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Partisan Preferences and Political Institutions: Explaining Fiscal Retrenchment in the European Union

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Abstract

This paper endeavours to illuminate the political and institutional factors that can help explain differing degrees of fiscal retrenchment in European Union countries for the time period 1990-2001. Several variants of the partisan approach and the veto players framework are elucidated and applied to the question of budgetary consolidation. These elaborations yield five working hypotheses which are empirically tested using a time-series cross-section data set of 14 EU countries. The results lend support to the notion that partisan preferences and institutional veto players interact to shape budgetary retrenchment in a rather counterintuitive way.

Keywords: *Deficits, Fiscal Adjustment, Partisan Models, Veto Player Models, Binary Time-Series Cross-Section Models*

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1. Introduction

Since the economic downturn in 2001, major policy debates in Europe have repeatedly revolved around the question of fiscal deficits and their containment. Since then, several member countries of the European Union have been repeatedly in breach of the provisions of the Stability and Growth Pact (SGP)[2]. These violations have spawned not only domestic and EU-wide discussions on the pros and cons of the pact, but have also led to some revisions in 2005 that prolonged the list of mitigating circumstances (Alves and Alfonso 2007). The SGP clarifies and enshrines the fiscal convergence criteria originally laid out in the Maastricht Treaty (TEU) in 1992. It mandates that the fiscal deficit of every country participating in the European Monetary Union (EMU) shall not exceed 3% per year. Repeated breach of this stipulation can result in heavy fines of up to 0.5% of a country's GDP.

While public debates on the SGP usually focus on countries that have exceeded the deficit ceiling, it has to be pointed out that a great number of EU countries have been highly successful in reducing their deficits in the 1990s. For example, Finland and Great Britain suffered from budget deficits in excess of 7% of GDP in 1993, and both managed to turn these into surpluses by 1998. Other countries such as Germany or Portugal only moderately reduced their deficits in the middle of the 1990s and saw them rise again at the end of the decade. Hence, even though average deficits in the EU have decreased from over 6% of GDP in 1993 to almost zero in 2001, there is still a wide variety of outcomes. The existence of the Maastricht convergence criteria and the SGP alone cannot explain these different developments. Rather, instead of being an explanation in itself, the fiscal criteria of the TEU and SGP provide an external constraint[3] on the fiscal policies of member states. The strength of this restriction depended, of course, on a country's initial budgetary situation and its willingness to join the Eurozone at the target date. In conjunction with the recession that hit Europe at the beginning of the 1990s and which led to burgeoning deficits, they provided a strong motivation for all governments to attempt fiscal consolidation.

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[2] France, Germany, Portugal and, as it turned out recently, also Greece.

[3] Even though Denmark, Sweden and the UK are not members of the Eurozone and, thus, do not have to fear the sanctions of the SGP, they still do participate in the annual budgetary review procedure by the European Commission (EC) and would face (non-binding) recommendations by the EC if they were in breach of the SGP-provisions.

Therefore, the EU countries in the run-up to the introduction of the Euro provide a unique framework for asking which political and institutional factors determine a country's ability to reduce its fiscal deficit. This is the overall question that motivates this paper. Specifically, since much of the literature shows that economic variables, like real growth or the unemployment rate, alone do not suffice to explain divergent deficit outcomes (e.g. Alesina and Perotti 1995; Franzese 2002a; De Wolff 1998; Woo 2003), this paper tries to illuminate which political and institutional factors may account for the observed differences.

Note that the focus here is exclusively on determinants of deficit reduction[4]. While there is a large existing literature on the determinants of the *occurrence* of deficits and debts (e.g. Roubini and Sachs 1989a, b; De Haan and Sturm 1997; Sakamoto 2001), much less attention has been paid to the factors that influence the decision to *reduce* a fiscal deficit. Most studies rather deal with the economic consequences of fiscal adjustments (Alesina and Ardagna 1998; Alesina et.al. 2002) or their compositions (Ardagna 2004; Mulas-Granados 2003). One exception is a recent working paper by Alesina et.al. (2006) that empirically tests determinants of fiscal reform decisions.[5] The authors, however, do not explicitly focus on the EU but on developing and developed countries in general.

In analysing fiscal adjustment decisions, standard political economy models are briefly introduced, discussed and empirically tested using time-series cross-section data (TSCS) of 14 EU countries[6] for the time period 1990-2001. In particular, the implications of two approaches, the partisan theory and the veto-player approach, are discussed. These models look at the policy-oriented preferences of actors as well as the institutional constraints that actors are facing when making decisions. The results show that domestic political forces and institutional structures continue to play a decisive role in shaping budgetary outcomes despite the often heralded argument of policy convergence due to globalization.

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[4] As has been shown before (Alesina and Perotti 1997; Alesina, Perotti and Tavares 1998; Alesina and Ardagna 1998), successful deficit reduction was mainly achieved by slashing government expenditure, not so much by raising revenues. That is why I also speak of fiscal retrenchment when talking about deficit reduction.

[5] I would like to than an anonymous reviewer, for bringing this paper to my attention.

[6] Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, UK. Luxembourg has been and throughout will be omitted, for it is the only EU country that has almost no government debt, high fiscal surpluses throughout the period under consideration and negative interest payments.

The paper is organized as follows: Section 2 introduces to several partisan and veto player models, relating them to the question of fiscal consolidation. The third section introduces the relevant definitions and variables. Section 4 then proceeds to the empirical testing of the different models, employing time-series cross-section analyses. Section 5 reviews the analysis carried out in this paper, sums up the results and draws some conclusions.

2. Political Economy Explanations

This section develops the theoretical underpinnings of our partisan and institutional hypotheses. We start of with the simple partisan model by Hibbs which is the earliest model, and then proceed to the more recent advances.

2.1 Adaptive Partisan Models

The partisan theory has been originally formulated by Douglass Hibbs (1977) and was extended later on to incorporate rational expectations (Alesina, Roubini and Cohen 1997). It assumes that policy makers care about the policies to be implemented, which is a marked contrast to classical Downsian models, where politicians care solely about winning elections or maximizing vote shares. The model's point of departure is the observation that different socio-economic groups are differently affected by growth, unemployment and inflation. Hibbs (1977: 1468; 1987: p.87), presenting evidence for the U.S., shows that inflation actually benefits lower income groups and has an equalizing impact on income distribution. Unemployment, on the other hand, shifts income from the poorest two quintiles to the richest two quintiles. Hibbs (1977: 1470) also presents survey evidence which indicates that socio-economic groups indeed utter subjective preferences over inflation and unemployment that are broadly in line with their objective economic situations. As a result, low and medium wage earners prefer low unemployment (which is brought about by high economic growth) and accept higher inflation in return, whereas asset holders and people with above average wages prefer low inflation paid for by higher unemployment.

Now, common sense holds it that in the political arena low and medium income earners are usually represented by left-wing parties, while upper-middle and upper classes are broadly represented by right-wing parties. Analysing cross-national evidence for 12 Western countries as well as time-series evidence for the U.S. and the UK, Hibbs (1977: 1468) arrives at the conclusion "that the macroeconomic policies pursued by left- and right-wing governments are broadly in accordance with the objective economic interests and the subjective preferences of their class-defined core political constituencies."

In the partisan model the economy is characterized by an (old-fashioned) exploitable Phillips-curve relationship between inflation and unemployment.

$$y_t = \hat{y} + \pi_t - \pi_t^e \tag{1}$$

where y_t is the realized economic growth rate, $\hat{y}$ denotes the natural growth rate and $\pi_t - \pi_t^e$ is the difference between realized and expected inflation. Expectations are presumed to be adaptive such that $\pi_t^e = \pi_{t-1}$. Macroeconomic policies thus follow a simple logic: if a left party wins the election, then, in line with the preferences of its constituency, it will strive to lower the unemployment rate. The result will be stronger economic growth and higher inflation. If the right-wing party wins the next election, it will act in accordance with its voters' preferences for low inflation. The consequence will be a recession where unemployment grows and inflation falls. It is important to emphasize that Hibbs does not consider any shifts in the short-run Phillips-curve due to adjustments in expectations. According to his view, the short-run is long enough to cover the lenght of the legislative term.

2.2 Rational Partisan Models

Whereas the original formulation by Hibbs assumed adaptive preferences, more recent revisions of the theory incorporating rational expectations have been proposed by Alesina, Roubini and Cohen (1997). In their approach, voting is prospective based on a given set of information: $\pi_t^e = E(\pi_t \mid I_{t-1})$. Hence, voters not only anticipate the policies the respective parties would pursue once elected, but also the probability distribution that the left- or the right-wing party will win the election. Given these probabilities and the presumption that voters are rational and forward looking, the electorates' overall expected inflation for the time after the election is given by

$$\pi_t^e = p\pi^{L*} + (1-p)\pi^{R*} \tag{2}$$

where p is the probability that L wins and accordingly (1-p) denotes the probability that R wins the election; π^{L*} and π^{R*} capture the two parties' inflation policies. Hence, voters take the average of both parties' policies weighted by their respective probabilities of winning as their expected inflation rate that will occur after the election, i.e. this is an average expectation. If party L wins, realised inflation will be higher than expected. Therefore, unemployment will be temporarily lower. Given rational expectations, however, voters will adjust wage and credit contracts in the next period to the higher inflation rate, thus the short-run Phillips curve will shift upwards bringing the economy back to the long-run equilibrium unemployment rate. Overall inflation will have risen. The case of a right-wing electoral victory is reverse of that logic.

In such a rational model, partisan effects on growth and unemployment are only short-lived. Once expectations have adjusted, the only thing that distinguishes left- from right-wing parties is the level of inflation. Hence, the difference between the traditional Hibbs' model and the rational expectations model lies in the persistence of partisan effects. The latter approach predicts a much shorter duration of post-electoral expansions and recessions. Empirical studies have not yet decided, however, which of the two approaches describes reality more accurately. While Alesina, Roubini and Cohen (1997: 108, 174) find evidence in favour of the rational model, Franzese (2002b: 401-405) is more sceptical, arguing that in most cases the traditional model can explain observed patterns equally well.

In principle, a government can use monetary and/or fiscal policy to implement its partisan goals regarding output, inflation and unemployment. As the standard Mundell-Fleming model predicts and as several authors have investigated empirically (Boix 2000; Oatley 1999; Clark and Hallerberg 2000), in an open economy with free capital flows, the choice of the exchange rate regime becomes crucial in determining which policy instruments are still viable. Under fixed exchange rates, fiscal policy, (and thus increasing and lowering deficits) is still effective in managing the economy while under floating exchange rates it is not. The reverse is true for monetary policy.

That governments try to take advantage of these opportunities has been empirically corroborated. Boix (2000: 66) presents evidence for a sample of OCED nations covering the period 1960-1993, which shows that under unrestricted capital mobility countries with fixed exchange rate regimes had on average significantly higher fiscal deficits than countries with a floating currency. There is also some tentative empirical evidence that governments dominated by the left run larger deficits under fixed exchange rate regimes than right-wing governments (Boix 2000: 66; Oatley 1999: 1014).

Therefore one can presume that partisan fiscal policy is possible even under perfect capital mobility, given that exchange rates are fixed[7]. From this and from the prior discussion about the two partisan models, we can conclude that different parties once elected not only have different preferences, but we can also assume that they have, at least theoretically, the fiscal policy means available to pursue their ends. Therefore, we would expect left governments not only to pursue a more expansionary fiscal policy and to run bigger fiscal deficits, but also to reduce deficits less than their right-wing counterparts. The partisan approach is therefore perfectly amenable to our question of retrenchment decisions. Thus, the first working hypothesis is:

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[7] This applies to most of the countries and the time period considered in this paper. In particular, the Eurozone can be considered such a fixed exchange rate regime. However, three countries in our sample do not take part in the common currency area: Denmark, whose currency is pegged to the Euro via the European Exchange rate Mechanism (ERM), using a fluctuation band of 2,25%, and the UK and Sweden which have free floating exchange rates. Moreover, before the creation of the Euro in 1999, almost all Eurozone members had their exchange rates pegged within the ERM. After the ERM crisis in 1992-1993, the fluctuation bands were widened from 2,25% to 15%, and Italy and the UK left the system (for a lengthy discussion see Tsoukalis 1997: 152-162). Yet, even with the wide fluctuation bands, the system could still be considered a fixed exchange rate regime, since “the nine countries which remained in the ERM plus Austria which joined in January 1995 and Finland in October 1996 (followed by Italy one month later), chose not to take advantage of the wider margins of fluctuation in their monetary policy” (Tsoukalis 1997: 160). Furthermore, even though the UK and Sweden have flexible exchange rates, independent fiscal policies are still possible if central banks accommodate the government policy by increasing the money supply. One needs to remember that the Bank of England became independent only in 1997, whereas the Swedish Riksbank has a comparably low degree of independence (Daniels, Nourzad and van Hoose 2004). Also, the fact that a policy proves ineffective may not prevent a government from trying it.

H_1: *The higher the share of left-wing party seats in a government, the less likely is that government to engage in fiscal retrenchment.*

The reason is that even with an external constraint such as the SGP, the left's preference according to the partisan model is always to increase output as much as possible. The right-wing party, on the other hand, likes low inflation and is thus much more ready to retrench the budget. Note that we need not to distinguish between the traditional partisan model and the rational one because we are only concerned here with policy instruments, not with actual economic outcomes. Hence, the magnitude and persistence of the real economic effects of these fiscal policies are of no concern here.

An alternative partisan approach emphasizes the strategic role that debt may play in constraining a future government's latitude (Aghion and Bolton 1990; Alesina and Tabellini 1990; Milesi-Feretti and Spoalore 1994; Persson and Svensson 1989). The basic notion of this approach is that a right-wing government with rational foresight might expect electoral defeat. Given that it does not like the policies that a left-wing successor government could implement, it may choose to accumulate debt. This way it forces the future government to spend resources on servicing the debt instead of pursuing ideological goals such as stimulating the economy or increasing social spending. Persson and Svensson (1989: 341) emphasize that the logic of this argument is perfectly symmetric: "a 'stubborn' liberal would choose to borrow less if it knew if would be succeeded by a more conservative government." This way, the left government could lower debt servicing costs or even create additional funds if it leaves surpluses to the future government, thus increasing future government spending.

As a result, this model yields the rather counterintuitive prediction that the right is more likely to run deficits, while the left is more prone to reduce them. It follows as a second hypothesis:

H_2: *The higher the share of right-wing party seats in a government, the less likely is that government to engage in fiscal retrenchment.*

2.3 Veto Player Models

Having elucidated possible effects of partisan preferences, it is time to turn to the role of political institutions. The fundamental goal of veto player models (Tsebelis 1995: 2000) is to explain policy stability and policy change, employing the tools and intuition of spatial models of voting. The focus lies on the decision-making process of political actors. Strategic interaction between them is therefore largely neglected. Given a certain amount of information, this approach aims at enabling the researcher to predict specific legislative outcomes of the political process.

Veto players are all those actors that have the constitutionally assigned power to veto a policy proposal in the legislative process, may they be institutional (e.g. different chambers of parliament) or partisan (e.g. different parties in parliament or in government) in nature. Moreover, veto players can be individual (such as a president or a monolithic party controlling the parliament) or collective (such as a parliament or a government composed of several parties that have to determine their position by using some kind of decision rule). Other actors, like interest groups for instance, that have no formal veto power assigned to them by a country's constitution but do exhibit informal influence on the political process are excluded from the analysis.

The fundamental insight of this approach is that policy stability and policy change depend crucially on the size of the win set[8] and the core[9]. The bigger the size of the win set, the more feasible alternatives exist to the status quo, and consequently, the more likely is a policy change. On the other hand though, the bigger the size of the core, the more policy positions exist that cannot be changed, and hence the less likely is a policy change[10].

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[8] The win set of a given status quo z (written W(z)) contains all policy positions that are preferred by a majority (however defined) of actors in a pairwise voting procedure to the status quo.

[9] The core contains all policy positions that cannot be defeated employing a given decision-making rule. Note, that the core is only equal to the pareto set, if the employed decision-making procedure is unanimity (then, we speak of the unanimity core). Once, some other form of majority voting is used, the core is different from the pareto set. However, most of the time the unanimity

As a result, policy stability and policy change are functions of the sizes of the core and the winset.[11] These are affected in turn by the ideological distance between veto players, their number and their internal cohesion. However, of these three variables, only the number of veto players can be easily operationalized in empirical studies, since so far there is no data available that measures internal cohesion of parties. With respect to ideological distance, there are some studies (Cusack 1997; 1999; Franzese 2002a) that try to measure this variable by creating indices that capture the "Centre of Gravity" of parties. Yet, even these measures rely on expert judgements that try to order parties on a left-right scale. Given that exact distances become crucial for this analysis, it is doubtful that experts can exactly locate parties' positions. As a result, the number of veto players emerges as the only variable that can be readily observed by examining a country's constitution and the parties acting within the political system. Moreover, in his empirical analysis, Franzese (2002a, pp. 175-178) finds that once one controls for the number of veto players, their ideological distance becomes statistically insignificant.

Applying this framework to the question of fiscal retrenchment, we would expect that on average the likelihood of fiscal retrenchment decreases as the number of institutional veto players increases. Thus, the third hypothesis posits:

H_3: *The higher the number of institutional veto players, the less likely is a country to engage in fiscal retrenchment, and the smaller is its deficit reduction.*

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core will be used given that the very concept of a veto player entails that he cannot be overruled.

[10] Note, however, that the size of the win set and the core are "a necessary but not sufficient condition for proximity of the new policy with the status quo" (Tsebelis 2002: 32) Hence, even though a large win set makes a policy far away from the status quo possible, it does not rule out that the new policy represents only an incremental change from the status quo.

[11] Note that core and win set almost always behave equivalently, with the win set shrinking as the core expands and vice versa (Tsebelis 2002: 29).

It is worthwhile to emphasize that this hypothesis does not imply that countries with a high number of veto players do necessarily have high deficits and debts. Theoretically, many veto players could lead to low deficits because huge spending increases or tax cuts are prevented by the small win set that is likely to exist in a system with many veto players. But one could also arrive at the opposite prediction: a government may be forced to make huge side-payments to other veto players in order to achieve its goals. This reasoning could lead one to expect that many veto players are associated with high deficits. All what is claimed here is that an increasing number of veto players is associated with an increasing stability of the status quo (which is a budget deficit), and therefore make fiscal retrenchment harder to achieve.

2.4 War of Attrition Models

So far, we have considered the cabinet of a government to be a monolithic actor. However, very often the government is composed of more than one party, and agenda setting power in almost all cases rests with the cabinet. Thus, intra-governmental dynamics may have an impact on fiscal retrenchment. Starting with two seminal articles by Roubini and Sachs (1989a, b), a large empirical literature has emerged since the beginning of the 1990s, which examines the impact of government fractionalisation on deficits. Yet, the empirical findings have been mixed. Roubini and Sachs (1989a,b), who used an ordinal variable to distinguish between single- coalition- and minority governments, found that the higher the number of parties in government, the higher the deficits. Edin and Ohlsson (1991) insisted that this finding can be completely attributed to the effects of minority governments. Hence, only minority governments run particularly high deficits. Still other, more recent empirical analyses yielded no significant relationship between the number of government parties and fiscal deficits (de Haan and Sturm 1997; de Haan, Sturm and Beekhuis 1999; Sakamoto 2001). Also, most of these studies do not distinguish properly between levels of deficits and the process of fiscal retrenchment.

Deficit reduction has been explicitly analysed in a more theoretical literature that has also emerged at the beginning of the 1990s (Alesina and Drazen 1991; Spoalore 1993). These authors model intra-governmental negotiations between coalition partners over fiscal retrenchment as a “war of attrition”[12]. The basic notion is that every coalition party would like to shift the burden of fiscal adjustment onto the other parties’ constituencies. As a consequence, every coalition member has an incentive to block a solution and tries to wait the others out. Thus, no fiscal retrenchment takes place, although everyone agrees that it is necessary. This situation is only resolved if one or several partners give in and bear a disproportionate burden of the costs.

Alesina and Drazen (1991) develop a war of attrition model where two societal groups bargain over who has to bear the costs of fiscal consolidation in a small open economy. Yet, their analysis also holds for coalition partners instead of socio-economic groups, if we assume that different parties represent different groups. At time t, an exogenous shock leads to a fall in government revenues and thus a deficit. The deficit is financed in part $(1-\eta)$ by issuing debt and another fraction η is financed via distortionary taxation (such as an inflation tax for instance). Debt is therefore,

$$d(t) = (1-\eta)\,[rd(t)+g_{t-1}] \qquad (3)$$

where d denotes debt, r is the (constant) world interest rate and g_{t-1} describes the level of government spending before the exogenous shock occurs. Note that Alesina and Drazen (1991) assume that fiscal consolidation occurs through increases in taxation. However, their arguments and results also hold, if we presume that the deficit will be lowered by reducing government spending, which is the focus of this paper.[13] Consequently, a retrenchment takes place when expenditure is lowered to such an extent that the level of debt will remain constant, that is, deficits are reduced to zero[14]:

$$g_t = \tau_t - rd_t \qquad (4)$$

with subscript t denoting the time when the retrenchment takes place and τ being the tax rate which will remain unchanged. Now, the bargaining between the coalition members starts over who has to bear the expenditure cuts. More precisely, given that all parties have different constituencies, it needs to be decided which societal group will get less of future public spending.[15] The utility function u that each party i maximizes is

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[12] War of attrition models have been extensively used to describe conflict situations between labour unions and central banks (Backhus and Driffill 1985a, b; Tabellini 1988), as well as between fiscal and monetary policy makers (Tabellini 1987).

[13] As a result, in contrast to Alesina and Drazen, taxes remain constant while expenditures are the decisive variable here.

[14] The model assumes for simplicity that there is no economic growth.

$$u_{i,t} = c_{i,t} - y - K_{i,t} \qquad (5)$$

where c is private consumption, y captures income which is assumed to be constant throughout, and K is the cost for every party (and its followers) to live another instant in an economy that is in deficit. K differs between the parties and is given by

$$K_{i,t} = \varphi_i \tau_t \qquad (6)$$

in which φ captures the utility loss due to the distortionary taxation (the inflation tax) that is partially used to cover the deficit. As becomes clear from (6), the welfare costs of an economy in debt increases linearly with the level of taxes one has to pay. Once the fiscal retrenchment takes place, K_i=0.

Of course, the longer the coalition members wait to enact a retrenchment, the more the situation deteriorates and the higher are therefore the future costs of retrenchment. In addition, there are also political costs associated with fighting for a solution that favours ones own clientele. Now, every party will block a solution as long as the marginal benefit from waiting is higher than the marginal cost of distortions associated with the accumulation of debt. The marginal benefit is defined by the probability that the opponent(s) will give in very soon times the higher utility that is derived from winning the war of attrition, which is the smaller retrenchment costs the winner has to pay compared to the loser(s). It is important to stress that each party only knows its own costs of living in a state of accelerating debt. If everyone knew each others' costs of waiting, then everybody could calculate each others' time until concession takes place, and the war of attrition would not take place, since the "loser" would know from the beginning that he is the loser and would hence immediately give in to save the costs of living in a distorted economy.

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[15] If different constituencies are geographically defined, this could mean that some group will get less public goods, like new infrastructure, in the future. If they are defined in socio-economic terms, than this could mean that some will get less government transfers in the future.

In applying war of attrition models directly to coalition governments, Spoalore (1993) finds, that deficit reduction takes longer to be agreed on, the higher the number of coalition partners, whereas single-party governments react much quicker and more decisively. In the context of the model by Alesina and Drazen (1991), this is explained by the fact that a high number of parties increases the probability that there are at least two parties with high marginal benefits derived from waiting, being in a deadlock. This deadlock will only be resolved when all parties but one concede, with the last party holding out being the winner. Moreover, the more parties there are, the higher is fractionalisation, and thus the more unequal is the societal distribution of the costs of retrenchment. As explicated above, this inequity leads, ceteris paribus, to a longer delay in deficit reduction. Note, that we can also expect consolidation to be smaller than is prescribed by standard tax-smoothing arguments because the parties may be tempted to retrench less in order to lower the burden the loser(s) have to bear in an attempt to induce the loser(s) to concede faster. As a result, we can formulate the final hypothesis:

H_4: *The higher the number of parties that participate in government, the less likely a fiscal retrenchment will be.*

2.5 Interaction of Partisan and Institutional Factors

Even though most studies look at partisan and institutional factors separately, it seems nonetheless plausible to expect that they are conditioning each other. Indeed, Shepsle (1979) maintained in his seminal article that preferences and political institutions conspire to yield structure induced equilibria. Therefore, we are led to expect that, for example, a high fragmentation of decision making power could induce partisan actors to behave differently as compared to a situation where power is more concentrated. Hence, a great number of veto players will most likely necessitate some kind of compromise, thus moderating partisan behaviour. The precise effect will depend on whether hypothesis 1 or 2 holds true. But in general, we can state

H_5: *The presence of a high number of veto players augments the partisan behaviour of governments.*

Before we can proceed to the next section in which all hypotheses will be empirically tested, we reiterate them in table 1.

Table 1: Hypotheses

Hypothesis	**Theoretical explanation**
H_1: The higher the share of left-wing party seats in a government, the less likely is that government to engage in fiscal retrenchment.	traditional/rational partisan approach
H_2: The higher the share of right-wing party seats in a government, the less likely is that government to engage in fiscal retrenchment.	partisan / debt as a strategic variable
H_3: The higher the number of institutional veto players, the less likely is a country to engage in fiscal retrenchment, and the smaller is its deficit reduction.	veto players approach / spatial model
H_4: The higher the number of parties that participate in government, the less likely is a fiscal retrenchment.	veto players approach / war of attrition model
H_5: The presence of a high number of veto players augments the partisan behaviour of governments.	partisan ∗ veto players

3. Definition of Variables and Data

3.1 Definition and Composition of Retrenchment

Before we can proceed, it is necessary to point out how "retrenchment" is measured and defined in the following empirical analyses. Two indicators are of importance: First, "government outlays" is the annual expenditure of a country measured in per cent of GDP. Second, to measure the annual (general)[16] government fiscal deficit, i.e. the difference between revenues and expenditures, the "structural" ("cyclically-adjusted") deficit[17] is used.

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[16] Using the general government deficit (as opposed to central government figures) provides a more complete picture, since it also includes sub-national de-

As a number of studies point out, for a retrenchment to be long lasting, i.e. one that is not reversed within a few years, the fiscal adjustment has to "rely mostly (or exclusively) on spending cuts (…), [whereas] short-lived adjustments rely mostly on revenue increases" (Alesina, Perotti and Tavares 1998: 200). Given these insights, a rather strict definition of what constitutes a lasting fiscal retrenchment in the EU countries between 1990 and 2001 will be employed. In doing so, a combination of both the structural deficit and government outlays will be used. The former is needed to control for business cycle movements, the latter is used to detect those consolidations that are exclusively based on increases in revenues. The first definition thus stipulates: *Only those instances in which a country reduced its structural deficit and/or its government outlays (keeping the other variable constant) for at least 5 years in a row shall count as a period of real fiscal retrenchment.* [18]

Applying this definition to our EU-14 data for the period 1990-2001 yields the results shown in table 2. The table indicates which countries underwent periods of retrenchment. Furthermore, the third column shows by how much the cyclically adjusted government balance has improved during the period of retrenchment, whereas column 4 depicts by how much government outlays were reduced. By definition, if the improvement in the structural balance is higher than the reduction in government outlays, then the difference between the two indicate an increase in government revenues. For instance, the fact that Belgium's and Italy's reductions in government expenditure were much lower then their increases in their gov-

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ficits as well as deficits in social security funds. Hence, differences in welfare state arrangements and the constitutional structure (federal vs. unitary) are accounted for.

[17] This indicator estimates the fiscal deficit that would prevail if the economy was producing at its full-employment output. This way, the influence of the business cycle can be removed from the data, and revenue losses and expenditure hikes due to recessions are thus accounted for. One has to note, however, that this indicator is not without its problems. In order to calculate the structural deficit, one has to estimate the potential growth rate of an economy which is not directly observable and thus in its calculation very dependent on the assumptions made and the methodology employed.

[18] Of course, this kind of definition rules out the possibility for opportunistic political business cycles (Nordhaus 1975; Rogoff 1990). Hence, their impact is not being tested here.

ernment balances indicates that these two countries consolidated their budgets partly via measures that increased revenues. Conversely, a higher reduction in total outlays than in the overall deficit indicates decreasing government revenues.

Table 2: Periods of Fiscal Retrenchment; Definition I

Country	**Period of Retrenchment**	**Change of the Cyclically Adjusted Government Balance (in % GDP)**	**Change in Total Government Outlays (in % GDP)**
Belgium	1992-1998	+8,2	-0,4
Denmark	1994-2001	+5,1	-7,4
Finland	1996-2001	+4,7	-9,8
Ireland	1991-2000	+5,3	-12
Italy	1991-1999	+10,8	-7,2
Netherlands	1995-2000	+6,4	-11,1
Spain	1995-2001	+4,7	-5
Sweden	1995-2001	+10,4	-9,7
United Kingdom	1995-2000	+6,2	-5,2

Source: OECD, own calculations

As a control and robustness check, a second definition will be introduced which is related to the one used by Alesina and Ardagna (1998: 469).[19] Here, we can speak of a fiscal retrenchment, if in one year a country reduced its cyclically adjusted deficit at least by 2% of GDP, or if it reduced its deficit by at least 1,5% of GDP in two consecutive years. The results of this definition are shown in table 3.

Table 3: Periods of Fiscal Retrenchment; Definition II

Country	**Period of Retrenchment**	**Change of the Cyclically Adjusted Government Balance (in % GDP)**	**Change in Total Government Outlays (in % GDP)**
Austria	1996-1997	+3	-2,7
Belgium	1993-1994	+4,5	+2,1
Denmark	1999	+2,1	-1,5
Finland	2000	+3,4	-3

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[19] Note that Alesina and Ardagna (1998) use the cyclically adjusted *primary* balance however.

Greece	1991	+4	-3,6
Greece	1994	+3,6	-2,1
Greece	1996-1998	+7,3	-3,8
Italy	1992-1993	+3,3	+1,5
Italy	1997	+4,2	-2,8
Netherlands	1991	+2,9	+0,5
Netherlands	1996	+2,2	-7,1
Portugal	1997	+3,8	+0,5
Sweden	1995-1996	+7,1	-4,9
Sweden	1998	+2,6	-2,5
Sweden	2001	+2	-0,3
United Kingdom	1997-1998	+3,9	-3,2

Source: OECD, own calculations

As can be easily seen, the two tables exhibit some striking differences. The reason is that the second definition is both less and more strict at the same time. It is stricter because it demands a higher annual deficit reduction than Definition I. Therefore, Ireland and Spain are no longer part of the table, since they lowered their deficits by smaller annual amounts. Another result of this stipulation is that in all countries the number of consecutive years of consolidation is now two at most. On the other hand, Definition II is less strict in that it also counts fiscal retrenchments that lasted for only one or two years, and which could therefore have been reversed the next year. As a result, countries like Austria, Greece and Portugal now figure as successful cases of consolidation.

But still, Definition I seems superior to the second one. For one, the latter does rule out important cases like Ireland, which pursued a gradual approach to retrenchment which lasted throughout the 1990s. Yet, Ireland is a prime example of substantial deficit reduction. Indeed, this approach misses many years of gradual retrenchment in all countries. This seems particularly problematic because, as is visible from the data, most states actually pursued such a gradual approach over several years. Furthermore, Definition II also considers very short cases, such as Austria and Portugal, whose efforts were quickly reversed in subsequent years. Therefore, they should not be counted as cases of successful budgetary retrenchment. For all these reasons, emphasis will be put on the first definition, which seems more capable of accounting for the gradual character of budgetary consolidation observed in Europe.

In sum, according to Definition I, nine out of fourteen EU countries were able to engage in lasting fiscal retrenchment during the 1990s and most did so by reducing expenditures. As has been shown before (See Alesina and Perotti 1997; Alesina and Ardagna 1998; Alesina, Perotti and Tavares 1998) this was mainly achieved by reducing social transfers and government consumption.

3.2 Data and Variables

The TSCS data consists of 14 EU countries, observed during the time period from 1990-2001. The dependent variable is a dummy which assumes the value "1", if a given country engaged in fiscal retrenchment in a given year, while the dummy assumes the value "0" for all those years in which no deficit reduction took place. For our two definitions, there are thus two dummies, *d1* and *d2*. This is the most straightforward way to test for the factors that facilitate or inhibit retrenchment as it is defined in this paper.

To control for the economic determinants of fiscal retrenchment, a number of economic variables is employed. The structural general government balance of the previous year $balance_{t-1}$ captures the extent to which current deficit decisions are related to past performance and path dependencies. It also gives an indication the short term budgetary pressures.[20] When deciding on future fiscal policy, decision makers form a prior belief on what the future economic growth rate is likely to be. It is obvious that higher than expected growth may lead to a stronger than intended fiscal consolidation.[21] Therefore, to account for the amount of unexpected economic growth, *unexgdp* is introduced into the model. This variable simply subtracts the period mean from the growth rate in a given year. Although this may not be fully satisfactory, it is in the spirit of the prior literature (see e.g. Roubini and Sachs 1989a, b, who use a related measure). In order to capture the budgetary effects of changing unemployment dynamics, the variable *ue* is used which measures the (OECD-) standardized unemployment rate.

In the period under consideration, all countries faced the constraint of the Maastricht fiscal convergence criterion. Hence, it might be possible that all retrenchment decisions were only driven by the magic three percent target, ruling out that preferences or institutions had any influence. To control for this possibility, a dummy variable named *maastricht* is introduced which is "1", if in a given year a country remained below the three per cent deficit target, and "0" otherwise. Since EU-14 nations have a common trade regime and do not differ very much in their demographics, factors such as the old-age dependency ratio or trade openness used in part of the literature (Franzese 2002a; Woo 2003) are neglected. This is also warranted by the rather brief time span considered here, which is too short to reflect the impact of changing demographics on social expenditures.

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[20] Since this variable is highly correlated with the overall debt burden, the latter is not used in the empirical model, even though it is often (maybe spuriously) employed in the literature.

[21] Remember that in Definition I, we not only use the structural deficit, which should be unaffected by that, but also government outlays which will be affected by changes in GDP.

To test for partisan effects, a variable called *govcomp* is employed. It indicates whether a given government is dominated by the left or the right. It ranges from 1 (for hegemony of the right) to 5 (indicating a left hegemony), while 3 indicates a stalemate.

Several variables are used to capture the effects of veto players on deficits. First of all, the additive indicator *power* measures the impact of the federal structure of a country, the number of parliamentary chambers, and the regime type (presidential or parliamentarian). The indicator ranges from 0 to 6, and increases with the concentration of power in a country. This means that the more veto players there are, the lower is this indicator's value. Hence, the highest value can be found in countries with a unitary structure, no president and a unicameral legislature. A value of "0", on the other hand, would be found in a country that has a pure presidential system, a federal structure and two chambers of parliament.[22] Given its distribution and to facilitate interpretation, the variable *power* is transformed into a dummy variable named *veto*, which assumes "0" if there are only few veto players (*power* > 4), and takes on the value "1" if there are many veto players (*power* ≤ 4). Second, in order to test hypothesis number 4, the variable *nop*, which denotes the number of parties participating in government, is included.

4. Testing the Hypotheses

4.1 *Specification and Estimation of the Binary Models*

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[22] Note that there is no such case in the sample employed here because a pure presidential system does not exist in any EU-14 country.

In this section, the above derived hypotheses are empirically tested by employing time-series cross-section (TSCS) analyses of a data set comprising 14 EU countries for the period 1990-2001. Therefore, logit regression models will be estimated with the dependent variable being a dummy that simply denotes whether a country in a given year engaged in successful budgetary consolidation or not.

However, as is well known and widely discussed in the literature (see for example Beck and Katz 1995a; Beck 2001a), there are a number pitfalls when analysing TSCS data. To deal with the problem of panel heteroskedasticity, White robust standard errors (White 1980) are calculated. A more serious but often overlooked problem (Beck et.al. 1998) is possible temporal dependence in the observations. The Wooldridge test for autocorrelation (Wooldridge 2002) clearly indicates the presence of first-order autocorrelation. As a remedy, the solution proposed by Beck et.al. (1998) is being followed. They note that binary TSCS models are equivalent to grouped duration data models. As a result, they propose to include temporal dummies, which in this case are analogous to the baseline hazards in the grouped duration case and which capture the time that has passed since the last event. A likelihood ratio test clearly confirms the need for the inclusion of these dummies.

The binary model itself is a logit model (i.e. ε is distributed logistically):

$$\Pr(D=1|X)= \frac{\exp(X)}{1+\exp(X)} \qquad (7)$$

where $\Pr(D=1|X)$ is the conditional probability of a lasting fiscal retrenchment D with D=1 if there is a lasting retrenchment in a given year and country, and D=0 if there is not. The conditional probability is given by

$$X = \beta_0 + \beta_1 balance_{t-1} + \beta_2 unexgdp_{i,t} + \beta_3 ue_{i,} + \beta_4 maatricht_{i,t} + \beta_5 NOP_{i,t} + \beta_6 govcomp_{i,t} + \beta_7 veto_{i,t} + \beta_8 govcomp_{i,t} * veto_{i,t} + k_{t-t0}$$

$$i=1,\ldots,14;\ t=1,\ldots,12 \qquad (8)$$

The subscripts i and t denote the country and the year, while k denotes the included temporal dummies. Most importantly, besides the above described variables there is also a multiplicative interaction term, which captures the conjecture that partisan behaviour is conditional upon the institutional structure of the political system. In other words, political parties and governments can only pursue their goals if the political system gives them the freedom to do so. As discussed before, a high number of veto players may augment partisan policies and may force actors to accept compromises.

4.2 Estimation Results

The results of the estimations are presented in tables 4 and 5. Of the economic variables, the one year lag of the cyclically adjusted balance is highly significant and negative across all specifications. This is what one would expect: higher fiscal deficits (negative balances) make retrenchment more likely. The unexpected growth variable, *unexgdp*, is positive and significant only for the first retrenchment definition, suggesting that higher than anticipated economic growth facilitates retrenchment. However, this effect can not be discerned when looking at Definition II results in table 5. A similar pattern can be found when looking at the impact of the unemployment rate. For Definition I, the effect is positive and significant, while for Definition II it is negative but insignificant. Again, for the former definition this would imply that higher unemployment raises the pressure (probably because of mounting social expenditures) to engage in budgetary consolidation, and thereby to act procyclical. The dummy *maastricht* remains insignificant throughout.

Table 4: Logit Regression Results – First Definition of Retrenchment

	Model 1	Model 2	Model 3	Model 4
balance$_{t-1}$	-0.235*** (0.087)	-0.239** (0.095)	-0.258*** (0.081)	-0.262*** (0.098)
unexgdp	0.181 (0.152)	0 .293** (0.138)	0.150 (0.153)	0.296 (0.145)
ue	0.207** (0.101)	0.228** (0.090)	0.274** (0.124)	0.285** (0.117)

maastricht	-1.207 (0.836)	-1.087 (0.924)	-1.188 (0.850)	-0.629 (1.022)
nop		0.214 (0.276)		0.445 (0.274)
govcomp		0.515*** (0.190)		0.653** (0.271)
veto			-1.145 (0.780)	0.954 (1.613)
govcomp*veto				-1.011* (0.584)
$\frac{\Delta^2 F(u)}{\Delta\, govcomp\, \Delta\, veto}$				-0.102
N	114	114	114	114
McFadden’s R^2	0.403	0.449	0.421	0.481

Notes: TSCS logit regression coefficients with robust standard errors in parentheses; $\frac{\Delta^2 F(u)}{\Delta\, govcomp\, \Delta\, veto}$ are marginal effects with standard errors in parentheses; temporal dummies are not shown.

***Significant at the 0.01 level, **Significant at the 0.05 level, *Significant at the 0.1 level

Source: own calculations.

Table 5: Logit Regression Results – Second Definition of Retrenchment

	Model 1	Model 2	Model 3	Model 4
balance $_{t-1}$	-0.347*** (0.126)	-0.427** (0.095)	-0.360*** (0.122)	-0.478*** (0.143)
unexgdp	0.031 (0.093)	0 .012 (0.197)	-0.021 (0.101)	-0.014 (0.207)
ue	-0.092 (0.076)	-0.100 (0.084)	-0.056 (0.078)	-0.097 (0.101)
maastricht	-0.202 (0.743)	0.187 (0.877)	-0.319 (0.729)	0.053 (0.882)

nop		-0.003		0.053
		(0.186)		(0.228)
govcomp		1.227***		1.490***
		(0.305)		(0.374)
veto			-0.849	3.318**
			(0.602)	(1.335)
govcomp*veto				-1.271**
				(0.607)
$\frac{\Delta^2 F(u)}{\Delta\, govcomp\, \Delta\, veto}$				-0.103
N	154	154	154	154
McFadden's R^2	0.190	0.365	0.206	0.481

Notes: TSCS logit regression coefficients with robust standard errors in parentheses; $\frac{\Delta^2 F(u)}{\Delta\, govcomp\, \Delta\, veto}$ are marginal effects with standard errors in parentheses; temporal dummies are not shown.

***Significant at the 0.01 level, **Significant at the 0.05 level, *Significant at the 0.1 level

Source: own calculations.

Looking at the veto players variables, we observe that the number of government parties *nop* is positive but hardly significant. The results thus do not seem to lend support to hypothesis 4. Looking at column 2 in each table, we find that *govcomp* is positive and significant across all specifications. Given the coding of this variable, this means that the greater the strength of the left in government, the more likely are we to observe a fiscal adjustment programme.[23] A result that also holds, when we employ a conditional fixed effects logit model (see table A1 in the appendix).

Greatest interest is probably spawned by the interaction term and its constitutive parts (column 4), which can only be interpreted in a conditional way (Brambor et.al. 2006). Besides the beta-coefficients, I also calculated the average marginal effects.[24] When looking at the partisan variable *govcomp*, we find that, it turns out to be positive and significant for the cases that *veto* assumes the value "0". This means that if there are only few veto players (i.e. political fragmentation is low), then the higher the share of the left in government, the more likely is a fiscal adjustment to be enacted. This holds for both definitions of retrenchment. However, as the negative signs of the coefficients and marginal effects of the interaction term show, once there are many veto players (*veto*=1), an increase in left-wing party strength in government actually *reduces* the probability of a fiscal adjustment. In other words, when power is concentrated parties behave in line with the strategic debt hypothesis of Persson and Svensson (1989), yet when power is highly dispersed, then parties behave according to the traditional partisan models.

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[23] Of course, I would have liked to also specify a full fixed effects model that also includes the interaction term. However, given that *veto* does not change within units, an fixed effects estimation is not possible because the variable would be perfectly collinear with the unit effects (see table 7 in Annex A).

Note that these results are by and large robust to alternative specifications, such as introducing further economic variables. In particular, they are upheld when controlling for the possible effect of falling interest rates due to the Maastricht convergence process. Introducing the lagged overall debt level and long term interest rates does not alter my findings.[25]

In sum, when we look at the results and compare them with our hypotheses, we naturally find that the empirical world is much more complicated than the neat world of political economy models. Yet, although the kind of definition for a lasting retrenchment has an impact on the effects of some of the economic control variables, the findings for the partisan variable and their interaction with the institutional variable are astoundingly stable across specifications. Indeed, the coefficients and marginal effects of the interaction term are very similar.

The findings are somewhat counterintuitive but seem to suggest that if there are only few veto players, the political leaning of legislators does not seem to matter statistically. However, with many veto players present, left- and right wing parties seem to behave in line with

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[24] The marginal effects in this case are the discrete double difference $\frac{\Delta^2 F(u)}{\Delta\, govcomp\, \Delta\, veto}$ (see Ai and Norton (2004) for how to calculate marginal effects in nonlinear models).

[25] I am indebted to an anonymous reviewer for suggesting to test this specification as well.

Hypothesis 2, which is based on the debt-as-strategic-variable argument.

5. Summary and Conclusions

This paper endeavoured to illuminate the political and institutional factors that can help explain the occurrence of lasting fiscal retrenchment in European Union countries for the time period 1990-2001. It departed from the assumption of rational decision makers that are policy-oriented and constrained in their choices and actions by the institutional environment. Applying standard partisan models, it was hypothesized that the success of fiscal retrenchment depends on the ideological orientation of the political parties in power. A second set of hypotheses was derived from the veto players approach. They predicted that successful fiscal consolidation was a function of the number of institutional veto players and the size of the governing coalition. Moreover, it was hypothesized that partisan behaviour should be conditioned by institutional factors.

The empirical analyses found that the lagged structural budget balance is the most important economic predictor of retrenchment in our EU sample. With respect to the institutional and partisan variables, it turned out that the partisan behaviour of governments is augmented by the structure of the political decision-making system. With few veto players, i.e. a high power concentration, left-wing government seemed more likely to bring about a lasting fiscal retrenchment in our sample, thus lending credibility to the model by Persson and Svensson (1989). Hence, governments dominated by the left are more likely to engage in fiscal retrenchment. However, in systems with many veto players, that is, when political power is dispersed among many actors that can veto each others' actions, the right is more prone to consolidate the budget, whereas the left is less likely to do so. Hypothesis 5 can thus be supported. As a result, the decision between Hypothesis 1 and 2 seems to depend on the prevailing institutional context.

These results are surprising and revealing at the same time. However, they also raise more questions. Most importantly, a sound theoretical model is still missing, which could potentially explain the sign switching of the partisan variable once interacted with the fragmentation of political power. Unfortunately, there is also still more work to be done on the empirical front. The data is still highly aggregated and the measure for partisanship is somewhat crude. What is needed is more micro-founded data. Information on individual party positions regarding fiscal policy could not only help to better categorize them regarding their partisan affiliation but may also allow to calculate win-sets and cores for different countries which would dramatically improve our ability to explain fiscal policy behaviour across countries and time. Of course, there exit data sets like for example the aforementioned "Centre of Gravity" indicator (Cusack 1999). The problem with this and other measures though, is that they all rely on expert judgements that try to assign values to parties on certain dimensions. While it is not disputed here that one can easily distinguish parties regarding their overall ideology and policy goals, it seems highly dubious to attempt to exactly locate their position in a n-dimensional policy space.

Despite all these disclaimers and drawbacks, the results nevertheless have relevance in the policy realm. The findings clearly indicate that successful fiscal retrenchment depends on the preferences of partisan actors and how they are constrained by the institutional environment. It clearly emerged that the external Maastricht convergence criterion alone was not a sufficient condition to bring about successful consolidation. As a result, this paper clearly contradicts Rotte and Zimmermann (1998) who argued that the consolidation taking place during the run-up to the euro introduction, can be completely attributed to the external constraint of the Maastricht treaty and its scape-goat effect, as well as the positive attitudes towards Europe by the voters.

Thus, it is not surprising that the Stability and Growth Pact was and is bound to fail because it cannot alter national domestic policy preferences sufficiently and does not affect domestic decision making processes. To be more effective, the SGP would need to stronger influence the preferences of policy actors by, for example, mandating harsh fines that are automatic and not subject to bargaining and log-rolling in the ECOFIN. National stability pacts could also help in that respect. The ultimate solution, of course, would be to significantly reduce member states authority over fiscal policy, which currently is not a politically (and perhaps economically) viable option.

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Appendix

Table A1: Conditional Fixed Effects Logit Model (excluding institutional variables)

	Model 1	Model 2
	d1	d2
balance $_{t-1}$	-0.689*** (0.235)	-0.462** (0.198)
unexgdp	0.357* (0.218)	0.034 (0.376)
ue	0.044 (0.155)	0.153 (0.257)
nop	0.041 (0.529)	-1.863 (1.469)
maastricht	-0.832 (1.093)	1.316 (1.579)
govcomp	1.038*** (0.472)	1.338* (0.776)
N	96	119
McFadden’s Adj. R^2	0.646	0.671

Notes: Conditional fixed effects logit regression, coefficients with standard errors in parentheses; ***Significant at the 0.01 level, **Significant at the 0.05 level, *Significant at the 0.1 level. Source: own calculations.

Table A2: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
d1	163	0.404908	0.4923869	0	1
d4	163	0.1411043	0.3492019	0	1
balance $_{t-1}$	162	-2.669753	3.555646	-15.7	5.7
unexgdp	163	-2.49E-09	2.39617	-8.938037	8.861963
ue	163	8.396994	3.340194	1.7	18.8
nop	163	2.496933	1.572818	1	8
govcomp	163	2.748466	1.353293	1	5
maastricht	163	0.4294479	0.4965228	0	1

Table A3: Correlation Matrix

	d1	d2	balance $_{t-1}$	unexgdp	ue	nop	gov-comp	maast-richt
d1	1							
d2	0.1666	1						
balance $_{t-1}$	0.0652	-0.3318	1					
unexgdp	0.3034	-0.028	0.1914	1				
ue	0.216	-0.0349	-0.0922	0.058	1			
nop	0.2157	-0.0956	0.0858	-0.0278	0.1539	1		
govcomp	0.1365	0.3113	0.1088	0.0606	-0.1681	-0.0363	1	
maastricht	-0.1146	0.145	-0.5745	-0.3084	0.2311	-0.0079	-0.2513	1

Table A4: Definition of Variables and Data Sources

Variable	**Definition**	**Source**
balance $_{t-1}$	Cyclically adjusted general government balance of the previous year (in % GDP)	SourceOECD
unexgdp	Unexpected real economic rate of growth; calculated by substracting the period mean from the real GDP growth rate in a given year	SourceOECD, own calculations
ue	OECD standardized unemployment rate	SourceOECD
maastricht	Dummy variable; (nominal) fiscal deficit ≤ 3% then maastricht=0, (nomial) fiscal deficit > 3%, then maastricht=1	SourceOECD, own calculations
govcomp	1: hegmony of right-wing parties, 2: dominace of right-wing parties, 3: stalemate between left and right, 4: dominance of left-wing parties, 5: Hegemony of left-wing parties	Klaus Armingeon et. al. (2002); own adjustments
nop	number of parties in government	Thomas Cusack, Lutz Engelhardt, The PGL File Collection; European Journal of Political Research, various is-

		sues
veto	High or low number of veto players veto=1, if power ≤4 veto=0, if power >4	Derived from the variable power
power	Additive index called consisting of three components, that are each coded from 0-3, according to increasing power cocentration (and decreasing number of veto players): 1. Chamber System (bicameral System=0, weak bicameral system=1, unicameral system=2) 2. Regime Type (pure presidential=0, 2emi-presidential =1, parliamentarian=2) 3. Federal-Unitary Index (federal system, subsidiary in character=0, federal system, unitary character=1, unitary system=2)	“Democratic Systems“ data set. WZB.

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