

# **On the Merits of Bicameral Legislatures: Policy Stability within Partisan Polities**

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## **Abstract**

Some “democrats” have argued that bicameral systems are undemocratic, insofar as voters in different regions or member states have disproportionate representation in one of the chambers. Others have argued that the bicameral structure is redundant insofar as elections ultimately determine the members of each chamber. This paper argues that bicameralism serves a useful constitutional purpose that is neither undemocratic nor redundant. Unbiased forms of bicameralism tend to make public policy more predictable and more, rather than less, faithful to voter preferences. Statistical evidence from the Danish parliamentary reform of 1953 and the Swedish parliamentary reform of 1970 demonstrates that bicameral legislatures tend to have more predictable public policy that better reflect long-term voter demands than unicameral legislatures in partisan polities.

**Key Words:** Bicameral, Unicameral, Stability, Public Choice, Constitutional Analysis,  
Public Choice

**JEL Categories:** D6, D7

## **I. Introduction: Bicameralism and Democracy**

This paper analyzes some neglected properties of bicameral systems of governance in which bicameralism is not used to “overweight” one group’s interests relative to others nor to bias policy making toward continuation of the status quo. The results suggest that bicameralism may improve public policy by making it more predictable and more consensual—especially in settings where policy deliberations are partisan. They demonstrate that completely representative bicameral legislatures tend to have policies that are more stable through time and more broadly supported on average than those adopted by otherwise similar unicameral legislatures, especially in settings where political parties are important. These results are obtained in settings where both chambers rely on simple majority rule for making policy decisions and no interests are overrepresented. This paper, thus, takes issue with the claim that bicameralism can serve no purpose unless it is an antidemocratic one.

An implication of the analysis is that the present bicameral structure of the EU should be refined rather than abandoned. That is to say, representative bicameral parliaments can be more “democratic” than unicameral parliaments, even when the term “democratic” is interpreted in narrow majoritarian terms.

During the nineteenth century, most governments in Europe had kings, most kings had parliaments, and most parliaments were multicameral. These parliaments were not democratic in the modern sense, because their members were generally appointed or elected on the basis of very narrow suffrage, rather than selected by a broad electorate. Nonetheless, the various chambers of government were representative bodies that allowed various classes, occupations, and regions to have a direct voice in the formation of policy. This allowed nobles, commoners, priests, merchants, farmers, and/or regional governments to have some direct influence over policy according to the formal and informal powers of the parliament in question.

National history largely determined the particulars of each nation's procedures for making law.<sup>1</sup>

In the bicameral parliaments of constitutional monarchies, the chambers were often selected on the basis of class, as is explicitly implied by the names of the chambers of the British parliament with its House of Lords and House of Commons and implicitly the case with the bicameral systems of Denmark, Sweden, and France by setting wealth restrictions for membership. In modern federal states and confederations, the memberships of bicameral parliaments tend to be directly or indirectly elected by different, but overlapping, electorates. One of the chambers is generally directly elected from subregional districts. The other chamber represents the interests of the constituent regional governments, as with the *lander* of Germany, provinces of the Netherlands, cantons of Switzerland, and states of the United States.

The federal structure has proved more robust than the class-based systems in the modern democratic period. In countries where the membership of the chambers was based on representation of class interests, only a single chamber—the directly elected one—generally continues to have significant policy-making power in the year 2000. For example, the United Kingdom (1915) and France (1958, A.45) revised policy-making rules so that their “upper” chambers could be overruled by their “lower” (directly elected) chambers.<sup>2</sup> The explicit representation of regional interests is more compatible with modern democratic norms than representation based on family history, wealth, or prestige. Regional governments are, or so it may be argued, closer to their electorates than are national governments and better able to represent

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<sup>1</sup> The multicameral structure of many European parliaments have roots that date back to the thirteenth century. “Parliaments, in this sense, sprouted up all over Europe in the thirteenth century . . . The new assemblies were called *cortes* in Spain, *diets* in Germany, estates general in France, and parliaments in the British Isles. Usually they are referred to generically as ‘estates,’ the word ‘parliament’ being reserved for Britain, but in origin they were essentially the same.” (Palmer and Coulter 1950, pp. 30–31)

Within the United States, bicameralism dates back to 1619 when the Virginia colony established a bicameral legislature with one chamber directly elected and the other appointed by the colonial governor.

<sup>2</sup> Tsebelius and Money (1997) argue that even upper chambers with no or little formal control over policy making have significant influence on the formation of public policy.

their citizen's interests than are national governments, especially on regional concerns.

This is not to say that bicameral systems based on federalism were unaffected by democratic tides; the United States Senate and the Dutch first chamber have been elected rather than appointed for most of the past century. In some federal systems, the upper chambers represented regional and class interests at different times in their histories, and class-based multicameralism was replaced by bicameral systems with an upper chamber representing regional interests. Indeed, Denmark (1953) and Sweden (1970) explicitly ended their regional chambers through constitutional reforms that created unicameral parliaments.

When no systematic difference exists in the interests represented in the chambers, as was sometimes argued in both Denmark and Sweden, it is often mistakenly concluded that there is no reason for bicameralism. Bicameralism is sometimes said to be undemocratic if the chambers represent different interests and redundant if they do not! The analysis below suggests that bicameral legislatures may advance the public interest even in cases in which there is no systematic difference between the interests represented in the two chambers.

The EU presently has an institutional structure that closely resembles a bicameral system: one chamber is based on regional representation, and the other is directly elected, that is, the Council and the European Parliament. Each has significant control over legislation within the EU. It can, thus, be said that the EU is either "resisting" the historical democratic tide in Europe by moving toward bicameralism or is gradually moving with the tide insofar as the European Parliament secures increasing authority over policy. This paper suggests that the former should be hoped for rather than discouraged. Overall, the results suggest that the EU is on the right track with its present bicameral system and that, rather than moving toward a unicameral parliamentary system as some have argued, an explicitly bicameral system is likely to serve the EU better in the long run.

The body of the paper is organized as follows. First, the governance of the EU is summarized and the literature and the principal results of the literature on bicameralism are reviewed. These results are extended to partisan politics in a series of electoral simulations. The simulation results suggest that a bicameral system of government is more predictable and more faithful to voter interests than unicameral systems. The third section tests the hypothesis that bicameral legislatures tend to be more stable than unicameral legislatures using data from Sweden and Denmark. The estimates suggest that the end of bicameralism in Sweden and Denmark had the effect of making their policies less predictable through time. The final section revisits the results and suggests their relevance for EU constitutional reform.

The statistical analysis demonstrates that (1) bicameral institutions can stabilize public policy outcomes relative to unicameral legislatures in a broad range of electoral and political environments without privileging some policy interests, (2) the policies adopted by legislatures are affected by the number of chambers, the power of the chambers, and the existence of political parties, and (3) that ordinary statistical methods may miss some important consequences of the effects of the interplay of political and institutional factors on policy outcomes by focusing too much attention on average policy outcomes rather than policy volatility.

## **II. A Digression on the European Union and Theories of Bicameralism**

### **A. Is the EU Bicameral? A Constitutional Perspective**

The present structure of the European Parliament and the Council of member states closely resembles the structure of modern federal democracies in which the “legislature” consists of a directly elected chamber and an indirectly elected federal council. The *Consolidated Version of the Treaty Establishing the European Community* describes the architecture of the government of the EU. Articles 189–91 state that the representative European Parliament “shall be elected by direct universal suffrage.” Articles 202–203 state that the Council “shall consist of a representative of each Member State at ministerial level, authorized to commit the government of that Member State.” The legislative procedures specified in the EU’s present constitution

are complex, but it is clear that in many, perhaps most, policy areas both the Council and the Parliament have to agree in order for policies to be adopted, although the balance of power currently favors the Council over the Parliament.<sup>3</sup>

The commission can be regarded as the cabinet or “the government” for the present purposes. Its membership is selected jointly by the nations represented in the Council with consultation by the European Parliament (Article 214). The Council can determine the size of the Commission (Article 213) and commission salaries (Article 210). The Commission clearly has significant autonomy after its appointment, as is also true of the cabinets of many parliamentary systems, but ultimately it remains controlled by the Council and the member states.

The representation of European nations established in both the Council and the Parliament can be regarded as a weighted form of democracy insofar as some voters’ interests are given greater weight than others. This is often the case within region-based forms of allocating representation insofar as the number of representatives (or votes by them) is constrained to be a whole number. For example, Germany is arguably being underrepresented and Luxembourg substantially overrepresented (see table A1 in the appendix). However, it also seems clear that the unequal representation within the EU’s governmental institutions is not a consequence of bicameralism, but rather an effort to moderate political risks that

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<sup>3</sup> Article 252 of the *Consolidated Version of the Treaty Establishing the European Community* states: “Where reference in this Treaty to this Article for the adoption of an act, the following procedure shall apply: (a) The Council, acting by qualified majority on a proposal from the Commission and after obtaining the opinion of the European Parliament, shall adopt a common position, (b) The Council’s common position shall be communicated to the European Parliament. The Council and the Commission shall inform the European Parliament fully of the reasons which lead the Council to adopt its common position and also of the Commission’s position. . . . (c) The European Parliament may within the period of three months by an absolute majority of its component Members, propose Amendments to the Council’s common position. The European Parliament may also by the same majority reject the Council’s common position. . . . If the European Parliament has rejected the Council’s common position, unanimity shall be required for the Council to act on a second reading.”

The commission may subsequently submit a revised proposal, which the council alone may consider. Amendments of this proposal by the Commission require unanimous agreement by the Council (A. 252[e]).

have generated this inequality. A different method of voting or different number of representatives could reduce this inequality, but has not been widely favored to this point. This electoral inequality has attracted considerable research (see, for example, Steunenberg, Schmidtchen, and Kolboldt 1999), but it is not the focus of the present analysis. The matter of interest here is whether the present bicameral structure could serve as the basis for future EU governance.

## **B. Modern Theoretical Defenses of Bicameralism**

The modern analytical literature on constitutional design includes many papers, but relatively few that analyze the effects of bicameralist legislatures. These papers explore three related issues. The first strand of the literature analyzes cases in which bicameralism tends to operate as supermajority rule. The second examines the extent to which bicameralism may help resolve the cyclic-majority problem. The third examines how bargaining between two more or less equally powerful chambers of government would affect public policies.

Analytical research on bicameralism began with Tullock (1959) and with Buchanan and Tullock (1962, ch. 16). This line of research argues that bicameralism indirectly tends to increase the size of the majority required to adopt new legislation. The authors point out that a requirement for implicit supermajorities may arise even in cases in which the chambers are not designed to represent different interests, because differences between the two chambers can arise as a consequence of chance events. For example, if some interests are spatially concentrated for whatever reason, those interests would tend to secure greater representation in the “lower” chamber elected from smaller districts than in an “upper” chamber elected from relatively larger districts. If both upper and lower chambers must agree for legislative proposals to become law, legislation has to advance a broader cross-section of interests than would have been required in a unicameral legislature, because two somewhat different majorities have to be assembled. Indeed, bicameralism can be defended as a method for identifying policies with supermajority support (Mueller 2000).

A second strand of literature explores the effect that bicameralism has on the stability of majoritarian decision making. It has been well-known since Duncan Black's work (1948a,b) that majority rule is cycle prone and, thus, tends to be indecisive. If policy A secures majority support over policy B, in most cases, there exists a policy C that can secure policy support over policy A. Analysis of majoritarian indecisiveness has attracted considerable attention in the academic literature since Black's rediscovery of Condorcet's paradox. As Arrow (1963) points out, indeterminacy—or intransitivity—is not simply a problem with majority rule, but with collective choice in general. Several authors have demonstrated that, in some circumstances, bicameralism can help stabilize majoritarian decision making. For example, Hammond and Miller (1987), Brennan and Hamlin (1992), and Riker (1992) demonstrate that bicameralism helps avoid some problems with democratic cycles. Essentially, these articles point out that there are circumstances in which a “median” or “pivotal” voter exists for each of two separate chambers, but in which no median or pivotal voter would exist in the combined legislature. In such cases, the pivotal voters of each chamber determine that chamber's policy, and negotiation between the medians will yield an agreement that lies between the two medians.

The third strand of literature examines the process of interchamber bargaining over legislative outcomes. It is clear that, in bicameral systems in which both chambers have veto power over the other, that some form of compromise will be necessary. Shepsle and Weingast (1987) demonstrate that intercameral conference committees within the United States (where the legislative compromises are worked out) tend to empower legislative committees in both chambers. Tsebelius and Money (1997) demonstrate that the power to delay implementation of a policy is sufficient to affect policy. For example, in cases in which proposals and counterproposals are simply shuffled back and forth between the chambers, the more “patient” chamber tends to be decisive. That is to say, if there are different opportunity costs for the negotiation—as might be generated by a pending election—the decisive voter of the chamber prepared to wait the longest for a relatively beneficial outcome will secure a



legislative outcome that is relatively closer to “its” ideal point than that of the more impatient counterpart. Rogers (1998) explores agenda control within bicameral legislatures. He argues that the more informed chamber tends to originate legislative proposals. Consequently, bicameral legislatures tend to make more informed decisions than unicameral ones. Steunenberg, Schmidtchen, and Kolboldt 1999 demonstrate that the elaborate policy-making procedures of the present EU determine the relative bargaining power of the Commission, Council, and European Parliament, and indirectly the relative power of member states within the Union. Persson, Roland, and Tabellini (1997) analyze bargains that might be struck between chambers of a divided government in a setting where voters will replace them for malfeasance or incompetence. They demonstrate that electoral pressures and specific divisions of policy-making responsibilities (agenda control and veto power) can generate improvements in the performance of government relative to a single chamber with complete control over policy making.

Overall, the literature predicts that (1) bicameral systems are somewhat more stable than unicameral systems insofar as majority cycles are fewer, (2) levels of consensus required for legislation to be adopted tend to be somewhat higher than under unicameral systems insofar as the interests represented in the two chambers differ, (3) in cases where the chambers each have substantial influence, policy decisions tend to be more informed and faithful to the desires of the electorate, and (4) the effect of bicameralism depends in part on the relative power of the two chambers, which is determined by the formal and informal procedures of negotiation between the chambers and the interests of the pivotal members of the two chambers.

### **C. Bicameral Outcomes with Political Parties and Electoral Slates**

Another possible legislative advantage of bicameral systems arises in settings where political parties are important. There are many advantages that political candidates realize by joining “political clubs” that limit membership to individuals with relatively similar views on public policies. Like-minded politicians may enjoy each other’s company, may cooperate to get legislation of mutual interest adopted,

and, therefore may be inclined to help each other get elected to office. This “homogenization” of member interests can increase the volatility of policy outcomes in unicameral legislatures relative to bicameral legislatures.

Partisan advantages arise in large part because party members share political or ideological agendas. Consequently, there are strong reasons for potential candidates to sort themselves into parties and also strong reasons for the parties, once established, to screen candidates for ideological position. The result is that the range of policy positions that can successfully be taken by viable candidates is somewhat reduced by these screening and sorting processes. Potential candidates will be refused membership in a given club if they espouse policies that are too far to the right or left of a party’s average or median constituent.

The fact that candidates or party slates must be elected to affect legislation means that parties cannot neglect voter interests. However, political parties may nonetheless increase the variance of the policies adopted by elected legislatures. Consider the case in which two dominant political parties (or coalitions of parties) take the left of center (LOC) and right of center (ROC) (Duverger 1954) blocking positions on the policy issues of interest. In the context of the distribution of voter preferences over government growth rates assumed, these positions will be ones that propose governmental growth rates of 3.33 percent and  $-3.33$  percent respectively. Suppose further that significant variation in party slates exists and that, once elected, the candidates may vote as they wish without fear of being banished from the party.<sup>4</sup>

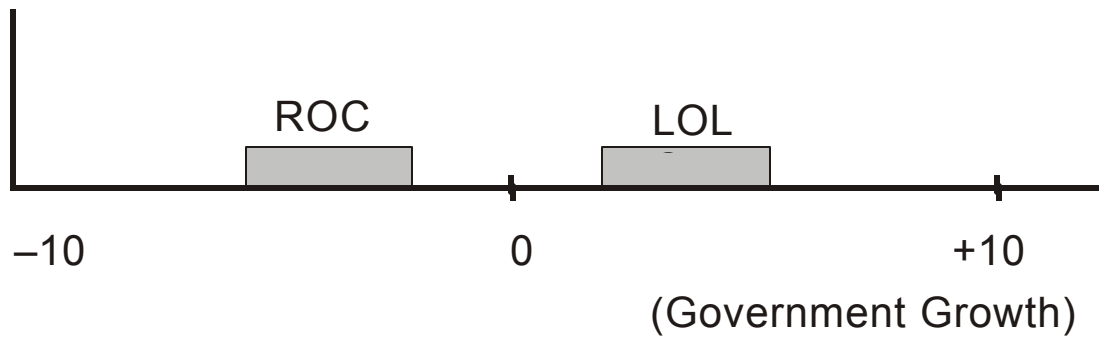
Figure 2 characterizes a field of mainstream candidates from the LOC and ROC parties. It seems natural to assume that the ROC candidates all take positions to the right of those of the LOC association of candidates and that the moderate ROC and LOC parties do not field candidates of the far right or left. In the illustration, party screening and sorting have narrowed the range of viable candidates from the [–

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<sup>4</sup> There is considerable evidence that partisan positions in the House and Senate of the United States do not converge to identical positions. See, for example, Poole and Rosenthal (1991) or Francis et. al. (1994). The “tolerant” version of the Duverger hypothesis used in the simulations is largely consistent with these results.

10, 10] interval that covers the entire political spectrum to the more moderate [-5.8, 5.8] interval.

Figure 1  
Party Slates



To investigate the effect of party slates on policy volatility, a series of simulated elections is conducted and reported below. Policy choices in two bicameral parliaments are simulated. One simulated parliament's membership has the composition of the present EU's Council and Parliament and the other, the "UE", has a more evenly sized upper and lower chambers. Voters are assumed to be uniformly distributed between -10 and 10, where the numbers should be interpreted as preferred rates of growth for government programs. Voting takes place through proportional representation, with the consequence that the parties each receive relatively similar electoral support; although their slates of candidates differ substantially. Table 1 summarizes the legislative results from a series of forty electoral cycles for the simulated EU and the hypothetical UE.

**Table 1**

## Simulated Legislative Policy Outcome with Party Slates

(Statistics for 15-member Council, 364-member Parliament, 40 Elections)

	Chamber 1 Mean	Chamber 2 Mean	Bicameral Mean	Chamber 1 Median	Chamber 2 Median	Bicameral Compromise
LR average	0.131	-0.033	0.049	-0.019	-0.177	-0.098
LR variance	0.502	0.022	0.121	3.355	0.961	0.72
Min	-1.054	-0.415	-0.565	-3.019	-1.324	-1.963
Max	2.244	0.281	1.064	4.363	1.175	1.648

(Statistics for 100-member Regional Council, 200-member Parliament, 40 Elections)

Averages	-0.033	0.018	-0.008	0.079	0.246	0.211
Variances	0.142	0.026	0.042	1.64	0.996	0.606
Min	-0.852	-0.327	-0.473	-1.923	-1.129	-1.445
Max	0.712	0.541	0.376	1.805	1.804	1.437

The decisions of a unicameral parliament are the median policy preference of the chamber of interest. The bicameral outcomes are represented as 50/50 compromises between the median members of the relevant two chambers. Table 1 allows four unicameral chambers to be compared with each other and with two bicameral outcomes. The probabilistic pattern of voting assumed generates a wide range of policy choices over the course of the forty electoral cycles, although voter preferences are completely stable during the entire period of interest. For example, the median legislator in the setting analogous to the present EU favored growth rates that varied from -1.324 to 1.175 percent in the Parliament and from -3.019 to 4.363 percent per year in the Council. The bicameral compromise yields a somewhat narrower range of policy outcomes and reduces the variance of the policies adopted relative to that of the Council and Parliament alone. The moderating effect of bicameralism is even greater in the more balanced chambers of the imaginary Union of Europe, where variance in the bicameral system is considerably *smaller* than that in either of the single chambers.

#### **D. Party Discipline and Legislative Outcomes**

Of course, political parties often do more than provide useful information about slates of candidates. Parties often coordinate voting among their elected members. For example, parties often “encourage” elected representatives to vote along party lines to support their party’s announced legislative agenda. When this takes place across the chambers of a bicameral legislature, it may weaken the case for bicameralism by increasing chamber congruence.<sup>5</sup>

To explore this possibility, an extreme form of party discipline is simulated below. Each party is assumed to adopt its announced platform, represented by its Duverger position, whenever it holds a majority of seats in both chambers of the legislature. Because the party platforms at Duverger positions are significantly different, this implies that policies will now change significantly whenever the majority party changes. This contrasts with the previous simulations in which the ebb and tide of elections would not generally imply radically different median legislators or policies.<sup>6</sup> In this case, the party or leadership with the most members in the chamber of interest determines the policies legislated. Table 2 summarizes legislative membership and policy outcomes from a series of forty pairs of simulated EU and UE parliaments, selected as in the previous case.

Party discipline within the legislature has several striking effects. First, the range of policy outcomes is now completely bounded by the party platforms. Consequently, the range of policy outcomes observed is generally smaller than in the previous two cases, although the average policy observed over the entire series of

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<sup>5</sup> The effects of party discipline are largely neglected in the Tsebelius and Money (1997) overview of bicameralism. However, it is clear that party discipline, at least as much as what they call chamber congruence, contributed to the similar (although not identical) patterns of voting in the Swedish bicameral parliament (Tsebilus and Money 1997, p. 43).

<sup>6</sup> In this setting, the random electoral outcomes should be regarded as a consequence of indifference by voters in the middle of the distribution rather than confusion about which party is which. Independence also has a somewhat different interpretation in this setting. Here, centrist voters, in effect, toss a coin before casting votes for the upper chamber and then toss the coin again before voting for the second chamber.

elections is not significantly affected. On average the average or median voter gets what he or she wants, although *he or she is never directly represented in the Parliament.*

*Note also that the volatility of policy outcomes, measured with variance, is substantially higher.* The sample variance of growth rates is twice as large as in the previous cases. It now exceeds 10 in both chambers in both parliamentary systems; whereas previously sample variances had all been less than 4. Moreover, bicameralism now has an even more substantial effect on the *volatility* of policies, as measured by sample variance.

<b>Table 2</b>						
Simulated Legislative Policy Outcomes with Party Slates and Party Discipline						
(Statistics for 15-member Council, 364-member Parliament, 40 Elections)						
	Chamber 1 Mean	Chamber 2 Mean	Bicameral Mean	Chamber 1 Outcome	Chamber 2 Outcome	Bicameral Compromise
LR average	0.125	-0.024	0.051	0.66	0	0.247
LR variance	1.009	0.019	0.253	10.454	10.89	5.111
min	-2.063	-0.316	-1.088	-3.3	-3.3	-3.3
max	1.984	0.316	0.968	3.3	3.3	3.3
(Statistics for 100-member Council, 200-member Parliament, 40 Elections)						
LR averages	-0.006	0.051	0.023	0.165	0.33	0.33
LR variances	0.13	0.057	0.055	10.863	10.781	4.792
min	-0.722	-0.347	-0.501	-3.3	-3.3	-3.3
max	0.829	0.441	0.616	3.3	3.3	3.3

A bicameral compromise is necessary in any case in which the chambers are controlled by different political parties. Because the dominant parties are assumed to have roughly equal electoral support, compromise policies will be adopted after approximately half of the elections. (Each party's platform already reflects intraparty negotiations.) The necessity of compromise in approximately half of the legislative sessions is sufficient to reduce the variation in policy outcomes to about half that of

the corresponding unicameral system.<sup>7</sup> This *stabilizing effect of bicameralism is not a result of sampling theory, but rather of the necessity of interchamber compromise*, a possibility emphasized by the literature that explores interchamber negotiations.

Interparty compromise is unnecessary in unicameral legislatures regardless of the size of the legislature, as long as majority parties or stable majority coalitions exist. No matter how large a single legislative chamber is, the policies adopted by a disciplined and partisan majority tend to oscillate back and forth between dominant party platforms. In partisan environments, bicameralism necessarily stabilizes political outcomes relative to unicameralism as long as compromises are worked out. In such cases, bicameralism causes intermediate policies to be adopted whenever power is divided within the legislature and, consequently, yields a more stable time series of policies than the unicameral Parliament.<sup>8</sup>

### **III. Does Bicameralism Actually Make Public Policy More Predictable?**

#### **A. Institutions and the Supply of Public Services**

Within a democracy, public choice analysis implies that the electoral demand for services is largely determined by voters in the middle of the distribution of policy preferences. If political institutions are “unbiased,” the median or average voters get what they want—at least on average. The variance of government policy is jointly determined by the stability of electoral demand and the responsiveness of government policy makers to variations in that demand.

In the usual rational choice models, voter preferences are not affected by constitutional arrangements. Consequently, the supply government services can be written as:  $G_t = v(Y_t, I_t) + e_t$ , where  $Y_t$  is the pivotal voter’s income in period  $t$ , and

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<sup>7</sup> The theoretical result is exactly half. Under unicameralism, the policy chosen is either  $-3.3$  or  $+3.3$  with probability  $0.5$ , which implies a variance of  $10.89$ . Under bicameralism the implied policy is  $-3.3$  or  $3.3$  with probability  $0.25$ , and  $0.0$  with probability  $0.5$ , so the policy variance is exactly half that of unicameralism,  $5.45$ .

<sup>8</sup> Note that for this particular alignment of parties and institutions, the same result would hold if neither party compromised. A compromise generates the status quo, which is the same result that occurs if each chamber simply vetoes every proposal backed by a majority in the other chamber.

$I_t$  is an index of the median or average voter's demand for government services. If institutions affect the volatility of public policies, error term  $e_t$  will be conditioned on the political institutions in force during the period of interest. The theories reviewed above and the simulation results suggest that the variance of the error term will be increased by a shift from bicameralism to unicameralism, although the basis of those predictions differs. The intent of the next two sections of the paper is to determine whether this common prediction is evident in recent European history.

### **B. The Effect of a Shift from Bicameralism to Unicameralism in Sweden**

Several countries have replaced bicameral institutions with unicameral ones during the past half century; Denmark (1953), Sweden (1970), New Zealand (1954), and Peru (1993) all switched from bicameral to unicameral legislatures. Temporary switches also occurred in Turkey (1982–89), Sri Lanka (1971–72), and Panama (1979–89). Unfortunately, most of these changes in fundamental legislative structure took place during “extraordinary” times. All but Sweden appear to have adopted or left bicameralism during or immediately following periods of extreme domestic turmoil or international crisis.

Consequently, Sweden's recent constitutional history provides the best available evidence. In 1970 the Swedish Constitution (Riksdag Act) was modified after approximately 20 years of peaceful constitutional deliberations. The 1970 Riksdag Act effectively merging the chambers of Sweden's hundred-year-old bicameral legislature into a single chamber.

To determine whether Swedish policies became less predictable after the change from bicameral to unicameral governance, the electoral demand equation developed above was estimated in linear and log linear forms. Government service levels are represented in two ways: as real per capita government consumption and as government consumption as a fraction of Swedish gross domestic product. The median voter's income is approximated by real per capita private consumption. The intensity of the median voter's preference for government services is approximated



by average voter ideology, as calculated for Swedish voters by Fording and Kim (1998). Economic data from the World Bank are used for real per capita government consumption levels and for average voter income (after tax), which is proxied by per capital private consumption.

There is considerable evidence that Sweden's switch from bicameralism to unicameralism in 1970 had significant effects on Swedish politics and, consequently, on Swedish policies. Congleton (2002) develops a variety of evidence that Sweden's shift from bicameral to unicameral governance affected public policy and national welfare. Immergut (2002) reconstructed the majority coalitions that would have emerged had bicameralism been left in place and finds that the Social Democrats and their allies on the left would have had a solid majority in the eliminated chamber that would have prevented the center-right coalition from coming to power or at least implementing their programs. However, neither of these studies directly addresses the matter of interest here, that is, whether Swedish government became less predictable after the unicameral Riksdag was adopted.

Four estimated supply equations for government services are reported in table 3, adjusted for institutional effects. The coefficients all have the anticipated signs. An increase in after-tax income and an ideological shift to the left both lead to an increase in the supply of government services. The estimates suggest that the Swedish government became less responsive to short-term changes in voter demand for government services after the elimination of the first chamber, possibly by making party leaders and platforms relatively more decisive.

**Table 3**  
Estimated Electoral Demand for  
Swedish Government Services

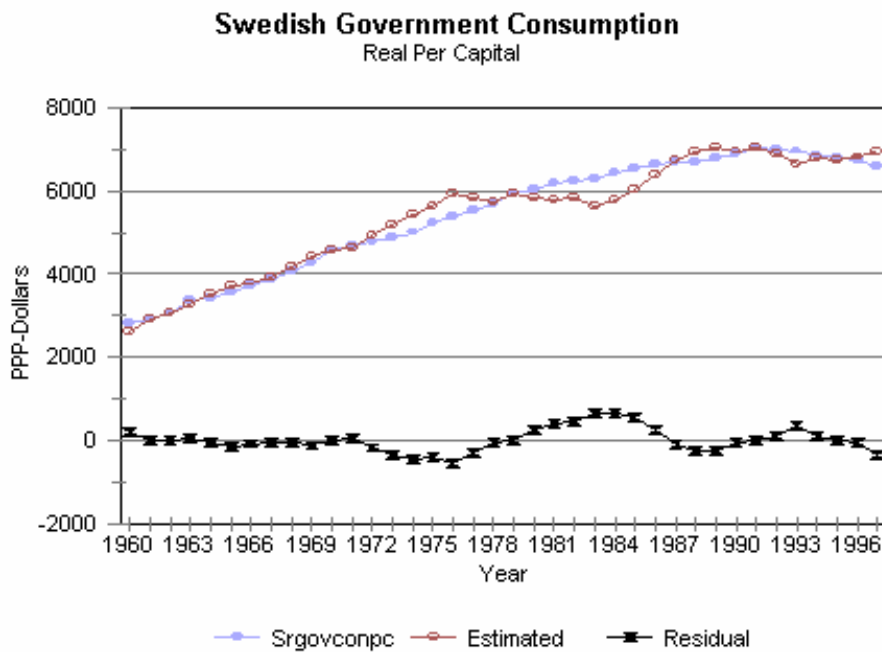
	Real Swedish Government Consumption ( <i>per capita</i> )	Real Swedish Government Consumption ( <i>per capita</i> )	Real Swedish Government Consumption ( <i>percent of GDP</i> )	Real Swedish Government Consumption ( <i>percent of GDP</i> )
Constant	-3586.526 (2.60)**	-7207.25 (-26.44)***	0.125 (4.05)***	-0.090 (-4.80)***
Unicameral		7033.106 (4.95)***		0.350 (7.46)***
Swedish Voter Ideology	33.820 (3.36)***	67.898 (9.36)***	0.0014 (6.06)***	0.0027 (5.65)***
Unicameral*Voter Ideology (uni-ideology)		-63.794 (-4.09)***		-0.0024 (-3.82)***
Real Per Capital Private Consumption	0.633 (7.04)***	0.8327 (49.33)***	4.79e-6 (2.41)**	1.90E-5 (20.10)**
Unicameral*Real Per Capital Private Consumption		-0.328 (-4.25)***		-1.94E-5 (-8.30)***
R-squared	0.860	0.93	0.49	0.81
F-statistic	105.56***	85.04***	16.82***	27.42***
Tests for Changes in Variance of Error Term				
Whites				
Heteroskedasticity Test	8.05***	2.70**	10.80***	3.11**
Bicameral Residual Standard Dev. 1960–70	185.51	67.8	0.01	0
Unicameral Residual Standard Dev 1970–97	855.91	681.43	0.03	0.02
F-test for Equivalence of Residual Variance	21.29***	101.03***	4.55***	42.50***

\*\*\* Denotes significance at the 0.01 level, \*\* denotes significance at the 0.05 level, and \* denotes significance at the 0.1 level.  
(Newey West Standard Errors used to calculate T-statistics)

Of particular interest for the purposes of this paper are the residuals of the estimates. The residuals provide an index of the predictability of Swedish government policy and of its faithfulness to electoral demand. The analysis above suggests that there will be systematic differences between the residual variance of the bicameral and unicameral periods. The White's tests are consistent with this hypothesis. They all reject the hypothesis that the error term is homoskedastic during the period of the estimates. The last portion of table 3 lists the sample standard deviations of the residuals for the 1960–70 bicameral period and for the 1971–97 unicameral period. In each case, the standard error of the unicameral period is greater than that of the bicameral period. F-tests for the hypothesis that the residual variance is not higher in the unicameral period than in the bicameral period can be rejected at conventional levels of significance in every case.

Overall, the results support the hypothesis that Swedish government policy became less predictable following the shift from bicameralism to unicameralism. Indeed, the difference in policy volatility after the adoption of unicameralism is sufficiently large that it can be directly observed in the data. Figure 2 plots the observed and estimated real Swedish per capita government consumption and the residuals. Note that the effect is sufficiently large that the residuals in the unicameral period after 1970 are noticeably larger than in the bicameral period before 1970. Note also that the increase in the variance of the residuals associated with the shift to unicameralism is clearly not the result of a spurious upward trend in residual variance, but rather a change in regime.

**Figure 2**



### C. Additional Evidence of Unicameral Policy Volatility from Denmark

Denmark's recent constitutional history is similar to that of Sweden. In 1953 Denmark eliminated its long-standing upper chamber, the Landsting, by constitutional amendment, transforming its bicameral Rigsdag to a unicameral system on June 5, 1953. Unfortunately, isolating the effects of the Danish shift to unicameralism is not as straightforward as in the Swedish case, because it occurred relatively shortly after World War II; consequently, the effects of the Occupation affect both the data available in the period before the unicameral Rigsdag was adopted and the government policies adopted prior to the 1953 constitutional reform.

Fortunately, the occupation of Denmark (1941–45) was evidently not as disruptive as in many other countries in Europe. Elections continued to be held, and most national policies were made by the governments elected—except toward the end, when the government resigned in block, leaving governance for a year or so in the hands of unelected officials. The effects of the war on demands for government services are doubtless present, but the estimates developed below find little that is systematic. (Estimated coefficients for binary variables for the period of occupation were not statistically different from zero and, consequently, are not included in the model estimates reported below.) In any case, the effect of the turbulent period prior to the 1953 constitutional reform would tend to *bias the results away* from finding a significant increase in policy volatility from unicameralism.

The other data problem that needs to be confronted in the Danish case is the lack of ideological data for the period of interest. Data on voter preferences for government services are proxied by voter support of the Social Democrats. Voter support of the Social Democrats should be highly correlated with the moderate voter demands for government services insofar as it is the dominant proponent for government services. For the period examined here, the Social Democrats were the largest party in the Folketing. Support for the Social Democrats was estimated by regressing vote shares in national elections as a linear function of the previous years'

per capita income, a time trend, and unicameralism. The estimated support—the systematic part of voter demands for services—is used as a measure of voter ideology.

Economic data were assembled from Mitchell (1992) and political data from Cook and Paxton (1986) for the period 1930-76. The supply of Danish government services are represented by real per capita government expenditures; the interests of pivotal voters are again assumed to be a linear function of income and preferences. Voter income is represented as real per capita gross domestic product, and voter preferences or ideology is represented as the estimated support for the Social Democrats. Several alternative measures and functional forms are reported below in Table 4. All in all, the results are basically similar to the Swedish case in spite of the historical and data problems. Government services tend to rise as support for the Social Democrats increase and as the average voter's income rises.

**Table 4**

Estimated Voter Demand for  
Danish Government Services 1930–76

	Real Danish Government Consumption <i>(per capita)</i>	Real Danish Government Consumption <i>(per capita)</i>	Danish Government Consumption <i>(log per capita)</i>	Danish Government Consumption <i>(percent of GDP)</i>
C	-644.822 (-5.31)***	-2,015.02 (-2.87)***	1.088 (0.81)	-232.398 (-2.29)**
Real Danish GDP <i>(per capita)</i>	380.624 (7.76)***	423.573 (2.02)**		63.54 (7.47)***
Estimated Danish Voter Ideology		30.619 (7.40)***		4.307 (2.04)**
Log Real Danish GDP <i>(per capita)</i>			2.284 (19.81)***	
Log Estimated Danish Voter Ideology			0.638 (1.85)*	
R-squared	0.88	0.892	0.98	0.88
F-statistic	320.903	169.563	865.315	149.878

Tests for the Effect of Unicameralism on the Predictability of Danish Governance

Whites				
Heteroskedasticity Test	30.354***	15.78***	3.34**	9.312***

Bicameral Residual				
St. D. 1930–53	85.589	45.76	0.125	11.26
Unicameral Residual				
St. D. 1954–76	262.902	248.75	0.17	40.378
F-test for equivalence of variance	9.44***	29.55***	1.84*	12.86***

\*\*\* Denotes significance at the 0.01 level, \*\* denotes significance at the 0.05 level, and \* denotes significance at the 0.1 level.

*Note:* Newey-West standard errors are used to compute T-statistics.

Again, the results of most interest are those that analyze the variance of the residuals in the bicameral and unicameral periods. The latter effect is demonstrated in the bottom half of the table, which analyzes the residuals in the periods before and after unicameralism was adopted. In each of the estimates, the Whites heterogeneity test statistic again rejects the hypothesis that the residuals are members of the same homogenous error distribution. Inspection, affirmed by F-tests, indicates that the residual variance of the bicameral period is systematically smaller than in the unicameral period. As in the Swedish case, Danish government policy became less predictable after the adoption of a unicameral parliament.

#### **IV. Conclusion**

This paper has explored the extent to which bicameral systems of governance affect policy formation in well-functioning democratic polities. Previous literature has demonstrated that bicameral legislatures avoid some majority cycling problems and tend to discover policies with supermajority support whenever the interests represented by the chambers are different. The present analysis and simulations demonstrate that bicameral institutions can systematically affect the course of public policy, without giving particular interests special consideration. In the circumstances simulated, bicameral legislatures adopted policies that were more faithful to the long-run interests of the median voter and more predictable than those adopted by unicameral legislatures. These results were strongest in disciplined partisan political environments where the chambers of parliament are reasonably similar in size.

Empirical evidence from Sweden and Denmark is consistent with the simulation analysis. Both nations had less predictable public policy in the years following their shift to unicameralism. The volatility appears to reflect changes in the balance of power among the parties in their respective parliaments that are associated with relatively small shifts in the agents elected in a setting where party discipline is high.

The analysis is relevant for the EU as member states attempt to design the proper institutional framework for future policy making. The simulations demonstrate that bicameral arrangements can make public policy more predictable through time and better aligned with the long-term interests of voters without biasing policies toward the status quo or toward any group's favor. The present study, thus, supports the continuation and refinement of the EU's current bicameral constitutional template.

The analysis did not address the present balance of national power within the EU institutional structure. The present system, by using different schemes for representation in the Council and Parliament, implicitly requires supermajorities within national governments for new policies to be adopted. Because the reversion point is the status quo, this creates a bias favoring continuity over reform, which also tends to increase stability, although it may bias policies away from voter preferences. The use of explicit supermajoritarian decision rules has similar effects. Both kinds of procedures are commonplace within treaty organizations where political risks are always a matter of concern for the participating countries, but they are not essential features of bicameralism in general.<sup>9</sup>

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<sup>9</sup> There are a number of practical reasons why voluntary associations of associations, alliances, treaty organizations and confederacies that favor democratic procedures nonetheless choose decision-making rules that assign relatively great influence to relatively less populous member states. Such procedures reduce the political risks of memberships in such organizations and, consequently, make smaller member states more likely to become and continue as members. To the extent that economies of scale exist within the policy areas addressed by the "confederacy," the net benefits of membership increase for everyone as the number of members increases and collective services become less costly for each.

This paper demonstrates that bicameralism need not overweight some interests nor act as a counter to majoritarian pressures to achieve systematically superior performance. The analysis and evidence generated above demonstrates that the process of compromise within bicameral institutions has desirable effects on the course of public policy in a wide range of political environments and within a variety of governmental structures. Consequently, bicameralism can be a useful institutional structure even in settings where majoritarian outcomes are not widely believed to be counterproductive, risky, or unfair.

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The EU uses a variety of methods to reduce the political risks of membership in the various treaties that define member obligations. Perhaps the most obvious are the various supermajority rules and the weighted voting systems that grant weights that are disproportionate to member populations, as noted in table 1. Many decisions still require unanimity, and others require supermajorities of one kind or another. Moreover, as a treaty organization, exit remains possible, although exit clearly becomes increasingly costly as the routines of governance become habitual and as loyalty to “Europe” per se increases.



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## I. Appendix

	European Parliament Members (Article 190.2)	Weighted Votes in the Council (Article 205.2)	National Population per Member in EU Parliament	National Population per Vote in EU Council	Population (thousands) (OECD, 2000)
Belgium	25	5	410.04	2,050.20	10,251.00
Denmark	16	3	333.75	1,780.00	5,340.00
Germany	99	10	830.35	8,220.50	82,205.00
Greece	25	5	421.72	2,108.60	10,543.00
Spain	64	8	623.86	4,990.88	39,927.00
France	87	10	676.93	5,889.30	58,893.00
Ireland	15	3	252.47	1,262.33	3,787.00
Italy	87	10	657.34	5,718.90	57,189.00
Luxembourg	6	2	73.17	219.50	439.00
Netherlands	31	5	513.74	3,185.20	15,926.00
Austria	21	4	386.19	2,027.50	8,110.00
Portugal	25	5	400.32	2,001.60	10,008.00
Finland	16	3	323.81	1,727.00	5,181.00
Sweden	22	4	0.00	0.00	8,872.00
United Kingdom	87	10	686.85	5,975.60	59,756.00
<i>Total</i>	626	87	6,590.55	47,157.11	367,555.00
<i>Average</i>	41.733	5.8	439.37	3,143.81	24,503.67