Coalition Structure and Legislative Innovation in American National Government

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Abstract. When does the legislative process in the US lead to major innovations in public policy, and under what conditions does the lawmaking process tend to stasis? In this paper we focus on the structure of party coalitions controlling policy-making institutions in the federal government. We separately model the passage, repeal, and amendment of significant legislation in a Congress as a function of coalition structure. The principal new findings are that (*i*) time *in power* for a continuing, unified coalition of both houses of Congress and the president tends to inhibit both passage and amendment of significant legislation, and (*ii*) time *out of power* for a new unified coalition increases the chance that an existing significant law is repealed (but does not affect passage or amendment of significant legislation). Like several scholars writing since Mayhew's landmark analysis of divided government in 1991, we also find that, conditional on time in power, unified party control of government results in enactment of more pieces of significant legislation.

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American political institutions parcel out the power to initiate as well as block policy changes among a multitude of actors. Separation of powers and bicameralism are two crucial and constitutionally specified power divisions. Internal rules of each chamber of Congress add more veto players. Yet despite this profusion of veto points, actors do find enough common ground to pass several major new policy innovations through the legislative process in almost every session of Congress.

Analysts of the political determinants of policy innovation in the legislative process have focused extensively on the effect of ideological harmony among various institutional actors in the form of unified government. Typically empirical analysis of this question treats instances of divided government alike, and instances of unified government alike. Yet it is not clear that coalition structures fall into these broad equivalence classes. A coalition with fixed preferences may be able to effect major policy changes when it first obtains power, if the policies on which it can agree are very different than policies either enacted or left in place by predecessor coalitions. As the coalition acts on these possibilities for major innovation, it may move policy closer and closer to a "core point" given the ideological makeup of the coalition, a point from which no further major policy changes or movement is possible.

In this paper we explore the effects of coalition structure on major policy innovations in the legislative process, with a special focus on a coalition's "freshness" as well as its ideological composition. We use retrospective evaluations of major legislation that have not been used before in the literature as a standalone measure of policy innovation. We statistically model (*i*) enactments of major legislation, (*ii*) amendment of major legislation, and (*iii*) repeal of major legislation as a function of coalition structure

and other control variables. Our models indicate that duration in power for a unified governing coalition significantly reduces enactments of major legislation in a Congress. Conditional on coalition duration, unified party control of both chambers of Congress and the presidency significantly increases enactments of major legislation. These findings apply to a restricted dataset from 1969 to 2001, and also in a dataset aggregating all Congresses seated from 1789 to 2001. Overall, it takes about 12 continuous years in power for the negative effect of time in power for a unified coalition to equal the negative effect of divided government, all else constant. Similarly, time in power significantly reduces the prospects for amending major legislation – a finding that is increasingly important, since (as we note below) more and more major legislative acts are themselves amendments of previous major acts. On the other hand, the duration since a unified coalition last controlled the House, Senate, and White House is not significantly related to either the passage or amendment of major acts, but it is significantly related to the repeal of previously enacted major legislation. Overall, if passage and amendment are taken as "constructive" legislative activity, unified coalitions tend to be less constructive as they age, while they tend to be more "destructive" of previous acts the longer they have been out of power.

1. Coalition Structure and Legislative Activity

A hallmark of separation of powers as well as checks and balances is that for legislative initiatives to succeed, coalitions must reach across institutions. Naturally scholars have explored how ideological agreement across institutions affects legislative activity or "output." Generally this literature has focused on divided vs. unified

government, following Mayhew's (1991) initial landmark study. And while scholars have not all reached the same conclusion about whether unified government "matters" (cf. Mayhew 1991, 2005; Kelly 1993; Edwards, Barrett, and Peake 1997; Thorson 1998; Coleman 1999; Binder 1999, 2005; Howell et al. 2000), clearly Mayhew has raised critical questions about any conventional wisdom that divided government reduces major policy innovation through legislative channels.

Although divided government, or more generally ideological disagreement, is a natural suspect to reduce policy innovation, it is not obvious that it should have any effect. There are many bargaining models in which delay in reaching agreement is inefficient and does not occur in equilibrium regardless of how strongly actors' interests are opposed (Baron and Ferejohn 1989, in which players' preferences are diametrically opposed because the game is constant-sum; Volden and Wiseman 2007). Thus ideological conflict might change the content of policy but not affect the prospects for changing it from a status quo. On the other hand, in spatial models with supermajority requirements (such as Krehbiel's pivotal politics model), increasing the diversity (and therefore conflict) of preferences among institutional actors expands the core and therefore diminishes prospects for policy change. Therefore, whether unified government affects policy innovation through the legislative process clearly depends on the nature of the policy choice.

It is equally clear that not all occurrences of unified government, or any given coalition structure, are from a homogenous class. For example, the three most recent two-term presidents have spent (or appear likely to spend) the final two years of their second terms mired in scandals rather than advancing major new policies. While scandals arising

for independent reasons may damage presidents' "political capital" and make significant new policy initiatives more difficult, it is also possible that indiscretions and distractions in the executive branch garner relatively more attention late in a second term because, simply put, the governing coalition has run out of ideas for new policies that can command sufficient agreement to pass the gauntlet of vetoes in the lawmaking process. Indeed, in the Iran-Contra case from the Reagan era, the administration's inability to find policy alternatives that could win approval through normal lawmaking channels is exactly what induced politically insulated White House staffers to push them through illegal channels. Clearly, if passing major policy changes becomes more difficult for a coalition as it ages, there are important implications not just for policy change but for the stability of institutional arrangements themselves.

In the context of policy stasis or "gridlock," this argument about the effect of coalition age on policy-making is clearly explicated by Krehbiel (1998). In the pivotal politics model, a governing coalition moves policy to the point in the "gridlock interval" most preferred by the proposer (the median voter in Congress given a one-dimensional policy space) at its earliest opportunity. Policy, by definition, cannot be changed further for a given constellation of preferences. Therefore, as long as the enacting coalition remains in power, no further policy movement is possible. The implication is clear: major policy shifts happen early in the lifetime of a coalition covering the House of Representatives, Senate, and President, and taper off later in the lifetime of that coalition.

Another source of difference among instances of unified government is how long a newly unified coalition had been out of power. For parties long shut out of simultaneous majority status across lawmaking institutions, it is possible that ideological

demands become "pent up," resulting in a deluge of new policy initiatives when the party finally holds a unified coalition. On the other hand, a new unified coalition that had been in the opposition for only a short time since it most recently held a unified coalition may not have had much time to develop demands for major new legislation. This argument is made cogently by Binder (1999, 2003), who finds empirical evidence in support of it.

The common theme in all these theoretical arguments is that coalition structure – the ideological makeup and duration in and out of power – affects coalition activity. Yet no analysis of legislative activity has addressed these arguments together. Indeed, the time-in-power argument has never been the focus of sustained empirical exploration in the literature. In our analysis we explore these arguments simultaneously, so that associations among the explanatory variables cannot undermine the estimated relationship between any one of them and legislative activity. Moreover, we perform this analysis with a previously-unused measure of major legislative activity, which is important for the literature because no one measure has ideal properties of construct validity, and over a longer time span than had been analyzed in the literature thus far.

2. Measurement of Significant Legislation and Coalition Structure

To explore the relationships discussed above between coalition structure and legislative innovation, we use retrospective evaluations of legislative significance ("major acts") as compiled by Stephen W. Stathis (2002) of the Congressional Research Service. This measure has several useful features for the questions we address. First, it applies a common evaluation metric to *each* Congress from the 1st (1789-91) through the 107th (2001-02). Thus, it allows us not only to analyze relationships over a longer time horizon

than all previous treatments in the literature, but to do so without mixing sources. Second, this measure is readily available: each major act is listed and discussed in a single publication. Third, the measure is readily interpretable because it is simply a tally of significant acts.[1]

In addition to its own unique benefits, it is useful for the literature to have arguments tested on related but different measures of legislative activity than have been used in prior work. The reason is because no one measure ideally captures the concept of "major legislation," an issue in research design sometimes referred to as construct validity (Shadish, Cook, and Campbell 2002). Since no one operationalization of the concept is uniquely best, building a set of findings on one measure risks creating a dependence on the idiosyncracies of a single operationalization rather than the concept itself. On the other hand, when a finding emerges from analyses of several different operationalizations of a single concept, it suggests that the finding is tapping into something about the concept itself. The Stathis measure we use has been a component of other analyses in the literature (see, e.g., Clinton and Lapinski 2006). These analyses have typically combined the Stathis data with other sources that do not stretch as far back in time, so generally only part of the Stathis data series has been used in analysis of coalition structure and significant legislation.[2]

We score government as unified in a Congress if each chamber of Congress and the presidency is controlled by the same party, and divided otherwise. A unified coalition is either new or continuing. A new unified coalition occurs in any Congress with unified government, and with divided government or a unified coalition of a different party in the

[1] The Stathis data include major acts *and treaties*. We focus only on major acts in this paper.
[2] Studies that apply the Stathis data to various other law-related questions include Harvey and Friedman (2007), Madonna (2007), and Whittington and Clark (2007).

previous Congress. A continuing unified coalition occurs in any Congress in which government is unified, and was unified under control of the same parties in the previous Congress.

The time out of power for a new unified coalition is the number of Congresses since that same party held its previous unified coalition. For a party experiencing its first unified coalition (e.g., the GOP in 1861), time out of power is dated from the founding of the party (1854 in case of the GOP). Time out of power is 0 for Congresses with divided coalitions or with continuing unified coalitions.

The time in power for a continuing unified coalition is the number of consecutive Congresses for which the party in power has maintained a unified coalition, starting at 1 for a new unified coalition. For divided coalitions time in power is 0.

We also score each Congress with a dummy for the "party system" in which it falls. Congresses seated in 1789 to 1823 are part of the first party system (Federalist and Democratic-Republican); 1825 to 1853 are part of the second (Democrat and National Republican/Whig); 1855 to 1895 are part of the third (Republican and Democrat I); 1897 to 1931 are part of the fourth (Republican and Democrat II); and 1933 to 2001 are part of the fifth (Republican and Democrat III). The fifth party system is further subdivided into one portion from 1933 to 1967 (New Deal Democrat), and another from 1969 to 2001 (resurgent Republicans).

3. Analysis

The major-acts data series, from the 1st through 107th Congresses (1789-2002), appears in Figure 1. On average about 10.3 major acts are passed each Congress. The

distribution is right-skewed with a standard deviation of about 6.6 and a range of 1 (both Congresses for Quincy Adams, one Congress each for Van Buren and Hayes) to 28 (FDR in 1933). The measure is strongly trended over time; a bivariate regression of major acts on a linear time trend yields an R^2 of 0.47 (and a coefficient of 0.15). Nevertheless, Dickey-Fuller and Phillips-Perron tests strongly reject the null hypothesis of a unit root in the time series, even without a time trend. Therefore, while our models typically do include a time trend as a control (especially because divided government, like major legislation, trends upward over time), we set aside issues of stationarity or trend-stationarity of the time series.

[Figure 1 here]

3.1. Main Results

Our first model is in the first column of numbers in Table 1. It specifies major acts as a function of coalition structure and control variables for each Congress from 1 to 107 in which the largest party in both chambers held a strict majority of seats, as opposed to a mere plurality less than 50%. The three coalition structure variables are unified government, time in power for unified coalitions, and time out of power for unified coalitions. The model also includes a time trend, and indicator variables for the party system in which a Congress falls.[3] Because unmodeled factors that make a given

[3] Because the party system indicator variables are roughly speaking time dummies, it may seem redundant to include both the time trend and the party system indicators. Therefore, we also estimated the model without the time trend. We exclude the results for brevity but for the coalition structure variables they are essentially indistinguishable from the results reported in table 1. The main difference is that with the time trend excluded, each party system appears more productive than its predecessors, because of the time trend in the major acts data. This seems spurious so we prefer the specification reported in table 1 with both the party system dummies and the time trend.

Congress especially innovative may persist for more than one Congress, serial correlation of the error term is a potential concern. Our baseline estimates are from an ordinary least squares (OLS) model[4] with Newey-West standard errors. These standard errors are correct in the presence of first order serial correlation (and arbitrary heteroskedasticity if present).[5]

[Table 1 here]

Our main new finding of theoretical importance is that unified coalitions become less productive of major policy innovations as they age. Time in power for a continuing unified coalition has a negative and strongly significant effect on major legislative enactments in Congress: one extra Congress in power for a continuing unified coalition results in about 0.68 fewer major acts in that Congress, or about 1/10 of the standard deviation of the dependent variable. This supports the argument that unified coalitions gradually work through the available major policy changes as they age, but in the course of making major changes to more and more policy issues, they exhaust their stock of feasible agreements. This is, in essence, the argument advanced by Krehbiel (1998).

The results also reveal a positive, strong, and significant effect of unified government. Unified government results in about 4.3 more major acts per Congress, all else constant. This is about 2/3 of a standard deviation of the dependent variable. Thus, ideological disagreement among institutional actors as proxied by partisan divisions

[4] We comment below on results from a negative binomial model of this count data, and simply note for the moment that the negative binomial results are very similar to the OLS results.
[5] We prefer OLS with a standard error correction for a non-IID error process over a GLS estimator for serially correlated data such as Prais-Winsten because the former gives unbiased estimates of model coefficients even if the model of the error process is incorrect, whereas the latter is at best consistent, and only if the error correlation is modeled correctly.

impedes the development and passage of major legislation, at least with this retrospective measure over the whole time span since 1789. This is consistent with the conjecture that policy-making entails the sorts of conflicts captured in spatial models rather than distributive bargaining models, or at least bargaining models without delay in equilibrium. More specifically, like the time-in-power result, this result is consistent with the pivotal politics model, insofar as divided government captures one aspect of the "gridlock zone" in that model. Specifically, and especially in any cases in which the president's ideal point is closer to the median in Congress than the veto pivot's ideal point is, as divided government rises the width of the gridlock zone rises. For a status quo in this region, policy cannot be changed in equilibrium by definition, and as the gridlock zone widens the status quo is generally more likely to fall within it.

All the results above are for the entire range of Congresses from 1 to 107. Thus it might be argued that the findings uncovered above might apply to an earlier era but that changes in the political process, e.g. apparent weakening of party control over presidential nomination, have rendered them inapplicable to contemporary politics. In other words the results above might simply be a mix of an earlier period in which the conclusions hold true, and a contemporary period in which they do not. To explore this, we estimated the model on the restricted time period from 1969 to 2001 (Congresses from 91 to 107). We chose this period to mark the "current" political era because the Republican party's resurgence began at this time and the power of the New Deal coalition, having made its strongest stands in economic and social policy, had begun to wane. The mean number of major acts by Congress in this period is over 20, almost twice as large as for the whole time series, and the standard deviation is about 3, less than half

as large as for the whole series. The results are in the second column of numbers in Table 1.

Any differences between these results and results for the whole time series would suggest that the principal effects of coalition structure identified above have intensified. Unified government is still significant and positive, and time in power is still significant and negative. Because the standard deviation of major acts is smaller, the coefficients suggest an even larger impact in substantive terms. Unified government increases occurrence of major acts by about 1.75 standard deviations, and a single extra Congress in power for a unified coalition reduces major enactments by about 4/5 of a standard deviation. Moreover, in this political era, it takes only a little over two Congresses for the negative effect of time in power to outweigh the positive effect of unified government. In other words reelecting the president in a unified coalition reduces enactment of major legislation by more than electing a president of the opposite party.

Similarly, we also estimated the model for the restricted time series from 1789 to 1967 (Congresses from 1 to 90). The mean number of major acts by Congress in this period is 8.4 and the standard deviation is about 5.3. The model results are in the last column of Table 1. They are similar to the results from the whole time series, both for substantive effects and statistical significance. Unified government is positive and significant and the marginal effect is over 9/10 of a standard deviation. Time in power is negative and significant and the marginal effect is about 1/12 of a standard deviation. In this time period, however, it would take over 11 Congresses for the negative effect of time in power to outweigh the positive effect of unified government. The only occasion

in US history when a unified coalition served for so many Congresses was the Era of Good Feelings at the end of the first party system.

The results have interesting implications for the political determinants of major policy innovation. Aggregating over most all of American history since 1789, relatively young unified coalitions of Congress and the president tend to be the most innovative, at least in working through the legislative process. The creativity of unified coalitions tends to decay over time: after about 6 Congresses (12 years), the negative effect of time in power on major acts about equals the positive effect of unified government. Thus, an electorate seeking enactment of major new legislation would do well to install a unified party coalition in power, but not return it to power too many times. On the other hand, a unified coalition does not appear to be significantly more productive if it spent a long time out of power.

3.2. Probing the Main Results

The dependent variable in our models is a count, and the Poisson and negative binomial distributions are natural probability models for count data. Therefore we replicate all the findings above in a negative binomial regression model of the tally of major acts as a function of the same covariates.[6] Marginal effects of covariates and significance test results are very close to the OLS results. We omit the model estimates for brevity but it is not too surprising that the models match up closely. While the dependent variable is a count, its overall mean is about 10 major acts per Congress. The right-skew of canonical count distributions starts to disappear at these levels and they look more and more like normal distributions as the mean grows.

[6] A Poisson model is rejected because the conditional variance of the dependent variable exceeds the mean.

The effect of unified vs. divided government shown in Table 1 is supported in part by the other covariates in the models in Table 1. In a model of major acts (all Congresses) as a function of only unified government and the time trend, without the other covariates in Table 1, unified government has a positive effect but it is insignificant at the 0.05 level. In the bivariate model of major acts as a function of the unified government indicator and a constant, unified government has a *p*-value of about 0.67. These findings from restricted models are consistent with Mayhew's principal finding that divided government has no significant relationship with legislative productivity. By the same token, given the theoretical foundation for the time-in-power and other variables, Mayhew's celebrated result may stem from model misspecification.

One interpretation of the divided government is that it is a coarse measure of policy disagreement among factions in national political institutions. With legislative "ideal point" estimates based on revealed preferences in roll call votes, it is arguably possible to obtain a more refined measure of this disagreement. A natural candidate for such a measure is polarization among parties at the national level, as reflected by differences in median party ideal points in the House of Representatives. Rather than the crude binary measure of divided government across institutions, this measure reflects the extent of policy disagreements between parties. McCarty (2007) argues that this variable has a significantly negative effect on major legislative enactments.[7] However, adding House party polarization to model 1 in Table 1 has no substantively important effect on any results. Polarization has a *p*-value of 0.89, while unified government and time-in-

[7] McCarty uses the Mayhew (1991, 2005) data for his main analysis. He also incorporates data from Howell et al. (2000), Clinton and Lapinski (2006), and Petersen (2001) for robustness checks.

power have the same signs and rough magnitudes as in table 1 and continue to be highly significant.

It is interesting to note that the effects of coalition structure on major legislative acts do not carry over to all public acts. We estimated the same models in Table 1 on a time series of *all* public laws enacted from 1789 to 2001.[8] For the whole time series as well as the restricted time series of the contemporary party system, neither unified government, nor time in power, nor time out of power is related to legislative activity in general. The covariates that stand out are the party system dummies. They imply that conditional on other covariates, significantly fewer public laws were enacted in a given Congress in each of the first four party systems. This is interesting because the raw (unconditional) count of public acts has actually declined over time, especially since 1933. This suggests that the downward trend of the entire series of public acts is spurious, and that other conditions conducive to passage of laws in general are not as prevalent today as before the New Deal.

3.3 Amendment and Repeal

While almost all of the literature on legislative "output" has focused on the enactment of major statutes, this obscures important subcategories of legislative activity. Further insights on the effects of coalition structure on major legislative acts might be gained by disaggregating the Stathis data. Two substantively important categories are (1) major acts that repeal earlier major acts and (2) major acts that amend earlier major acts. Viewed in

[8] The data source for this time series is "Congressional Bills and Resolutions: 1789-2000." Contributed by John P. McIver. *Historical Statistics of the United States*, Millennial Edition On Line, edited by Susan B. Carter, Scott S. Gartner, Michael R. Haines, Alan L. Olmstead, Richard Sutch, and Gavin Wright. © Cambridge University Press, 2006.

this way, one facet of legislative innovation is a type of "creative destruction" (Schumpeter 1942), whereby policy change occurs by eliminating (repeals) or revising (amendments) prior policy enactments. By disaggregating, we can determine whether important variation in the data is explained by different mechanisms.

A typical Congress amends 3.13 major acts (standard deviation: 4.11); 28 of 107 Congresses in our dataset amended none while the 104th Congress amended 17. By comparison, recall that a typical Congress passes about 10 major laws. Repeals are much more binary, with only five Congresses repealing more than one major law (none more than two); about 23% of Congresses repealed at least one major law. Repeals of major laws have become marginally more common in recent years. Since 1969 about 35% of Congresses have repealed at least one major law, compared to about 21% before 1969, but the z statistic on a two-sided difference in proportions test is only 1.27 (p-value = 0.21).

Even more strikingly, since 1969 the average number of amendments is about 11.47 per Congress, while it is about 1.56 before 1969 (t statistic from two-sided homoskedastic difference in means test is 19.54).[9] This confirms an impressionistic sense about policy innovation in Congress: we have transitioned away from a period in which Congress takes up broad new categories of public policy which it had not previously touched, and entered one in which Congress's major policy work tends to alter the legislative infrastructure already in place. In other words, amendments and repeals of major laws are an important aspect of legislative innovation, and increasingly so over time.

[9] Even restricting attention to 1932 and later, the post-1969 period has witnessed many more amendments on average; in this range of years the t statistic on the pre- and post-1969 difference is 9.43.

To analyze the behavior of amendment and repeal of major legislation we estimated statistical models with the same set of covariates we used in modeling the number of major laws in Table 1. In each case, as before, the unit of observation is a Congress. For amendments, we estimated a negative binomial regression model[10] rather than OLS, since the dependent variable is small on average and equal to zero in a fairly large share of the observations. For repeals, we estimate a probit model of the dichotomous variable of whether or not a Congress repealed any major laws (logit and linear probability (OLS) models yield essentially the same qualitative findings). The results are in Table 2.

[Table 2 here]

The results for amendments are qualitatively similar to those for major acts in general. Unified government increases the number of amendments to major laws in a Congress by about 0.7, an effect statistically significant at about the 0.05 level. When a unified coalition spends an additional Congress in power, the number of amendments to major laws falls by about 0.17, an effect statistically significant at the 0.10 level. Thus, four consecutive Congresses in power for a unified coalition inhibits amendment of major legislation by about the same amount that installing unified government increases it.

Our results indicate that the elapsed time since a given unified coalition last held power (time since holding power) does not have a significant effect on either passage or amendment of major laws (though the *p*-value for the amendments model, 0.22, is not large enough to be completely comfortable that the null result is not a false negative). On

[10] The null hypothesis of the Poisson model that the conditional mean equals the conditional variance is rejected at the 0.01 level in a likelihood ratio test.

the other hand, time since holding power does have a significant, positive effect on the probability that at least one major law is repealed in a Congress. In a probit model the effect is significant at $p = 0.042$; one Congress more than average out of power increases the chance that a unified coalition repeals a major law by about 5.3% (which is substantively similar to the estimated marginal effect in a logit and linear probability (OLS) model with Newey-West standard errors). Yet for repeals, neither unified government alone nor the time in power for a unified coalition has a significant effect on the probability of repeal (p-values are 0.92 and 0.31 respectively). Overall, these models suggest that the effect of "pent up demand" for legislative innovation depends on the type of legislative activity. A unified coalition that has spent many years out of power correspondingly inherits a body of legislation that it thinks never should have passed and sets about repealing them, but does not have a similarly long list of items that it can turn into original legislative action immediately.

4. Conclusion

Mayhew's landmark analysis of landmark legislation posed a simple, compelling question that spawned a literature. Scholars have pushed this literature in a variety of different directions, but in each case have asserted arguments about how the structure of coalitions holding power in national lawmaking institutions affects the output of the legislative process. In this paper we have brought several strands of this coalition structure argument together for empirical analysis. We have included a unified coalition's "age" or time in power as an explanatory factor, a variable highlighted in previous theoretical work. We have simultaneously analyzed the effect on major legislative

enactments of several different aspects of coalition structure, and done so with a new measure of major legislation covering a longer time span than previous analyses.

The major new findings are that time in power has a significant and negative effect on both enactments and amendments of major legislation. When unified coalitions first take power, they identify feasible policy changes on major issues and enact those changes into law. With the new policy at an equilibrium point with respect to coalition preferences, such major changes are harder to find as the coalition ages, thus reducing major legislative activity over its life span. Furthermore, once coalition time in power is taken into account, divided government has a negative effect on major legislative activity – at least with the measure we use. On the other hand, time out of power, which might allow a coalition time to build up a stockpile of policy issues to address, increases the chance of repeal of a major law, but not passage or amendment of a major law.

In general these findings support natural theoretical arguments about the policy effects of coalition structure based on spatial models of American lawmaking institutions. They also point to many directions for future work, to explore the robustness of these findings with different measures of major legislation and new theoretical arguments about the effect of coalition structure.

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Figure 1. Major Acts of Congress, 1st-107th Congresses

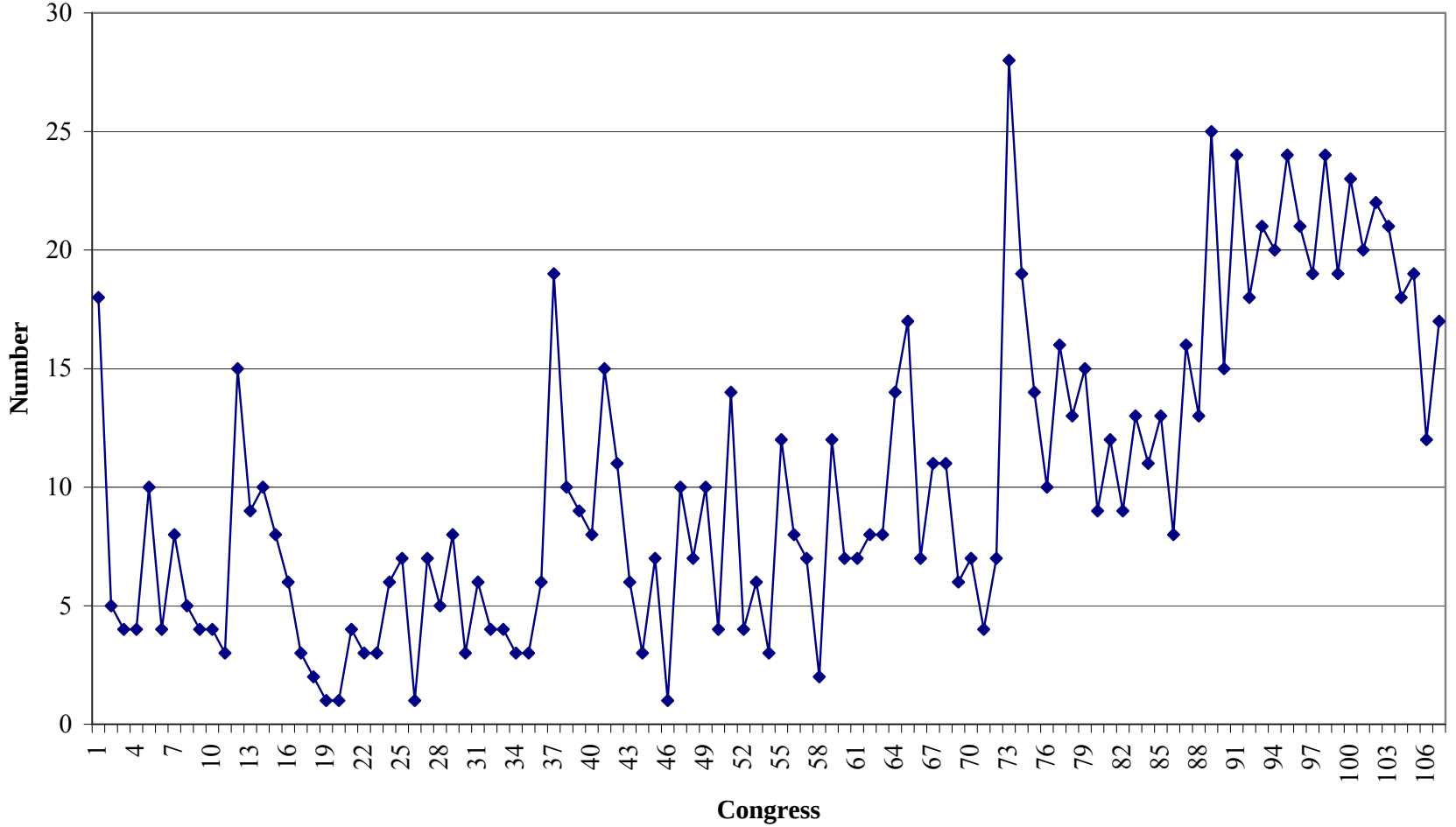

Table 1. Regression results, major acts and coalition structure

Explanatory Variable	Model 1 1789-2001	Model 2 1969-2001	Model 3 1789-1967
Unified government	4.31***	5.28***	4.87***
	(1.05)	(0.68)	(1.22)
Time in power for unified coalition	−0.68***	−2.50***	−0.43**
	(0.19)	(0.29)	(0.20)
Time out of power for unified coalition	−0.07	−0.02	0.05
	(0.13)	(0.09)	(0.28)
Indicator, party system 1 1789-1823	2.31		−10.08
	(6.93)		(8.74)
Indicator, party system 2 1825-1853	−4.04		−12.17*
	(5.67)		(6.79)
Indicator, party system 3 1855-1895	−2.76		−7.42
	(4.21)		(4.65)
Indicator, party system 4 1897-1931	−5.20*		−7.23**
	(2.92)		(3.06)
Time Trend	0.16*	−0.30	−0.03
	(0.08)	(0.18)	(0.12)
Constant	2.33	49.84**	14.82
	(7.72)	(17.15)	(9.59)
F statistic (No. obs.)[11]	34.43*** (94)	4581.30*** (17)	10.54*** (77)

Note: Each column is a separate model of major legislation. Entries are OLS estimates with Newey-West standard errors in parentheses.

* denotes significance at $\alpha = 0.10$ or less; ** at 0.05 or less; *** at 0.01 or less

[11] *N* in the overall model is 94 rather than 107 because we exclude the thirteen Congresses in which the largest party in some chamber held a plurality but not a majority of seats.

Table 2. Regression results, amendments and repeals

Explanatory Variable	Amendments (Negative Binomial)	Repeals (Probit)
Unified government	0.44* (0.23)	0.05 (0.51)
Time in power for unified coalition	−0.10* (0.06)	−0.09 (0.09)
Time out of power for unified coalition	−0.04 (0.03)	0.18** (0.09)
Indicator, party system 1 1789-1823	1.34* (0.81)	2.49** (1.23)
Indicator, party system 2 1825-1853	0.98 (0.68)	1.00 (1.05)
Indicator, party system 3 1855-1895	1.26*** (0.46)	0.85 (0.79)
Indicator, party system 4 1897-1931	0.09 (0.31)	[dropped]
Time Trend	0.05*** (0.01)	0.03* (0.02)
Constant	−3.07*** (0.84)	−3.02** (1.44)
χ^2 statistic (No. obs.)	137.71*** (94)	15.00** (94)

Note: * denotes significance at $\alpha = 0.10$ or less; ** at 0.05 or less; *** at 0.01 or less