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**Legislative Activity and Gridlock
in the European Union**

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Abstract*

We develop a game-theoretical model of European Union (EU) policy making which suggests that the amount of legislative activity depends on the size of the gridlock interval, consistent with Krehbiel's (1998) study of US politics. This interval depends on two factors: (1) the preference configuration of the political actors; and (2) the legislative procedures in a particular period. Actors' preferences and the procedures are not expected to have any effect beyond their impact on the gridlock interval. We predict smaller gridlock intervals, and thus more legislative activity, when the pivotal member states and the European Parliament and/or EU Commission are closer to each other. We also predict smaller gridlock intervals under the codecision than the consultation procedure and under qualified-majority voting in the Council than under unanimity. We find empirical support for these propositions in an empirical analysis of EU legislative activity between 1979 and 2009.

Key words: gridlock, European Union, legislative procedures, spatial models.

Word count: 8,196

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One of the aspirations of political scientists and economists is to explain policy. Spatial models are a useful tool in this endeavor. In these models, policies typically depend on the preferences of the political actors. For example, the outcome of a legislative debate on deficit reduction can be expected to be different if all legislators favor spending cuts over tax hikes, as opposed to the other way around. The institutional rules also affect policies. They include such aspects of policy making as the legislative procedures and voting rules, the roles of the political actors, and the policy dimensions that are under consideration. If consensus rather than a simple majority is required, for example, agreeing on spending cuts is likely to be more difficult.

As in the study of legislative politics generally, spatial models have become a standard approach to study policy making in the European Union (EU). Steunenberg (1994), Tsebelis (1994), Crombez (1996, 1997, 2001), Moser (1997) and Tsebelis and Garrett (2000), amongst others, have presented spatial models of the EU legislative process. Thomson et al. (2006) and Thomson (2011) have tested these and other theories. Spatial models have also been used to study other aspects of EU politics, albeit less often. The Commission appointment process, for example, has been formally analyzed by Crombez and Hix (2011).

In this paper we focus on legislative activity in the EU and the absence thereof, or ‘gridlock’. Legislative activity during a period of time is measured by the number of pieces of legislation that are adopted. We do not seek to explain what specific policies emerge from the political process, but rather we study under what conditions we can expect more or less legislative activity. These conditions relate to the two variables we mentioned above: actors’ preferences, and institutional rules.

Our approach is similar to that used by Krehbiel (1998) to study United States law making. He found that legislative activity in the United States is a function of the width of the ‘gridlock interval’: the set of policies that cannot be changed in the legislative process, because

the key political actors cannot agree. The status quo prevails if it is in the gridlock interval.¹ If the adoption of a policy requires the approval of two political actors, for example, the gridlock interval is the set of policies that are located between the two actors' ideal policies. If the status quo is in this set, each actor wants to move policy closer to his ideal, and thus farther away from the other actor, and rejects moves away from his ideal. Gridlock then results. The gridlock interval can be considered as a measure for the preference heterogeneity of the key political actors in a particular period. The more diverse their preferences, the wider the gridlock interval, and the less legislative activity occurs under the assumption that the status quo is uniformly distributed over the policy space. Krehbiel further argued that the mood of the electorate and the government regime, divided or united, have no impact on legislative activity when controlling for the width of the gridlock interval. Our approach is similar, but what is of additional interest in the context of the EU are the changing procedural rules over the past three decades as a result of reforms of the EU Treaty.

We hence develop a theory of legislative activity and gridlock in the EU and test it using data on legislation and political actors' preferences for a thirty-year period, from 1979 until 2009. Gridlock in the EU has received little attention thus far in the literature. Hertz and Leuffen (2011) have studied the impact of enlargement on the production of legislation in the EU and found that the effects of enlargement on gridlock are smaller than they expected. Others have analyzed the impact of enlargement on the speed of EU decision making, a concept that is related to legislative productivity and gridlock (cf. König 2008, Golub 2008). König (2007) found that a rise in the level of conflict in the Council, as measured by the distance between the policy positions of the two most extreme member states, increased the duration of the EU's legislative process.

What is different about how approach is that rather than focus on the speed of the adoption of legislation, which has been extensively studied in existing research on EU legislative politics, we focus on the volume of legislation adopted in a particular period. Put simply: does a larger (smaller) gridlock interval reduce (increase) legislative output? Our theory predicts that it does. What is more, our theory suggests that the institutional rules do not affect legislative activity beyond the impact they have on the gridlock interval.

We make two simplifying assumptions to allow us to empirically test our theory: (1) that the policy positions of EU actors can be measured on a left-right dimension; and (2) that a single decision-making rule applies in a particular six-month period. Each of these assumptions is problematic: there are at least two dimensions of EU politics (e.g. left-right, pro-/anti-Europe etc.); and different legislative rules (such as unanimity and qualified-majority voting) are used for different pieces of legislative in most periods. Put another way, by making these two simplifications, our measurement of actors' preferences and the applications of rules is certainly 'noisy'. Hence, the results that we find – of a significant (inverse) relationship between gridlock size and legislative output, both across and within each institutional period of the EU – are probably at the lower bound of the true relationship. This suggests that we have indeed discovered something new about how the EU works.

In the next section we present our model of legislative activity in the EU. In the third section we analyze how preferences and institutions affect this activity. We then test our theory using data on actors' preferences, rule changes and legislative activity in the 1979-2009 period.

A Model of Legislative Activity and Gridlock in the EU

In this section we present a model of legislative activity in the EU, which builds on models of EU policy making introduced by Crombez (1996, 1997, 2001).

Pivotal Actors and Procedural Rules

The political actors in the model are the m member states, the Members of the European Parliament (MEPs), and the Commissioners. We assume that these actors care about policy and have Euclidean preferences. That is, they have ideal policies and prefer policies that are closer to rather than farther away from these ideal policies. Thus, they can be represented by points in an n -dimensional policy space $P \subset \mathcal{N}^n$.

Since the actors have Euclidean preferences, their preferences over a policy issue are independent of the EU policies on other issues. Member state k 's utility, for example, decreases as the EU policy on dimension i moves further away from its ideal policy on dimension i , whatever the EU policies on the other dimensions. Since the EU uses strict germaneness rules EU policy making on dimension i can then be studied as if it were the only relevant dimension. For that reason we present one-dimensional models of policy making.²

We assume that the European Parliament and the Commission use simple majority voting rules and that there are no restrictions on amendments.³ As a consequence, we focus on the ideal policies of the median Commissioner and the median MEP, as these are the pivotal actors under majority rule in one-dimension and open amendments (e.g. Black, 1958).

The Council is not represented as a unitary actor because it uses either QMV or unanimity for the adoption of legislation. Nonetheless, the analysis of policy making can be simplified by

focusing on the member states that are pivotal under the QMV and unanimity rules. Under the QMV rule, 255 votes out of a total of 345 are currently needed to defeat the status quo.⁴ The member state a (b) that is pivotal for a rightward (leftward) move thus has an ideal policy to the left (right) of the member state with the median vote. In particular, it is the member state with the 91st (255th) vote from the left (right). Under unanimity rule the two most extreme member states l and m are pivotal.

In sum, there are six potentially relevant actors in policy making: the Commission, as represented by the median Commissioner; the European Parliament, as represented by the median MEP; and the four pivotal member states l , a , b and m . The respective ideal policies of these actors are p_c , p_p , p_l , p_a , p_b and p_m . Below we refer to member states a and b as the pivotal member states, and member states l and m as the extreme member states.

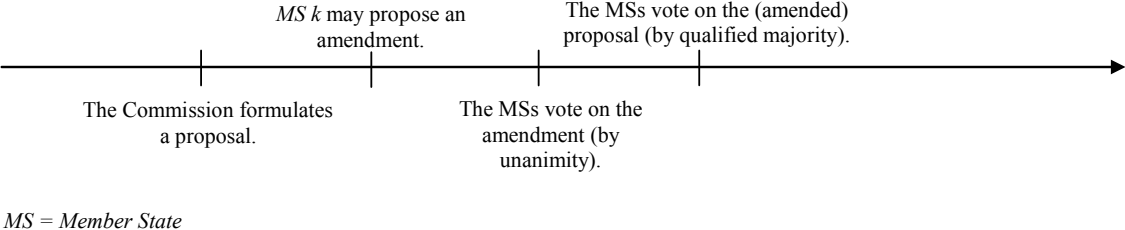
We present an infinite-horizon model. In each period t the EU may alter policy on one particular issue. We assume for simplicity and without loss of generality that the Commission chooses what issue to address in each period. Policy on an issue is then set under one of the EU's two main legislative procedures: consultation or codecision (since the Treaty of Lisbon called the 'ordinary legislative procedure'). On the other issues the status quo prevails. The procedure that applies to an issue is exogenously determined at the start of each period. The procedure may change from one period to another due to Treaty changes.

The preferences of the political actors are also exogenously assigned at the start of each period. The actors' preferences may be different from those in the previous period because political actors may have been voted out of office and replaced, for example. We assume for simplicity that in period t political actors care about policy during that period only. They do not care about policy in future periods.

The location of the status quo at the start of period 1 is exogenously given. The location of the status quo at the start of period $t > 1$ depends on the policy that was set in period $t-1$ and an exogenous shock that may have moved its location at the start of period t . At the start of period t an exogenous shock S occurs with probability π . Subsequently the Commission chooses what policy issue to address. The sequence of events that follows depends on the legislative procedure that applies.

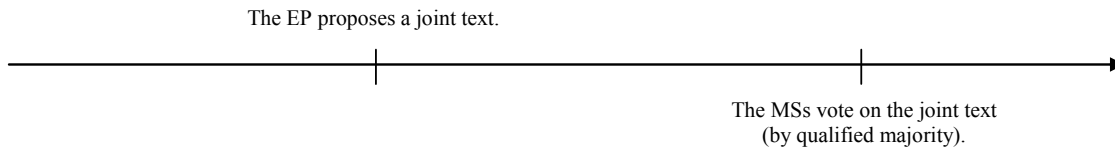
Under consultation the Commission first proposes a policy. Next the Commission proposal is sent to the Council. In the Council member states can propose amendments. We assume for simplicity that only one MS k is selected to propose an amendment, and that it can decide whether or not to use that opportunity. Amendments need unanimity in the Council for approval. At the end of the procedure the (amended) proposal is voted on by the Council. Approval by a qualified majority in the Council is required for adoption. If the proposal is adopted, it becomes EU law. Otherwise the status quo prevails. Figure 1 shows the sequence of events under consultation.

Figure 1. The Sequence of Events under the Consultation Procedure



Under codecision the European Parliament proposes a joint text, as shown in the first step of Figure 2.⁵ If it is approved by a qualified majority in the Council, it is adopted. Otherwise, the status quo prevails.

Figure 2. The Sequence of Events under the Codecision Procedure



The model incorporates complete and perfect information. We use the subgame perfect Nash equilibrium concept.

Consultation and Codecision

We next look at the conditions under which the EU manages to adopt legislation in period t under each of the two main legislative procedures of the EU: consultation and codecision.

Under *consultation* the Commission needs the support of a qualified majority in the Council for the adoption of its proposal in the last step of the procedure. The Commission then focuses on the relevant pivotal member state, since any proposal which wins its support can be adopted in the Council. If the Commission wants to move to the right (left) the relevant pivotal member state is member state a (b). The Commission thus only considers the policies that this member state prefers to the status quo. Not all proposals that are preferred to the status quo by the relevant pivotal member state make it to the last step of the procedure, however, because they can be amended by unanimity in the second and third steps of the procedure. Such proposals that are to the left or right of the ideal policies of all member states are successfully amended, and the

amended proposal will be between the ideal policies of the two extreme member states. When formulating its proposal in the first step of the procedure the Commission thus considers the policies that are preferred to the status quo by the relevant pivotal member state and that are between the ideal policies of the two extreme member states. The Commission successfully proposes the policy it prefers most from this set of policies.

So, under what circumstances does consultation lead to gridlock? Proposals need to be preferred to the status quo by a qualified majority for adoption. If no policy is preferred to the status quo by a qualified majority, the status quo prevails. If the status quo is to the right (left) of member state a (b), there is no qualified majority in favor of a move to the right (left). That is, if the status quo is in the set $[p_a, p_b]$, gridlock results. The status quo may also prevail if there are policies a qualified majority in the Council strictly prefers to the status quo, but the Commission prefers the status quo to such policies. This occurs if the status quo is between the ideal policies of the Commission on the one hand and the pivotal member states on the other hand: if $p_c \leq SQ < p_a$ or $p_b < SQ \leq p_c$. The Commission and the pivotal member states then want to move the status quo in opposite directions. Hence, the status quo prevails in interval $[min\{p_a, p_c\}, max\{p_b, p_c\}]$, unless all member states want to move in the same direction away from the status quo.

If all member states do want to move in the same direction, that is $SQ < p_l$ or $p_n < SQ$, they can successfully amend Commission proposals. The gridlock interval under consultation is then equal to the interval $GI_{CONS} = [min\{p_a, p_c\}, max\{p_b, p_c\}] \cap [p_l, p_n] = [max\{p_l, min\{p_a, p_c\}\}, min\{p_n, max\{p_b, p_c\}\}]$. The status quo prevails if it is in this interval. If the status quo is not in this interval, the EU is able to adopt legislation.

Once EU policy on an issue has been set in period t , it cannot be altered in subsequent periods unless the actors' preferences, the procedures or the status quo change. To approve a new policy, support from either of two winning coalitions would be required: (1) the Commission and

a qualified majority in the Council; or (2) a unanimous Council. A unanimous Council cannot agree on another policy, however, because it would have approved a unanimously preferred policy as an amendment in period t , if there were one. The Commission cannot find qualified majority support to move even farther from the status quo, because it would have proposed such a move in period t , if it could. Moreover, the Commission does not want to move back toward the status quo because it would not have proposed to move as far in period t , if it did.

Turning to *codecision*, in the last stage of the procedure a joint text requires approval by a qualified majority in the Council. At the first stage, the European Parliament thus considers the policies that the relevant pivotal member state prefers to the status quo, and successfully proposes as a joint text the policy it prefers most from among these policies.

Under what circumstances does codecision lead to gridlock? Proposals need to be preferred to the status quo by the European Parliament and a qualified majority in the Council for adoption. If no policy is preferred to the status quo by the European Parliament and a qualified majority, that is, if the status quo is between the ideal policies of the European Parliament and the two pivotal member states, gridlock results. The gridlock interval for an issue under codecision is then equal to the interval $GI_{COD} = [\min\{p_a, p_p\}, \max\{p_b, p_p\}]$.

Determinants of Gridlock

As discussed, our theory suggests that equilibrium policies depend on two main factors: actors' preferences, and institutional rules. We now analyze how these factors affect gridlock.

Actors' Preferences

In the previous section we determined the gridlock intervals for an issue in period t under consultation and codecision. Under consultation, the gridlock interval widens as the pivotal member states are farther apart, and as the extreme member states and the Commission are farther away from the midpoint between the two pivotal member states' ideal policies. Under codecision, meanwhile, the gridlock interval expands as the pivotal member states are farther apart, and as the European Parliament is farther away from the midpoint between the two pivotal member states' ideal policies. More preference heterogeneity thus hinders legislative activity on an issue under both consultation and codecision.

At the start of each period the Commission considers on what issues legislative activity is possible. It then studies the equilibrium policies that will emerge on these issues, and the utility it will derive from those policies. It chooses the issue that yield the largest utility increase, or smallest utility decrease, for itself.⁶ If the status quo is in the gridlock interval on each issue, no legislative activity occurs during the period. There is thus less legislative activity and more gridlock in the EU if preferences are more heterogeneous. This leads to the following testable hypothesis.

Hypothesis 1 *Legislative activity increases as the gridlock interval contracts. The gridlock interval on dimension i contracts as (1) the ideal policies of the pivotal member states on that dimension are closer together, (2) the ideal policies of the Commission and (3) the extreme member states are closer to the midpoint between the pivotal member states' ideal policies (under consultation), and (4) under codecision, the European*

Parliament's ideal policy is closer to the midpoint between the pivotal member states' ideal policies.

We now examine more closely how the preferences of the Commission, the European Parliament and the member states affect legislative activity. The *Commission* is appointed by the member state governments and the MEPs for a five-year term after each European Parliament election. As new Commissioners take office, their preferences are likely to be different from those of their predecessors. Occasionally individual Commissioners are replaced during a Commission term. Commissioners may also change their preferences during their terms.

Since the Commission does not play a role in proposing the joint text or voting on it under codecision, legislative activity does not depend on its preferences under this procedure. However, under consultation it does. Under consultation, if the old and the new Commission are both located between the two pivotal member states, the gridlock interval is not affected by the investiture of a new Commission. But, if the old (new) Commission is located between the two pivotal member states, but the new (old) Commission is not, the gridlock interval weakly expands (contracts). And, if neither the old nor the new Commission are located between the two pivotal member states, legislative activity weakly increases (reduces) if the new Commission is closer to (farther away from) the midpoint between the two pivotal member states.

The *European Parliament* is directly elected for a five-year term. A newly elected Parliament is likely to have different preferences from its predecessor. As was the case for Commissioners, occasionally individual MEPs are replaced during their terms, and sitting MEPs may change their preferences after their election. In our model, the preferences of the European Parliament do not affect legislative activity under consultation. Under codecision, in contrast, the

effect of changing European Parliament preferences is the same as the effect of changes in Commission preferences under consultation.

Finally, *member states* are represented in the Council by national government ministers. In contrast to the European Parliament and the Commission, the members of the Council are not all re-elected or reappointed at the same time. Member state representatives change at various moments during a Commission's term, whenever there is a change of government in a member state, as a result of national elections or the formation of a new government, or if there is a reshuffle of cabinet seats.

A change in a member state's preferences affects legislative activity only if it leads to a different preference configuration of the pivotal and extreme member states. Such a different configuration emerges when one of the pivotal or extreme member states changes its preferences, while remaining pivotal or extreme, and also when another member state becomes pivotal or extreme as a result of a preference change. In either case, the result of a change that affects the preferences of a pivotal member state is similar to the result of the changes in Commission or European Parliament preferences discussed above.⁷ The result of a change that affects the preferences of an extreme member state is straightforward: if the (possibly new) extreme member state is closer to the closer pivotal member state, legislative activity (weakly) increases. Otherwise it (weakly) reduces.

Changes to Institutional Rules

Table 1 shows the evolution of the EU's legislative rules between the entry into force of Treaty of Rome and the end of 2009-14 European Parliament. So, for example, between 1958 and 1986 the EU adopted legislation using the consultation procedure and unanimous agreement amongst the

then 9 member states in the Council. The majorities in the Commission and the European Parliament were not relevant for determining the gridlock interval at that time. Then, between July 1987 and October 1993, which was the period of the Single European Act (SEA), the EU adopted most legislation using the consultation procedure and QMV in the Council (which at that time was 54 out of 76 votes). And, from the entry into force of the Maastricht Treaty in November 1993, the codecision procedure has become the most important legislative procedure, which requires a qualified majority in the Council and a simple majority in the European Parliament.

Whether there is more gridlock under the *consultation or codecision procedures* depends on the relative locations of the ideal policies of the European Parliament, the Commission and the pivotal and extreme member states. If the European Parliament and the Commission are both located between the two pivotal member states, the extent of gridlock is the same under both procedures. If the Commission is between the pivotal member states, but the European Parliament is not, the gridlock interval is *wider* under codecision than under consultation. But, if the European Parliament is between the pivotal member states, but the Commission is not, then the gridlock interval is *smaller* under codecision than under consultation. If neither the Commission nor the European Parliament are located between the pivotal member states, and the Commission, or the extreme member state that is at the same side of the pivotal member states as is the Commission, is closer to (farther from) the midpoint of the ideal policies of the pivotal member states than is the European Parliament, the gridlock interval is wider (smaller) under codecision. Hence, our theory predicts that the introduction of codecision has an impact on legislative activity insofar as the introduction of the new procedure affects the size of the gridlock interval. It does not predict any impact beyond that.

Even though the 1957 Treaty of Rome provided for *QMV*, in practice it was not used until the SEA. Then, each subsequent Treaty extended its use. There is more gridlock when unanimity is used than when *QMV* is used, both under consultation and codecision. Under consultation, there is gridlock under unanimity if the status quo is between the ideal policies of the two extreme member states on that issue; if it is in the set $[p_l, p_n]$. This is a superset of the gridlock set GI_{CONS} under *QMV*. Under codecision, there is additional gridlock under unanimity if the European Parliament is not between the ideal policies of the two extreme member states and the status quo is between the European Parliament and the extreme member states: The gridlock set is then $[\min\{p_l, p_p\}, \max\{p_n, p_p\}]$, which is a superset of the gridlock set GI_{COD} under *QMV*. Thus our theory predicts that the move from unanimity to *QMV* has a positive impact on legislative activity, but does not predict any impact beyond that.

Finally, it is often claimed that EU *enlargement*, ‘widening of the EU’, has made decision-making more cumbersome and led to a decrease in legislative activity. Our theory predicts that the impact of adding more member states depends on the location of the ideal policies of these new member states. If the gridlock interval expands as a result of their entry into the EU, legislative activity can be expected to decrease. Otherwise it will increase. For example, the gridlock interval expands in a policy area if unanimity is used and the new member states all have ideal policies that are to the left (right) of the old member states. An increase in preference heterogeneity thus leads to an expansion of the gridlock interval. If, by contrast all new member states have ideal policies between the pivotal member states and *QMV* is used, the gridlock interval decreases and legislative activity rises. Our theory hence predicts that EU enlargement has an impact on legislative activity only insofar as it affects the gridlock interval.

Table 1. Evolution of the EU's Legislative Decision-Making Rules

Treaty period	Legislative Procedure	Rule change	Start date	Decision-making rules		
				Commission (majority)	Council (QMV unless stated)	Parliament (majority)
Rome	Consultation (U)	New treaty	1 January 1958	5 of 9	6 states (unanimity)	72 of 142 MEPs
		Enlargement	1 January 1973	7 of 13	9 states (unanimity)	100 of 198 MEPs
		EP elected	1 July 1979	7 of 13	9 states (unanimity)	206 of 410 MEPs
		Enlargement	1 January 1981	8 of 14	10 states (unanimity)	218 of 434 MEPs
		Enlargement	1 January 1986	9 of 17	12 states (unanimity)	260 of 518 MEPs
Single European Act	Consultation (Q)	New treaty	1 July 1987	9 of 17	54 of 76 votes	260 of 518 MEPs
Maastricht	Codecision	New treaty	1 November 1993	9 of 17	54 of 76 votes	260 of 518 MEPs
		EP reappportionment	1 July 1994	9 of 17	54 of 76 votes	284 of 567 MEPs
		Enlargement	1 January 1995	11 of 20	62 of 87 votes	314 of 626 MEPs
Amsterdam	Codecision	New treaty	2 October 1997	11 of 20	62 of 87 votes	314 of 626 MEPs
Nice	Codecision	New treaty	1 February 2003	8 of 15	62 of 87 votes	314 of 626 MEPs
		Enlargement	1 May 2004	13 of 25	88 of 124 votes	395 of 788 MEPs
		EP reappportionment	1 July 2004	13 of 25	88 of 124 votes	367 of 732 MEPs
		QMV weights	1 November 2004	13 of 25	232 of 321 votes	367 of 732 MEPs
		Enlargement	1 January 2007	14 of 27	255 of 345 votes	393 of 785 MEPs
		EP reappportionment	1 July 2009	14 of 27	255 of 345 votes	369 of 736 MEPs
Lisbon	Codecision	New treaty	1 December 2009	14 of 27	255 of 345 votes	369 of 736 MEPs
		Enlargement (<i>expected</i>)	1 July 2013	15 of 28	260 of 352 votes	375 of 748 MEPs
		EP reappportionment	1 July 2014	15 of 28	260 of 352 votes	376 of 751 MEPs
		QMV weights	1 November 2014	15 of 28	55% states + 65% pop'n	376 of 751 MEPs

Note: Changes to the decision-making rules in the Commission, the Council, or the EP are indicated in bold. Consultation (U) is the consultation procedure with unanimity in the Council. Consultation (Q) is the is the consultation procedure with QMV in the Council.

Empirical Analysis

To test these ideas we developed a method for calculating the size of the gridlock interval in the EU legislative institutions in a particular period, and then looked at the relationship between the size of this interval and the number of EU laws adopted. Formally, in our theory the location of the status quo on a particular policy issue, and whether this point is inside or outside the gridlock interval, should predict whether the policy can or cannot be changed in a particular period. One possible empirical operationalization of this would be to look the expected location of policy status quos in a particular period, and to see whether these policies are moved into the gridlock interval in a period. Such an operationalization is very difficult in any context (cf. Krehbiel 1998). There are also good reasons why the volume of legislation in a particular period is a reasonable way of testing our theory in the EU context.

First, because much of the period we are looking at relates to new EU policies and the building of the single market, policy status quo points are not likely to be limited to particular parts of the policy space, which are then freed-up when the gridlock interval changes. Existing policy status quos are likely to be reasonably evenly distributed on a left-right dimension because some EU policies lead to de-regulation of existing standards whereas other EU policies lead to the adoption of new regulatory standards.

Second, because of the way EU decision-making works and because of the different electoral timetables of the EU member states and the EU institutions, it is impossible to identify a periods in EU politics where the gridlock interval is fixed for a sufficiently long period of time for all existing policies outside this interval to be moved into the gridlock interval. Specifically, it would not be reasonable to treat each six-month period, or each year, or each European

Parliament term, or each Commission term as a clear ‘period’ where all status quo from outside a set gridlock interval are likely to be brought into the interval in that period.

Instead, what we can assume is that the size of the gridlock interval in a particular period in the EU has an influence on the ability of the EU institutions to adopt policy at that time, all other things being equal. So, for simplicity, our dependent variable is the number of legislative acts adopted by the EU in a six-month period between July 1979 and June 2009.⁸ A six-month period is a more appropriate unit of analysis than a calendar year because of the six-monthly rotating presidency of the Council and because the European Parliament is elected in June every five years. We calculated the number of legislative acts adopted in each period from Frank Häge’s (2011) EUPOL dataset.⁹ And, as a robustness check we use König, Luetgert and Dannwolf’s (2006) alternative measure of EU legislative activity, which covers the 1984 to 2002 period.¹⁰

To calculate the size of the gridlock interval in a six-month period we proceeded as follows. First, we identified the main decision-making rules that apply in each six-month period, as described above and in Table 1. In most of these periods, several different rules are used at the same time. For example, during the period of the SEA, the cooperation and the consultation procedure were used for different policy issues, and under the period of the Maastricht Treaty, the codecision and consultation procedures were used for different policy issues. Also, in most periods, some legislation is adopted by unanimity in the Council while other legislation is adopted by qualified-majority voting, depending on the legislative procedure.

To test our model, though, we need to make an assumption about the main procedural rules used in each period, and we use the procedures as shown in Table 1. As a robustness check, we also test whether the results hold if we assume that cooperation rather than consultation was the main procedure during the period of the SEA. Nevertheless, by making this assumption, we

introduce a certain measurement error, which reduces the likelihood that we will find significant results.

Second, having identified the procedures used in each six-month period, which in turn determines the pivotal actors under each procedure, we then calculated the location of each of the actors. Here, again, we make a simplifying assumption, and assume that these actors are located on a left-right policy dimension. This is not an unreasonable simplification. There is some evidence that the left-right dimension is present in roll-call voting in the Council (e.g. Mattila 2004, Hagemann 2007), and considerable evidence that the left-right is the dominant dimension of roll-call voting in the European Parliament (e.g. Hix et al. 2006). Nevertheless, most scholars of EU politics assume that the EU policy-space is multi-dimensional, and there is considerable evidence of this (e.g. Hix and Høyland 2012). For example, expert interviews on the locations of actors in EU decision-making has found that actors' positions in the Council correlate with underlying pro/anti-integration preferences or EU budget contributions (e.g. Thomson et al. 2004, 2006, Thomson 2011; Zimmer et al. 2005).

However, we estimate actors' positions on a single left-right dimension for several reasons. Measuring the gridlock interval in more than one dimension is a non-trivial exercise, and would introduce a further level of complexity when interpreting the empirical results. Also, estimates of EU actors' positions on a pro-/anti-Europe dimension cover a shorter time period and are less reliable than estimates of actors' positions on a left-right dimension. And, most EU legislation since 1979 has related to the creation and regulation of the single market, which suggests that it is reasonable to assume that politicians' preferences on many EU policies (such as environmental standards or social standards) are influenced by their underlying left-right policy preferences. Yet, if EU policy-making is in fact multidimensional, assuming that it is un-

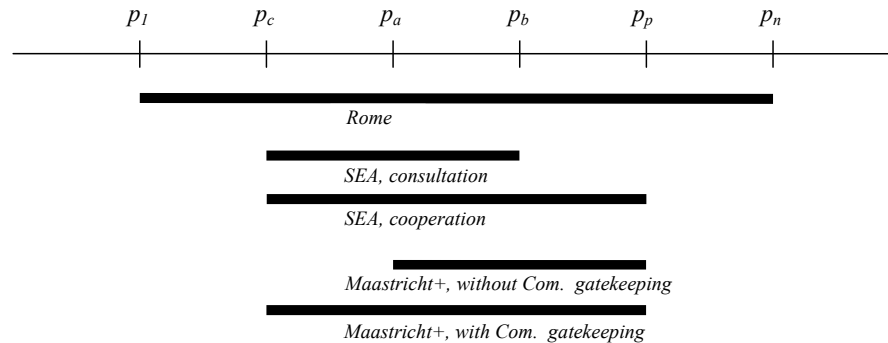
dimension introduces measurement error, which hence reduces the likelihood that we will find significant results by making this simplifying assumption.

To calculate the positions of actors on the left-right dimension we start with the information on party and government positions in Döring and Manow's (2010) ParlGov dataset.¹¹ Döring and Manow use 'expert judgment' data on the left-right policy locations of parties from a range of sources to estimate the left-right position of each political party in the EU across time on a 0 to 10 left-right scale (Castles and Mair 1984, Huber and Inglehart 1995, Ray 1999, Benoit and Laver 2006, Steenbergen and Marks 2007, Hooghe et al. 2010). From the positions of the political parties, the position of each government in the Council was calculated as the average position of the parties in a government, weighted by the share of the parliamentary seats of the parties in government. From these data we then calculated the location of the pivotal and extreme governments in the Council on the left-right dimension in each six-month period.

For the Commission, we assumed that each Commissioner was located at the same position on the left-right dimension as the national party to which he or she belonged. We do not believe that each Commissioner has exactly the same positions as his or her party. Nevertheless, because almost all Commissioners are career party politicians it is not unreasonable to assume that the left-right location of a Commissioner's national party is correlated with the Commissioner's position on this dimension. From these data we then worked out the location of the median Commissioner on the left-right dimension in each six-month period.

For the European Parliament, we assumed that each MEP has the same left-right position as his or her national party. We then calculated the median member of each political group in the European Parliament and then identified the median political group on the left-right dimension in each six-month period, and used this as the left-right location of a majority in the European Parliament in a particular period.

Figure 3. Illustration of the Gridlock Intervals



Key: p_l extreme left government in the Council
 p_c median Commissioner
 p_a left pivotal government in the Council
 p_b right pivotal government in the Council
 p_p median MEP
 p_n extreme right government in the Council

From the left-right positions of the key member states and the median members of the European Parliament and the Commission we then calculated the size of the gridlock interval in each six-month period between July 1979 and June 2009. For this we followed the inferences of the theoretical model. This is illustrated in Figure 3. So, for the period of the Rome Treaty, when legislation was adopted by consultation and unanimity, the gridlock interval was the set $[p_l, p_n]$ of policies between the extreme left and right governments.

For the period of the SEA, when we assume that most legislation was passed under the consultation and QMV, the gridlock interval was the set $[\min\{p_a, p_c\}, \max\{p_b, p_c\}]$ between the position of the left pivotal government in the Council or the Commission and the position of the right pivotal government in the Council or the Commission.¹² As a robustness check we also calculate gridlock intervals for the period of the SEA assuming that the cooperation procedure was the main decision-making procedure. Under this procedure the European Parliament had a veto right, and the gridlock interval was thus the set $[\min\{p_a, p_p, p_c\}, \max\{p_b, p_p, p_c\}]$ of policies

between the furthest left of three actors – the Commission, the European Parliament, and the left pivotal government in the Council – and the furthest right of three actors – the Commission, the European Parliament, and the right pivotal government. So, in the hypothetical example in Figure 3, the gridlock interval under the consultation procedure is the distance between p_c and p_b , and under the cooperation procedure is the distance between p_c and p_p .

For the period following the Maastricht Treaty, when we assume that most legislation was adopted by the codecision procedure, the gridlock interval was the set $[\min\{p_a, p_p\}, \max\{p_b, p_p\}]$ of policies between the left pivotal government in the Council or the European Parliament and the right pivotal government in the Council or the European Parliament. As a robustness check we also calculate gridlock intervals for the period after the Maastricht Treaty assuming that the Commission had gatekeeping power. In this case, the gridlock interval in this period was as under the cooperation procedure. So, in the hypothetical example in Figure 3, the gridlock interval under the codecision procedure without Commission gatekeeping is the distance between p_a and p_p , and under the codecision procedure with Commission gatekeeping is the distance between p_c and p_p .

Finally, in the statistical analysis we include a number of control variables that are often broached to influence the volume of legislation adopted by the EU in a given period. As discussed, we predict that these variables should not have an impact on legislative activity independently of their effects on the size of the gridlock interval. First, the *No. of member states* is simply a count of the number of EU member states in a six-month period, which ranges from 9 in July 1979 to 27 in June 2009.

Second, the variable *EP cycle* captures the point in the term of a European Parliament, where the first six-month period in a parliamentary term takes the value 1, the second six-month period takes the value 2, and so on until the final six-month period before a European Parliament

election which takes the value 10. This variable captures an effect identified by the European Parliament's research division, where there is an increase in legislative activity across a parliamentary term (European Parliament 2009). Fewer laws tend to be passed at the beginning of a parliamentary term because the process of forming political groups and committees delays the passage of legislation. Then, towards the end of a parliamentary term, the Commission and the Council try to get as many laws passed as possible before the European Parliament breaks for the election period and the formation of the new Parliament.

Third, the variable *Part year* captures whether a six-month period is the first half of a year (coded 0) or the second half of a year (coded 1). This variable accounts for the agenda of the EU, where annual budgetary issues, for example, are usually resolved in the second half of a year.

Fourth, the variable *Big state presidency* equals 1 if one of the larger member states (Germany, France, United Kingdom, Italy, or Spain) held the six-monthly rotating presidency of the Council, and 0 otherwise. This variable consequently controls for the possibility that the larger EU states are able to push through more legislation during their period at the helm of the Council than smaller states are.

Fifth, the variable *EU public support* captures the changing level of support for the EU over time. If the EU institutions respond to the 'policy mood' of the public, one might expect the EU to adopt more legislation when public support for the EU is higher and less legislation when public support is lower. Indeed, Franklin and Wlezian (1997) and Toshkov (2011) find a relationship between more public support for the EU and more legislative action by the EU, at least until the 1990s. This is similar to Eriksson et al.'s claim about the effect of the policy mood of the US public on the activities of the US Congress (Eriksson et al. 2006). For this variable we use the 'membership' question in the Eurobarometer (EB) survey from a particular period (Spring EBs for January-June, and Autumn EBs for July-December), and identify the (weighted)

percentage of people in the EU who regard their country's membership of the EU as a 'good thing' in the six-month period *before* the six-month period of observation – to take account of a likely 'lag' effect of public opinion on the EU institutions. We use the Mannheimer EB Trend File for all periods up to Spring 2002, and each separate EB datafile for all periods since August 2002.

Sixth, the variable *Before enlargement* captures the likely effect of the final six-month period before a new member state or group of member states joined the EU. This takes account of the fact that the oft-observed fact that EU tried to pass a lot of legislation before the two enlargements to the central and eastern European states in the 2000s, perhaps with the expectation by the Commission and some of the existing EU member states that some legislative acts might be more difficult to pass in an enlarged Council.

Finally, in some models we include dummy variables for each separate institutional period. The variable *Rome* captures the period of the Treaty of Rome, and is coded 1 from the start of the dataset until January-June 1987, and 0 thereafter. The variable *SEA* captures the period of the SEA, and is coded 1 from the July-December 1987 period until the July-December 1993 period, and 0 otherwise. And, the variable *Maastricht+* captures the effect of the entry into force of Maastricht Treaty, and is coded 1 from the January-June 1994 period until the end of the data, and 0 otherwise. These dummy variables account for the increasing policy competences of the EU as a result of each of these treaty reforms. Related to this, our theory predicts that legislative activity decreases over time, but that the deepening of the EU that results from the SEA and the Maastricht Treaty leads to an increase in EU legislation.

Descriptive statistics for all the variables are shown in Table A1 in the Appendix.

Results

To get a sense of some of the patterns in the data, Figure 4 shows the locations of the pivotal actors in the EU across our thirty-year period. The gap between the extreme left and right governments in the 1980s was considerable. After the entry into force of the SEA in 1987, the two relevant actors in the Council shifted closer together, because the identity of these actors changed from the two extreme governments to the two pivotal governments as a result of the change from unanimity to QMV. The pivotal governments in the Council then became very close together in the late 1990s, as a result of a shift to the left in a large number of member states. The gap between the two pivotal governments grew again in the early 2000s. The European Parliament and the Commission, meanwhile, were between the two pivotal governments in the Council in most periods, except between 1989 and 1996, when the European Parliament shifted considerably to the left, for short periods in 1995-96 and 2002-04, when the median Commissioner was further to the left than both pivotal governments, and between 1999 and 2000, when the European Parliament was briefly to the right of the pivotal governments in the Council.

How these shifting positions affected the size of the gridlock interval is illustrated in Figure 5, as shown by the red line (on the inverted left-hand scale). In general, the gridlock interval was larger under the Rome Treaty, much smaller under the SEA, and then shifted considerably during the period following the Maastricht Treaty, and was at its smallest between 1997 and 2000. As Figure 5 also shows, the volume of legislation adopted by the EU appears to broadly follow the changes in the gridlock interval sizes, as shown by the blue line (on the right-hand scale), although with much higher variation.

Figure 4. Locations of the Pivotal Actors in EU Decision-Making

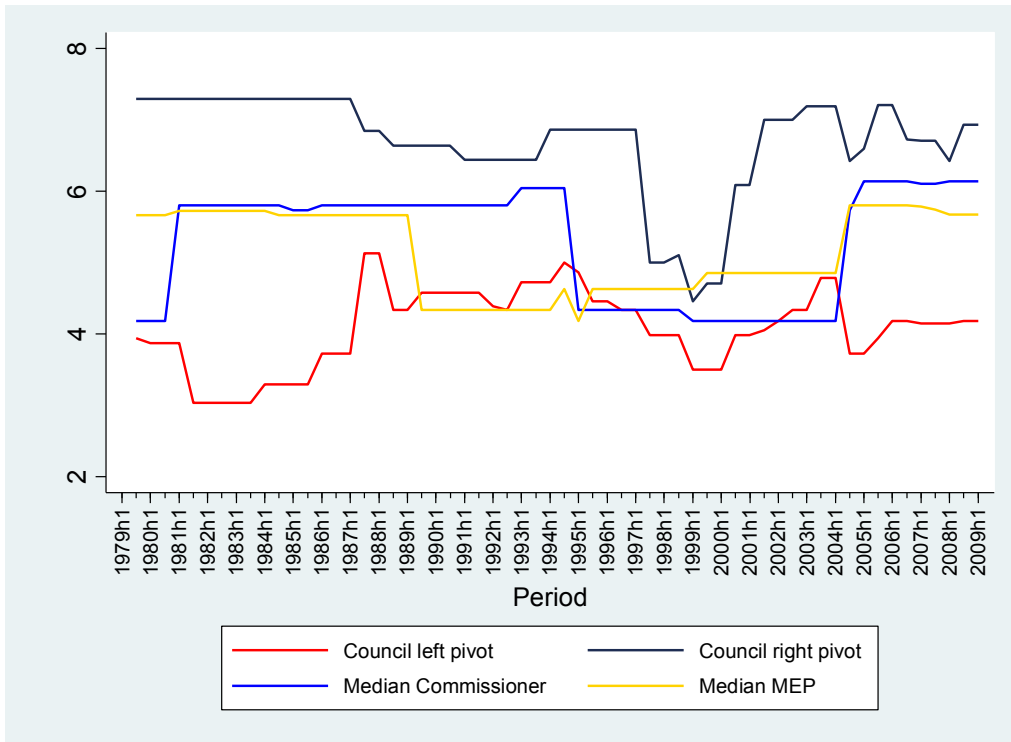


Figure 5. Gridlock Interval Size and Legislative Activity

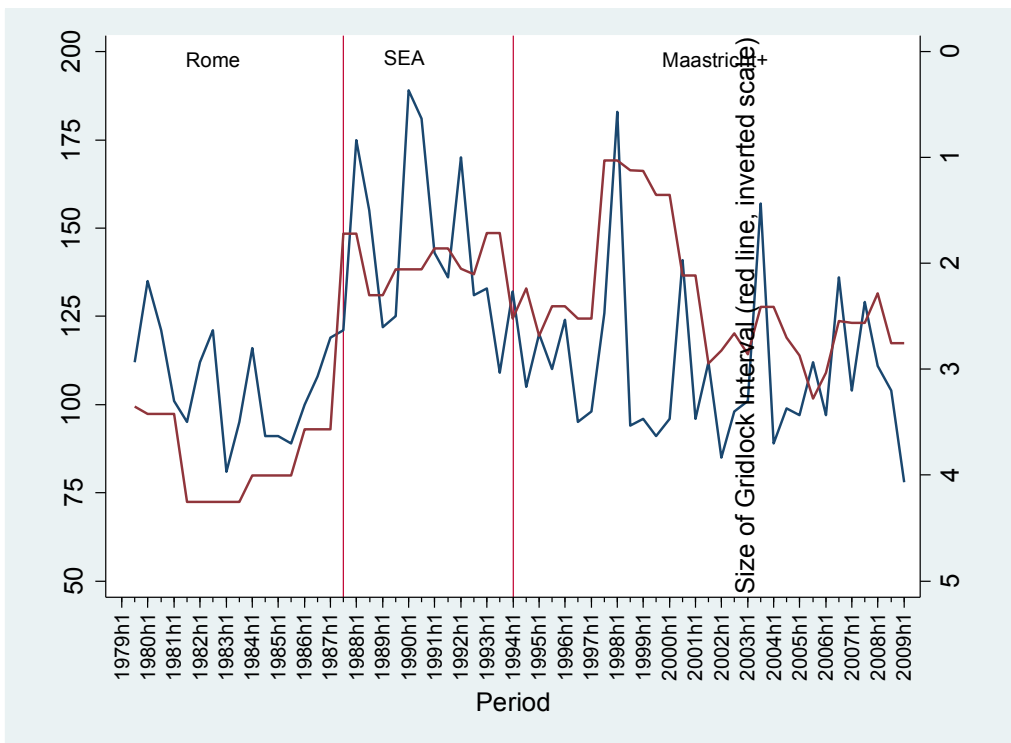


Table 2 presents the main results.¹³ The size of the gridlock interval is statistically significant in all model specifications. Specifically, the bigger the gridlock interval, the less legislation the EU has passed. In model 1, for example, the size of the gridlock interval alone explains about 18 per cent of the variance in the volume of legislation adopted by the EU. In addition, a one-unit increase in the size of the gridlock interval (measured on a 10-point scale) corresponds to 14 fewer pieces of legislation passed by the EU in a six-month period.

Table 2. Gridlock Interval and Number of Laws Adopted: Main Results

	(1)	(2)	(3)	(4)	(5)
	All periods	All periods	Excluding Rome period	Excluding SEA period	Excluding Maastricht+ period
Constant	152.69*** (10.70)	131.49*** (23.63)	160.20*** (18.32)	127.40*** (10.52)	192.72*** (12.18)
Gridlock interval	-14.24*** (3.83)	-8.44*** (5.96)	-17.81** (8.02)	-7.64** (3.53)	-23.82*** (3.85)
SEA		33.53** (12.07)			
Maastricht+		-2.77 (11.47)			
Observations	60	60	44	47	52
Adjusted R-squared	0.179	0.389	0.084	0.074	0.571

Note: Dependent variable = number of laws adopted by the EU in a six-month period, between 1979 and 2009. OLS regression. Standard errors in parentheses. In model 2, the Rome period is the baseline. * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.01$.

As model 2 shows, moreover, the size of the gridlock interval remains significant even when controlling for the changes to the decision-making rules, as represented by the *SEA* and *Maastricht+* variables. Adding these two dummy variables controls for all periods after the extension of QMV in the Single European Act. Even with these variables included, a larger gridlock interval leads to fewer legislative acts adopted. Also, as models 3, 4 and 5 show,

dropping one or other of the three institutional periods does not affect the general result. In other words, changes in the size of the gridlock interval *within* in each institutional period influences, as a result of the changing policy positions of the pivotal actors in the EU institutions, influences the volume of legislation adopted by the EU.

Table 3. Gridlock Interval and Number of Laws Adopted: With Controls

	(1)	(6)	(7a)	(7b)	(8)	(9)
	All periods (from Table 2)	All periods + controls	Excluding Rome period	Excluding Rome period	Excluding SEA period	Excluding Maastricht+ period
Constant	152.69*** (10.70)	61.30* (34.05)	45.28 (39.14)	30.44 (37.98)	93.63** (39.80)	184.21** (89.46)
Gridlock interval	-14.24*** (3.83)	-14.17*** (3.53)	-9.50 (7.96)	-14.82** (6.99)	-8.53** (4.27)	-24.59*** (6.59)
No. of member states		-0.77 (0.58)	-1.13 (0.85)		-0.10 (0.60)	-0.66 (5.83)
EP cycle		2.53** (1.08)	2.85** (1.35)	2.76* (1.37)	1.69 (1.15)	2.65* (1.54)
Part year		1.73 (6.22)	-0.62 (7.76)	-0.65 (7.84)	-0.54 (6.70)	9.80 (7.97)
Big state presidency		-7.76 (6.28)	-15.19* (7.89)	-14.19* (7.95)	-3.54 (6.72)	-2.24 (8.50)
EU public support		1.65*** (0.52)	1.92*** (0.61)	2.07*** (0.61)	0.55 (0.83)	-0.49 (0.94)
Before enlargement		15.74 (11.34)	20.04 (15.48)	20.82*** (15.65)	17.75 (10.80)	17.10 (17.32)
Observations	60	60	44	44	47	29
Adjusted R-squared	0.179	0.347	0.339	0.324	0.066	0.564

Note: Dependent variable = number of laws adopted by the EU in a six-month period, between 1979 and 2009. OLS regression. Standard errors in parentheses. * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.01$.

Table 3 shows the same models, but this time with the full set of control variables. Model 1, from Table 2, is included here for comparison. As model 6 shows, the size of the gridlock interval is still highly significant, and the magnitude of the effect hardly changes, despite controlling for a number of other factors. Dropping each period separately only affects the results

when the Rome period is dropped. However, if the *No. of member states* variable is excluded, the gridlock interval is then significant even when Rome is excluded. This is because the number of member states is moderately correlated (at 0.49) with the size of the gridlock interval after the move to QMV in 1987.

Regarding the other variables, the difference between the first and second halves of a year is not significant. Also, less legislation tended to be adopted when one of the big member states held the Council Presidency, although this is not significant in all models. In contrast, more laws have been adopted towards the end of a term of the European Parliament, at least since the SEA. Furthermore, since the SEA higher public support for the EU had correlated with more legislative action, as others have found.

Table 4. Robustness Checks

	No. of laws adopted using König et al. data (10)	Gridlock calculated using party manifestos data (11)	SEA period = cooperation (not consultation) (12)	Models with Commission gatekeeping power (13)	Gridlock only using pivotal states in the Council (14)	Dep. var. = no. of laws proposed by Commission (15)
Constant	36.11 (126.08)	75.60 (68.72)	57.90* (34.22)	63.81* (33.50)	52.84 (33.46)	59.95* (31.37)
Gridlock interval	-15.78** (7.82)	-0.85*** (0.29)	-14.05*** (3.69)	-14.75*** (3.47)	-13.45*** (3.43)	-11.93*** (3.26)
No. of member states	4.45 (4.97)	-2.48 (2.89)	-0.80 (0.59)	-0.79 (0.57)	-0.72 (0.58)	-0.83 (0.54)
EP cycle	2.54 (1.95)	3.07** (1.35)	2.52** (1.10)	2.68** (1.06)	2.63** (1.09)	-0.02 (1.00)
Part year	9.24 (10.70)	-4.25 (7.60)	1.61 (6.30)	1.76 (6.14)	1.15 (6.26)	-0.55 (5.75)
Big state presidency	1.41 (10.63)	-2.74 (7.55)	-8.20 (6.36)	-7.42 (6.20)	-8.37 (6.32)	6.36 (5.81)
EU public support	0.30 (1.06)	1.56** (0.65)	1.73*** (0.52)	1.63*** (0.51)	1.75*** (0.52)	1.82*** (0.48)
Before enlargement	59.32** (27.75)	10.27 (17.23)	15.24 (11.48)	17.56 (11.23)	15.00 (11.40)	-0.33 (10.49)
Observations	38	48	60	60	60	60
Adj. R-sq.	0.199	0.291	0.331	0.365	0.339	0.318

Note: Dependent variable = number of laws adopted by the EU in a six-month period, between 1979 and 2009. OLS regression. Standard errors in parentheses. * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.01$.

Table 4 shows a series of robustness checks. First, model 10 uses an alternative dependent variable, based on König et al.'s (2006) measure of the number of laws adopted by the EU between 1984 and 2002. The results are identical to the results using the Häge data, for the longer time period.

Second, model 11 uses an alternative measure for the key independent variable, based on estimates of left-right party positions from coding party manifestos rather than from expert judgments. The data for this variable were put together from the Döring and Manow (2010) ParlGov dataset and the Warntjen et al. (2008) dataset. The data covers the period from July 1979 until June 2003, and the gridlock interval scale goes from -100 on the left to +100 on the right. Once again, the results hold: a larger gridlock interval, as measured by party positions on a left-right scale, corresponds with fewer legislative acts.

Third, models 12 and 13 look at two alternative conceptions of the operation of the legislative rules. Model 12 assumes that most legislation in the period of the SEA was adopted by the cooperation procedure, while model 13 assumes that the Commission had a gatekeeping right under the codecision procedure. These different assumptions, which lead to slightly different ways of measuring the size of the gridlock intervals since the SEA, produce identical results to the main results in Tables 2 and 3.

Model 14 tests König's (2007) approach, which focuses only on the level of conflict in the Council, by assuming that the gridlock interval is the distance between the policy positions of the two pivotal governments in the Council. The basic result holds: that the size of the gridlock interval – in the Council only, this time – is negatively related to the number of legislative acts adopted in a six-month period. Interestingly, though, the magnitude of the coefficient on the

gridlock interval variable is smaller in model 14 than in models 6, 12, and 13, which are the alternative definitions of the gridlock interval which include the locations and powers of the European Parliament and/or Commission. This suggests that the preferences of the EU's supranational institutions do influence EU legislative outcomes over and above the preferences of the pivotal member states in the Council. This is an interesting result given the fact that the European Parliament and/or the Commission were located outside the interval between the two pivotal member states in the Council in only 19 of the 60 periods we look at, as Figure 1 shows. The results suggest, though, that this was enough to make a difference. Put another way, less legislation was adopted in the early 1990s because the median MEP was to the left of the pivotal governments in the Council (under QMV) than would have been the case had the European Parliament not had power under the codecision procedure.

Finally, model 15 looks at the effect of the gridlock interval on the volume of legislation proposed by the Commission. The result suggests that the Commission is strategic when considering legislative proposals, in that it proposed less (more) legislation when the gridlock interval was larger (smaller). However, the magnitude of the relationship between the size of the gridlock interval and the volume of legislation proposed is smaller than the magnitude of the relationship between the size of the gridlock interval and the volume of legislation adopted. Interestingly, though, the results on some of the control variables are different in this model than in the other models. Particularly, whereas the effect of the European Parliament election cycle influences the volume of legislation adopted it has no effect on the volume of legislation proposed. Also, whereas a big member state holding the Council Presidency has a *negative* effect on the volume of legislation *adopted*, a big member state holding the Council Presidency has a *positive* effect on the volume of legislation *proposed*, although these results are not statistically significant.

Conclusion

Intuitively one might think that enlargement of the EU from 6 to 27 member states and changes to the procedural rules which have added the European Parliament as a veto-player have made it more difficult for the EU to adopt policy. Our theory challenges these intuitions. As in other multi-actor legislative environments, such as the United States presidential system or in coalition governments in parliamentary systems, the ability to adopt legislation depends on the preferences of the key actors, the rules governing the relative powers of these actors, and the location of existing policies. These factors together determine the size of the set of policies that can be adopted, and conversely the size of the set of policies that *cannot* be adopted: the gridlock interval. In our approach, the number of actors or the decision-making rules only affect policy outcomes in so far as they influence the relative size of the gridlock interval.

In the EU context, for example, the shift from consultation to the codecision procedure after 1993 essentially involved replacing the Commission with the European Parliament as a pivotal actor, in addition to the two pivotal governments in the Council under QMV. Furthermore, in each of the three institutional periods of the EU – before 1987, between 1987 and 1993, and since 1993 – the size of the gridlock interval changed significantly as the relative preferences of the Commission, the European Parliament, and the pivotal member states changed. So, for example, the large volume of legislation adopted by the EU in the late 1980s was a result of the combined effect of the new institutional rules introduced by the SEA (such as QMV in the Council) and the relatively close positions of the pivotal actors in the institutions at that time. Put another way, the effect of Jacques Delors was at least in part due to the fortuitous institutional and political context during his Presidency of the Commission.

Our empirical analysis of EU legislative activity between 1979 and 2009 supports this perspective. We find compelling evidence that as the gridlock interval in the EU increased (decreased) from one six-month period to the next, the legislative activity of the EU decreased (increased). For example, a decline in the size of the gridlock interval in the late 1990s, as a result of a shift to the center-left across the EU at that time, corresponded to an increase in the legislative activity in the EU. Then, in the early 2000s, as the EU Council became more heterogeneous as center-right governments began to be elected and following the election of a center-right majority in the European Parliament, the gridlock interval increased and the legislative activity of the EU consequently declined.

Moreover, these results are perhaps surprising given the simplification assumptions we need to make in the empirical estimation – about the uni-dimensionality of EU politics and the use of a single main legislative procedure in each period. Given the inevitable errors in the measurement of our key independent variable which result from these simplifications, the magnitude of our key results are probably at the lower bound of the true relationship between gridlock size and EU legislative outputs.

Finally, our theory also suggests that the EU should adopt particular types of policies in particular periods. So, if the pivotal actors are close together on the center-left, as they were in the late 1990s, the EU should not only adopt more policy, but should also move existing policy status quos on a leftward direction. Conversely, if the pivotal actors are close together on the center-right, as they were in the late 2000s, the EU should once again adopt more policy than in the early 2000s when the gridlock interval was larger, but should also move existing policy status quos in a rightward direction. Hence, building on our theory and evidence, future research could look at how the substantive content of EU policy has changed over time in response to the size of the gridlock interval and the preferences of the key actors.

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Appendix

Table A1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Laws adopted (Häge)	60	114.95	28.95	70	183
Laws proposed (Häge)	60	116.55	26.19	78	189
Laws adopted (König et al.)	38	95.03	34.86	27	177
Gridlock interval (ParlGov)	60	2.65	0.89	1.02	4.25
Gridlock interval, SEA=cooperation (ParlGov)	60	2.68	0.87	1.02	4.25
Gridlock interval, Com=gatekeeper (ParlGov)	60	2.68	0.89	1.02	4.25
Gridlock interval, Council only (ParlGov)	60	2.62	0.91	0.96	4.25
Gridlock interval (party manifestos)	48	31.62	18.70	9.07	66.37
No. of member states	60	14.80	5.43	9	27
EP cycle	60	5.50	2.90	1	10
Part year	60	0.50	0.50	0	1
Big state presidency	60	0.38	0.49	0	1
EU public support	60	54.17	6.04	44.62	69.99
Before enlargement	60	0.08	0.28	0	1

Endnotes

¹ The gridlock interval is distinct from, but related to the winset of the status quo. The winset is the set of policies that can beat the status quo in the legislative process. It is empty if the status quo is in the gridlock interval. We focus on the gridlock interval rather than the winset, because we are interested in the level of legislative activity. If the location of the status quo is uniformly distributed over the policy space, the relative size of the gridlock interval measures for what proportion of status quos no legislative activity occurs. By contrast, the size of the winset does not give any indication of the extent of legislative activity, beyond whether there can be legislative activity for a specific status quo or not.

² Multi-dimensional models of policy making would lead to similar conclusions. Commission proposals would need to satisfy the same conditions to be adopted. The analysis would be more intricate, however, because the pivotal member states, MEPs and Commissioners would be different depending on the direction of policy change considered. There would thus be more relevant actors. The graphical representation of multi-dimensional models of policy making would also be more complicated. For the purposes of our analysis no additional insights would be gained, however.

³ The Commission typically tries to reach consensus, but uses simple majority rule if it fails to reach consensus. The prospect of a simple majority vote thus determines consensus agreements. The European Parliament uses absolute majority rule in some instances. A majority of its members then need to vote in favor rather than a mere majority of the voting members. Participation rates have increased over the years, however, and as this trend continues the absolute majority requirement becomes equivalent to a simple majority rule (e.g. Hix et al. 2007). For these reasons assuming simple majority voting in the Commission and European Parliament seems reasonable.

⁴ More precisely, a qualified majority currently consists of: (1) 255 out of 345 votes; (2) from a majority of member states; (3) representing at least 62 percent of EU population. For simplicity, we ignore conditions (2) and (3), but this has no effect on the conclusions. The member states receive votes based on population, with the largest states getting 29 votes and the smallest having three. Under the provisions of the 2009 Lisbon Treaty the qualified majority rule will change with the accession of Croatia to the EU in 2013, and again in 2014.

⁵ In reality codecision starts with a Commission proposal. We ignore the first steps of the procedure, however, as they are irrelevant for the purpose of determining the gridlock interval, because the European Parliament can disregard them when it proposes its joint text. Also, we assume that only the European Parliament can propose a joint text, whereas member states can do so too in reality. This assumption does not affect our conclusions either.

⁶ We assume that the Commission does not have gatekeeping rights throughout the paper, unless explicitly mentioned. If the Commission has gatekeeping rights it will chose an issue only if that choice increases its utility. Gridlock then occurs if there are no issues that lead to an increase in the Commission's utility, if chosen. If the Commission does not have gatekeeping rights, its best choice may be the issue that lowers its utility the least. For an analysis of gatekeeping rights, see Crombez, Groseclose and Krehbiel (2006).

⁷ The only difference is that a change in one member state's preferences may result in more than one pivotal or extreme member state having different preferences. For example, if the most leftist member state moves all the way to the other extreme, the preferences of both extreme member states are different after the change, and the preferences of both pivotal member states may be different as well.

⁸ In each 6-month period the EU adopts many laws under a variety of different legislative procedures. However, we decided to use a simple aggregate measure of the total number of legislative acts adopted as we felt that any decision regarding what to count or not to count as a legislative act adopted under the procedure we focus on in a particular period would be relatively arbitrary. As a result, because our

dependent variable is a ‘noisy’ indicator, our results are likely to be at the lower bound of statistical significance.

⁹ See <http://frankhaege.eu/data/eupol>.

¹⁰ The König et al. data is more complete than Häge’s data on issues like the voting procedure used in the Council on a particular legislative issue. However, this difference between the two datasets is not relevant for our research because we only use the datasets to measure the number of pieces of legislation adopted in each 6-month period.

¹¹ See <http://parlgov.org>.

¹² We ignore the most extreme member states under the SEA, because their location affects the gridlock interval under consultation and QMV only if the Commission is more extreme than them. According to all measures used, however, the Commission was located between them under the SEA.

¹³ We present OLS regression results for ease of interpretation of the results. As a robustness check, we also estimated the models in Tables 2, 3 and 4 with negative binomial regression, and the results are identical.