler (2004, 2006) test and confirm their hypotheses using a historical dataset of coalition sizes on landmark legislation. They find that winning coalitions in the Senate were smaller before the adoption of cloture. Thus, a rule designed to curb obstruction actually ended up facilitating it. The authors suggest that this was a strategic decision made to better ensure the passage of legislation late in a session, by forcing coalition builders to compromise on more measures to overcome obstruction. Again, the example of the Stimulus Bill is instructive in this regard. Democratic leaders compromised on the substance of the legislation to attract Republican support and ensure its passage.

While these coalition-based approaches have made for compelling theories of institutional change, recent work has begun to question some of their empirical assumptions. Smith (2007, 159–60) suggests that the presence of extreme status quo points could bias any studies that test changes in institutional decision rules using temporal data. If status quo points are similarly distributed before and after a rules change, then an increase in coalition size is evidence of the rule change affecting policy outcomes. But if status quo points become more extreme after a rule change, increased coalitions are expected, even if the rule has no effect on policy. Consistent with Mayhew (1991), Smith argues that shocks like wars, depressions, or natural disasters often force issues onto the legislative agenda. After cloture was introduced, the Senate agenda included legislation written to confront the Great Depression and to fight World War II. The extreme status quo points caused by these two events would lead to oversized coalitions, irrespective of congressional rules or procedure.

Lawrence (2004) notes that the growth in the average size of winning coalitions in the Senate coincides with a growth in House average coalition sizes. He argues that this calls into question the pivotal politics findings, as the House did not enact a similar reform in 1917. Wawro and Schickler (2006) respond to this argument, noting that the simultaneous growth in the two chambers’ average enacting coalitions could reflect strategic anticipation on the part of coalition builders. We believe that this exchange is important, as it highlights the bicameral nature of the legislative process. By calling attention to coalition formation in both chambers, we can highlight the important role that the bicameral nature of the legislative process plays in policy outcomes. Indeed, as we saw with the stimulus package discussed earlier, the House played a pivotal role in defining the tone of the debate whereas the super-majority constraints of the Senate had a greater impact on legislative content.

More recently, Madonna (2011) demonstrates that what comes to a vote in Congress has greatly fluctuated over time. Specifically, he shows that Congress was substantially more likely to cast recorded roll-call votes on legislation that garnered overwhelming support (greater than 90%) in the early twentieth century as compared to the late nineteenth century. Furthermore, Lynch and Madonna (2008) have demonstrated that the early twentieth century Congress is also more likely to consider bills with nonzero-sum policy benefits. These changes in legislative practice have likely inflated coalition sizes and further confounded efforts to estimate the effects of rule changes. In the next section, we build upon this recent evidence by discussing the biases in the roll-call record in greater detail.

### The Evolving Roll-Call Record: Voting, Issues, and Agendas

When a bill has a small enacting coalition, like the 2009 Stimulus Bill, it is frequently said that the measure was partisan, contentious, or appealed only to a narrow subset of the public. Using aggregate coalition data to explain and test the effects of changes in institutional decision rules is particularly compelling because such a finding can be used to
characterize the macrolevel legislative process. For example, Krehbiel (1998) suggests that the lowering of the cloture threshold in 1975 has led to a more contentious legislative process in the Senate. These scholars typically restrict their analysis to only final passage votes, because they are the easiest for voters to understand back home, and as such, should be the most important for the member (Mayhew 1991). They also usually opt to consider only landmark legislative enactments. Doing so ensures the data are not biased by the large amount of trivial legislation the U.S. Congress produces on a regular basis (Cameron 2000; Clinton and Lapinski 2006). When one examines final passage votes on landmark enactments in both chambers, the conclusion that is frequently drawn is that the legislative process has become more consensual over time. Using a list of coalition sizes on landmark legislative enactments compiled by Stathis (2003), Figure 2 illustrates this.

The evolving roll-call record presents the greatest challenge to testing institutions-based theories with aggregate coalition data. To test the effects of a new legislative decision rule on the formation of winning coalitions on final passage votes, one must rely on the roll-call voting record. Further, one must assume the process generating the roll-call record is consistent throughout the congresses being studied. If the process is not consistent, then any attempts to compare postrule congresses to prerule congresses could be biased. In the remainder of this section, we discuss two pivotal ways the roll-call record has evolved. First, the frequency that a bill will receive a recorded final passage vote has greatly increased over time. Second, the types of issues considered by Congress have shifted over time as well.

Once Congress passes a bill, and the president signs it, that bill becomes public law. However, most bills do not receive recorded votes in either chamber. These bills tend to reflect consensus among members and pass by voice vote. As Smith argues, the number of final passage votes accounts for “a small fraction of the legislative agenda during most of the post-Reconstruction Congresses” (2007, 183). Also, public laws subject to recorded votes have fluctuated over time. During the 104th Congress (1995–97), there were 333 public laws enacted and 130 House votes on final passage. In contrast, there were 360 public laws enacted but just 33 votes on final passage during the 44th Congress (1875–77). This holds true across levels of salience as well. For Wawro and Schickler’s (2006) important enactments data from 1881 to 1946, roughly 43% of the bills did not receive a recorded vote.

An increase over time in the proportion of enactments that received recorded final passage votes is problematic because it can inflate the aggregate size of winning coalitions. This is because the data-generating process is not random (Morton 1999; Roberts 2007). Instead, it appears that in the modern era, legislation that enjoys wide support is more likely to receive a recorded final passage vote than it has in previous eras. That is, legislation that would have passed by unrecorded voice vote in the mid-nineteenth century is now passing by a lopsided coalition in the modern era. A closer look at the composition of winning coalitions in the House and Senate from 1875 to 1945 suggests this is the case (Madonna 2011).

The expectation generated by institutions-based theories of coalition formation is that the relevant decision rule should be related to the size of the winning coalition. Thus, the increase in winning coalitions in both chambers should be related to changes in those chambers’ decision rules. Empirical tests of coalitions on landmark enactments in the Senate have confirmed this intuition. However, the evidence in Table 1 casts some doubt on this claim.

This contrasts with using individual-level roll-call votes. Doing so usually leads to conclusions that necessitate the scholar make distinctions amongst groups of legislators (e.g., members whose ideology falls close to the chamber median should vote a certain way).

Voice voting is the default mechanism for voting in both chambers. When a vote is called for, the chair will ask for the yeas and nays and declare the result via his counting. While members may make their opinions clearly known, voice votes produce no record of individual positions on a bill (Lynch and Madonna 2008).


This is most likely a function of increased activism on the part of legislators, especially in terms of enhancing position-taking opportunities for constituents back home (Mayhew 1974).
suggesting that the increase in coalition sizes in both chambers is due to an increase in the number of bills passed by oversized coalitions—and not a more nuanced change in response to shifts in the decision rules. One likely explanation for this phenomenon is a change in proportion of enactments that have passed with an unrecorded final passage vote.

In addition to the changing proportion of bills receiving final passage votes, another problem stems from fluctuations in the content of the legislative agenda. Early theories of coalition formation paid close attention to issue content. For example, Riker’s (1962) theory of minimal winning coalitions predicted that small coalitions would form if the underlying issue area was zero-sum in nature. When considering a bill with zero-sum policy benefits, coalition leaders needed to offset personal gains by taking from legislators who were not part of the enacting coalitions. Subsequent scholars, however, found scant empirical support for the theory of minimal winning coalitions (Fenno 1966, 1973; Ferejohn 1974; Manley 1970). Weingast (1979) attributes this to a change in the legislative agenda, specifically pointing to Riker’s assumption of zero-sum benefits. Indeed, his theory of universalism is predicated on the assumption that policy benefits are not zero-sum. Since coalition leaders do not have to exclude other members to maximize personal gain, coalitions should be of maximum size when legislators are attempting to enact legislation.

This discussion is particularly illuminating when considering the two dominant issues in the nineteenth- and twentieth-century congresses—the tariff and civil rights (see, e.g., Bensel 2000; Poole and Rosenthal 1997; Potter 1976; Taussig 1931). Prior to the introduction of the income tax, the tariff was the federal government’s primary method for raising revenue (Hansen 1990). The issue serves as a nice example of the zero-sum policymaking stressed by Riker (1962). Tariff policy was largely considered in an era that did not embrace deficit politics. Thus, the costs of the tariff could not be passed on to future generations, nor could they be parcelled out collectively.

The costs and benefits of passing civil rights legislation have similar consequences for coalition formation, and those costs and benefits were almost entirely regional. There was no way to compromise on the substance of a civil rights bill that would have attracted support from Southern members of Congress. As such, winning coalitions on the issue were smaller, approximating the size of each regional faction. Issues like the tariff and civil rights became less prevalent in the twentieth century and were replaced with spending measures with distributive benefits, dispersed policy costs, and increased deficit spending. In short, issues that fostered the narrow coalitions predicted by Riker (1962) were replaced with issues that fostered the universal coalitions predicted by Weingast (1979). Thus, the change in the type of issues on the legislative agenda, as opposed to institutional decision rules or partisan factors, could be the causal factor explaining shifts in average coalition sizes. Indeed, Madonna (2011) suggests as much, reporting that these issues fostered smaller coalitions in the Senate, regardless of the institution decision rules being employed.

In sum, one would expect the size of winning coalitions to be closely linked with both the proportion of bills that received recorded final passage votes and the underlying issue area of bills. Thus, using aggregate coalition sizes to test the effects of legislative decision rules is inappropriate. While recent scholarship has done a laudable job in identifying these biases and problems, thus far, they have been

14 More specifically, Wawro and Schickler (2004, 2006) suggest that the introduction of Rule XXII in the Senate has played a more direct role in the increase in coalition sizes throughout congressional history. This claim suggests that coalitions should increase in response to the changing size of the decision rule (e.g., we should see more bills with an enacting coalition around two-thirds size). From 1815 to 1917, the Senate passed 77 bills with less than two-thirds support, averaging 1.51 per Congress. For the post-cloture era (1917 to 2002), the Senate passed 72 bills with less than two-thirds support, averaging 1.59 per Congress.

15 Early scholarship frequently attributed tariff policy to distributive policymaking (see, e.g., Lowi 1964; Schattschneider 1935; Weingast 1979). More recent work has challenged this conclusion and stressed the narrow partisan benefits (Epstein and O’Halloran 1996; Hansen 1990).
unable to come up with an adequate method for controlling for those biases. This is problematic, as it means questions regarding the influence of institutional decision rules and political parties in coalition formation still linger. In the next section, we discuss how utilizing differences between the size of enacting coalitions on paired votes between chambers allows us to control for many of these potential biases.

**Matched Bills**

Previous scholarship has acknowledged the difficulty in working with aggregate coalition data. However, the primary approach to dealing with problems (e.g., restricting the data to only landmark enactments) has been inadequate in dealing with difficulties posed by the evolving roll-call record. Scholars have been unable to control for increases in the likelihood a public law receives a recorded final passage vote and changes in the legislative agenda. This has made it difficult to cleanly assess the policy implications of congressional rule changes.

We believe that the best way to examine the effects of institutional decision rules is to take advantage of the bicameral bargaining process within Congress. Given that both chambers have to pass identical versions of legislation before it is sent to the president, we examine the difference between the two chambers’ enacting coalitions on the same bill at the initial passage stage. Doing so allows us substantial leverage over approaches that pool coalition data together in that it controls for problems stemming from the evolving roll-call record. By employing these “matched” bills across both chambers over time periods that span across the implementation of Reed’s Rules in the House and cloture in the Senate—roughly 25 years apart—we essentially employ a pair of quasi-experiments on the effect of rules changes on legislation coalitions. More specifically, by assessing coalition size both before and after each of these rules changes were implemented, and simultaneously across chambers, we effectively conduct a pre- and post-test within chambers and have a control group in the opposite chamber during the precise period in which these bills are being considered.\(^\text{16}\)

The advantages of this approach are threefold. First, it allows us to exclude the large amounts of trivial legislation that are dealt with by Congress on a regular basis. Scholars have shown that highly salient bills are more likely to receive recorded roll-call votes in both chambers—as opposed to only one of the two chambers (Clinton and Lapinski 2006).\(^\text{17}\) Second, it allows us to control for the changing issues that are being considered by Congress over time. As an example, it would be difficult to draw conclusions about rules by comparing the size of the enacting coalitions on a late nineteenth-century tariff bill and a 1930s appropriations bill. The largely zero-sum tariff bills will invite narrower coalitions regardless of the rule (Riker 1962). However, the direct effect of changes in institutional settings can be compared using the difference between the House and Senate coalitions on the same bills.\(^\text{18}\) The difficulties that historically changing status quo points present to such analysis are also alleviated. Since the status quo is identical for matched House/Senate votes, differences in coalition sizes will reflect differences in rules and not differences in the historical content of the agenda. Finally, because these matched votes are on final passage, and not conference reports, the early cross-chamber compromising should be minimal.\(^\text{19}\)

The following example further demonstrates how matched bill data works. Suppose the Senate enacted

\(^\text{16}\)It is difficult to envision other variables affecting the same piece of legislation at the same time in the other chamber that are not due to changes in that chamber. Indeed, the examination of matched bills approximates an “as if” random sampling design by serving to hold constant all other conceivable factors that might affect coalition size, except for the conditions in the institution.

\(^\text{17}\)Given that we analyze all major legislation, even if the sample of bills is unrepresentative of all legislation that goes through the chamber, it is arguably the most important legislation to be considered, and hence the type of legislation scholars are most interested in learning about.

\(^\text{18}\)Analyzing matched votes requires that ideological distributions be similar across the two voting chambers. If the Senate, for example, had a much higher percentage of moderates than the House, than Senate coalitions may be larger, regardless of chamber rules. We analyzed chamber polarization rates to assess whether House and Senate ideological distribution were similar during the time period examined. Polarization rates of the House and Senate, measured as the ideological distance using DW-NOMINATE between the median members of the two major parties, are highly correlated (.859). As an additional check, we estimated the ensuing regression model using a measure of intrachamber polarization to account for any potential ideological differences between the chambers. This variable did not reach conventional levels of statistical significance and did not substantively affect the interpretation of any other coefficients in the regression model.

\(^\text{19}\)This is not to suggest that there will be no cross-chamber compromises. However, we believe the bulk of these compromises will be done at the conference report stage, and as such, the pre-conference report passage of the bill will closely reflect the chambers’ true preferences. Indeed, our matched-bill dataset indicates that the variable capturing the difference between the House and Senate enacting coalitions exhibits a high degree of variance at the bill level. This suggests to us that compromising between the two chambers on each bill appears to be minimal.
a simple majority cloture rule before considering the Stimulus Bill described in the introduction to the article. Accordingly, the institutional literature would expect the Democrats to avoid compromising on the substance of the bill with moderate Republicans and pass the bill on a narrow vote (on this point, see Krehbiel 1998; Wawro and Schickler 2004, 2006). As such, we would expect this trend to be observable using aggregate coalition data. However, if something external to the new cloture rule was driving up the aggregate size of coalitions (e.g., an increase in the likelihood legislation received a recorded roll-call vote), the effect of the cloture rule might not be evident. At the same time, if the change in the cloture rule plays a causal role in coalition formation, then we would expect the difference between the House and Senate’s enacting coalitions to shrink as the Senate’s decision rule begins to mirror that of the House. Even if some unaccounted for variable was driving up the average size of coalitions in the two chambers independent of the new cloture rule, the difference between the enacting coalitions should still be reduced.

Our data consist of differences between House and Senate coalitions on bills receiving final passage votes in both chambers from the 39th (1865–67) to the 78th Congress (1943–45). The process for collecting enacting coalition data on matched bills was fairly tedious. Doing so required comparing not just the bill numbers on measures receiving final passage votes in both chambers, but also the subject matter of those measures. This allowed us to identify any relevant companion bills that were introduced and voted on. These companion bills were matched using vote descriptions in the roll-call database provided by the ICPSR and checked using the Congressional Record and Congressional Globe. Disappearing quorums pose a potential problem for coalition-size analysis. If a bill passes in the face of minority attempts to obstruct the bill by strategically refusing to vote, the winning coalition could appear very large despite the contentious nature of the bill. To control for this, votes where the turnout was lower than 60% in either chamber were excluded from the analysis. The number of matched bills per Congress is shown in Figure 3.

These data demonstrate that the roll-call generating process does greatly fluctuate over time and between chambers. For this 80-year period, only 412 measures received recorded final passage votes in both chambers of Congress. Again, this suggests that substantial problems may result from attempting to use aggregate final passage data over several congresses to compare changing decision rules. As noted earlier, the matched bill data time series allows us to evaluate the effect of two consequential rules changes—the adoption of Reed’s Rules in the House and Rule XXII (cloture) in Senate—on the size of legislative coalitions.

Differences in House and Senate voting rules allow us to formulate clear hypotheses as to the expected difference between House and Senate coalitions. Prior to the adoption of Reed’s Rules, obstruction and filibustering were the norm in the House (Koger 2010). Accordingly, House winning coalitions are expected to be supermajoritarian to overcome this obstruction. Conversely, leading accounts of coalition formation in the Senate during this era suggest that the chamber was largely a majoritarian institution (Binder and Smith 1997; Wawro and Schickler 2004, 2006). As such, we would expect a sizable, positive difference between House and Senate enacting coalitions prior to the introduction of Reed’s Rules. With the readoption of Reed’s Rules in the 53rd Congress (1893–95), the House changed to a simple majority decision rule. During the period after Reed’s

---

20 Final passage votes for the Senate from the 44th Congress (1875–77) to the 78th Congress (1943–45) were originally coded by Lawrence, Maltzman, and Smith (2006). Final passage votes for the Senate from the 39th Congress (1865–67) to the 43rd Congress (1873–75) and the House from the 39th Congress (1865–67) to the 78th Congress (1943–45) were coded by the authors.

21 This analysis is robust to lower turnout thresholds.

22 Reed’s Rules were a series of rulings by then-Speaker of the House Thomas B. Reed designed to give majorities more direct control over the legislative process (Binder 1997; Lawrence 2004).

23 It is not clear exactly where the pivotal member of a pre-Reed House would be located, since there was no formal voting rule by which obstruction could be overcome. Regardless, obstruction is hypothesized to move the pivotal member beyond the median. Contrasting this with the majoritarian Senate, the expectation is that House coalition size will exceed Senate coalition size.
Rules, but before the adoption of cloture, the Senate continued to operate as a simple majoritarian body (Wawro and Schickler 2004, 2006). As such, we expect the adoption of the House decision rule to lead to a significant decrease in the difference between the two chambers’ winning coalitions. During this period, the size of House and Senate coalitions should be largely indistinguishable.

In 1917, the Senate introduced cloture with the adoption of Rule XXII. To gain cloture, Senate majorities required the support of two-thirds of its members, effectively creating a supermajority rule in the Senate. This, Wawro and Schickler (2004, 2006) argue, served to institutionalize the filibuster and increase the size of winning coalitions in the chamber. Again, the House still operates under the simple majority decision rules readopted in the 53rd Congress. Thus, the difference between the two chambers’ enacting coalitions should operate much like it did during consideration of the Stimulus Bill. We would anticipate a sizeable, negative difference between House and Senate enacting coalitions in this era.

Data, Hypotheses, and Methods

The dependent variable in this analysis is the difference in the proportion of House and Senate enacting coalitions (i.e., House coalition - Senate coalition). The winning coalition for each chamber is determined by dividing the number of votes on the winning side by the total number of votes cast. If this difference is positive, then this reflects a House enacting coalition that is larger than its Senate counterpart. A negative difference reflects a House enacting coalition that is smaller than its Senate counterpart. Finally, a difference approaching zero means the chambers passed legislation by nearly the exact same proportion. To ensure we are accounting for important legislation in our analysis, legislation that featured an oversized enacting coalition (greater than 95%) in both chambers was dropped. We estimate the model over all votes on matched bills from 1865 to 1945.

The main objective of the model is to test for the effects of congressional rule changes on the likelihood of passing major policy reform by examining the size of legislative coalitions. Leading institutional theories suggest that changing the legislative decision rules in either chamber should result in fluctuations in the size of winning coalitions. The previous section leads us to two primary hypotheses. First, the difference between the House and Senate enacting coalitions in the pre-Reed’s Rules era should be positive and significant in comparison to the post-Reed era. To capture this, we created a pre-Reed dummy variable denoted (1) if the vote occurred prior to the adoption of Reed’s Rules, (0) otherwise.24 Second, the difference between House and Senate enacting coalitions should be negative and significant in the post-Rule XXII era. This effect is captured with a post-Rule XXII dummy variable coded (1) if the vote occurred after the adoption of Rule XXII and (0) otherwise.

The effect of rules change on coalition size can be seen in Figure 4. Consistent with prior work, matched pair votes show that House and Senate coalition sizes have steadily increased from 1865 to 1945. But while the size of coalitions has increased in both chambers, the difference in size between House and Senate coalitions has remained near zero for the entire period. House coalitions do not decrease in size relative to the Senate after Reed’s Rules introduced simple majority rule to the House. Senate coalitions do not increase relative to the House after cloture is introduced, formalizing a two-thirds voting rule.

As an additional check on the effects of rules change, we develop a multivariate model and test these institutional effects while controlling for other factors. Party theorists have suggested that winning coalitions should be responsive to fluctuations in the size of the majority party. The evidence in support of this claim has been mixed. Wawro and Schickler (2004, 2006) find no significant results for majority party seat share in their models of the Senate. However, Lawrence (2004) finds support for the influence of majority size on House legislative coalitions. Chiou and Rothenberg (2003, 2006) argue that incorporating political parties into pivot-based theories of legislatively productivity improves our ability to understand gridlock. As such, we control for the difference in size between the majority party in the House and the Senate. The expectation is that when the House majority party is large relative to the Senate, enacting coalitions in the House will be larger than the Senate, regardless of the voting rule of either chamber. As the dependent variable is the difference between the House and Senate enacting coalition, the expectation is that the coefficient on the party size

24More specifically, the Pre-Reed House variable is a dummy variable coded (1) if the bill was enacted before the 50th Congress or during the 52nd Congress. Reed’s Rules were eliminated by the new Democratic majority in the 52nd Congress and re instituted in the 54th Congress.
difference variable will be positive and significant. This variable is calculated by taking the percentage of seats controlled by the Senate majority party and subtracting them from the percentage of seats controlled by the House majority party.

Wawro and Schickler (2004, 2006) argue that minorities were more successful at defeating legislation when the mandatory adjournment date was looming in the Senate. They argue that the adoption of cloture institutionalized the filibuster in exchange for more certainty late in a legislative session. We account for votes occurring in these sessions. We expect that winning Senate coalitions will have to be larger during lame duck sessions in order to overcome late session obstruction. As such, the coefficient of this variable should be negative, indicating that during lame duck sessions, House coalitions are smaller relative to larger coalitions that are confronting obstruction in the Senate. This variable is coded one if a bill was passed by the Senate between January and March of a lame duck year.  

\[^{25}\text{The variable takes on a value of zero after 1933, when the 20th Amendment went into effect. Additionally, one would expect that prior to the adoption of Reed’s Rules, measures passed by the House in a lame duck year would also necessitate oversized coalitions. However, this occurs so rarely in our data that we opt not to control for it. Including it in the multivariate analysis does not substantively alter our conclusions.}\]
Results

In contrast to the findings reported by Krehbiel (1998) and Wawro and Schickler (2004, 2006), our results in Table 2 fail to find significant effects for major congressional rule changes.\(^{26}\) First, the pre-Reed’s Rules era dummy was in the predicted direction, but was not significant. In other words, when historical changes are accounted for, the adoption of Reed’s Rules in the House is not correlated with decreased coalition sizes in that chamber. Since coalition size is being used to test for the policy effect of rules changes, these results provide no statistical support for the claim that the simple majority rule introduced by Reed’s Rules moved policy outcomes closer to the median member of the House.

Second, the introduction of cloture via Rule XXII in 1917 was predicted to institutionalize obstruction, leading to larger Senate coalitions compared to the House. Our results do not support this hypothesis. Indeed, there does not appear to be a significant change in the Senate’s coalition size relative to the House after the adoption of cloture. It follows that the introduction of cloture did not have an aggregate, moderating effect on policy outcomes in the Senate. Given the nature of the experimental design that we employ, we are much more confident in the null conclusions for each of the rules change variables in our analysis.

In contrast to institutional changes, there is evidence that the relative size of the majority party in the House and Senate affects coalition sizes. As the size of the majority party in the House increases relative to the Senate, the size of House winning coalitions increases relative to Senate coalitions. This finding is consistent with those scholars who have argued that parties have an influential role on policy outcomes in the Congress (see, e.g., Binder 1997; Cox and McCubbins 2005; Rohde 1991). In other words, large majority parties appear to be unwilling to craft legislation that excludes moderate legislators. In the case of the Stimulus Bill discussed at the outset of the article, only a handful of House Democrats opposed the measure, and no Senate Democrats voted no. Finally, the variable controlling for increased filibustering during lame duck sessions is not statistically significant.

\(^{26}\)Replicating these results using only matched pairs on landmark legislation does not alter the findings in Table 2. Moreover, the analysis is robust to alternative time series specifications.

Table 2  Ordinary Least Squares Regression of Bicameral Coalitions, 1865-1945

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Robust Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Reeds’ Rules Era</td>
<td>0.027</td>
</tr>
<tr>
<td>Post-Cloture Era</td>
<td>0.026</td>
</tr>
<tr>
<td>House And Senate Majority Party</td>
<td>0.305*</td>
</tr>
<tr>
<td>Seat Share Difference</td>
<td></td>
</tr>
<tr>
<td>Lame Duck Senate</td>
<td>- 0.017</td>
</tr>
<tr>
<td>Constant</td>
<td>- 0.010</td>
</tr>
</tbody>
</table>

\(N = 318\)
\(Prob > F = 0.000\)
\(R^2 = 0.040\)

Note: * signifies \(p \leq .05\) (two-tailed test). Robust standard errors are reported. Standard errors are clustered by Congress.

Discussion and Conclusion

When the American Recovery and Reinvestment Act of 2009 was adopted by the Senate on February 13, 2009, most observers commented on the partisan breakdown in both chambers. As noted initially, not a single Republican voted for the measure in the House and only three Republicans defected and voted for the Stimulus Bill in the Senate. At the same time, Senate Democrats decried the role that the filibuster pivot played in weakening the legislation as reflected by the compromise needed to get the three Republicans to support the final bill. This debate over the Stimulus Bill underscores the important scholarly disagreement over the roles of institutions and policy outcomes; the Senate’s supermajority requirement meant that economic policy passed by Congress was more moderate in nature than it would have been if the House and Senate both had simple majority requirements.

Recent work has argued that the driving force behind the policies winning coalitions craft is not partisan factors, but the chamber’s relevant decision rule. This work has relied almost exclusively on the effect that changes in decision rules have on aggregate coalition sizes (Krehbiel 1998; Wawro and Schickler 2004, 2006). Furthermore, such work has largely assumed that the data-generating process underlying the roll-call record in Congress has been consistent over time. Recent scholarship has demonstrated that this is not the case. The likelihood a roll call receives a final passage vote has increased over time, increasing the size of aggregate coalitions regardless of the rule they vote under. Additionally, fluctuations in the congressional
agenda over time have led many issues affecting specific constituencies (e.g., tariff legislation, civil rights bills) to become less prevalent in Congress. These contentious issues have been replaced with more universally appealing policies. As such, coalitions have increased regardless of voting rules. Claims that coalition sizes in Congress are affected by rules changes can only be believed if these historical changes are accounted for.

By employing a quasi-experimental design and using interchamber coalition data, we have corrected many of the biases that historical change may have introduced into previous research on coalition formation. After accounting for historical change, we find no statistical evidence that congressional rule changes affect the size of legislative coalitions. This implies that major rules changes, like Reed’s Rules and the introduction of cloture, have not had an aggregate effect on the policies created by Congress.

But perhaps we should not expect to see a stark aggregate effect following congressional rules changes. Indeed, it is not fair to expect that policy outcomes will mirror chamber pivots on all bills. It may be that rules will have the greatest effect on salient, ideologically charged issues like the Stimulus Bill. For other bills, pivots may not be as vital. Bills being considered with extreme status quo points may also be less likely to be affected by voting thresholds. It is hard to imagine that in the face of a great crisis, the 60th member of the Senate would stand up and announce that she will only vote for a bill that perfectly mirrors her ideology. It is even less likely to happen if the bill has 90 supporters and even the pivot more strongly prefers the imperfect bill to the status quo. This decision to not fight hard over minor differences between the House and Senate pivots will dampen the measured impact of rules, but seems unlikely to occur for all but the most salient legislation.

It may also be true that behavior in Congress does not perfectly correspond with formal rules changes. While the introduction of cloture in 1917 formalized a super-majority threshold in the Senate, super-majorities were required before then. Indeed, the rules change came in response to increased filibustering and the increased need of supermajority coalitions prior to 1917. If, as Knight (1992) suggests, rules are established as a way of stabilizing the existing rules of the Congress, then it may be too much to expect dummy variables (in this study and others) to accurately represent institutional change(s) decades in the making.

Finally, party influence may simply explain more about policy formation in the Congress than do formal rules. Our findings suggest a much stronger role for parties in this process. More specifically, they suggest that the most important causal factor in coalition formation across chambers is the size of the majority parties in those chambers. The larger the House majority party is, relative to the Senate, the larger its winning coalition will be. This suggests that it may be more difficult to enact legislation with broad coalitions. In an era of increased polarization, it becomes substantially more difficult to reach across the aisle to form such coalitions, thus reducing the opportunities for more bipartisan solutions to policy dilemmas.

To be clear, we are not arguing that institutional arrangements are ignored by coalition builders at the microlevel. The Stimulus Bill story makes that more than clear. However, we find that partisan factors play a more prominent role in determining aggregate coalition formation in Congress than previously recognized. When leaders look to distribute benefits on key pieces of legislation, they do not regularly exclude moderate party members from their coalitions. These moderate legislators may provide key votes for future bills that better serve the party’s brand name. Additionally, institutions are likely to impact the total legislative production of the chamber more than the aggregate policy locations of a set of bills. Scholars seeking to build upon our results should keep this in mind in future research.

Acknowledgments

The authors would like to thank Scott Ainsworth, Randy Calvert, Mike Crespin, Greg Koger, Burdett Loomis, Andrew Martin, Gary Miller, Nate Monroe, David Rohde, Eric Schickler, Steve Smith, and Greg Wawro for comments on earlier drafts of this manuscript and Keith T. Poole for making data available.

References


Jamie L. Carson is Associate Professor of Political Science at the University of Georgia, Athens, GA 30602-1615.

Michael S. Lynch is Assistant Professor of Political Science at the University of Kansas, Lawrence, KS 66044.

Anthony J. Madonna is Assistant Professor of Political Science at the University of Georgia, Athens, GA 30602-1615.