Dissolution Power and Redistribution

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This version: April 3, 2015

Prepared for presentation at the 73rd annual MPSA conference

Abstract

While democracies vary in whether they allow their chief executives to dissolve parliament and call an early election, recent theories of the economic consequences of executive-legislative institutions in comparative politics pay little attention to dissolution power. I develop a model to analyze how chief executives’ ability to dissolve the legislature influences the stability and level of redistribution. It shows that dissolution power critically alters the ability of partisan chief executives to change policy. The resulting differences in redistributive policy across constitutions with and without dissolution power emerge despite holding constant the number of veto players. They are also not driven by the confidence vote emphasized by existing models. Turning to some observational data from advanced democracies, I find that economic policy is more variable over time where chief executives may schedule early elections. This supports a key implication of the model.

Word count: 8159

*For helpful comments and suggestions on a precursor to this paper I am especially grateful to Carles Boix, John Londregan, Nolan McCarty, Thomas Brambor, Peter Buisseret, Jidong Chen, Michael Donnelly, Miriam Golden, Carsten Jensen, Johannes Lindvall, Irene Menéndez González, Jonas Pontusson, Grigore Pop-Eleches, Ron Rogowski, Ulrich Sieberer and seminar participants at Princeton University, Lund University, and EPSA 2012 (Berlin). The usual disclaimer applies.

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A striking difference in the design of democratic constitutions is whether the chief executive has the power to dissolve the legislature and call an early election or whether dissolution power is limited or non-existent. While dissolution power is sometimes linked to the form of government (parliamentary vs. presidential), it actually varies considerably within the large universe of parliamentary democracies. For example, chief executives in Denmark or New Zealand can dissolve the legislature at their discretion whereas their colleagues in Germany face veto hurdles and those in Norway have no possibility whatsoever to initiate a dissolution. Does this institutional difference matter for how democracies are governed? In particular, can variation in dissolution power explain variation in economic policy that is important for citizens’ well-being? Scholarship on political institutions provides no clear answer to this question. In this paper, I address it by developing a formal model to analyze how chief executives’ ability to call an early election influences redistributive policy and by providing some observational evidence on the relationship between dissolution power and policy. I argue that dissolution power shapes the stability and level of redistribution. The model shows that dissolution power fundamentally alters the ability of chief executives to change status quo policy. Specifically, it highlights three insights with implications for empirical research. First, in the shadow of an early election policy change can take place even when standard models of veto bargaining predict policy stability. Second, there is no simple link between dissolution power and the level of redistribution. Comparing redistribution across constitutions with and without dissolution power yields an institutional effect that varies with the status quo. Third, more discretion can make chief executives worse off. While control over dissolution benefits chief executives under a range of conditions, it reduces their ability to exploit an extreme status quo to their advantage. I find that evidence from a panel of OECD countries supports a key implication of the model. Controlling for alternative institutions and exploiting exogenous variation in dissolution power, policy variability is significantly higher where chief executives have dissolution power compared to where they lack it.
I build on the vast literature on how variation in the political structure of modern democracies influences economic policy in general and redistribution in particular. For instance, scholars have provided clear theories and a large amount of evidence concerning the effect of electoral rules or the effect of separation of power arrangements on the size and composition of government spending (e.g., Alt and Lowry, 2000; Cox and McCubbins, 2001; Iversen and Soskice, 2006; Funk and Gathmann, 2013; Persson, Roland and Tabellini, 2000; Persson and Tabellini, 2003). There is also a closely related literature on veto players and reforms (e.g., Franzese, 2002; Gehlbach and Malesky, 2010; Keefer and Stasavage, 2003; Tsebelis, 1999, 2002). Taken together, this research has greatly advanced our understanding of the economic effects of political institutions. However, it has paid less attention to the economic effects of dissolution power. At the same time, dissolution power has been a core feature in the comparative politics literatures trying to explain the timing of early election (e.g., Kayser, 2005; Strom and Swindle, 2002) and the survival of governments (e.g., Schleiter and Morgan-Jones, 2009; Warwick, 1994). Though this line of research has not examined the redistributive consequences of dissolution power.\footnote{Kayser (2005) shows that it reduces pre-electoral manipulation of the macroeconomy.}

The stylized model developed in the next section captures a democratic setting where citizens disagree about the desired amount of taxes and transfers and representative political parties aim to implement their constituency’s preferred policy in the legislature. Elections determine the partisan composition of the legislature. The main strategic interaction takes place in post-electoral bargaining between parties. The chief executive is selected from the legislature and controls the legislative agenda. To isolate the effect of dissolution power, I compare equilibrium policy in a game where the chief executive has dissolution power with that of a game without dissolution power, holding everything else constant. Under the benchmark institution, there is no dissolution procedure, and so a rejection of the chief exec-
utive’s proposal maintains the status quo policy. Under the alternative institution, the chief executive can decide whether to dissolve the legislature and call an early election to resolve legislative gridlock. In this setting, I formally demonstrate that the ex-ante probability of a change in redistributive policy tends to be higher when the chief executive has dissolution power compared to the case without dissolution power. This is a first central theoretical result of the paper. In particular, this is always true when the status quo policy lies between ideal points of the relevant partisan veto players. Arguably, this characterizes much of political conflict over redistributive policy in established democracies. In this scenario, standard models of veto bargaining or pivotal politics, such as those developed by Tsebelis (2002), predict policy stability unless one party wins a legislative majority or there is an exogenous shock. However, accounting for dissolution power changes this prediction. If a chief executive can dissolve parliament after the failure to reach an agreement, what matters is the expected policy outcome after an early election rather than the current status quo policy.

This paper joins a small but growing literature on dissolution power and legislative bargaining. The canonical model by Lupia and Strøm (1995) shows that the possibility of a dissolution and early election in the wake of bargaining failure affects the distribution of spoils among coalition members. The party with the best electoral outlook will try to extract concessions from its coalition partners. I build on this work and focus on the case where political conflict is over redistributive policy and the chief executive can initiate a dissolution without significant political constraints. I formally demonstrate that the existence of dissolution power influences the probability and direction of redistributive policy change.

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Evidence on cabinet dissolutions is consistent with the model (Diermeier and Steven-son, 2000). This is not the focus of this paper.
the flexibility of parliamentary governments in the face of gridlock, though he sees this less grounded in dissolution power than the ability of parliament to remove the government with a vote of no confidence. In contrast, the model clarifies how dissolution power can break gridlock without any actual dissolution occurring in equilibrium.\(^3\)

The paper also advances the theoretical debate on executive-legislative bargaining over economic policy. A central argument in the literature comparing presidential with parliamentary democracies is that the vote of confidence explains differences in legislative outcomes and policies between these systems. As captured by the seminal model of Diermeier and Feddersen (1998), a key institutional feature of parliamentarism is that the legislative defeat of the government leads to the government’s resignation and the formation of a new government drawn from the sitting legislature. The main intuition formalized by Diermeier and Feddersen (1998) is that this confidence procedure increases the stakes of legislative voting and thereby increases voting cohesion. Subsequent models building on this framework have shown that the same mechanism can also cause higher taxes and transfer spending (Persson, Roland and Tabellini, 2000) and higher legislative success rates of the chief executive in parliamentary compared to presidential systems (Diermeier and Vlaicu, 2011), consistent with several empirical studies (Persson and Tabellini, 2003; Rockey, 2012; Saiegh, 2011).\(^4\)

While I agree that the confidence vote is a crucial feature of parliamentarism, my simple model illustrates the distinct effect of dissolution power.\(^5\) Bargaining under the (implicit)
threat of dissolution can lead to different outcomes than bargaining only under the threat of the confidence vote. If political conflict is over redistribution (rather than distribution as in the framework of Diermeier and Feddersen (1998)), the possibility of a failed confidence vote and subsequent re-allocation of proposal power among members of parliament is not generally sufficient to induce agreement among partisan veto players. Policy is gridlocked if the status quo policy lies between the ideal points of the relevant parties. Once we add the possibility of a strategic dissolution, however, policy change becomes more likely.

A second insight concerns the importance of the status quo for institutional differences in the level of redistribution. Most related models of the confidence procedure assume that the status quo entails no transfers to any group. This is natural for pork-barrel politics, but less so for redistributive policies. My analysis shows that for low initial levels of redistribution, dissolution power benefits left (i.e., pro-redistribution) parties and their constituencies. As the status quo increases, the institutional advantage flips to those favoring less redistribution. If the status quo is above the level preferred by the left party, who benefits from dissolution power may be different yet again. This result has implications for empirical research. The common approach of estimating average effects of institutions neglects potentially important causal heterogeneity based on the status quo policy.

A third insight is that while dissolution power often makes chief executives better off, there are situations when it actually weakens their hand in legislative bargaining. In particular, the option of an early election limits their ability to exploit an extreme status quo to their advantage, departing from the classical agenda setter model where proposal power becomes more valuable as the status quo becomes more extreme (Romer and Rosenthal, 1978; Tsebelis, 2002). The model captures this and the ability to call an election regardless of whether a confidences vote took place.
Finally, the empirical part of the paper confronts one of the main implication of the model with data drawn from 23 advanced democracies. Based on annual observations of regulatory policy in six economic sectors, I examine the link between dissolution power of the chief executive and policy variability in each sector between 1975 and 2005. As there is virtually no time-variation in dissolution power in the data, the focus is on cross-national variation. The findings support the implication of the model that policy is more variable where chief executives have dissolution power. The differences in dissolution power persist if the analysis is restricted to parliamentary democracies where the chief executive is accountable to the legislature, holding fixed the confidence vote mechanism. I also address the concern that dissolution power is endogenous to unobserved confounders by exploiting variation in the age of constitutions. Beyond providing initial evidence for the argument, these findings contribute to the literature on veto players and reforms (e.g., Gehlbach and Malesky, 2010; Tsebelis, 1999). They clearly indicate that dissolution power shapes policy stability for a given number of veto players.

A Model

In this section, I consider how dissolution power influences redistributive policy in a highly stylized manner that, nonetheless, captures important real-world variation in political institutions and leads to new observable implications. In line with a large literature on partisan politics and public policymaking, I assume that voters disagree about the appropriate level of redistribution from the relatively rich to the relatively poor and that divergent political parties represent the views of particular groups of voters. Politicians care about the policy outcome and are unable to make credible campaign promises. In the terminology of Alesina, Roubini and Cohen (1997), they are partisan rather than opportunistic. Note that partisan motivations may also reflect unmodeled career concerns. Policy is chosen in a legislature that
selects a chief executive as the agenda setter. This institutional setup most closely resembles a parliamentary form of government. If one party wins a majority of legislative seats in the election, it will simply implement its ideal policy. Otherwise, policy reflects a compromise between partisan actors with divergent preferences. It is natural to think of this situation as coalition government. This is where strategic bargaining depends on whether the chief executive has the power dissolve the legislature and call an early election.

Environment

Formally, consider an environment with two groups of citizens, indexed by \( j \in \{p, r\} \), that differ in their exogenous income \( y_j \): poor \((p)\) and rich \((r)\). This is sufficient to generate redistributive conflict that is resolved through elections and legislative bargaining. The share of relatively poor citizens is \( \delta \) and the share of relatively rich citizens is \( 1 - \delta \) and population size is unity. The relatively poor constitute a majority in the population. But as will be explained below, the combination of electoral shocks and electoral rules can generate substantial variation in the partisan control of government, ranging from single-party majority to coalition government of different partisan colors. Following a large literature (e.g., Bolton and Roland, 1997), the redistributive policy consists of a general lump-sum transfer, \( g \), that is financed by a linear income tax \( t \). The government budget constraint is \( g = t\bar{y} - \frac{t^2\bar{y}}{2} \), where \( \bar{y} \) denotes the mean income \( \bar{y} \equiv \delta y_p + (1 - \delta)y_r \), and it includes a quadratic deadweight cost of taxation. Hence, the disposable income of a citizen belonging to group \( j \) is \( V_j(y_j, t) = (\bar{y} - y_j)t + y_j - \frac{t^2\bar{y}}{2} \). In this public finance setting, it is well-known that the poor prefer redistribution, and increasingly so as the income gap to the rich increases, and the rich prefer no redistribution at all. Specifically, maximizing \( V_j(y_j, t) \) (with respect to \( t \)) yields the ideal tax rates of \( t_p = \frac{\bar{y} - y_p}{\bar{y}} \) and \( t_r = 0 \).

\[ \text{6} \] The institutional argument does not depend on citizens being self-interested.
There are two representative parties. Politicians belonging to the left party (L) represent the interests of poor citizens and politicians belonging to the right party (R) represent the interests of rich citizens in the sense that left (right) politicians share the induced ideal points of the poor (rich), $t_L = t_p$ ($t_R = t_r$). For a given policy $t$, the payoffs for a partisan politicians of type $J \in \{L, R\}$ are summarized by a linear spatial utility function

$$u_J = -|t - t_J|. \tag{1}$$

After the election, policy is determined within a legislature that has a finite and even number of $N \geq 2$ seats. The chief executive (CE) with proposal power is drawn from the legislature and a simple majority of $\frac{N}{2} + 1$ votes is required to pass legislation. Focusing on an even number of legislative seats is a straightforward way to allow for the possibility of a coalition government where neither left nor right policymakers on their own can change the exogenous status quo policy $t_q \in [0, 1]$. Citizens can support the left or the right party, and it is apparent that they prefer to support the party that represents their interests. The resulting distribution of electoral votes determines the partisan allocation of seats in the legislature. The share of legislative seats received by a party is proportional to the share of votes it receives in the legislative election. Thus, a party wins a legislative majority (i.e., obtaining a seat share of at least $\frac{1}{2} + \frac{1}{N}$) if it wins more than $\frac{N+1}{2N}$ of the votes.

The model captures that electoral outcomes are uncertain and can lead to different partisan constellations in the legislature. Given the electoral rules for the legislature, electoral shocks that affect the relative size of each party’s support translate into substantial variation in seats. In the Online Appendix, I show that probabilistic turnout with an income bias implies that there is a non-degenerate probability that the election leads to a coalition government with a left chief executive (denote this probability by $p_{LL}$), a coalition government led by a right-chief executive ($p_{RR}$), as well as single-party majority governments by either
party \((p_{LR} \text{ and } p_{RL})\). These probabilities depend on the environment \((N \text{ and } \delta)\) and the mobilization capacity of the left. Politicians are aware of them. Facing a possible dissolution, they form expectations about the likely partisan control of government. Probabilistic voting models, applied widely in the literature (Persson and Tabellini, 2000), can also justify this scenario. What matters is that election outcomes have a stochastic component so that an early election may lead to a different distribution of partisan power in the legislature.\(^8\)

**Variation in Dissolution Power**

Given this partisan framework of redistributive politics, we are ready to discuss the alternative rules of the game governing executive-legislative relations that are the focus of the analysis. It is useful to start with a benchmark model where the chief executive does not have the discretion to dissolve the legislature. Then we specify a counterfactual game where the chief executive does have dissolution power. In the benchmark model, the sequence of events is as follows:

1. The electoral shocks (to turnout) are realized and voting takes place.
2. If a party wins a majority of legislative seats, it obtains the position of the chief executive \((CE)\). If no party wins a legislative majority, nature randomly recognizes one party to hold the \(CE\).
3. \(CE\) can propose a bill specifying an income tax rate \(b \in [0,1]\) or do nothing, \(b = 0\).

The government budget constraint residually determines the corresponding lump-sum

\(^{7}\) Online Appendix A formalizes the role of turnout shocks, Appendix B derives the probabilities.

\(^{8}\) To ensure \(p_{LL} > 0\), I assume \(\delta > \frac{N+1}{2N}\).
transfer \( g \). If \( CE \) makes no proposal, the game ends with the status quo policy being preserved \((t = t_q)\).

(4) If \( CE \) makes a proposal, it is considered in the legislature. If a majority accept \( b \), it becomes the new policy, otherwise the status quo remains in force.

This game captures core features of parliamentary democracies in which the chief executives has no discretion to call early elections. One example is Norway, where the constitution does not allow any early dissolution except to ratify constitutional amendments.\(^9\) Another example is Germany, where there are several constitutional obstacles to an early dissolution, including a veto by the partisan head of state and a vigilant constitutional court. In some countries, only a parliamentary majority or a collective decision of the cabinet can trigger a dissolution. These are also cases where the chief executive has little leeway to use dissolution power in legislative bargaining.

In other democracies, however, chief executives have considerable discretion over dissolution and can use it as a bargaining chip in policymaking. Traditionally, this includes Westminster-style democracies like Great Britain or New Zealand. But the institutional prerogative of the chief executive also exists in countries like Denmark or Spain. To capture this, consider a variation of the benchmark model where the only difference is to give the chief executive the right to dissolve the legislature after the proposal was defeated. Hence, step (4) in the game protocol from above is changed as follows:

(4)' If \( CE \) makes a proposal, it is considered in the legislature. If a majority accept \( b \), it becomes the new policy. If it is defeated, \( CE \) may accept the status quo, ending the game, or dissolve the legislature and call a new election.

\(^9\) For comparative surveys of dissolution power, see Strøm and Swindle (2002) and Schleiter and Morgan-Jones (2009), which are also discussed in the empirical section.
After a dissolution, the subsequent timing of events corresponds to that of the benchmark model, from (1) to (4).

The chief executive may use stalemate as a rationale to call an early election in order to “let the voters decide” how to resolve the issue. The outcome of a new election is explicitly modeled, albeit as simple as possible, so that it can be linked clearly to parameters of the political environment. Next, we will see how the variation in dissolution power shape redistribution.

Implications of Dissolution Power

To see the argument most clearly, it is instructive to compare post-electoral bargaining and the resulting equilibrium policy in the game without dissolution power to the game with dissolution power. The intuition behind the main results summarized by the propositions below is conveyed graphically. A formal proof is in the Online Appendix.

Policy Stability

For now suppose that status quo redistributive policy lies between the ideal points of the left party and the right party \( t_L \geq t_q \geq t_R \). From a theoretical perspective, it is the most interesting case and, arguably, a very common scenario in established democracies. In this context, the effect of dissolution power on policy stability is summarized by Proposition 1.

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10 I assume that a player that is indifferent between an action that leads to a dissolution and another action that avoids it she will choose latter. This reflects the argument in the literature that dissolution entails costs, especially to the chief executive (Strøm and Swindle, 2002).

11 The solution concept is subgame-perfect Nash equilibrium in weakly undominated (voting) strategies in the electoral and legislative stage.
Proposition 1. Suppose the status quo income tax rate lies in the Pareto set between the ideal points of R and L. Then the probability of a policy change is strictly higher in the political system where the chief executive has dissolution power than in the system where the chief executive does not have dissolution power.

This statement refers to the expectation before the election has taken place. To convey the logic of the argument, Figure 1 depicts the policy space in terms of the income tax rate used to finance the lump-sum redistributive transfer from the rich to the poor with the ideal points of the right party ($t_R$), the left party ($t_L$) and different status quo policies ($t_{q1}^1$, $t_{q2}^2$, $t_{q3}^3$). For the purpose of comparison, start by considering the well-understood game without dissolution power. If the election has generated no single-party majority, it is evident that the status quo will not be changed as long as it lies between the ideal points of the parties. Say the status quo location is $t_{q1}^1$ and suppose the left party controls the chief executive in a coalition with the right party whose support is required to change the status quo. Clearly, party $R$ will only accept proposals that move policy closer to its ideal point. As this would require reducing redistribution, such a move is against the interest of party $L$. In this situation, the left chief executive is not able to find a proposal that she prefers to the status quo and that is acceptable to the partisan veto player $R$. A coalition government led by a right chief executive leads to the same outcome. Thus, policy change will only occur if the election generates a clear majority for either party. Note that this prediction is not changed if we allow for a confidence vote as in the model of Diermeier and Feddersen (1998). Suppose the government falls if the proposal of the chief executive is rejected in the legislature and a new chief executive is recognized at random from the sitting legislature. As this reallocation of proposal power without a new election does not change the partisan composition of the legislature, the new chief executive will also not be able or willing to make a proposal that leads to policy change. What matters here is that conflict is over a redistributive issue and the status quo lies in the Pareto set of partisan veto players.
Figure 1: Example of veto bargaining situation with the ideal income tax rates for redistribution of the right party ($t_R$), left party ($t_L$), and different status quo policies ($t^1_q$, $t^2_q$, $t^3_q$). The expected tax rate after a dissolution and new election is denoted by $t_e$.

The logic of executive-legislative bargaining changes fundamentally under the alternative rules of the game where the chief executive has dissolution power. In the case of policy gridlock, including failed confidence votes, the chief executive may dissolve the legislature and call an early election. As politicians know the rules of the game, they anticipate this possibility. The expected policy after a new election is denoted by $t_e$. Recall that uncertainty about turnout creates political uncertainty about the partisan distribution of seats in case of an election. In general, a chief executive will only initiate a dissolution if that increases her expected utility relative to the status quo. For instance, in this case a left chief executive facing a right coalition partner is only willing to gamble on a new election if the status quo redistribution is sufficiently low compared to expected post-dissolution policy ($t^1_q < t_e$). By the same logic, in this case a right chief executive facing a left veto player is only willing to gamble on a new election if the status quo redistribution is sufficiently high ($t^2_q > t_e$). The coalition partner takes the chief executive’s optimal dissolution decision into account when formulating a veto strategy. Consider the situation of a left chief executive in a coalition government and suppose the status quo is lower than $t_e$ (e.g., $t^1_q$). Given the implied credible threat of dissolution, the right party will accept any proposal by the chief executive in the interval between $t_R$ and $t_e$ and thus the optimal proposal by the left chief executive is $b = t_e$.

\[12\] If $t_L \geq t_q \geq t_L$ and given the assumption that the post-dissolution game is played as the benchmark game, $t_e = p_{LL}t_L + (p_{LR} + p_{RL})t_q + p_{RR}t_R$. See Online Appendix B.
In this situation, the right party is willing to accept a larger range of policies than in the
game without dissolution power, where R accepts and proposal between \( t_R \) and \( t_{q1} \). The chief
executive’s best-responding strategy, dissolving parliament to resolve gridlock, changes the
reversion outcome to the policy expected after an early election. Note that the different
outcome relative to the benchmark game occurs given the same number number of veto
players. Thus, the analysis of policy stability and reforms, which has focused mostly on the
number and ideology of veto players (e.g., Tsebelis, 1999; Gehlbach and Malesky, 2010), is
altered in important ways if one accounts for variation in dissolution power.

Now suppose that status quo is higher than \( t_e \) but below the left’s ideal point (e.g., \( t_{e2} \)). Reconsider the situation of a left chief executive facing a right veto player. In this
c constellation, L prefers the status quo to dissolution and it will not initiative a proposal.
Thus, gridlock can still occur with dissolution power, but it occurs under fewer status quo
locations. The situation of a right chief executive facing a left veto player is symmetric to that
of a left chief executive facing a right veto player. When status quo redistribution is lower
than \( t_e \) (e.g., \( t_{q1} \)), R prefers the status quo to dissolution and it will not initiative a proposal.
If the status quo is higher than \( t_e \) (e.g., \( t_{q2} \)), however, a dissolution is expected to benefit the
right and so a right-left coalition government would agree to a policy of \( t_e \), moving the status
quo toward the right’s ideal point without any actual dissolution occurring in equilibrium.
Averaging over all possible electoral outcomes and holding constant the status quo yields
the result stated in Proposition 1. Gridlock can still occur with dissolution power, but it is
less likely compared to the benchmark agenda setter model with a fixed legislative term.\(^{13}\)
This effect is distinct from the confidence vote mechanism emphasized in the literature.

\(^{13}\) As derived in Online Appendix B, policy stability is zero when the status quo is
relatively extreme (\( t_q > t_e \)) regardless of dissolution power. Thus, policy change is often more
likely and never less likely in the game with dissolution power compared to the benchmark.
Level of Redistribution

A second result is that the effect of the dissolution institution relative to the game with fixed terms on the level of redistribution varies with the status quo policy and may do so in a non-monotonic fashion (Proposition 2). While institutional models of veto bargaining have long demonstrated the importance of the status quo for equilibrium policy for a given constitutional structure, this comparative result goes beyond existing theories in several ways and has important implications for empirical research.

**Proposition 2.** The effect of dissolution power on the size of the redistributive budget varies with the status quo and may do so non-monotonically.

We have seen in the discussion above that left chief executives with dissolution power can increase redistribution relative to left executives without dissolution power when the status quo redistribution is relatively low (e.g., $t^1_q$). When the status quo is closer to the ideal point of the left than the expected outcome after an early election (e.g., $t^2_q$), then right chief executives with dissolution power can reduce redistribution relative to their colleagues without dissolution power. Thus, whether dissolution power benefits those for or against redistribution depends on the status quo policy. Moreover, Figure 2 illustrates that the direction of the institutional effect can change again when the status quo is higher than preferred even by left politicians. Suppose the electoral outlook of the left party is relatively good because of a high mobilization of left voters. In this case, an early election is expected to lead to limited cutbacks in redistribution toward L’s ideal point. In the game with the fixed term, in contrast, this does not matter and right chief executives will be able to better exploit an extreme status quo position to their advantage.

The importance of the status quo stands in contrast to seminal models of executive-legislative institutions and redistribution. For example, Persson, Roland and Tabellini (2000) show formally that variation in the confidence relationship between proposers and veto play-
Figure 2: Institutional difference in redistributive income tax rates ($t$) in equilibrium between the model where the chief executive has dissolution power and the benchmark model without dissolution power varying by the status quo policy ($t_q$) and the mobilizational strength of the left ($g_P$). The parameter values for this figure are as follows: $y_p = 1$, $y_r = 3.5$, $\delta = 0.65$, $N = 10$, $\gamma_p = 2$ (low left mobilization), $\gamma_p = 1.5$ (high left mobilization).
ers between parliamentary and presidential forms of government causes higher government taxes and spending on broad public goods (also see Persson, Roland and Tabellini 1997; Persson and Tabellini 2000). They assume that the default policy that is implemented if there is no agreement entails no government spending other than some rents for politicians.\footnote{Some models of the confidence vote procedure deliberately abstract from different status quo allocations (Diermeier and Feddersen, 1998).} Consistent with this argument, most cross-national empirical studies following the landmark study of Persson and Tabellini (2003) try to estimate the average effect of executive-legislative institutions on fiscal policy. However, the model shows that this can lead to a misleading causal interpretation of the empirical findings. For instance, democracies where chief executive have dissolution power may have been faster initially in expanding redistribution. Though this need not be a constant redistributive effect, as they should also be more likely to reform existing welfare states.

**Agenda Power**

Another insight is that while dissolution power often confers a significant agenda advantage to chief executives that want to change the status quo, there are situations when dissolution power actually weakens their agenda power (Proposition 3).

**Proposition 3.** *Introducing dissolution power decreases the proposal advantage of the chief executive if status quo redistribution is very high and increases it otherwise.*

To see this, return to Figure 1 and consider the case where status quo redistribution is considerably higher than that preferred by the left party and their constituents ($t_q^3$). This is a case where the status quo is extreme relative to both parties. In the benchmark game without dissolution power, the predicted policy follows the classical agenda setter framework developed by Romer and Rosenthal (1978) and subsequently applied to executive-legislative
bargaining in parliamentary and presidential settings (e.g., Cox and McCubbins, 2005; Tsebelis, 2002). It predicts that the agenda setter can exploit the extreme status quo to her advantage. A left-chief executive in coalition with R will thus be able to implement her ideal policy \((t = t_L)\), and a right-chief executive in coalition with L will be able to dramatically change policy and implement \(t = 2t_L - t_q^3\) close to her ideal point \((t_R)\). In this situation, the agenda advantage is smaller with dissolution power. The left chief executive prefers an early election to maintaining the status quo because \(t_q^3 > 2t_L - t_e\). Knowing this, a right veto player is only willing to accept proposals with tax rates of \(t_e\) or less. The left chief executive cannot credibly commit to refrain from calling an early election if a veto occurs. As a result, she will propose \(b = t_e\) and R accepts. This makes L worse off compared to the outcome without dissolution power. In spatial terms, the policy loss for the chief executive caused by dissolution power is \(-t_L + t_e\). The argument for the right chief executive is similar. In short, placing the discretion over dissolution in the hands of the chief executive reduces the ability of chief executives to change policy toward their preferred policy if the status quo is extreme but improves her proposal advantage if the status quo lies in gridlock interval or only moderately above L’s ideal point. Thus, more discretion is not always better for the chief executive. This insight also differs from models of the confidence vote building on Diermeier and Feddersen (1998) that predict a uniform proposal advantage.

For empirical research, Proposition 3 implies that scholars interesting in the link between chief executives’ power an policy cannot assume that dissolution power always increases executives’ ability to get what they want. This matters because existing additive indices of executives’ power, such as the widely used and extended measures of Shugart and Carey (1992), implicitly assume this.
Some Evidence

In this section, I confront one of the novel observable implications of the theoretical model with non-experimental data. Proposition 1 states that policy stability should be lower in democracies where the chief executive has discretion over dissolution compared to where they do not have this discretion. To test this claim, I gathered the required data on policy stability and dissolution power for 23 developed democracies over the period between 1975 and 2005.\footnote{The countries included are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United States, and the United Kingdom.}

Research Design and Data

To measure policy stability, I draw on annual measures of the level of regulation in six economic sectors compiled by the research department of the International Monetary Fund (IMF) and calculate the average policy volatility in a given sector and country over the period of observation. The original IMF measures cover economic policy concerning financial sectors (domestic financial market, external capital account) and sectors of the real economy (product markets, agriculture, trade protection, and current account restrictions). Major political conflicts over redistribution between winners and losers of regulation, deregulation and re-regulation were waged in these areas over the last decades, and so they provide a suitable source of data.\footnote{For an excellent analysis of redistributive conflict about trade and product market policy, see for instance McGillivray (2004).} For each of these six sectors, Giuliano, Mishra and Spilimberto (2013) have calculated normalized regulation scores varying between zero and one, where...
one means a higher degree of deregulation. Based on these scores, my measure of policy variability in a given country \((c)\) and sector \((s)\) is the standard variation of the level of regulation, denoted by \(\text{Variability}_{c,s}\).\(^{17}\)

The theoretical model implies that volatility should be higher under dissolution power while controlling for initial policy, partisan alternation of the chief executive, and veto players. Thus, the basic empirical specification is as follows:

\[
\text{Volatility}_{c,s} = \alpha \text{Initial regulation}_{c,s} + \beta \text{Alternation}_c + \gamma \text{Dissolution power}_c + \delta \text{Veto players}_c + \phi \mathbf{X}_{c,s} + \epsilon_{c,s}
\]

(2)

where \(\mathbf{X}_{c,s}\) is a set of additional control variables described below and the main parameter of interest to be estimated is the effect of Dissolution power, \(\gamma\). The cross-sectional design reflects both the focus on average policy variability and the scarcity of institutional reforms. Dissolution power is a dummy variable that is one if the chief executive has the discretion to dissolve parliament and call a new election and zero otherwise. High-quality institutional data on dissolution power is only available for a limited set of democracies. I mostly draw on the comparative survey in Strøm and Swindle (2002).\(^{18}\) In all countries in the data set except Switzerland and the US, which do not allow for a dissolution, the chief executive is the prime minister responsible to the legislature. If prime ministers in a country can unilaterally call a new election or their dissolution decision merely requires the consent of a non-partisan head of state, such as a largely ceremonial monarch, governor general or president, they are

\(^{17}\) The initial data set is described in detail by Ostry, Prati and Spilimbergo (2009). See Giuliano, Mishra and Spilimbergo (2013) for a discussion of the normalization and a panel analysis of reforms based on country-sector-year observations.

\(^{18}\) Countries not covered by Strøm and Swindle (2002) are coded following Schleiter and Morgan-Jones (2009).
considered to have dissolution power consistent with the theoretical argument. Otherwise, even if some other procedure for a dissolution exists, the chief executive’s dissolution power is zero. There is no over-time variation in executives’ dissolution power over this period.\textsuperscript{19}

*Initial regulation* is the level of regulation, where the given coding was reverted so that higher values indicators more state regulation of economic activity. As markets, international organizations, and economic doctrine have put pressure on governments to deregulate markets, higher initial levels of regulation can be expected to be associated with more subsequent reforms (Giuliano, Mishra and Spilimbergo, 2013). *Alternation* measures partisan turnover in control of the chief executive. In line with a large literature, the model captures the belief that change in government partisanship is a proximate determinant of policy change. Following Alt and Dreyer Lassen (2006, 1409), partisan alternation is calculated as “1 minus a Herfindahl ‘political concentration index’”, where I take the required data on the partisan orientation of the chief executive from Beck et al. (2001).\textsuperscript{20} In the model, the partisan control of government is driven by the distribution of preferences in the population as well as turnout. In the real world, there may be many other reasons why it varies over time, and the alternation variable is a proxy for whatever determines political competition in a country. *Veto players* is a proxy for the potential for policy change based on the number of institutional and partisan veto players. It is measured using the widely-used index of political constraints index complied by Henisz (2002). Based on a simple spatial politics of

\textsuperscript{19} The chief executive has discretion over dissolution in the following countries: Australia, Britain, Canada, Denmark, New Zealand, Spain. Note that the recent introduction of so-called fixed-term legislation in Britain and Canada occurred after the period of study. Moreover, they do not rule out early elections after gridlock.

\textsuperscript{20} Formally, Alternation is calculated as $1 - \sum k_i^2$, where $k_i$ is the fraction of years during which the chief executive belonged to party $i \in \{\text{left, center, right, other}\}$. 

21
veto bargaining, the index varies between zero and one, where the latter indicates minimal space for policy change. In Online Appendix C, I show that using the alternative checks-and-balances measure developed by Keefer and Stasavage (2003) and the measures concerning the number and ideological range of veto players developed by Tsebelis (2002), which are only available for a subset of the data, does not change the finding on dissolution power.

Other controls

To show that the results hold independent of other conjectures outside the model, I also include additional political and economic variables. As discussed before, a theoretically well-founded strand in the literature on executive-legislative institutions argues that constitutions that make the survival of the chief executive dependent on the confidence of the legislature through a confidence procedure lead to different political and economic outcomes compared to those constitutions that separate the survival of the executive and the legislature. Theoretical models predict that the confidence procedure leads to higher voting cohesion (Diermeier and Feddersen, 1998), higher government spending (Persson, Roland and Tabellini, 2000), and higher success rates for the chief executive (Diermeier and Vlaicu, 2011), and empirical studies have found some support for these claims. It is worth reiterating that the underlying theoretical mechanism emphasized in the theories is not based on dissolution power. What matters in these models is that in parliamentary democracies a defeat of the government leads to its downfall and the formation of a new government from the legislature rather than a new election. They also make no explicit prediction about policy stability. In contrast, my model emphasizes differences in dissolution power that also exist among parliamentary democracies and how they are linked to policy stability. In the theoretical part, we have seen that the confidence vote does not necessarily lead to more policy change, and Tsebelis (2002) argues that veto players are more important for policy stability than the form of government per se. It nonetheless seems prudent to control for whether a country has a presidential or a
parliamentary form of government as there is a long tradition in the literature arguing that it matters for reforms (Cox and McCubbins, 2001; Linz, 1994). In line with theories of the confidence procedure, Cheibub, Gandhi and Vreeland (2010) have coded Presidential systems as democracies where the chief executive is not accountable to the legislature, otherwise the system is parliamentary, either pure or mixed. According to this minimal definition, in the data only the US and Switzerland are coded as presidential. Switzerland is a rare case of a collegial executive that is elected by the legislature but cannot be removed by it. As will become apparent below, the findings are robust to excluding these two countries and only focusing on variation in dissolution power among parliamentary democracies. Mixed is an indicator for systems where the chief executive co-exists with a directly elected president that has limited legislative powers. It was also taken from Cheibub, Gandhi and Vreeland (2010). Investiture requirement captures whether the inauguration of the government requires winning a majority in parliament (Bergman et al., 2003). Some studies have found that it is associated with cabinet stability (Warwick, 1994).

I also control for the proportion of years during which there was a Single-party majority government, based on Beck et al. (2001). This complements the veto player measure, as various studies have linked the type of government to economic reforms such as changes in government debt, though the findings are mixed (Eslava, 2011). To capture possible electoral incentives for economic reform that go beyond the number of veto players and partisan alternation in government, such as in the models of Persson and Tabellini (2000), I also include a variable for Electoral rules from Beck et al. (2001). It measures the proportion of years during which the lower house was elected under winner-take-all (first past the post) electoral rules. By the same logic, I also control for the Federalism variable from Persson and Tabellini (2003).

In the literature on redistribution, turnout has been linked to policy outcomes, especially more redistribution (e.g., Mahler, 2010), and for this reason variability in turnout may shape
variability in policies. While I already control for Alternation, this need not capture potential direct electoral effects of turnout (e.g., on the median voter) and turnout-based uncertainty that may co-vary with the distribution of dissolution power. Using data from International IDEA (2012), I thus also control for Turnout level, the average level of turnout in legislative elections (for the lower house), and Turnout variability, the standard deviation of turnout. Finally, average GDP per capita enters as a control in all specifications.

**Endogeneity and Estimation**

While the analysis controls for possible confounders, especially other institutional variables that have been linked to policy stability in previous research, an important concern with this cross-sectional design is that it cannot rely on within-country variation in dissolution power to control for unobserved country heterogeneity that may generate a spurious association between dissolution power and the stability of economic policy. To further address this endogeneity or selection on unobservables problem, I exploit exogenous variation in the design of political institutions based on the age of the constitution. Concretely, I use the fact that granting chief executives the unilateral right to dissolve the legislature, which dates back to the right of monarchs to do the same (Beyme, 2000, 7), has become less fashionable over time. The broader idea to use the age of the constitution as an instrument of certain political institutions has been originally proposed by Persson and Tabellini (2003). Given the chosen institutions, the age of the constitution is plausibly exogenous to and has no direct impact on political competition over policy the last quarter of the twentieth century. In his critical review of Persson and Tabellini’s landmark study, Acemoglu (2005) agrees that it is a plausible instrumental variable strategy a priori but points out that the constitution’s age turns out to be only weakly related to the form of government and electoral institutions in the large cross-section of approximately 80 countries studied by Persson and Tabellini (2003). In contrast, an indicator for the age of the constitution taken from Persson and Tabellini (2003)
– whether it was adopted before 1920 – is a statistically significant and robust predictor of executive dissolution power in the smaller set of countries examined here, controlling for a large set of potential confounders including broader constitutional features such as electoral rules and the form of government.

Therefore, equation 2 is estimated using two different regression approaches. The first approach is weighted least squares (WLS), where weights are based on the number of annual observation used to calculate the dependent variable, $Variability_{c,s}$, in a given country and sector.\(^{21}\) This approach relies on the set of control variables to rule out alternative explanations. The second approach is (weighted) two-stage least squares (2SLS), where the instrument for dissolution power is the indicator for the age of the constitution discussed above and the weights are as before. In the first stage, this instrument is included along with all the other control variables from the second stage. In the specifications shown below, there is a strong positive and statistically significant effect of the age of the constitution on the existence of dissolution power: the F-statistic on the omitted instrument is comfortably above 10 in the full data set and when the two presidential countries are excluded.\(^{22}\) This approach allows for a stronger causal interpretation of the results. As dissolution power does not vary across policy sectors in a country, standard errors are clustered by country to allow for a correlation of errors within countries.

\(^{21}\) The average number of years used to calculate the dependent variable is 29 and the maximum is 31. 90 percent of all cases use at least 29 years, though some cases use less (the minimum is 6).

\(^{22}\) Holding everything else constant, constitutions adopted before 1920 have an approximately 50 percent higher chance of granting dissolution power to the chief executive compared to those constitutions adopted from 1920 onwards.
### Table 1: Regression estimates of the effect of dissolution power on economic policy change

<table>
<thead>
<tr>
<th></th>
<th>All 23 countries</th>
<th>Excluding US &amp; Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1) WLS</td>
<td>(2) 2SLS</td>
</tr>
<tr>
<td>Initial regulation level</td>
<td>30.82**</td>
<td>30.71**</td>
</tr>
<tr>
<td></td>
<td>(2.96)</td>
<td>(2.72)</td>
</tr>
<tr>
<td>Political competition</td>
<td>12.38**</td>
<td>10.85**</td>
</tr>
<tr>
<td></td>
<td>(2.51)</td>
<td>(1.75)</td>
</tr>
<tr>
<td>Dissolution power</td>
<td>3.74**</td>
<td>6.96**</td>
</tr>
<tr>
<td></td>
<td>(1.35)</td>
<td>(2.86)</td>
</tr>
<tr>
<td>Veto player index</td>
<td>-10.46**</td>
<td>-6.40</td>
</tr>
<tr>
<td></td>
<td>(4.95)</td>
<td>(5.97)</td>
</tr>
<tr>
<td>Presidential system</td>
<td>6.34*</td>
<td>8.44**</td>
</tr>
<tr>
<td></td>
<td>(3.09)</td>
<td>(1.97)</td>
</tr>
<tr>
<td>Mixed system</td>
<td>-4.59</td>
<td>-3.41</td>
</tr>
<tr>
<td></td>
<td>(2.71)</td>
<td>(2.08)</td>
</tr>
<tr>
<td>Investiture requirement</td>
<td>0.78</td>
<td>1.43</td>
</tr>
<tr>
<td></td>
<td>(0.88)</td>
<td>(1.06)</td>
</tr>
<tr>
<td>Majority</td>
<td>17.29**</td>
<td>14.83**</td>
</tr>
<tr>
<td></td>
<td>(7.02)</td>
<td>(7.54)</td>
</tr>
<tr>
<td></td>
<td>(2.12)</td>
<td>(3.15)</td>
</tr>
<tr>
<td>Federalism</td>
<td>-1.17</td>
<td>-1.33</td>
</tr>
<tr>
<td></td>
<td>(1.70)</td>
<td>(1.62)</td>
</tr>
<tr>
<td>Electoral system</td>
<td>-0.64</td>
<td>-0.61</td>
</tr>
<tr>
<td></td>
<td>(1.63)</td>
<td>(1.58)</td>
</tr>
<tr>
<td>Turnout variability</td>
<td>1.81**</td>
<td>1.97**</td>
</tr>
<tr>
<td></td>
<td>(0.39)</td>
<td>(0.49)</td>
</tr>
<tr>
<td>Turnout level</td>
<td>0.34**</td>
<td>0.36**</td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.08)</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>-0.04</td>
<td>-0.06</td>
</tr>
<tr>
<td></td>
<td>(0.21)</td>
<td>(0.23)</td>
</tr>
<tr>
<td>Observations</td>
<td>130</td>
<td>130</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.687</td>
<td>0.683</td>
</tr>
</tbody>
</table>

The dependent variable is the standard deviation of the IMF policy index 1975-2005 by economic sector. Standard errors in parentheses are clustered by country. Models 1 and 3 are estimated by weighted least squares (WLS), models 2 and 4 by (weighted) two-stage least squares (2SLS), where the omitted instrument for dissolution power is an indicator for old constitutions (before 1920). The F-statistic on the instrument in first stage is 16.9 ($p < 0.001$) in model 2 and 16.5 ($p < 0.001$) in model 4. The intercept is not shown. * $p < 0.1$, ** $p < 0.05$ (two-tailed tests)
Results

As displayed in Table 1, the estimation results show that policy variability is consistently higher where chief executive have dissolution power compared to where they lack this prerogative. This finding supports Proposition 1. Models 1 and 2 include all 23 countries and models 3 and 4 exclude the two countries where the chief executive is not accountable to the legislature, in order to fully block the confidence vote mechanism as an alternative explanation. The estimated coefficient on dissolution power is positive and statistically significant at the 5 percent level in all four specifications. The coefficients are nearly twice as large in the models estimated by 2SLS than by ordinary WLS. In substantive terms, the instrumental-variable estimate in model 2 implies that placing dissolution power in the hands of the head of government increases policy variability by approximately one-half of a standard deviation. For instance, this roughly corresponds to the difference in policy variability in capital account regulation between Denmark and Italy.

In line with a large literature on partisan effects on policy and also consistent with the theoretical model proposed here, more alternation in the chief executive is linked to more policy variability. Also note that the negative impact of the veto player variable, significant at the 10 percent level or higher in two out of four specifications, is consistent with what is perhaps the dominant view in the literature on veto points and policymaking (e.g., Tsebelis 1999, 2002; Keefer and Stasavage 2003; Henisz 2002; see Gehlbach and Malesky 2010 for a different argument and finding in former communist countries). Also broadly in line with this perspective, larger average majorities in the lower house are associated with more policy change, though this seems to be in part driven by the case of the United States with its candidate-centered political competition where legislative voting cohesion among parties is comparatively lower, despite increasing polarization. Somewhat surprisingly, the fraction of

\(^{23}\) For ease of interpretation, the dependent variable has been multiplied by 100.
single-party majority governments exhibits a negative and fairly precisely estimated coefficient. Electoral rules and federalism, which indirectly influence policy variability through the number of partisan veto players and government partisanship, exhibit little direct influence on policy change. The level and variability of turnout, on the other hand, are significant predictors of policy change.

Online Appendix C demonstrates that the central finding on dissolution power is robust to using alternative measures of veto power proposed in the large literature on veto players and reforms, as well as to controlling for additional measures of economic conditions (such as banking crises, debt crises, IMF programs and membership in the EU) that may be partly a function of political institutions or policies and are thus not included in the baseline specification. Moreover, the appendix shows that the results become stronger if countries with a large share of single-party majority governments (above 90%), where dissolution power can be argued to be less relevant for inter-party conflict, are excluded.

Conclusion

In this paper, I have argued that whether constitutions grant chief executives discretion over parliamentary dissolution has important consequences for the stability and level of redistributive policy. I show formally that the probability of policy change is higher where chief executives have dissolution power, and that the redistributive effect of dissolution power depends on the status quo. Dissolution power is not generally an instrument that favors the left or the right. It favors political parties that want to change the status quo. Counter-intuitively, having more discretion does not always make the chief executive better off. If the status quo is relatively extreme, it actually reduces chief executives’ proposal advantage.

Testing one implication of the theory, the empirical analysis finds that taking into account the constitutional distribution of dissolution power helps us to explain policy stability
in developed democracies. Crucially, the effect of dissolution power holds while controlling for other important aspects of the constitutional environment, including the number of veto players, the form of government, investiture requirements, or electoral rules. Using plausibly exogenous variation in the existence of dissolution institutions strengthens the causal interpretation of the results. This finding provides a new perspective to explanations of policy stability. While the voluminous literature on institutions, gridlock and reforms has made a lot of progress in identifying institutional determinants of policy stability, to the best of my knowledge it has paid little attention to dissolution power.

The theoretical analysis has further implications for empirical research on the link between executive-legislative institutions and policy. First, it highlights that institutional effects on policy levels or the magnitude of policy change can be contingent on the status quo. Theoretically, the direction of the effect of dissolution power on the level of redistribution is indeterminate. This insight mirrors arguments and findings about the role of veto players that lock-in the status quo. However, it holds for a given constellation of veto players. So far, most empirical studies in the literature focus on average effects of political institutions on policy, neglecting this possibility. Second, the theory also suggests that the assumption underlying additive indices of executives’ powers that dissolution power always increases the ability of chief executives to get the legislation they want can be problematic. This provides an agenda for further empirical research on this topic.

24 There are important exceptions. For example, see Franzese (2002).
References


**URL:** [http://www.idea.int/uid/](http://www.idea.int/uid/)


A Modeling political uncertainty

To capture that electoral outcomes are uncertain and can lead to different partisan constellations in the legislature, I assume that there is probabilistic turnout among the poor. In large elections, voting is typically a low-cost, low-benefit action and relatively small changes in the cost of voting may affect turnout (Aldrich, 1993). In this context, the turnout decision is not considered a strategic choice. Citizens turn out to vote if the individual cost of voting is (weakly) negative. In particular, suppose that the idiosyncratic cost of voting, \( c_{ij} \), for an individual member of group \( j \) is uniformly distributed on the interval \([-1, \phi_j]\), where \( \phi_j \) itself is a random variable uniformly distributed on \([0, \gamma_j]\). To capture a socio-economic turnout differential, assume that there is full turnout among rich voters and incomplete turnout among poor voters. This requires \( \gamma_r = 0 \) and \( \gamma_p > \left( \frac{(2\delta-1)N+1}{(N-1)(1-\delta)} \right) \) to ensure \( p_{RR} > 0 \).

The turnout differential between rich and poor and consequently, for given group sizes, the relative strength of income groups in the electorate depends on two factors. First, \( \phi_p \) is an election-wide mobilization shock affecting all low-income citizens. In substantive terms, it can be thought to represent the relative strength of left-party organization and valence that shape the mobilization of low-income voters. Second, \( c_{ij} \) is an idiosyncratic shock at the individual level. For a given \( \phi_p \), it captures individual variation in the propensity to vote due to, for example, normative concerns (civic duty) and the cost of voting (e.g., information, foregone leisure or work). The distribution of the individual-level shocks depends on the election-wide shock. Hence, a large \( \phi_p \) means that the average voting cost for the poor are large (e.g., because of low left-party organizational capacity or low valence of left party candidates) and thus the turnout differential between rich and poor will be large.
B Proof of Results

The following Lemmas are useful for establishing the propositions stated in the paper. The proof proceeds by backward induction. Denote the partisan type of government that emerges from the election as $G = \{LL, LR, RL, RR\}$, where $G = LL$ is a single-party majority L-government, $G = LR$ is a coalition government with a L chief executive and R veto player, $G = RL$ is a coalition government with a R chief executive and L veto player and $G = RR$ is a single-party majority R-government.

The benchmark model without dissolution power

First, consider the stage of post-electoral bargaining over redistribution in the legislature without dissolution power. For a given type of government, this is a standard model of veto bargaining or pivotal politics. Veto players accept any proposed income tax rate $b \in [0, 1]$ that makes them at least weakly better off than the status quo $t_q$, and the chief executive as the proposer chooses a proposal that maximizes her utility subject to the veto players’ acceptance constraints. Denote the set of feasible proposals that a veto player of partisan type $P$ accepts because they are preferred to the status quo by $A^P_V$. Given parties’ linear spatial utility function, $A^L_V = [t_q, 2t_L - t_q]$ if $t_q \in [0, t_L]$, $A^L_V = [2t_L - t_q, t_q]$ if $t_q \in [t_L, 2t_L]$ and $A^L_V = [0, t_q]$ if $t_q \in [2t_L, 1]$. The acceptance set of party R simplifies to $A^R_V = [0, t_q]$ because tax rates must be non-negative. Under single-party majority government, the chief executive can always implement her most-preferred policy. Otherwise she chooses the closest policy from the acceptance set of the veto player with divergent policy preferences, including the status quo. The resulting policy is summarized by Lemma 1. It restates a well-known result in the context of the benchmark model. This is for convenience and the purpose of comparing it with policymaking in the model where the chief executive has dissolution power.
Lemma 1. Suppose there is no dissolution power. For a given partisan control of government the final redistributive policy is

\[ t = \begin{cases} 
  t_L & \text{if } G = LL \\
  t_q & \text{if } G = LR \land t_q \in [0, t_L] \\
  t_L & \text{if } G = LR \land t_q \in [t_L, 1] \\
  t_q & \text{if } G = RL \land t_q \in [0, t_L] \\
  2t_L - t_q & \text{if } G = RL \land t_q \in [t_L, 2t_L] \\
  t_R & \text{if } G = RL \land t_q \in [2t_L, 1] \\
  t_R & \text{if } G = RR 
\end{cases} \]

Second, let us turn to the electoral arena to consider the probability that a particular type of government emerges. This allows us to characterize the expected policy and the probability of a policy change before election outcomes are realized. Note that voters vote for the party that represents their economic interest. Given the two group-set up, it is clearly a best-response for them to do so. They are never better off giving their vote to the party representing the other economic group. As there is a continuum of voters, they may not be strictly worse off doing so. But by elimination of strictly dominated strategies, voting strategies that involve such behavior are ruled out. This means that party vote shares are a function of turnout. The group of voters supporting party L (R) consists of poor (rich) citizens with negative voting cost \( c_{ij} \). For a fixed common shock \( \phi_p \geq 0 \) and given the distribution of \( c_{ij} \), the size of the group of voters supporting L is \( v_L = F_c(c_{ij} \leq 0)\delta = \frac{\delta}{1+\phi_p} \). The size of the group of voters supporting R is \( v_R = 1 - \delta \) because \( \phi_r = 0 \) by assumption. A single-party majority government of a party requires that it wins an absolute majority of seats in the legislature and a situation of coalition government with divided control emerges if no
party wins a majority of seats. Given a legislature with an even number of $N \geq 2$ seats and the proportional (i.e., simple quota) electoral rule, $L$ obtains a majority of legislative seats if $\frac{v_L}{v_L + v_R} > \left(\frac{N+1}{2N}\right)$ and $R$ wins a legislative majority if $\frac{v_R}{v_L + v_R} > \left(\frac{N+1}{2N}\right)$. Otherwise, no party wins a legislative majority coalition government occurs where the chief executive, who has proposal power, is drawn with equal probability from the two coalition partners. Vote shares are a function of $\phi_p$, a continuous random variable. Hence, the probability that $L$ wins a majority of seats is $p_{LL} \equiv Pr\left(v_L > \left(\frac{N+1}{2N}\right)(v_L + v_R)\right) = Pr\left((\frac{N-1}{N+1})(1-\delta) - 1 > \phi_p\right) = F_{\phi_p}\left(\frac{(2\delta-1)N-1}{(N+1)(1-\delta)}\right)$. Given the distributional assumption concerning $\phi_p$, $p_{LL} = \left(\frac{(2\delta-1)N-1}{(N-1)(1-\delta)}\right)$. By the same logic, $p_{RR} \equiv Pr\left(v_R > \left(\frac{N+1}{2N}\right)(v_L + v_R)\right) = 1 - F_{\phi_p}\left(\frac{(2\delta-1)N+1}{(N-1)(1-\delta)}\right) = 1 - \left(\frac{(2\delta-1)N+1}{(N-1)(1-\delta)}\right)$. Note that $p_{LL} > 0$ as $\delta > \left(\frac{N+1}{2N}\right)$ and $p_{RR} > 0$ as $\gamma_p > \left(\frac{(2\delta-1)N+1}{(N-1)(1-\delta)}\right)$. By the random selection of the chief executive under coalition government, the probability that $G = LR$ is equal to the probability of $G = RL$: $p_{LR} = p_{RL} = \frac{1}{2}(1 - p_{LL} - p_{RR})$. Putting the expected electoral outcomes together with the results from the policymaking stage (Lemma 1) directly yields the expected policy and probability of a policy change in equilibrium in the absence of dissolution power (Lemma 2).

**Lemma 2.** Suppose there is no dissolution power. Before the election, the expected tax rate is

\[
E(t) \equiv t_c = \begin{cases} 
    p_{LL}t_L + (p_{LR} + p_{RL})t_q + p_{RR}t_R & \text{if } t_q \in [t_R, t_L] \\
    (p_{LL} + p_{LR})t_L + p_{RL}(2t_L - t_q) + p_{RR}t_R & \text{if } t_q \in [t_L, 2t_L] \\
    (p_{LL} + p_{LR})t_L + (p_{RR} + p_{RL})t_R & \text{if } t_q \in [2t_L, 1]
\end{cases}
\]
and the probability of policy change is

\[ Pr(t \neq t_q) = \begin{cases} 
  p_{RR} & \text{if } t_q = t_L \\
  p_{LL} + p_{RR} & \text{if } t_q \in (t_R, t_L) \\
  p_{LL} & \text{if } t_q = t_R \\
  1 & \text{if } t_q \in (t_L, 1] 
\end{cases} \]

where \( p_{LL} = \left(\frac{(2\delta-1)N-1}{\gamma_P(N+1)(1-\delta)}\right) \), \( p_{RR} = 1 - \left(\frac{(2\delta-1)N+1}{\gamma_P(N-1)(1-\delta)}\right) \), and \( p_{LR} = p_{RL} = \frac{1}{2}(1 - p_{LL} - p_{RR}) \).

**The model with dissolution power**

Now we are ready to solve the game with dissolution power. First, consider the decision of \( CE \) whether or not to dissolve parliament in the case when her initial proposal \( b \) was vetoed. \( CE \) only dissolves if the expected utility of a dissolution exceeds that of maintaining the status quo. Because of the electoral shocks to turnout, the outcome of a new election is uncertain. As the subgame after dissolution resembles that of the benchmark model, the expected utility from dissolution follows from the expected policy summarized in Lemma 2. If \( t_q \in [0, t_L] \), for instance, \( EU_P(\text{dissolution}) = -p_{LL}|t_L - t_P| - (p_{LR} + p_{RL})|t_q - t_P| - p_{RR}|t_P| \).

The utility from no dissolution is simply \( u_P = -|t_q - t_P| \). Denote the set of status quo policies that \( CE \) of partisan type \( P \) prefers to a dissolution by \( N_{CE}^P \). Simple algebra yields

\[ N_{CE}^L = \begin{cases} 
  \left[ \frac{p_{LL}}{p_{LL}+p_{RR}} t_L, \frac{1-p_{LR}+p_{RR}}{1-p_{LL}} t_L \right] & \text{if } t_q \in [0, 2t_L] \\
  \emptyset & \text{if } t_q \in (2t_L, 1] 
\end{cases} \]
and

\[
N_{CE}^R = \begin{cases} 
0, \frac{p_L t_L}{p_{LL} + p_{RR}} t_L & \text{if } t_q \in [0, t_L] \\
\emptyset & \text{if } t_q \in (t_L, 1].
\end{cases}
\]

Second, consider the decision of veto player \(V\) to accept or veto \(CE\)'s initial proposal \(b\) given \(N_{CE}\). As before, \(V\)'s acceptance set is denoted by \(A_{V}^P\). There are two cases. Case 1: \(t_q \in N_{CE}\). A rejection of \(b\) leads to the maintenance of the government and the status quo policy. This is identical to the benchmark model. Case 2: \(t_q \notin N_{CE}\). A rejection of \(b\) leads to a dissolution and the expected post-dissolution policy is the one summarized by Lemma 2. \(V\) accepts \(b\) only if it entails a utility that is weakly higher than the expected utility from dissolution and vetoes otherwise. Therefore,

\[
A_{V}^L = \begin{cases} 
[t_q, 2t_L - t_q] & \text{if } t_q \in N_{CE} \cap [0, t_L] \\
[2t_L - t_q, t_q] & \text{if } t_q \in N_{CE} \cap [t_L, 2t_L] \\
[0, t_q] & \text{if } t_q \in N_{CE} \cap [2t_L, 1] \\
[t_e, 2t_L - t_e] & \text{if } t_q \notin N_{CE}
\end{cases}
\]

and

\[
A_{V}^R = \begin{cases} 
[0, t_q] & \text{if } t_q \in N_{CE} \\
[0, t_e] & \text{if } t_q \notin N_{CE}
\end{cases}
\]

where \(t_e\) is given by Lemma 2.

Next, given \(A_{V}\) and \(N_{CE}\) we can turn to the optimal proposal by \(CE\) and the resulting policy \(t\). Note that if \(t_q \notin N_{CE}\), then \(t_e \in A_{V}\). Given risk-neutral preferences, \(CE\) can always achieve the same utility as achieved in expectation through a dissolution by proposing \(t_e\).
Thus, a dissolution does not occur in equilibrium. The two cases of single-party majority government, $G = LL$ and $G = RR$, are obvious. In each case, $t_p \in A_V$ and CE proposes her ideal point and $t = t_p$. Consider $G = LR$. Suppose $t_q \in [0, t_L] \setminus N_{CE}^L = [0, \frac{p_{LL}}{p_{LL} + p_{RL}} t_L)$. $A_V^R = [0, t_e]$ where $t_e = p_{LL} t_L + (p_{LR} + p_{RL}) t_q$. CE’s optimal proposal is $b^{L^*} = t_e$ and it will be accepted, so $t = t_e$. This makes CE better off than making no proposal or a proposal $b \not\in A_V^R$ that will be rejected an thus maintains the status quo because $t_q < \frac{p_{LL}}{p_{LL} + p_{RL}} t_L$.

Other acceptable proposals $b < t_e$ make CE worse off and $b = t_e$ and it leaves CE indifferent between any $t_q \not\in A_V^R$, which will lead to a new election with expected policy $t_e$. Suppose $t_q \in [0, t_L] \cap N_{CE}^L = [0, \frac{1 - p_{RL} + p_{RR}}{1 - p_{RL}} t_L]$. $A_V^R = [0, t_q]$. Any proposal that maintains the status quo is a best-response: $b^{L^*} \in \emptyset \cup [t_q, 1]$, and $t = t_q$. Any $b < t_q$ would be accepted and thus make CE strictly worse off. Suppose $t_q \in [t_L, 1] \cap N_{CE}^L = [t_L, \frac{1 - p_{RL} + p_{RR}}{1 - p_{RL}} t_L]$. $A_V^R = [0, t_q]$. Given $t_L \in A_V^R$, $b^{L^*} = t_L$ is the unique best proposal and will be accepted $t = t_L$. Suppose $t_q \in [t_L, 1] \setminus N_{CE}^L = (\frac{1 - p_{RL} + p_{RR}}{1 - p_{RL}} t_L, 1]$. $A_V^R = [0, t_e]$. So the optimal proposal is $b^{L^*} = t_e$ and will be accepted, $t = t_e$, where $t_e = (p_{LL} + p_{LR}) t_L + p_{RL}(2t_L - t_q)$ if $t_q < 2t_L$ and $t_e = (p_{LL} + p_{LR}) t_L$ if $t_q \geq 2t_L$. This is strictly better than $b = \emptyset$ as $t_q > \frac{1 - p_{RL} + p_{RR}}{1 - p_{RL}} t_L$ and evidently better than $b < t_e$. Finally, consider $G = RL$. Suppose $t_q \in [0, t_L] \cap N_{CE}^R = [0, \frac{p_{LL}}{p_{LL} + p_{RL}} t_L]$. $A_V^R = [t_q, 2t_L - t_q]$. Any proposal that maintains the status quo is a best-response, $b^{R^*} \in \emptyset \cup [0, t_q] \cup (2t_L - t_q, 1]$, and $t = t_q$. Clearly, any $b > t_q \in A_V^R$ would make CE strictly worse off. Suppose $t_q \in [0, t_L] \setminus N_{CE}^R = (\frac{p_{LL}}{p_{LL} + p_{RL}} t_L, t_L]$. $A_V^R = [t_e, 2t_L - t_e]$. CE’s optimal proposal is $b^{R^*} = t_e$ and it will be accepted, so $t = t_e$. This makes CE better off than making no proposal and thus maintaining the status quo because $t_q > \frac{p_{LL}}{p_{LL} + p_{RL}} t_L$ or than proposing $b > t_e$, and it leaves CE indifferent between any $t_q \not\in A_V^R$, which will lead to a new election with expected policy $t_e$. Suppose $t_q \in (t_L, 1]$. Then $N_{CE}^R = \emptyset$ and $A_V^R = [t_e, 2t_L - t_e]$. As above, CE’s optimal proposal is $b^{R^*} = t_e$ and will be accepted by L, so $t = t_e$. The resulting policy outcome for a given $G$ and $t_q$ is summarized by Lemma 3.

The electoral politics are the same as in the benchmark model (Lemma 2), so given and
Lemma 3 it is straightforward to calculate the expected tax rate and probability of policy change (see Lemma 4).

**Lemma 3.** For a given partisan control of government and assuming the chief executive has dissolution power, a dissolution does not occur and the redistributive policy is

\[
t = \begin{cases} 
  t_L & \text{if } G = LL \\
  t_e & \text{if } G = LR \cap t_q \in \left[0, \frac{p_{LL}}{p_{LL} + p_{RR}} t_L \right) \\
  t_q & \text{if } G = LR \cap t_q \in \left[\frac{p_{LL}}{p_{LL} + p_{RR}} t_L, t_L \right] \\
  t_L & \text{if } G = LR \cap t_q \in \left[t_L, \frac{1 - p_{RL} + p_{RR}}{1 - p_{RL}} t_L \right] \\
  t_e & \text{if } G = LR \cap t_q \in \left(\frac{1 - p_{RL} + p_{RR}}{1 - p_{RL}} t_L, 2t_L \right] \\
  t_e & \text{if } G = LR \cap t_q \in (2t_L, 1] \\
  t_q & \text{if } G = RL \cap t_q \in \left[0, \frac{p_{LL}}{p_{LL} + p_{RR}} t_L \right) \\
  t_e & \text{if } G = RL \cap t_q \in \left(\frac{p_{LL}}{p_{LL} + p_{RR}} t_L, t_L \right] \\
  t_e & \text{if } G = RL \cap t_q \in [t_L, 2t_L] \\
  t_e & \text{if } G = RL \cap t_q \in [2t_L, 1] \\
  t_R & \text{if } G = RR
\end{cases}
\]

where \( t_e \) is given by Lemma 2.

**Lemma 4.** Suppose the chief executive has dissolution power. Before the election, the expected tax rate is

\[
E(t) \equiv t_e^D = \begin{cases} 
  p_{LL} t_L + (p_{LR} + p_{RL})(t_e/2 + t_q/2) + p_{RR} t_R & \text{if } t_q \in [0, t_L] \\
  (p_{LL} + p_{LR}) t_L + p_{RL} t_e + p_{RR} t_R & \text{if } t_q \in (t_L, \frac{1 - p_{RL} + p_{RR}}{1 - p_{RL}} t_L] \\
  p_{LL} t_L + (p_{LR} + p_{RL}) t_e + p_{RR} t_R & \text{if } t_q \in (\frac{1 - p_{RL} + p_{RR}}{1 - p_{RL}} t_L, 1]
\end{cases}
\]
and the probability of policy change is

\[
Pr(t \neq t_q) = \begin{cases} 
  p_{LL} + p_{LR} & \text{if } t_q = t_R \\
  p_{LL} + p_{RR} + \frac{p_{LR} + p_{RL}}{2} & \text{if } t_q \in (t_R, t_L) \\
  p_{RR} + p_{RL} & \text{if } t_q = t_L \\
  1 & \text{if } t_q \in (t_l, 1]
\end{cases}
\]

where \( t_e, p_{LL}, p_{LR}, p_{RL}, p_{RR} \) are given in Lemma 2.

To conclude the proof, note that Proposition 1 directly follows from comparing the probability of policy change between Lemma 2 and Lemma 4. Similarly, Proposition 2 follows from comparing expected tax rates between the Lemmas. Denote the institutional difference by \( \Delta \equiv t_e^D - t_e \). Ignoring knife-edged cases there expected policy is identical, the comparison yields

\[
\Delta = \begin{cases} 
  > 0 & \text{if } t_q \in \left[0, \frac{p_{LL}}{p_{LL} + p_{RR}} t_L\right) \\
  < 0 & \text{if } t_q \in \left(\frac{p_{LL}}{p_{LL} + p_{RR}} t_L, \frac{1 - p_{RL} + p_{RR}}{1 - p_{RL}} t_L\right) \\
  < 0 & \text{if } t_q \in \left(\frac{1 - p_{RL} + p_{RR}}{1 - p_{RL}} t_L, 1\right) \& p_{LL} < p_{RR} \\
  < 0 & \text{if } t_q \in \left(\frac{1 - p_{RL} + p_{RR}}{1 - p_{RL}} t_L, 1 + \frac{2 p_{RR}}{p_{LL} + p_{RR}} t_L\right) \& p_{LL} > p_{RR} \\
  > 0 & \text{if } t_q \in (1 + \frac{2 p_{RR}}{p_{LL} + p_{RR}} t_L, 1) \& p_{LL} > p_{RR}
\end{cases}
\]

Note that the sign of \( \Delta \) changes with \( t_q \) in a non-monotonic fashion if \( p_{LL} > p_{RR} \). For Proposition 3, define the ex-ante proposal advantage of CE as the expected utility difference for the CE between the game with dissolution power (D) and the benchmark game without dissolution power (S). Formally, \( \xi \equiv E(u_{CE}^D - u_{CE}^S) \). The result stated in Proposition 3 also
follows from Lemma 2 and 4. After substitution and rearranging,

\[ \xi = \begin{cases} 
  \left( \frac{p_{LR} + p_{RL}}{2} \right) |p_{LL} t_L - (p_{LL} + p_{RR}) t_q| \geq 0 & \text{if } t_q \in [0, t_L] \\
  p_{RL} ((1 - p_{RL} + p_{RR}) t_L - (1 - p_{RL}) t_q) \geq 0 & \text{if } t_q \in (t_L, \frac{1 - p_{LR} + p_{RR}}{1 - p_{RL}} t_L] \\
  \left( \frac{p_{LR} + p_{RL}}{2} \right) (t_L - t_q) < 0 & \text{if } t_q = (\frac{1 - p_{LR} + p_{RR}}{1 - p_{RL}}, 2t_L] \\
  - \left( \frac{p_{LR} + p_{RL}}{2} \right) t_L < 0 & \text{if } t_q \in (2t_L, 1] 
\end{cases} \]

Note that if if \( t_q \in [0, t_L] \) the inequality holds strictly unless \( p_{LL} t_L = (p_{LL} + p_{RR}) t_q \) and similar for \( t_q \in (t_L, \frac{1 - p_{LR} + p_{RR}}{1 - p_{RL}} t_L] \). This completes the proof. \( \square \)
C Additional empirical results

This appendix contains the robustness checks for the empirical analysis of dissolution power and policy volatility conducted in the paper. One possible concern is that the veto player measure used in the analysis, the index on political constraints developed by Henisz (2002), is not sufficient to rule out that the finding on dissolution power is driven by the constitutional or partisan configuration of veto players. To address this concern, I employ three alternative measures based on different sources and methodologies than that of Henisz (2002). The first alternative is the checks-and-balances measure compiled by Keefer and Stasavage (2003) and available from the 2012 version of the Database of Political Institutions (Beck et al., 2001), where the variable is labelled CHECKS. It is available for the same set of countries and years and focuses on counting the number of veto players, also trying to account for programmatic congruence among parties, rather than trying to provide a theoretically-derived approximation of the gridlock interval. Two other measures are drawn from work of Tsebelis (2002). Based on his theoretical work, he has identified the number of veto players as well as the ideological range of veto players in parliamentary democracies in the OECD, where each party’s ideology is based on expert surveys. The data are available from his website, http://sitemaker.umich.edu/tsebelis/veto_players_data. One drawback is that they are only available for a subset of the countries under study and only up to 1995 or 2000, depending on the country.

The regression estimated displayed in Table A1 and Table A2 show that the finding on the positive effect of the chief executive’s dissolution power on policy variability is robust to employing these alternative measures. If anything, the estimated coefficients are somewhat larger. The analysis based on Tsebelis’ variables by default excludes the two presidential countries, Switzerland and the US, as they are not covered by his data base.
Additional economic control variables

Another potential concern is that economic conditions other than GDP per capita are driving the observed effect of dissolution power on policy variability. The basic specification deliberately excludes economic factors that appear more likely to be a consequence of the initial set of political institutions and policy volatility than the other way round. Recall that dissolution power does not vary over time and initial constitutions were chosen decades before the period of analysis, with the exception of Greece, Portugal and Spain. This mitigates against the concern that the distribution of economic conditions over the period of study drives both dissolution power and policy volatility. However, the basic specification reflects a judgement call. Its importance can be further investigated by adding potential “post-treatment” variables as controls. A common argument in the literature on reforms is that economic crises provide a window of opportunity for reform. To account for crises, I control for the incidence of debt crises and banking crises in each country over the period of observation. The data are from the seminal historical study of Reinhart and Rogoff (2009) and were retrieved from Giuliano, Mishra and Spilimbergo (2013). Assistance programs of the IMF often come attached with conditions that require structural reforms, so I also control for the proportion of years during which a country took part in a IMF program, using the variable \text{IMF\_program} from Giuliano, Mishra and Spilimbergo (2013). Similarly, becoming a member of the EU requires adopting the large body of existing laws and current members are required to implement new EU-wide legislation. Thus I also add EU membership as a control. As Table A3 shows, adding all of these variables does not alter the finding on dissolution power.
**Excluding single-party majority governments**

The effect of dissolution power on policy volatility is not driven by countries with a large share of single-party majority governments, where dissolution can be argued to be less relevant for partisan conflict. The analysis reported in Table A4 excludes countries where the share of single-party majority governments was larger than 90% (Britain, Canada, and Greece). The impact of dissolution in the smaller set of countries is actually larger than in the full data set.
Table A1: Regression estimates of the effect of dissolution power on economic policy change: using the checks-and-balances measure of veto players from Keefer and Stasavage (2003)

<table>
<thead>
<tr>
<th></th>
<th>All 23 countries</th>
<th>Excluding US &amp; Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WLS (1)</td>
<td>2SLS (2)</td>
</tr>
<tr>
<td></td>
<td>WLS (3)</td>
<td>2SLS (4)</td>
</tr>
<tr>
<td>Initial regulation level</td>
<td>30.68** (2.93)</td>
<td>30.46** (2.70)</td>
</tr>
<tr>
<td></td>
<td>31.85** (2.98)</td>
<td>31.61** (2.75)</td>
</tr>
<tr>
<td>Political competition</td>
<td>13.29** (3.03)</td>
<td>8.22** (2.80)</td>
</tr>
<tr>
<td></td>
<td>12.43** (3.16)</td>
<td>8.07** (2.84)</td>
</tr>
<tr>
<td>Dissolution power</td>
<td>4.85** (1.87)</td>
<td>10.74** (4.89)</td>
</tr>
<tr>
<td></td>
<td>4.16** (1.85)</td>
<td>10.67** (4.58)</td>
</tr>
<tr>
<td>Checks &amp; balances</td>
<td>-0.37 (0.68)</td>
<td>-1.52 (1.05)</td>
</tr>
<tr>
<td></td>
<td>-0.02 (0.68)</td>
<td>-1.46 (1.03)</td>
</tr>
<tr>
<td>Observations</td>
<td>130</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td>119</td>
<td>119</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.685</td>
<td>0.672</td>
</tr>
<tr>
<td></td>
<td>0.682</td>
<td>0.667</td>
</tr>
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</table>

The dependent variable is the standard deviation of the IMF policy index 1975-2005 by economic sector. Standard errors in parentheses are clustered by country. The specification is the same as in Table 1 but uses the measure of veto players “CHECKS” from Keefer and Stasavage (2003).

* $p < 0.1$, ** $p < 0.05$ (two-tailed tests)
Table A2: Regression estimates of the effect of dissolution power on economic policy change: controlling for the number and ideological distance of veto players from Tsebelis (2002)

<table>
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<th>WLS (1)</th>
<th>2SLS (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial regulation level</td>
<td>21.95**</td>
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<tr>
<td></td>
<td>(3.12)</td>
<td>(2.82)</td>
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<td>Political competition</td>
<td>7.25**</td>
<td>2.82</td>
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<tr>
<td></td>
<td>(2.97)</td>
<td>(3.42)</td>
</tr>
<tr>
<td>Dissolution power</td>
<td>6.67**</td>
<td>11.69**</td>
</tr>
<tr>
<td></td>
<td>(1.94)</td>
<td>(2.56)</td>
</tr>
<tr>
<td>Ideological range of veto players</td>
<td>-2.07**</td>
<td>-2.20**</td>
</tr>
<tr>
<td></td>
<td>(0.55)</td>
<td>(0.56)</td>
</tr>
<tr>
<td>Number of veto players</td>
<td>2.46*</td>
<td>1.86*</td>
</tr>
<tr>
<td></td>
<td>(1.18)</td>
<td>(1.06)</td>
</tr>
<tr>
<td>Observations</td>
<td>107</td>
<td>107</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.523</td>
<td>0.517</td>
</tr>
</tbody>
</table>

The dependent variable is the standard deviation of the IMF policy index 1975-2000 by economic sector. Standard errors in parentheses are clustered by country.

The specification is the same as in Table 1 but includes as controls the number and ideological range of veto players from Tsebelis (2002).

Data are missing for Greece, Britain, Switzerland and the United States.

* $p < 0.1$, ** $p < 0.05$ (two-tailed tests)
Table A3: Controlling for additional economic variables

<table>
<thead>
<tr>
<th></th>
<th>All 23 countries</th>
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<th>Excluding US &amp; Switzerland</th>
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<tr>
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<td>WLS (1)</td>
<td>2SLS (2)</td>
<td>WLS (3)</td>
<td>2SLS (4)</td>
</tr>
<tr>
<td>Initial regulation</td>
<td>30.63**</td>
<td>30.56**</td>
<td>31.77**</td>
<td>31.61**</td>
</tr>
<tr>
<td>level</td>
<td>(2.93)</td>
<td>(2.66)</td>
<td>(2.92)</td>
<td>(2.61)</td>
</tr>
<tr>
<td>Political competition</td>
<td>12.32**</td>
<td>11.56**</td>
<td>9.98**</td>
<td>8.25**</td>
</tr>
<tr>
<td></td>
<td>(2.95)</td>
<td>(2.35)</td>
<td>(2.92)</td>
<td>(2.67)</td>
</tr>
<tr>
<td>Dissolution power</td>
<td>4.55**</td>
<td>6.38**</td>
<td>4.74**</td>
<td>8.55**</td>
</tr>
<tr>
<td></td>
<td>(1.19)</td>
<td>(2.56)</td>
<td>(1.25)</td>
<td>(2.86)</td>
</tr>
<tr>
<td>Observations</td>
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<td>130</td>
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<td>119</td>
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<tr>
<td>$R^2$</td>
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<td>0.692</td>
<td>0.695</td>
<td>0.689</td>
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</table>

The dependent variable is the standard deviation of the IMF policy index 1975-2005 by economic sector. Standard errors in parentheses are clustered by country. The specification is the same as in Table 1. Additional controls: proportion of years with IMF programs, debt crises, banking crises, and EU membership, respectively.

* $p < 0.1$, ** $p < 0.05$ (two-tailed tests)

Table A4: Excluding countries with more than 90% single-party majority governments

<table>
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<td>WLS (3)</td>
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</tr>
<tr>
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<td>32.51**</td>
<td>32.47**</td>
<td>33.67**</td>
<td>33.43**</td>
</tr>
<tr>
<td>level</td>
<td>(2.62)</td>
<td>(2.40)</td>
<td>(2.48)</td>
<td>(2.30)</td>
</tr>
<tr>
<td>Political competition</td>
<td>13.98**</td>
<td>14.05**</td>
<td>12.25**</td>
<td>12.01**</td>
</tr>
<tr>
<td></td>
<td>(2.49)</td>
<td>(2.33)</td>
<td>(1.88)</td>
<td>(1.84)</td>
</tr>
<tr>
<td>Dissolution power</td>
<td>8.61**</td>
<td>9.54**</td>
<td>12.75**</td>
<td>17.70**</td>
</tr>
<tr>
<td></td>
<td>(1.74)</td>
<td>(3.71)</td>
<td>(2.33)</td>
<td>(5.98)</td>
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<tr>
<td>Observations</td>
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<td>112</td>
<td>101</td>
<td>101</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.729</td>
<td>0.729</td>
<td>0.739</td>
<td>0.736</td>
</tr>
</tbody>
</table>

The dependent variable is the standard deviation of the IMF policy index 1975-2005 by economic sector. Standard errors in parentheses are clustered by country. The specification is the same as in Table 1. It excludes Britain, Canada and Greece.

* $p < 0.1$, ** $p < 0.05$ (two-tailed tests)
Appendix References


