Strange Bedfellows: Cooperative Policy Making in a Divided Government

Jongkon Lee*

Abstract: It is widely believed that the lack of bipartisanship between the executive and legislative branches in the United States is deleterious to policy making. However, a divided government is perhaps more productive than a unified government because it can facilitate electoral gains for the minority party. Policy created by a divided government can be seen as the collaborative outcome of the majority and minority parties, but that of a unified government is perceived as the exclusive work of the majority party. Further, successful policy making on the part of the unified government could have the effect of compromising the minority party's brand. Thus, the minority party has more incentive to negotiate with the majority party and participate in policy making in a divided government. To the extent that party brand name assumes greater importance in elections in a polarized political system, a divided government could be more conducive to policy making than a unified government.

Keywords: policymaking productivity, divided government, polarization, party conflict, political cooperation

INTRODUCTION

Since the 1990s, many studies have discussed the negative effect of a divided government on policy-making productivity in the United States. They emphasize the role of political parties in bringing the executive and legislative branches together and identify a divided government as the main culprit of legislative grid-lock (Binder, 1999, 2003; Coleman, 1999; Sundquist, 1988). James L. Sundquist

_____

 * Jongkon Lee(Associate Professor) Department of Political Science and International Relations, Ewha Womans University, Seoul, Korea. E-mail: jongkonlee@ewha.ac.kr.

(1988, p. 614) for example, describes political parties "as the indispensable instrument that brought cohesion and unity, and hence effectiveness, to the government as a whole by linking the executive and legislative branches in a bond of common interest." Additionally, it has been suggested that party polarization, although it might serve to unify political parties, inflates the negative effect of a divided government on policy-making productivity (Jacobson, 2013; Barber & McCarty, 2016; Metzger, 2015; Lee, 2013).[1]

Despite that, recent studies have intimated that a divided government may be more productive than—not just as productive as—a unified government in the United States. For example, Baumgartner et al. (2014) have argued that the quantity of policies generated by weakly divided governments (such as one in which the president's party is in the minority in one chamber) may be greater than that of unified ones, even if the quality is not. Gray and Jenkins (2017) conducted several regression tests on policy-making productivity that showed that the coefficient of a unified government was negative, even though the variable was statistically insignificant. Likewise, according to Ansolabehere, Palmer, & Schneer (2017), divided governments have become more productive quantitatively compared with unified ones in recent decades: on average, from 1989 to 2009, 483.4 pieces of total legislation were enacted at the federal level in the United States by divided governments, whereas only 457 pieces were passed by unified governments.[2] Hughes and Carlson (2015) have shown that even with respect to quality, divided governments have been more productive; for the same period, on average 41.7 pieces of significant legislation were passed by divided governments, whereas 28.8 pieces were passed by unified government.[3] In addition, these productive divided governments emerged the wake of intense party polarization. Data provided by Ansolabehere et al. (2017) and Hughes and Carlson (2015) suggest divided governments were less

---

1. Several studies have argued that a divided government combined with party polarization not only has a negative affect policy-making productivity but also contributes to the failure of presidential nominations to the executive branch to secure confirmation from the Senate (Derouen et al., 2005).

2. The 107th Congress is treated as a divided government in this article because Republicans did not maintain a majority in the Senate for more than one year. The data of Ansolabehere et al. (2017) indicates that the policy-making productivity of the 107th Congress was low compared with other recent Congresses. Nevertheless, divided governments were more productive in total legislation.

3. In contrast, the data of Ansolabehere et al. (2017) suggests that a unified government is more productive with respect to significant legislation, though it is less productive in total legislation.

productive than unified governments prior to the 1980s but that since then, as party polarization has ramped up, divided governments have been more productive.

The key to the puzzle may be the distribution of electoral benefits from policy-making production, in particular that between majority and minority party legislators. As many political scientists have argued, even though good public policy is one of the most important goals of legislators (Fenno, 1978), they frequently behave as "single-minded seekers of reelection" (Mayhew, 1974). Thus, legislators may not cling to their policy preferences if doing so significantly reduces the odds of their being reelected. Traditionally, policy-making productivity studies have focused on good public policy, emphasizing that the majority party's shared interests tended to lead to legislative success in a unified government. Although divided governments may be less productive in conventional terms (Binder, 1999, 2003; Coleman, 1999; Sundquist, 1988), there are other measures of legislative success. Legislators may weigh their voting decisions more strategically (Arnold 1990) and consider shared policy preferences as well as the electoral gains from successful policy making as a collective good (Adler & Wilkerson, 2012; Harbridge, 2015).

Even though legislative performance is a collective good for both majority and minority parties, the distribution of electoral gains from legislation varies depending on whether the government is unified or divided. Under a unified government, many citizens hold the majority party accountable for everything (Samuels, 2004). Thus, successful policy making on the part of the majority enhances its image and in turn negatively affects the minority party members' odds of being reelected (Powell & Whitten, 1993). According to Adler and Wilkerson (2012), successful policy making increased the reelection chances of both parties' legislators under a divided government but only that of majority party legislators under a unified government. Thus, the minority party may have more incentive to cooperate with the majority party in a divided government, thereby promoting policy-making productivity. Indeed, several studies have shown that legislators are more likely to negotiate bipartisan legislation in a divided government (Harbridge, 2015; Trubowitz & Mellow, 2005).

In addition, strategic policy-making decisions may be more significant in circumstances in which a high degree of party polarization obtains. In the wake of increasing polarization between the Democratic and Republican parties in recent decades, their brand names have become more critical in elections (Jacobson, 2017, 2015; Layman et al., 2006). Party polarization has increased party loyalty of voters, thereby inflating the significance of party image in elections (Erikson, 2017; Jones, 2010). As a consequence, in this scenario minority party legislators have less incentive to cooperate with the majority party under a unified government. They are

more likely to try to thwart policy making that could improve their opponent's brand. In contrast, under a divided government, they are more likely to cooperate to enhance their own party image.

In this respect, this study examines the effect of a divided government on policy-making productivity in an era of party polarization. Several regression tests indicate that divided governments may be more productive when legislators act with electoral benefits in mind. For example, divided governments are more productive in the case of issues that attract a lot of public attention. Likewise, when the approval rating of the minority party is sufficiently high, the share of electoral benefits for the minority party may be greater. As a result, more laws may be enacted under a divided government. However, this does not mean that a divided government is always more productive. Rather, a divided government is only likely to be more productive than a unified government when the parties are highly polarized and electorally sensitive matters are at issue.

A DIVIDED GOVERNMENT AND PARTY POLARIZATION

Party polarization matters in policy making because it leads legislators to weigh the positive and negative effects of a divided government in distinctive ways. Basically, party polarization broadens ideological distance between political parties, thereby negatively affecting policymaking productivity (Jones, 2001). Nevertheless, the negative effect may be invariable regardless of government types because of currently prevalent filibusters. Party polarization has fueled filibusters in recent decades, and the minority party could obstruct legislation effectively in unified governments (Koger, 2010). According to Sinclair (2017), legislators in the U.S. Congress deployed the filibuster less than 30% of the time before the mid-2000s, but the ratio has increased to more than 50% since the late 2000s, both in periods during which the government has been divided as well as united. The positive effect of a unified government on policy-making productivity decreased because of filibuster threats (Barber & McCarty, 2016), suggesting that shared interests between the legislative and executive branches have become less significant in facilitating it (Brady & Volden, 2005).

Party polarization, however, may encourage policy-making productivity under a divided government. One effect of polarization is that party brand has become more important in elections, as party loyalty has increasingly tended to guide voters in House and Senate elections (Jacobson, 2015, 2017; Layman et al., 2006; Erikson, 2017; Smidt, 2017). As a result, legislators have had the incentive to

improve their image as party stalwarts and to undercut their opponent's party image (Erikson, 2017; Jones, 2010). For this reason, party polarization has discouraged minority party legislators from participating in policy making in unified governments and instead encouraged them to cooperate in policy making in divided governments, because in this way both majority and minority party members are able to acquire electoral benefits from successful policy making.

Table 1. Bipartisan Roll Calls in the 101st-114th Congresses

Congress	Government Types	Senate			House		
		Roll Call Votes	Bipartisan Roll Calls	Bipartisan Roll Call Ratio	Roll Call Votes	Bipartisan Roll Calls	Bipartisan Roll Call Ratio
101	Divided	950	439	0.46	904	340	0.38
102	Divided	550	222	0.40	932	288	0.31
103	Unified	724	240	0.33	1123	328	0.29
104	Divided	919	262	0.29	1340	332	0.25
105	Divided	612	238	0.39	1187	419	0.35
106	Divided	672	249	0.37	1214	562	0.46
107	Divided	633	283	0.45	996	505	0.51
108	Unified	675	236	0.35	1221	535	0.44
109	Unified	645	229	0.36	1214	478	0.39
110	Divided	657	241	0.37	1876	674	0.36
111	Unified	696	156	0.22	1655	831	0.50
112	Divided	486	176	0.36	1608	297	0.18
113	Divided	657	202	0.31	1205	306	0.25
114	Divided	502	178	0.35	1325	286	0.22

Note: the data were based on the PIPC Roll Call Datasets (http://pipcvotes.cacexplore.org/)

Party polarization may relatively increase the weight of the divided government's positive effect on policy-making productivity, resulting in the divided government being more productive compared with the unified government. Table 1 partly supports this argument. Even though roll call data cannot provide precise information about legislative behavior, table 1 indicates that minority parties participated in more bipartisan roll calls under a divided government than under a unified one. The number of bipartisan roll calls was counted along with the number of roll calls for which majorities of both parties cast yes votes. In addition, the trend is

more significant in the Senate where the filibuster is available, which has the effect of decreasing the weight of shared interests between legislative and executive branches. Given sufficient party polarization, the interaction between a divided government and party polarization may be positive.

Thus, it is more likely in a divided government than in a unified government that if electoral gains from successful policy making are sufficiently high, legislators will seek to push legislation through and that minority party legislators will cooperate over issues in which citizens are interested, particularly if their party's approval rating is higher than that of the majority party. However, if the minority party's approval ratings are not high, then even in a divided government, the distribution of electoral gains from successful policy making may be asymmetric. Additionally, the effects of issues in which the public is deeply invested and of the minority party's approval ratings are likely to be more significant in a polarized environment, thereby inflating the importance of party image in elections.

Congressional and presidential approval ratings that may affect their reelection odds are also likely to be of interest to legislators. If the public's approval of Congress is sufficiently high, incumbent legislators are more likely to be reelected (Adler & Wilkerson, 2012), which in turn could reduce the relative weight of electoral gains from successful policy making. Likewise, presidential approval is a valuable electoral resource of minority party legislators in a divided government (Mcdermott & Jones, 2003; Lebo & O'Geen, 2011). If the president's approval rating is sufficiently high, the relative weight of electoral gains of minority party legislators from policy making may decrease. As a result, high congressional and presidential approval ratings negatively affect minority party legislators' incentive to cooperate, thereby reducing policy-making productivity. In such circumstances, they also do not need to enhance party image and so can even renounce legislate policies that are ideologically distant from the party platform without repercussions. However, party polarization weakens this relationship because it increases the relative significance of party approval ratings in elections compared with congressional or presidential approval ratings. Thus, the net effect of high congressional and presidential approval ratings may decrease, as party polarization increases.

In addition, the relative weight of electoral gains from policy making may be limited if the bills in question are highly innovative and consequential. In this case, legislators may feel compelled to act in accordance with their ideology and to stand by their preferred policies. In other words, the goal of good public policy may in such circumstances be more important to legislators than electoral gains.

FINDINGS

Data Format and Variables

To examine the hypotheses in the previous section, this study used data covering the period between 1981 and 2011, as the political power and the political behaviors of Democratic and Republican party members may not have been consistent before then owing to party reforms in the 1970s that increased party power and gave party leaders the means to exert strong pressure on members to vote along party lines (Rohde, 1991; Aldrich, 1995). In addition, this study used individual Congresses, the 97th to the 111th instead of years as the unit of analysis to avoid the bias of congressional sessions, given that it is reasonable to expect that the second congressional session would be more productive. The panel data covered 20 major policy areas classified by the Comparative Agendas Project, which is important given my speculation that a divided government may be more productive with respect to the issues that interest citizens.[4]

The dependent variable is the number of legislative enactments over the course of the period from 1981 to 2011. Because qualities and quantities of laws passed are not identical, a count of the number of them may overestimate or underestimate the dependent variable. Thus, policy-making productivity studies generally measure the dependent variable by counting only significant laws (e.g., Howell et al., 2000). In particular, a number of policy-making productivity studies have relied on the list of significant laws David Mayhew (1991) compiled by reviewing annual end-of-session wrap-up articles from the *New York Times* and *Washington Post* and policy specialists' retrospective judgments (Clinton & Lapinski, 2006).[5]

The fact that all the listed laws are highly important is a plus for this measure, since that means the units are homogenous. Nevertheless, several studies have relied instead on the laws passed as reported in the *Congressional Quarterly Almanac* (CQA) (e.g., Francis & Sulkin, 2013; Ryan, 2011; Ansolabehere et al., 2017), but since the almanac documents many laws that have been passed in a congressional year, there is less homogeneity among them. For example, two laws recorded in the almanac for 1990, the Clean Air Act Amendment (P.L. 101-549) and the Global

---

4. The policy areas are macroeconomics, civil rights, health, agriculture, labor, education, environment, energy, immigration, transportation, law and crime, welfare, housing, domestic commerce, defense, technology, foreign trade, international affairs, government operations, and public lands. See http://www.comparativeagendas.net.

5. The list of laws can be found on the following webpage: http://campuspress.yale.edu/davidmayhew/datasets-divided-we-govern.

Change Research Act (P.L. 101-606), are substantially different, the former including 11 titles totaling 315 pages, the latter having only three titles and taking up a mere 10 pages. During the period of 97th-111th Congresses, approximately 24.89% of enacted laws were mentioned in the almanac, whereas Mayhew's list includes only approximately 2% of laws. Additionally, multiple policy topics can be included in a public law—one of the 11 titles of the Clean Air Act Amendment, for instance, relates to labor issues. This study weighted the laws mentioned in the almanac by the number of law titles and took the titles of related policies into consideration. Because Mayhew's list comprises highly innovative and consequential laws, a comparison between the regressions of Mayhew's list and the laws mentioned in CQA provide a means of testing the idea that the relative weight of electoral gains from policy making may be limited in the case of significant bills. In addition, this study used the total number of all public laws weighted by the number of law titles to enhance the robustness of regression results. Thus, one unit of "laws mentioned in CQA" and "all public laws" represents the average number of law titles per day.[6]

One of the major independent variables in this study is party polarization. This study generally relied on the ideological distance between median members of Democratic and Republican parties for this variable (e.g., Lee, 2013). Because there are two party medians in each congressional chamber, the union of the median ideological intervals of the parties—that is, the distance between the more liberal Democratic median and the more conservative Republican median—was used as a measure of party polarization. The ideological distance through DW-NOMINATE scores was calculated.[7] In addition, this study used a dummy variable for a divided government (1 for a divided government and 0 for a unified government) and coded the nonpresidential party in a split Congress as an instance of a divided government. It also used the data from Gallup's most important problem survey that illuminates issues regarded as highly important by the public. The level of public approval of Congress and the president was measured using Gallup surveys about the job approval rating of the legislative and executive branches.[8] Because Gallup did not measure the approval rating of political parties in the 1980s, this study used data from the American

---

6. The data regarding laws published in the *Congressional Quarterly Almanac*, all public laws, and related titles come from the Comparative Agendas Project.
7. Detailed data come from voteview.com.
8. The survey questions ask whether a respondent approves or disapproves of the way Congress is handling its job and whether the respondent approves or disapproves of the way the president is handling his job.

National Election Studies instead that calculates average feelings toward parties.[9] To calculate the relative approval rating of the minority party, pro-minority party approval subtracted by pro-majority party approval was calculated.

Table 2. Descriptive Statistics

Measures	Mean	SD	Min	Max
Mayhew Laws	0.487	0.765	0	4
Laws Mentioned in CQA	0.0277	0.037	0	0.252
All Public Laws	0.078	0.080	0.003	0.448
Polarization	0.73	0.063	0.626	0.804
Policy Mood	64.206	2.399	59.848	68.058
Budget Situation	2.16	0.541	1.441	3.472
Bills	0.604	0.367	0.099	2.296
Most Important Problem (MIP)	0.045	0.092	0	0.740
(Relative) Minority Party Approval	-0.8	6.367	-9	10
Congressional Approval	35.267	9.153	23.24	55.192
Presidential Approval	53.438	9.151	31.727	69.192

In addition, several variables were included to control extraneous factors. Traditional policy-making productivity studies have suggested that policy mood and budgetary situations are important factors to take into account (e.g., Binder, 2003; Chiou & Rothenberg, 2003; Saeki, 2009). The more liberal the atmosphere or the larger the budget, the more bills that can be dealt with. Following this tradition, the public liberalism index developed by James Stimson (1998) was inserted to control policy mood. Likewise, budget outlays that may indicate the size of governmental works were inserted in regression models. Budget data were revised to be constant in 2009 dollars (in trillions of dollars). An average number of bills of individual policy areas was also included in regression models to control the effect of the spe-

---

9. The average values of previous and next Congresses were measured if there is no available data. For example, there is no survey data during the 109th Congress. Then, the average of the party approval ratings in the 108th and the 110th Congresses were measured. Detailed information of the ANES survey is provided its website: http://www.electionstudies.org/nesguide/toptable/tab2b_2.htm.

cific policy areas' agenda sizes. Last, the personality of presidents may affect communication between legislative and executive branches (Neustadt, 1990), and individual presidency dummies were included. Descriptive statistics of the variables are suggested in table 2.

Because of the format of panel data, heteroscedasticity and autocorrelation problems were possible. In addition, the number of laws could be correlated contemporaneously. Because there were fewer Congresses than policy areas in the dataset—the number of time periods is relatively small compared to the number of panels—methods such as feasible generalized least squares (FGLS) and Prais-Winston regression with panel-corrected standard errors (PCSE) might be inappropriate (Hoechle, 2007), although PCSE is a better tool than FGLS (Beck & Katz, 1995). Instead, considering data format, Driscoll-Kraay standard errors would be more appropriate for this study (Hoechle, 2007).[10] Fixed effects were also used to limit the effect of heteroscedasticity (and hidden factors from individual policy areas), and MA(2) was used to limit autocorrelation problems.[11]

Hypothesis Tests

Results in table 3 strongly support the idea that the interaction between a divided government and party polarization is positive. Models 1-2, 1-5, and 1-8 indicate that the coefficients of a divided government are negative, while those of the inter-

---

10. All regression tests in this study were reexamined with FGLS and PCSE with AR(1) and policy area dummies as fixed effects to enhance statistical robustness. The statistical results were consistent regardless of the methods, if the dependent variables were laws published in *Congressional Quarterly Almanac* and all public laws. Regarding Mayhew's list of laws, however, the interactive terms of level of presidential and congressional approval were insignificant when using FGLS. In addition, this study reexamined Mayhew's list using panel negative binomial regressions with fixed effects and lagged dependent variable, in spite of contemporaneous correlation, because it is a count data. In this case, almost all models based on Mayhew's list showed that a divided government and its interactive terms were generally insignificant. Only in the case of a consideration of the most important problem and a highly polarized Congress was a divided government more productive regarding model 2-2 (p-value=.007). This result also supports the suggestion that electoral gains from policy making may be limited if the laws in question are highly innovative and consequential.

11. The length of maximum autocorrelation was determined using the autocorrelation rule suggested by Newey and West (1987). For this study, given the time frame of data (15 Congresses), MA(2) is appropriate. However, the regression results were robust, even when the length of maximum autocorrelation was 1 or 3.

active terms of a divided government and polarization are positive for all measures of policy-making productivity. In contrast, models 1-1, 1-4, and 1-7 suggest that a divided government is not statistically significant without interactive terms. However, the result does not imply that the effect of a divided government is null. Instead, the effect may vary depending on political situations, in particular, party polarization.[12] However, even inserting the maximum value of polarization (i.e., .804) in the regression models in table 3, the net effect of a divided government is generally negative. Only regarding Mayhew's list of laws is the net effect of a divided government approximately zero when polarization is maximized.

Table 3. The Effect of a Divided Government and Polarization on Legislative Productivity

# Model	Mayhew Laws			Laws Mentioned in CQA (weighted by the number of titles)			All Public Laws (weighted by the number of titles)		
	Model 1-1	Model 1-2	Model 1-3	Model 1-4	Model 1-5	Model 1-6	Model 1-7	Model 1-8	Model 1-9
Divided Gov.	-.031	-4.970†	1.217	-.006	-.561***	-.486*	-.017	-.862**	-1.28**
	(.044)	(2.325)	(2.097)	(.005)	(.027)	(.165)	(.011)	(.198)	(.379)
Divided Gov X Polarization		6.183*	-1.587		.694***	.600*		1.058**	1.578**
		(2.879)	(2.601)		(.034)	(.207)		(.248)	(.475)
Polarization	-.227	2.012	10.034***	.004	.256***	.353	.284	.667***	.131
	(1.084)	(1.800)	(1.896)	(.137)	(.045)	(.216)	(.287)	(.141)	(.363)
Policy Mood	.027	-.009	.008	.000	-.004***	-.004***	.002	-.005	-.006*
	(.017)	(.036)	(.025)	(.001)	(.000)	(.001)	(.003)	(.003)	(.002)
Budget	-.392***	-.594***	-.786***	.004	-.019**	-.021*	.022†	-.013	-.000
	(.083)	(.120)	(.104)	(.008)	(.006)	(.009)	(.011)	(.010)	(.010)
Bills	.641***	.666***	.688***	.014*	.017*	.017*	.010	.015	.013
	(.094)	(.098)	(.104)	(.006)	(.006)	(.006)	(.009)	(.009)	(.009)

12. The models of table 3 were reexamined with including the data of 15 more Congresses (82th-96th Congresses, 1951-1981). For the regression tests, both a divided government and the interactive term of a divided government and polarization were statistically insignificant. In other words, the interaction between a divided government and party polarization may be positive only in the recent period when polarization has been sufficiently high.

Reagan	-.949*** (.174)	.018 (.631)	.074 (.397)	.023 (.033)	.131*** (.014)	.132*** (.014)	.105 (.066)	.270*** (.056)	.266*** (.040)
GHWB	-1.07*** (.225)	-.017 (.749)	.050 (.475)	.041 (.031)	.159*** (.016)	.160*** (.016)	.116 (.068)	.297*** (.062)	.293*** (.044)
Clinton	-.731*** (.135)	-.696*** (.180)	-.047 (.118)	.011 (.018)	.015 (.009)	.023 (.017)	.045 (.033)	.051* (.019)	.008 (.033)
GWB	-.454*** (.111)	-.441** (.154)	.202 (.127)	.017 (.011)	.018** (.006)	.026 (.016)	.047† (.023)	.049** (.014)	.006 (.032)
EGI			-3.649** (.825)			-.044 (.092)			.244 (.177)
Constant	.127** (.1.135)	1.219 (1.144)	-4.403* (1.630)	-.019 (.085)	.103*** (.016)	.035 (.146)	-.345* (.134)	-.158 (.091)	.219 (.295)
n	300	300	300	300	300	300	300	300	300
R-Squared	.046	.048	.051	.174	.206	.206	.252	.281	.285

Driscoll-Kraay standard errors are in parentheses. The error structure is assumed to be heteroskedastic, autocorrelated up to two Congresses (MA(2)), and possibly correlated between policy areas. In addition, fixed effects were included to prevent hidden factors from policy areas.

† Significant at .10 level, * Significant at .05 level, **Significant at .01 level, ***Significant at .001 level (one-tailed).

Acronyms: GWHB (George H.W. Bush), GWB (George W. Bush), EGI (Equilibrium Gridlock Interval)

Even though results show similar policy making productivity between divided and unified governments, they do not support the institutional understanding of legislative gridlock, which in contrast to partisan models highlight only ideological preferences of individual legislators (in particular those of veto pivot and filibuster pivot) and argues that a divided government is as productive as a unified government (Brady & Volden, 2005; Krehbiel, 1998; Mayhew, 1991). If this argument was valid, the interactive term between divided government and polarization would be statistically insignificant. However, it is significant in models 1-2, 1-5, and 1-8. In addition, even when including an equilibrium gridlock interval (EGI) that indicates the ideological distance between veto pivot and filibuster pivot, the regression results were invariable for laws published in CQA and all public Laws (models 1-6 and 1-9); the models' interactive terms were significant, but EGI was insignificant.[13] However, regarding Mayhew's list, EGI instead of party polarization and a

---

13. The concept of EGI was developed by Keith Krehbiel (1998). This study measured EGI based on DW-NOMINATE scores.

divided government was more significant. The result may imply that legislators are inclined to embrace good public policy (that is, the ideological stances of their party) if a given bill under consideration is innovative and consequential and thereby forego the electoral benefits that might accrue from voting yes for an insignificant bill that they nevertheless are not truly in favor of. The interactive term of model 1-2 was less significant than those of models 1-5 and 1-8, because Mayhew's list contains only highly innovative and consequential laws, which supports the idea that the relative weight of electoral gains from policy making may be limited if the bills in question are significant.

Regression results in table 3 indicate that a divided government is on average less productive than a unified government. However, a divided government may be more productive than a unified government in specific situations if party polarization is high and legislators have a lot of interest in electoral gains. To clarify the effect of party polarization in detail, we can examine the interaction between a highly polarized Congress and a divided government.

Since the mid-1990s, party polarization has sharply increased. Even though Newt Gingrich (R-GA) initiated the Contract with America, that moved the Republican Party in a more conservative direction, his leadership was attacked by Republican members and he was replaced by Dennis Hastert (R-IL). In the late 1990s, Hastert managed Congress in a less aggressive and centralized manner (Smith & Gamm, 2017). However, after George W. Bush became president in 2001, Hastert and majority leader Tom Delay (R-TX) began forcing Republican members to follow the party line. Moreover, the frequency of filibuster attempts has steeply increased since the 2000s (Koger, 2017). In addition, compared with previous presidents, President Bush attempted more unilateral actions, including constitutional signing statements against the Democratic opposition (Ostrander & Sievert, 2013). Thus, it should come as no surprise that the 107th (2001-2) Congress inaugurated a deeply polarized period. This study used a dummy variable that indicates that the 107th through 111th Congresses that were highly polarized.[14]

------

14. Despite that, as a robustness check, the regression models of table 3 (and also, table 4, 5, and 6) were reexamined with the interactive term of divided government and polarization instead of HPC. The results were generally consistent, though the statistical significance of the interactive terms were slightly lower.

Table 4. The Effect of a Divided Government and Most Important Problems on Legislative Productivity

# Model	Mayhew Laws		Laws Mentioned in CQA (weighted by the number of titles)		All Public Laws (weighted by the number of titles)	
	Model 2-1	Model 2-2	Model 2-3	Model 2-4	Model 2-5	Model 2-6
Divided Gov.	.008	-.278†	-.003	-.015*	-.013	-.029*
	(.106)	(.152)	(.006)	(.006)	(.010)	(.012)
Most Important Problem (MIP)	4.247*	4.885*	.149*	.175*	.169*	.205*
	(1.853)	(1.950)	(.058)	(.068)	(.059)	(.079)
Divided Gov X MIP	-.447	-1.209	-.058	-.090†	-.078†	-.121*
	(1.736)	(1.668)	(.044)	(.050)	(.039)	(.048)
Divided Gov. X MIP X HPC		6.581**		.270***		.374***
		(2.020)		(.019)		(.041)
Polarization	-.743	4.277*	-.010	.196	.269	.554†
	(.999)	(1.794)	(.136)	(.113)	(.286)	(.276)
Policy Mood	.031†	.010	.000	-.001	.002	.001
	(.016)	(.019)	(.001)	(.001)	(.003)	(.003)
Budget	-.311**	-.453***	.006	.000	.024*	.016
	(.074)	(.061)	(.007)	(.007)	(.011)	(.010)
Bills	.386**	.359**	.007	.006	.004	.002
	(.104)	(.098)	(.007)	(.005)	(.010)	(.009)
Reagan	-.909***	-.110	.024	.057†	.106	.151*
	(.191)	(.356)	(.032)	(.029)	(.066)	(.063)
GHWB	-1.062***	-.205	.041	.076*	.117	.154*
	(.232)	(.403)	(.031)	(.028)	(.068)	(.065)
Clinton	-.700***	-.450*	.012	.022	.046	.061†
	(.141)	(.181)	(.018)	(.016)	(.033)	(.032)
GWB	-.422**	-.470**	.018	.016	.048†	.045†
	(.110)	(.125)	(.011)	(.010)	(.023)	(.021)
Constant	.001	-2.213†	-.023	-.144	-.349*	-475**
	(1.083)	(1.149)	(.082)	(.066)	(.130)	(.120)
n	300	300	300	300	300	300
R-Squared	.115	.162	.227	.301	.277	.332

Driscoll-Kraay standard errors are in parentheses, and fixed effects and MA(2) are used.
† Significant at .10 level, * Significant at .05 level, **Significant at .01 level, ***Significant at .001 level (one-tailed).
Acronyms: MIP (Most Important Problems), HPC (Highly Polarized Congresses), GWHB (George H.W. Bush), and GWB (George W. Bush)

Table 5. The Effect of a Divided Government and Minority Party Approval on Legislative Productivity

# Model	Mayhew Laws		Laws Mentioned in CQA (weighted by the number of titles)		All Public Laws (weighted by the number of titles)	
	Model 3-1	Model 3-2	Model 3-3	Model 3-4	Model 3-5	Model 3-6
Divided Gov.	-.029	-.062	-.042†	-.081***	-.095**	-.147***
	(.275)	(.248)	(.022)	(.014)	(.031)	(.009)
Minority Party Approval (MA)	-.001	-.011	-.006†	-.018**	-.013*	-.029***
	(.047)	(.047)	(.003)	(.004)	(.004)	(.002)
Divided Gov ✕ MA	.004	.015	.006	.019**	.012*	.029***
	(.061)	(.057)	(.004)	(.005)	(.004)	(.002)
Divided Gov. ✕ MA ✕ HPC		.006		.007**		.010***
		(.026)		(.002)		(.001)
Polarization	-.800	-.124	.315	-.211	1.174*	.476*
	(5.027)	(4.898)	(.319)	(.348)	(.456)	(.165)
Policy Mood	.025	.020	-.001	-.007**	-.001	-.008***
	(.033)	(.028)	(.001)	(.002)	(.002)	(.001)
Budget	-.315	-.149	-.001	.196*	-.020	.243***
	(.606)	(.746)	(.027)	(.081)	(.032)	(.033)
Bills	.640***	.639***	.016*	.015*	.015†	.014
	(.101)	(.101)	(.006)	(.005)	(.009)	(.008)
Reagan	-.854	-.466	.146	.608**	.331*	.945***
	(1.344)	(1.516)	(.086)	(.165)	(.113)	(.072)
GHWB	-.980	-.611	.166†	.606**	.349**	.933***
	(1.397)	(1.478)	(.085)	(.155)	(.115)	(.070)
Clinton	-.638	-.290	.101	.516**	.202*	.752***
	(1.111)	(1.318)	(.065)	(.150)	(.083)	(.061)
GWB	-.360	-.059	.102	.461**	.193*	.670***
	(1.155)	(1.231)	(.060)	(.135)	(.075)	(.055)
Constant	.417	.407	-.215	-.227*	-.876**	-.892***
	(3.193)	(3.110)	(.187)	(.100)	(.229)	(.068)
n	300	300	300	300	300	300
R-Squared	.046	.046	.187	.217	.281	.301

Driscoll-Kraay standard errors are in parentheses, and fixed effects and MA(2) are used.
† Significant at .10 level, * Significant at .05 level, **Significant at .01 level, ***Significant at .001 level (one-tailed).
Acronyms: MP (Minority Party Approval), HPC (Highly Polarized Congresses), GWHB (George H.W. Bush), and GWB (George W. Bush)

Table 4 records the effects of the inclusion of the interactive terms of a divided government and the most important problems, along with the effects of the interactive variables of a divided government, most important problems, and highly polarized Congresses, which this study used to examine the effect of high polarization. As expected, when party polarization was sufficiently high, thereby increasing the importance of party image, minority party legislators were more likely to collaborate in a divided government. With a highly polarized Congress and a high number of most important problems (more than 10%, with related policies in the areas of macroeconomics, law, crime, and defense), a divided government could be more productive. In other words, legislators tend to pass more laws addressing issues the attract a lot of public interest, particularly when polarization is sufficiently high.

Models 3-4 and 3-6 of table 5 suggest that a divided government is productive only when minority party approval is sufficiently high (>3.8) and Congress is highly polarized (HPC=1). Otherwise, the relative electoral benefit from successful policy making may accrue solely to the majority party, thereby reducing the policy-making productivity of a divided government. However, the interactive term is insignificant in model 3-2, which implies that when policy issues are sufficiently innovative and consequential, minority party legislators are less likely to collaborate, even if doing so might mean losing votes. In other words, when the goal of good public policy' becomes much more significant than reelection, a divided government may be less productive than a unified government.

Table 6 indicates that the effect of a divided government on policy-making productivity may also decrease if minority party legislators have sufficient electoral resources. In particular, high congressional approval ratings facilitate the reelection of incumbents (Adler & Wilkerson 2012). Likewise, high presidential approval ratings contribute to the presidential party members' reelection chances (Lebo & O'Geen 2011; Mcdermott & Jones 2003). In such circumstances, minority party members are less likely to collaborate. However, the negative effect of high congressional and presidential approval ratings decreases as the significance of party image increases in the wake of party polarization. Table 6 also supports the idea that the positive effect of a divided government on policy-making productivity is relatively limited when laws are highly innovative and consequential.

Table 6. The Effect of a Divided Government and Approval Ratings on Legislative Productivity

# Model	Mayhew Laws		Laws Mentioned in CQA (weighted by the number of titles)		All Public Laws (weighted by the number of titles)	
	Model 4-1	Model 4-2	Model 4-3	Model 4-4	Model 4-5	Model 4-6
Divided Gov.	-.128	-.034	.008	.050***	.025***	.089***
	(.101)	(.091)	(.007)	(.010)	(.004)	(.008)
Congressional Approval (CA)	.001		.002***		.004***	
	(.003)		(.000)		(.000)	
Divided Gov ⅹ CA	-.013		-.003***		-.005***	
	(.009)		(.001)		(.000)	
Divided Gov. ⅹ CA ⅹ HPC	.015*		.002***		.003***	
	(.006)		(.000)		(.000)	
Presidential Approval (PA)		.002		.002***		.004***
		(.003)		(.000)		(.000)
Divided Gov ⅹ PA		-.015*		-.003***		-.004***
		(.005)		(.000)		(.000)
Divided Gov. ⅹ PA ⅹ HPC		.013***		.002***		.002***
		(.003)		(.000)		(.000)
Polarization	9.158†	13.309**	.704*	1.301***	1.069***	1.345***
	(4.442)	(3.236)	(.263)	(.264)	(.091)	(.246)
Policy Mood	-.002	-.025	-.006**	-.007***	-.009***	-.008***
	(.025)	(.021)	(.002)	(.001)	(.001)	(.002)
Budget	-.496†	-724**	.084*	.021***	.174***	.112***
	(.266)	(.197)	(.030)	(.006)	(.013)	(.008)
Bills	.669***	.678***	.017*	.019**	.015†	.016†
	(.105)	(.108)	(.006)	(.006)	(.008)	(.008)
Reagan	.786	1.205†	.344***	.346**	.602***	.552***
	(.694)	(.646)	(.071)	(.053)	(.027)	(.051)
GHWB	.536	1.298†	.352***	.377***	.601***	.561***
	(.719)	(.704)	(.072)	(.056)	(.028)	(.056)
Clinton	-.065	-.003	.208**	.172***	.372***	.318***
	(.376)	(.367)	(.049)	(.023)	(.020)	(.025)
GWB	-.499	-.538*	.083**	.067***	.167***	.178***
	(.294)	(.228)	(.027)	(.006)	(.013)	(.011)
Constant	-5.42*	-6.387**	-.521**	-.776***	-.987***	-1.144***
	(2.438)	(.1.616)	(.142)	(.145)	(.059)	(.118)
n	300	300	300	300	300	300
R-Squared	.050	.051	.221	.230	.303	.300

Driscoll-Kraay standard errors are in parentheses, and fixed effects and MA(2) are used.
† Significant at .10 level, * Significant at .05 level, **Significant at .01 level, ***Significant at .001 level (one-tailed).
Acronyms: CA (Congressional Approval), PA (Presidential Approval), HPC (Highly Polarized Congresses), GWHB (George H.W. Bush), and GWB (George W. Bush)

CONCLUSION

Many policy-making productivity studies have tacitly assumed that shared interests among party members or ideological stances determine their voting behavior in Congress. This assumption may not be absolutely false, but it is also not absolutely true. As Mayhew (1974) established, legislators are highly interested in their reelection. Because they are at least partly "single-minded seekers of reelection," they vote strategically to maximize their chances of reelection (Arnold, 1990). Minority party legislators thus may have sufficient incentive to prevent bills from being passed that could contribute to opponent party candidates' reelection odds in a unified government. In contrast, they may facilitate the passage of such bills under a divided government to maximize electoral gains. As a result, a divided government could be more productive than a unified government.

This relationship becomes clearer following significant party polarization in the United States. Because prior to the 1970s party polarization was minimal, partisan loyalty was insignificant. Instead, incumbency was crucial in elections, and incumbent legislators did not need to consider party brand when casting votes on the congressional floor. As a result, divided governments were less productive than unified governments during this time. However, with the increasing emphasis on party loyalty and the importance of party brand name that has accompanied party polarization, legislators have had more and more to take the party brand into account in voting. In this situation, the minority party in a divided government has sufficient incentive to pass laws. Several regression models in this study support this suggestion. In particular, regarding policy areas in which electoral benefits might be significant and political contexts in which the approval ratings of the minority party are sufficiently high, minority party legislators in a divided government have more incentive to participate in policy making. However, if minority party legislators have sufficient electoral resources that derive from high congressional and presidential approval ratings, the policy-making productivity of a divided government decreases, because they have less incentive to improve party image.

Several studies on the effect of the interaction between a divided government and party polarization on policy-making productivity have argued that the effect is insignificant (e.g., Jones, 2001). Others have claimed that the interaction has negatively affected policy-making productivity (e.g., Metzger, 2015). None of these studies, however, consider minority party legislators' electoral gains from successful policy making. Moreover, they rely on outdated data or make their arguments without conducting rigorous empirical tests.

This article statistically tested the relationship using up-to-date data and found

that a divided government may be more productive in particular when party polarization is significant and minority party legislators are highly interested in electoral gains. Because party polarization has increased since the 2010s, the policy-making productivity of a divided government could grow even more. This does not mean that divided governments are always more productive than unified governments. Only in circumstances in which significant party polarization obtains and legislators have a high interest in electoral gains are divided governments likely be more productive.

REFERENCES

Adler, E. S., & Wilkerson, J. D. 2012. *Congress and the politics of problem solving.* New York: Cambridge University Press.

Aldrich, J. H. 1995. *Why parties? The origin and transformation of political parties in America.* Chicago: University of Chicago Press.

Ansolabehere, S., Palmer, M., & Schneer, B. 2017. What has Congress done? In A. S. Gerber and E. Schickler (eds.), *Governing in a polarized age: Elections, parties, and political representation in America* (pp. 243-266). New York: Cambridge University Press.

Arnold, R. D. 1990. *The logic of congressional action.* New Haven, CT: Yale University Press.

Barber, M., & McCarty, N. 2016. Causes and consequences of polarization. In J. Mansbridge and C. J. Martin (eds.), *Political negotiation: A handbook* (pp. 37-90). Washington, DC: Brookings Institution Press.

Baumgartner, F. R., Brouard, S., Grossman, E., Lazardeux, S. G., & Moody, J. 2014. Divided government, legislative productivity, and policy change in the USA and France. *Governance*, 27(3): 423-447.

Beck, N., & Katz, J. N. 1995. What to do (and not to do) with time-series cross-section data. *American Political Science Review*, 89(3): 634-647.

Binder, S. A. 1999. The dynamics of legislative gridlock, 1947-96. *American Journal of Political Science*, 93(3): 519-534.

Binder, S. A. 2003. *Stalemate: Causes and consequences of legislative gridlock.*

Washington, DC: Brookings Institution Press.

Brady, D. W., & olden, C. 2005. *Revolving gridlock: Politics and policy from Jimmy Carter to George W. Bush*. 2nd ed. Boulder, CO: Westview Press.

Chiou, F.-Y., & Rothenberg, L. S. 2003. When pivotal politics meets partisan politics. *American Journal of Political Science*, 47(3): 503-522.

Clinton, J. D., & Lapinski, J. S. 2006. Measuring legislative accomplishment, 1877-1994. *American Journal of Political Science*, 50(1): 232-249.

Coleman, J. J. 1999. Unified government, divided government, and party responsiveness. *American Political Science Review*, 93(4): 821-835.

Derouen, K., Peake, J. S., & Ward, K. 2005. Presidential mandates and the dynamics of Senate advice and consent, 1885-1996. *American Politics Research*, 33(1): 106-131.

Erikson, R. S. 2017. The congressional incumbency advantage over sixty years: Measurement, trends, and implications. In A. S. Gerber and E. Schickler (eds.) *Governing in a polarized age* (pp. 65-89). New York: Cambridge University Press.

Fenno, R. F. 1978. *Home style.* Boston: Little, Brown.

Francis, K., & Sulkin, T. 2013. Legislative coalitions and presidential signing statements. *Congress & the Presidency*, 40(3): 230-254.

Gray, T. R., & Jenkins, J. A. 2017. Unpacking pivotal politics: Exploring the differential effects of the filibuster and veto pivots. *Public Choice*, 172(3): 359-376.

Harbridge, L. 2015. *Is bipartisanship dead? Policy agreement and agenda-setting in the House of Representatives*. New York: Cambridge University Press.

Hoechle, D. 2007. Robust standard errors for panel regressions with cross-sectional dependence. *Stata Journal*, 7(3): 281-312.

Howell, W. G., Adler, S., Cameron, C., & Riemann, C. 2000. Divided government and the legislative productivity of Congress, 1945-94. *Legislative Studies Quarterly*, 25(2): 285-312.

Hughes, T., & Carlson, D. 2015. Divided government and delay in the legislative process. *American Politics Research*, 43(5): 771-792.

Jacobson, G. C. 2013. Partisan polarization in American politics: A background paper. *Presidential Studies Quarterly*, 43(4): 688-708.

_____. 2015. It's nothing personal: The decline of the incumbency advantage in US House elections. *Journal of Politics*, 77(3): 861-873.

_____. 2017. The electoral connection, then and now. In A. S. Gerber and E. Schickler (eds.) *Governing in a polarized age* (pp. 35-64). New York: Cambridge University Press.

Jones, D. R. 2001. Party polarization and legislative gridlock. *Political Research Quarterly*, 54(1): 125-141.

_____. 2010. Partisan polarization and congressional accountability in House elections. *American Journal of Political Science*, 54(2): 323-337.

Koger, G. 2010. *Filibustering: A political history of obstruction in the House and Senate*. Chicago: University of Chicago Press.

_____. 2017. Filibusters and majority rule in the modern Senate. In L. C. Dodd and B. I. Oppenheimer (eds.), *Congress reconsidered* (pp. 311-329). Washington DC: CQ Press.

Krehbiel, K. 1998. *Pivotal politics: A theory of US lawmaking*. Chicago: University of Chicago Press.

Layman, G. C., Carsey, T. M., & Horowitz, J. M. 2006. Party polarization in American politics: Characteristics, causes, and consequences. *Annual Review of Political Science* 9: 83-110.

Lebo, M. J., & O'Geen, A. J. 2011. The president's role in the partisan congressional arena. *Journal of Politics*, 73(3): 718-734.

Lee, J. 2013. Contingent party pressure and legislative gridlock. *American Politics Research*, 41(2): 175-202.

Mayhew, D. R. 1974. *Congress: The electoral connection*. New Haven, CT: Yale University Press.

_____. 1991. *Divided we govern: Party control, lawmaking and investigations, 1946-1990*. New Haven, CT: Yale University Press.

Mcdermott, M. L., & Jones, D. R. 2003. Do public evaluations of Congress matter? *American Politics Research*, 31(2): 155-177.

Metzger, G. E. 2015. Agencies, polarization, and the states. *Columbia Law Review*, 115(7): 1739-1787.

Neustadt, R. E. 1990. *Presidential power and the modern presidents: The politics of leadership from Roosevelt to Reagan*. New York: Free Press.

Newey, W. K., & West, K. D. 1987. A simple, positive semi-definite, heteroskedasticity and autocorrelation consistent covariance matrix. *Econometrica*, 55(3): 703-708.

Ostrander, I., & Sievert, J. 2013. The logic of presidential signing statements. *Political Research Quarterly*, 66(1): 141-153.

Powell, G. B., & Whitten, G. D. 1993. A cross-national analysis of economic voting: Taking account of the political context. *American Journal of Political Science*, 37(2): 391-414.

Rohde, D. W. 1991. *Parties and leaders in the postreform house*. Chicago: University of Chicago Press.

Ryan, J. M. 2011. The disappearing conference committee: The use of procedures by minority coalitions to prevent conferencing. *Congress & the Presidency,* 38(1): 101-125.

Saeki, M. 2009. Gridlock in the government of the United States: Influence of divided government and veto players. *British Journal of Political Science*, 39(3): 587-607.

Samuels, D. 2004. Presidentialism and accountability for the economy in comparative perspective. *American Political Science Review*, 98(3): 425-436.

Sinclair, B. 2017. The new world of U.S. senators. In L. C. Dodd and B. I. Oppenheimer (eds.), *Congress reconsidered* (pp. 1-28). Washington, DC: CQ Press.

Smidt, C. D. 2017. Polarization and the decline of the American floating voter. *American Journal of Political Science*, 61(2): 365-381.

Smith, S. S., & Gamm, G. 2017. The dynamics of party government in Congress. In L. C. Dodd and B. I. Oppenheimer (eds.) *Congress reconsidered* (pp. 163-188). Washington, DC: CQ Press.

Stimson, J. A. 1998. *Public opinion in America: Moods, cycles, and swings*. 2nd ed. Boulder, CO: Westview Press.

Sundquist, J. L. 1988. Needed: A political theory for the new era of coalition government in the United States. *Political Science Quarterly*, 103(4): 613-635.

Trubowitz, P., & Mellow, N. 2005. "Going bipartisan": Politics by other means. *Political Science Quarterly*, 120(3): 433-453.