The Political Economy of Fiscal Retrenchment in the European Union: An Empirical Investigation

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Abstract

Driven by the desire to fulfil the Maastricht fiscal criteria and pressed by mounting debt burdens that have accumulated over the past 30 years, a majority of EU-15 countries attempted to reduce their budget deficits during the 1990s. Yet, these nations have exhibited remarkable differences in their ability to pursue such retrenchment policies. This paper endeavours to illuminate the the empirical relevance of political and institutional factors that can help explain those 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 applied to the question of budgetary consolidation. These elaborations yield four 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 a low number of institutional veto players increases likelihood and extent of a budgetary retrenchment.

Keywords: Deficits, Fiscal Adjustment, Partisan Theory, Veto Players, Time-Series Cross-Section Models

***JEL–Classification*:** C23, D72, D78, H62

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1. Introduction

Since the economic downturn in 2001, major policy debates in Europe have revolved, once again, around the question of fiscal deficits. Several member countries of the European Union[1] have been repeatedly in breach of the provisions of the Stability and Growth Pact (SGP) which spawned not only domestic but also EU-wide discussions on the pros and cons of the pact. The SGP clarifies and enshrines the fiscal convergence criteria originally laid out in the Treaty of Maastricht (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 are about to exceed the deficit ceiling, it has to be pointed out that a great number of EU countries have been highly successful in reducing their deficits. 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 SGP alone cannot explain these different developments. Rather, instead of being an explanation in itself, the fiscal criteria of the TEU and SGP provide a common external constraint[2] on the fiscal policies of member states. 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.

Therefore, the EU countries in the 1990s and at the beginning of the new millennium provide a unique framework for asking which political and institutional factors determine a country's ability to reduce its 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[3]. In particular, the implications of two approaches, the partisan theory and the veto-player approach, are

[1] France, Germany and Portugal

[2] 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. Hence I assume similar constraints and motivations for these countries.

[3] 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.

discussed[4] and empirically tested using a time-series cross-section data set of 14 EU countries[5] for the time period 1990-2001. These analyses show that domestic political forces and institutional structures continue to play a decisive role in shaping budgetary outcomes. Hence, from this political economy perspective the Stability and Growth Pact is bound to fail, for in its current shape, it cannot undo nor sufficiently alter these national constraints and incentives.

The paper is organized as follows: Section 2 introduces several versions of the partisan theory and the veto players framework, applying them to the question of fiscal consolidation. The 3rd Section then proceeds to the empirical testing of the two theories, employing time-series cross-section analyses. Section 4 reviews the analysis carried out in this paper, sums up the results and draws some conclusions regarding the future of the SGP.

2. Political Economy Explanations for Retrenchment

2.1. Partisan Approaches

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) . The model's point of departure is the observation that different socio-economic groups are differently affected by growth, unemployment and inflation. Hibbs (1977, p. 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, p. 1470) presents survey evidence which indicates that these 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 the average wages prefer low inflation paid for by higher unemployment.

Now, 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. As Franzese (2002b, p. 391) summarizes, all in all the left can be associated with a preference for low unemployment, even income distribution, bigger government spending and a greater acceptance of inflation. Right-wing parties, on the other hand, prefer low

[4] There is also a rich theoretical and empirical literature that analyses the impact of budget institutions (that is, the procedural rules governing formulation, approval and implementation of the budget) on deficits. Even though the importance of such institutions is not disputed, they will not be analysed here. This approach has already received a rather extensive treatment in the literature. See Hallerberg and von Hagen (1997), Ferejohn and Krehbiel (1987), Weingast, Shepsle and Johnsen (1981). For a survey see Drazen (2000).

[5] 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. Therefore, it is an extreme outlier that does not add to the analysis.

taxes, low government spending, balanced budgets and trade off higher unemployment for lower inflation. Analysing cross-national evidence for 12 Western countries as well as time-series evidence for the U.S. and the UK, Hibbs (1977, p.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 this model the economy is characterized by a Phillips-curve relationship between inflation and unemployment, governments are assumed to be actually capable of exploiting the trade-off between these two variables. Therefore, if a left party wins the election, then it will in line with the preferences of its constituency 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. Hence, in his view the short-run is long enough to last for the terms the same party is in office.

Whereas the original formulation by Hibbs assumed adaptive prefrences, more recent revisions of the theory incorporated rational expectations (Alesina, Roubini and Cohen (1997). 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 variant lies in the persistence of partisan effects, with the latter approach predicting 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, p. 108, 174) find evidence that favour the rational model, Franzese (2002b, p. 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. A large body of literature, emerging in the 1990s, argued however, that given a continuing strong integration of capital markets and unconstrained capital mobility, partisan fiscal and monetary policy was no longer feasible (e.g. Garret and Lange 1991; Kurzer 1993; Scharpf 1991; Simmons 1998). Yet, this conclusion seems theoretically dubious. Rather, as the Mundell-Fleming model predicts and as several authors have pointed out recently (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 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, p. 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, p. 66; Oatley 1999, p. 1014).

Therefore we can conclude that partisan fiscal policy is possible even under perfect capital mobility, given that exchange rates are fixed[6]. 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 can expect left governments to pursue a more expansionary fiscal policy, to run bigger fiscal deficits and to reduce deficits less than their right-wing counterpart. Thus, the first hypothesis is:

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 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 economic outcomes. Hence, the extent and duration 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 its ideological goals such as stimulating the economy or increasing social spending. Persson and Svensson (1989, p. 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

[6] 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, p. 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, p. 160).

create additional funds if it leaves surpluses to the future government, thus increasing future government spending.[7]

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.*

2.2 Veto Players Approaches

Having elucidated possible effects of partisan preferences, it is time to turn to the role of political institutions. The fundamental goal of the veto players theory (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. Hence, this approach assumes policy oriented actors. Strategic interaction between them is largely neglected, however. In contrast to other approaches such as political business cycle models, this theory presumes therefore that policy makers care about implementing their desired policies, but not to win elections per se. 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. They can be either institutional (e.g. different chambers of parliament, federal states) 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

[7] Note that if the right uses these surpluses for tax cuts, then this is also in the interest of the left, since it means an expansionary fiscal policy that furthers the left-wing party's goals regarding growth an employment.
[8]"The win set of a given status quo z (written W(z)) is the set of alternatives that will garner more votes than z in a pairwise majority rule election" (Hinich and Munger 1997, p. 62). Put simply, the win set contains all policy positions that are preferred by a majority (however defined) of actors 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 core will be used given that the very concept of a veto player entails that he cannot be overruled.

positions exist that cannot be changed, and hence the less likely is a policy change[10]. As a result, policy stability and policy change are functions of the sizes of the core and the win set.[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.[12] 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.[13] Therefore, these indices remain to a considerable extent subjective and, thus, disputable. 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. For these reasons, only the number of veto players will be henceforth considered as an explanatory variable for explaining fiscal retrenchment.

Applying this framework to the question of fiscal retrenchment, we can conclude that *on average* we should expect that 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.*

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 may 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. However, all what is claimed here is that an increasing number of veto players is associated with an increasing

[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, p.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, p. 29).

[12] The "Centre of Gravity" index captures a party's position C_i on a left-right scale and its relative numerical strength T_i in parliament or government. Formally (Cusack 1999, p.473),

$$G = \sum_{i=1}^{n} T_i C_i$$

[13] It is not disputed here, that one can easily distinguish parties concerning their overall ideology and policy goals. What seems highly dubious is to exactly locate their position in a n-dimensional policy space.

stability of the status quo (which is a budget deficit), and therefore makes fiscal retrenchment harder to achieve.

So far, we have considered the government a monolithic actor. However, very often the government is composed of more than one party. 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). However, most of these studies are largely empirical and 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"[14]. 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 members 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, whereas the winner, the one who did not give in, has to bear the smallest share.

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

[14] War of attrition models have been extensively used to describe conflict situations between labour unions and central banks (Backus and Driffill 1985a, b; Tabellini 1988), as well as between fiscal and monetary policy makers (Sargent 1986; Tabellini 1987).

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.

Within this framework, Alesina and Drazen (1991) derive a number of parameters that determine how long retrenchment is delayed in a political system. First of all, the more unequal the distribution of fiscal costs associated with deficit reduction, the longer the delay. The reason is that the benefit from waiting, as defined above, increases if the utility from being the "winner" is significantly larger than the utility derived from giving in. The authors interpret the degree of inequity in the distribution of costs as a proxy for political cohesion in a country. Therefore, they conclude that the more unequal this distribution is, the less cohesive is a society. Furthermore, consolidation will also be longer postponed, the lower the distortionary costs of accumulating debts are. Also, in applying a war of attrition model 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 tax-smoothing 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 is a fiscal retrenchment.*

Modelling intra-governmental conflict over retrenchment as a war of attrition is pretty much in line with the veto players approach. Indeed, parties could be modelled in spatial terms as partisan veto players. However, the war of attrition model, in contrast to the veto players theory by Tsebelis, is dynamic. As time elapses and the cost of accumulating debts rises, actors start shifting their positions. Yet, employing a spatial approach shows that the losers may not need to surrender completely but only move towards the winner's bliss point in order to create a non-empty win-set. This stands in contrast to this model which leaves no room for political compromise, but rather assumes total surrender by the loser(s). As a result, both variants of the veto players approach are not mutually exclusive but rather complementary. The war of attrition model adds a dynamic element to the analysis, while the spatial veto players theorem is able to explain the occurrence of political compromise.

Before we proceed to the next section which empirically tests all hypotheses, 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

3. Testing the Hypotheses

In this section, the hypotheses derived above will be empirically tested employing time-series cross-section (TSCS) analyses of a data set comprising 14 EU countries[15] for the period from 1990-2001. However, since pooled data carry a number of caveats and difficulties (see Beck and Katz 1995; Beck 2001; Plümper, Manow and Troeger 2003), estimation and specification issues have to be discussed thoroughly.

3.1 Definitions and Composition of Retrenchment

Before we can proceed, it is necessary to point out how "retrenchment" is measured and defined in the following. Two indicators are of importance for the further analysis: 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.

As a number of studies point out, for a retrenchment to be lasting, i.e. one that is not reversed within a few years, the fiscal adjustment has to "rely mostly (or exclusively) on spending cuts (…), short-lived adjustments rely mostly on revenue increases" (Alesina, Perotti and Tavares 1998, p. 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

[15] Luxembourg is still excluded.

[16] Using the general government deficit (as opposed to central government figures) provides a more complete picture, since it also includes sub-national deficits 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 (see de Brouwer 1998).

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.

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 government 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, a second definition will be introduced which is related to the one used by Alesina and Ardagna (1998, p. 469). 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[18]. The results of this definition are shown in table 3.

As can be 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

[18] The only difference is that Alesina and Ardagna (1998) use the cyclically adjusted *primary* balance.

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.

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
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

Note that in none of the two definitions France or Germany are considered to have undergone periods of fiscal 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[19], this was mainly achieved by reducing social transfers and government consumption.

[19] See Alesina and Perotti 1997; Alesina and Ardagna 1998; Alesina, Perotti and Tavares 1998

3.2. Data and Variables

The data has been moulded into two data sets. There is one TSCS set that contains all countries for the whole period under consideration. The other one is also TSCS data, but it only contains those countries and those periods in which retrenchment according to the first definition given in section 2.2 actually took place; in other words, it represents pooled retrenchment periods (see tables 1). The reason for doing so is that the complete TSCS data set may conceal effects of variables that are particularly important only in times of fiscal consolidation. For instance, as has been argued above, veto players may inhibit deficit reduction but their effects on deficit levels are less clear. Thus, pooling only those years in which retrenchment actually took place, might be useful in order to distinguish between the dynamics of deficit expansion and deficit reduction.

Now, it is time to specify dependent and independent variables.[20] The dependent variable will be the annual change in government expenditures, named "ΔOUTLAYS". A second variable to be tested is a dummy. This dummy 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 instances that do not belong to a period of deficit reduction. 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. Partly following the empirical literature (Alesina, Roubini and Cohen 1997; de Haan and Sturm 1997; Franzese 2002a; Sakamoto 2001; Woo 2003), five economic controls are introduced: real GDP growth: "GDP"; the standardized (according to OECD definition) unemployment rate: "UE"; tax revenues in percent of GDP: "TAX"; the overall debt level in percent of GDP: "DEBT"; and the long-term interest rate: "LTERMINT". Growth, unemployment and tax revenue capture the effects of recessions and booms on deficits. The debt level and the interest rate, on the other hand, control for the debt servicing costs. 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 expenditure.

To test for partisan effects on deficits, several variables are employed. First of all, "GOVLEFT", "GOVCENTER" and "GOVRIGHT" are the respective percentage shares of left-, centre- and right-wing parties in government.[21] Also, their respective share in parliament is captured by "PLEFT", "PCENTER" and "PRIGHT".

[20] A full list of definitions and sources of the variables is provided in the annex.

[21] Centrist (Christian democratic) parties pose a particular problem, since it is not clear whether they should be lumped together with the left or the right regarding fiscal policy preferences. Wilensky (1981) assumes the former because centrist parties have a history of supporting welfare state expansion.

Two 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 six, 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.[22] 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.[23] Second, in order to test hypothesis number 4, the variable "NOP", which denotes the number of parties in government, is included.

3.3 Time-Series Cross-Section Analyses

3.2.1 Some Notes on Methodology

TSCS data represent repeated observations of a fixed number of units[24]. In other words, they are pooled time-series data. This offers a number of advantages to the researcher, since TSCS allow to study dynamic adjustment processes and thereby to control for unit heterogeneity. They also make more efficient use of the data and provide more degrees of freedom, allowing richer specification of models (Baltagi 200; p. 5-8). Despite these advantages, however, OLS analysis of TSCS data is far more problematic than in purely cross-sectional regressions. The reason is that pooled data sets commonly violate the OLS assumptions about the error process. In particular, TSCS errors often exhibit panel heteroskedasticity, contemporaneous correlation and serial correlation.

In order to deal with the problems of heteroskedacticity and contemporaneous correlation we specify an OLS regression with Panel Corrected Standard Errors (PCSE)[25] as suggested in the literature (Beck 2001, Beck and Katz 1997). In addition, to cope with autocorrelation, an error correction model is used which entails a Prais-Winston transformation of the data, employing a common first-order autoregressive process AR(1). For theoretical reasons though, fixed effects are not included. The reason is twofold. First, the variable "POWER" is time-invariant and would thus be controlled away by fixed effects. Second, since a number of partisan variables are of particular interest here, we have to assume that level effects matter. It simply makes no sense to assume that a 10 percent increase in the share of left parties in government has the same effect in a country, where the left already holds 70 percent of cabinet seats and in a country where it had previously no seats. But this is exactly what fixed effects do, since they abstract from differences in

[22] For specifics about the coding see the annex.
[23] 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.
[24] It is important to distinguish between panel data and TSCS. Panel data usually consist of a large number of sampled units observed only a few times, with the focus lying on making general inferences for a larger population, that is, units are interchangeable. In TSCS, units are smaller in number, fixed and observed over longer periods of time. Also, these specific units are of interest in themselves and are usually not merely a sample (Beck 2001, p. 273).
[25] For specifics about the estimation of PCSE see Beck and Katz (1995, p. 638).

levels. Note that these considerations apply only to the continuous dependent variable model. There will also be a binary dependent variable model, which uses a logit regression approach. The logit model is based on different assumptions than OLS. Yet, serially correlated errors also pose a huge problem for these kinds of models (Beck, Katz and Tucker 1998). Therefore, a common AR(1) error correction model will also be used here, together with robust standard errors.

3.2.2 Specification and Estimation of the Models

In this sub-section, it will be estimated which factors caused fiscal retrenchment. This will be done in two steps. First, the full TSCS data set will be analysed in order to find the variables that determined whether or not a country underwent a period of fiscal retrenchment, as it has been defined in 2.2. Therefore, a logit regression model will be estimated with the dependent variable being a dummy that simply denotes whether a country in a given year engaged in budgetary consolidation. It has been shown in section 2.1 that deficit reduction in the EU-14 nations was mainly achieved via cuts in government outlays. Thus, we are interested in isolating those factors that were especially conducive for slashing public expenditures. To do this, a sub-sample of the TSCS data, that pools only all those years in which retrenchment actually took place, is examined. The dependent variable is the change in government outlays "ΔOUTLAYS". Note that because only retrenchment periods are included in this TSCS subset, all observations on this variable are by definition either stable or negative. Hence, this variable only captures the extent of reductions in government outlays. This is very useful, since we are solely interested in the determinants of retrenchment, whereas fiscal expansion may very well be driven by different political and institutional factors that could potential blur the clarity of the results.[26]

The specification of the logit model is the following:

$$P(D1=1) = \beta_0 + \beta_1 GDP_{i,t} + \beta_2 OUTLAYS_{i,t} + \beta_3 DEBT_{i,t} + \beta_4 TAX_{i,t} + \beta_5 LTERMINT_{i,t} + \beta_6 UE_{i,t} + \beta_7 GOVLEFT_{i,t} + \beta_8 GOVRIGHT_{i,t} + \beta_9 GOVCENTER_{i,t} + \beta_{10} PLEFT_{i,t} + \beta_{11} PRIGHT_{i,t} + \beta_{12} PCENTER_{i,t} + \beta_{14} NOP_{i,t} + \beta_{15} POWER_{i,t}$$
$$i=1,\ldots,14; \qquad t=1,\ldots,12$$

The subscripts i and t denote the country and the year. The results of this model are presented in table 4. As can be seen, the model is estimated employing our first definition (D1) of fiscal retrenchment in the second column, while showing the findings for definition II in the third column.

The main emphasis of the discussion will be laid on the results of the first definition. Of the economic variables, tax revenues, the overall debt burden and the level of long term interest rates turn out to be significant. In particular, the latter two have a positive sign, which means that the higher the debt burden and the higher interest rates are, the greater is

[26] Indeed, focusing on social expenditure Pierson (1996, p. 144) shows that welfare state expansion and welfare state retrenchment follow different logics, which entails "that variables crucial to understanding the former process are of limited use for analyzing the latter one."

the likelihood that a country engaged in fiscal retrenchment. This is what one would expect, since debt servicing costs cannot increase indefinitely and sooner or later adjustment has to take place. "TAX", on the other hand is negatively related to the binary dependent variable, which leads to the conclusion that the higher the tax revenues are, the lower is the likelihood of retrenchment. The reason is that higher revenues, given that the level of outlays is controlled for in this specification, should come along with lower deficits, and thus a less urgent need to consolidate. GDP growth, the level of public expenditure and the unemployment rate do not exert a significant influence here.

Turning our attention to the partisan factors, we immediately observe that no matter which kind of party we look at, an increase in the share of that party in government invariably reduces the probability of deficit reduction. Interestingly, the coefficients (and standard errors) for centre- and right wing governments are almost equal in size. This could be interpreted that, once in government, right and centrist parties pursue rather equal policies. For left parties, the coefficient is of similar magnitude, yet the statistical significance is lower. The negative coefficient runs counter to hypothesis number four, which expected that a high fractionalisation of government inhibits consolidation. But the results suggest that as the power of one party increases in government, the probability that it reduces deficits falls. However, the negative signs for left- and right-wing parties are actually in line with H1 and H2. The stronger the left is, the more rigorous it can be in following its preferences, which entails to pursue rather loose fiscal policies. The negative sign for the right lends credibility to the Persson/Svensson model. The right will use its increasing strength to accumulate debts in order to constrain future left governments' latitudes. The explanation for why increasing centrist governments' strength prevents retrenchment depends on whether their preferences are more in line with those of the left or the right.

The respective share of parties in parliament is of less importance, being insignificant for left and right parties, and moderately significant for centrist parties in Definition 1 model. Interestingly, the coefficient is positive, which could mean that an increasing number of centrist parliamentarians increase the likelihood of fiscal consolidation. Yet, since in model 2 this variable is far from significant, we can conclude that this result is not robust across definitions and therefore should not be taken at face value. The reason that these variables do not seem to matter is probably that the partisan effect is already captured by the government variables. Given that we have parliamentarian regimes in all EU countries, parliamentary majorities are mostly synonymous with governments and do thus not exert a distinct influence. For these reasons, we exclude these variables in the OLS regressions below.

Looking at the two veto players variables, we observe that "NOP" is not significant, which once more rejects the weak government hypothesis (H4). Yet, "POWER" emerges with a very strong, positive coefficient which is highly significant. This clearly supports H3. The higher the power concentration of a political system, that is, the less veto actors there are, the bigger the likelihood that fiscal retrenchment will take place.

Table 4: Logit Regression of the Full TSCS Sample

	Model 1 D1	Model 2 D2
GDP	0.143	-0.163
	(0.316)	(0.142)
OUTLAYS	-0.144	-0.037
	(0.201)	(0.164)
DEBT	0.121***	0.059***
	(0.037)	(0.017)
TAX	-0.292***	0.020
	(0.101)	(0.252)
LTERMINT	0.821**	-0.199
	(0.435)	(0.385)
UE	-0.004	-0.555***
	(0.267)	(0.211)
GOVLEFT	-0.255**	-0.085
	(0.109)	(0.055)
GOVRIGHT	-0.278***	-0.043
	(0.056)	(0.035)
GOVCENTER	-0.271***	-0.061
	(0.062)	(0.032)
PLEFT	0.104	0.065
	(0.123)	(0.212)
PRIGHT	0.018	-0.029
	(0.064)	(0.165)
PCENTER	0.093**	0.043
	(0.041)	(0.151)
NOP	-0.331	-0.308
	(0.628)	(0.290)
POWER	5.179***	0.906**
	(1.421)	(0.444)
N	111	111
Wald χ^2	141.71***	127.02***
Error Correction	AR(1)	AR(1)

Notes: TSCS logit regression coefficients with robust 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.

Comparing these result with the third column, we see some striking differences. Most notably, when employing definition II, "LTERMINT" and "TAX" are no longer significant, but now the rate of unemployment enters significantly, exhibiting a negative impact on "D2". Also, all partisan variables are now no longer significant. However, it also turns out that "DEBT" and "POWER" remain their significance, across the two definitions. This gives us a first hint that these two findings seem to be quite robust.

In a next step, we further test the robustness of the above results by pooling all definition I retrenchment episodes and test for the factors that led to reductions in government

outlays. Therefore, we now run an OLS regression on "ΔOUTLAYS", using PSCE and an error correction as laid out above.

The OLS model's full specification is as follows:

$$\Delta OUTLAYS = \beta_0 + \beta_1 GDP_{i,t} + \beta_2 DEBT_{i,t} + \beta_3 TAX_{i,t} + \beta_4 LTERMINT_{i,t} + \beta_5 UE_{i,t} + \beta_6 GOVLEFT_{i,t} + \beta_7 GOVRIGHT_{i,t} + \beta_8 GOVCENTER_{i,t} + \beta_9 NOP_{i,t} + \beta_{10} POWER_{i,t} + \varepsilon_{i,t} \qquad i=1,\ldots,14;\ t=1,\ldots,12$$

The estimation results are explicated in table 5 below. The column denoted "Model1" includes only the economic variables, while the other one presents the findings for the fully specified model.

Table 5: OLS Regression of the Pooled Retrenchment Periods (Definition I)

	Model 1 ΔOutlays	Model 2 ΔOutlays
GDP	-0.192*** (0.073)	-0.329*** (0.091)
DEBT	0.013* (0.007)	0.019*** (0.006)
TAX	-0.067*** (0.023)	- 0.129*** (0.040)
LTERMINT	0.007 (0.104)	-0.006 (0.102)
UE	-0.039 (0.062)	-0.113** (0.053)
GOVLEFT		-0.011 (0.016)
GOVRIGHT		-0.005 (0.016)
GOVCENTER		0.002 (0.013)
NOP		0.299 (0.239)
POWER		0.730** (0.309)
N	61	61
R^2	0.189	0.341
Wald χ^2	15.01**	53.25***
Error Correction	AR(1)	AR(1)

Notes: TSCS OLS regression coefficients with panel corrected 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.

Looking at the economic variables first, we observe that "GDP" is significant and negative, which comes as no surprise given that "OUTLAYS" are defined in terms of a percentage share of GDP. As in the logit specification above, "DEBT" and "TAX" are again

significant. However, "LTERMINT" is no longer significant in neither of the OLS specifications. In addition, in the full model "UE" is moderately significant. Yet, this effect vanishes when we only consider the economic variables, as is done in Model 1.

Of the partisan variables, none turns out to be significant anymore, even though they all keep their negative signs. One has to bear in mind that the dependent variable in this specification is the *reduction* in government outlays. Hence, the extent of any party's hold on government does not seem to influence retrenchment, rejecting therefore H1 and H2.

Regarding the veto variables, we observe the same picture as in the logit analysis. Again, "NOP" is not statistically significant, thus rejecting H4. The variable "POWER", on the other hand, is once more strongly positive and significant, suggesting that high power concentration, and therefore few veto players, lead to strong cuts in public expenditure. This confirms the robustness of this variable's effects.

3.3 Results

We are now in a position to summarize the findings and relate them to the four hypotheses. The logit and OLS regressions clearly showed higher debt levels induce stronger retrenchment. The variable "LTERMINT" capturing long term interest rates change sign and robustness across definitions and specifications. However, the fiscal pressure exerted by high overall debt burdens is probably already captured by the variable "DEBT". The significance of unemployment varied somewhat between the two different logit and OLS specifications, but remained negative throughout. This seems to (tentatively) suggest that high unemployment may hinder fiscal retrenchment. Moreover, the sign for the share of tax revenue is negative and (apart from model 2 in the logit regression) strongly significant, which leads us to the perfectly intuitive conclusion that low tax revenues induce governments to engage in expenditure based budgetary retrenchment.

Looking at the partisan variables, none of them exerted a statistically significant impact in both the logit as well as in the OLS model. Whereas all of them had a significantly negative influence on the likelihood of consolidation in the logit tests, the OLS regression on the sample of pooled retrenchment periods left these variables insignificant, although the sign remained negative. Hence, there is no conclusive evidence on the first two hypotheses which claim that the higher the share of left (H1) or right (H2) parties in government, the less likely will be fiscal retrenchment. The variable which captures the number of parties in government was far from significant in all tests. It also changed its sign from being negative in the logit model to being positive in the OLS specification. Therefore, the fourth hypothesis, which holds that retrenchment becomes less likely as the number of parties in government increases, can be clearly rejected. However, the other veto players variable, "POWER", proved to be strongly positive and significant in all specifications. As this variable increases (that is, as the number of veto players decreases) the likelihood of fiscal retrenchment strongly rises. Thus, the third hypothesis, which claims that likelihood and

extent of retrenchment decreases as the number of institutional veto players grows, is plainly confirmed here.

4. Summary and Conclusions

This paper endeavoured 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. Applying the partisan perspective 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 insitutional veto players and the size of the governing coalition.

In the empirical analyses, it turned out that the overall debt level of a country was one important econmic predictor of retrenchment in our EU sample. In addition, the level of tax revenues also had discernible impacts on deficit reductions. Of the political and insitutional variables which constituted the focus in this in paper, only the number of insitutional veto players exerted a significant influence that was robust across all specifications. Thus, it turned out that probability and magnitude of deficit reductions crucially depended on the power concentration that a county's political system exhibits. The more power was concentrated in the hands of government, that is, the fewer veto players there were, the more likely was that EU country to engage in retrenchment and the more forceful it pursued this policy.

Note that these statements are by no means normative. It has not been claimed here that deficit reduction is per se economically sensible nor do the statements about power concentration imply that these systems are "better" in all dimensions. Indeed, strong power concentration may come at the cost of fewer checks and balances, and may therefore lead to policies that disproportionally burden minorites which have no insitutional channels to veto such actions.

Returning to the beginning of the paper we can now ask what implications these insights may have for the future of fiscal policy coordination in Europe. First of all, from the political economy point of view employed here, the recent failure of the SGP comes as no surprise. The pact simply imposes numerical targets without paying attention to the different institutional constraints that national policymakers face. Yet, given the fact that the sanctions of the SGP have to be approved by the ECOFIN council, political log-rolling as has happened in the case of Germany and France, is likely to prevent sanctions to be ever enacted. Therefore, when making fiscal decisions, policy makers (regardless of which ideological coleur) rationally anticipating this will not have to internalize the fiscal, reputational and electoral costs that may be associated with a sanction. Therefore, fiscal deficits are less costly than would be the case with a well-functioning punishment mechanism. Making sanctions mandatory or at least not subject to political bargaining within the council could offer a solution to this problem.

On the other hand, it is also obvious that institutional barriers to fiscal retrenchment cannot be overcome by simply setting a defict target. Rather, the SGP should mandate every country to enact a national stability pact that is suited to deal with the idiosyncratic properties of national fiscal policy making. For instance, in Germany the different layers of government (federal government, Länder, to a lesser extent municipalities) do all run deficits but only the federal government is repsonsible for keeping the general deficit in line with the SGP, even though it cannot reign into the fiscal decisions of the Länder. Hence, the Länder do not internalize the same costs when running deficits as the federal level does; thus they become a potential veto player since their budgetary preferences will differ. A binding national agreement that allocates permissable deficits to the different layers of government could solve this problem. This is but one example of how such national stability pacts could help making the SGP more effective and deficit reduction feasible. The literature on budget institutions and procedural rules (Hallerberg and von Hagen 1997; Poterba and von Hagen 1999) potentially offers solutions as to how institutional barriers can be offset by the introduction of budgetary procedures that facilitate fiscal retrenchment without the need to change constitutions which in most cases are hard to amend.[27] How to design such national pacts for those countries that seemed so far incapable of retrenchment could be a fruitful task for future research.

[27] E.g. Hallerberg and von Hagen (1997) show that political systems that produce multiparty governments can avoid "war of attrition"-like behaviour by negotiating fiscal contracts at the stage of coalition formation.

5. Annex

Definition and Sources of Variables

Variable	Definition	Source
ΔBalance	Cyclically adjusted general government balance minus Cyclically adjusted general government balance of the previous year (in % GDP)	SourceOECD database
ΔOutlays	Total disbursments of government (excluding consumption of fixed capital) minus total disbursments of government (excluding consumption of fixed capital) of the previous year (in % GDP)	SourceOECD database
GDP	Annual growth the in real Gross Domestic Product (in %)	SourceOECD database
DEBT	Goss Government Debt (% GDP)	SourceOECD database
TAX	Total tax revenue (% GDP)	SourceOECD database
LTERMINT	Long term interest rates, 10-year benchmark goverment bond yields, (in %)	SourceOECD database
UE	OECD Standardized unemployment rate	SourceOECD database
GOVLEFT	Share of social democratic and other left parties in cabinet (in %), weighted by days	Klaus Armingeon, Michelle Beyeler, Sarah Menegale. Comparative Political Data Set 1960-2001, Institute of Political Science, University of Berne 2002
GOVRIGHT	Share of right-wing parties in cabinet (in %), weighted by days	Klaus Armingeon et. al., Comparative Political Data Set 1960-2001
GOVCENTER	Share of centrist parties in cabinet (in %), weighted by days	Klaus Armingeon et. al., Comparative Political Data Set 1960-2001
PLEFT	Share of social democratic and other left parties in parliament (in %)	Klaus Armingeon et. al., Comparative Political Data Set 1960-2001; own calculation
PRIGHT	Share of right-wing parties in parliament (in %)	Klaus Armingeon et. al., Comparative Political Data Set 1960-2001; own calculation
PCENTER	Share of centrist parties in parliament (in %)	Klaus Armingeon et. al., Comparative Political Data Set 1960-2001; own calculation

<table>
<tr><th>Variable</th><th>Definition</th><th>Source</th></tr>
<tr><td>NOP</td><td>Number of parties in government</td><td>Thomas Cusack, Lutz Engelhardt, The PGL File Collection; European Journal of Political Research, various issues</td></tr>
<tr><td>Central Government Balance</td><td>Balance of the Central Government (in % GDP)</td><td>World Development Indicators Online</td></tr>
<tr><td>POWER</td><td>Additive index called “Fuchs2p“ 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
<table>
<tr><td>Bicameral system</td><td>two chambers;
approval of the second chamber is needed for certain issue areas</td><td>0</td></tr>
<tr><td>Weak bicameral system</td><td>two chambers;
second chamber can object</td><td>1</td></tr>
<tr><td>Unicameral system</td><td>only one chamber</td><td>2</td></tr>
</table>
2. Regime Type
<table>
<tr><td>Pure presidential</td><td>directly elected president;
monistic executive with president at the top</td><td>0</td></tr>
<tr><td>Semi-presidential</td><td>directly elected president;
dualistic executive with prime minister being either dependent or independent from president</td><td>1</td></tr>
<tr><td>Parliamentarian</td><td>monistic executive with prime minister</td><td>2</td></tr>
</table>
3. Federal-Unitary Index
<table>
<tr><td>Federal system, subsidiary in character</td><td>strong legislative competencies for sub-national regions</td><td>0</td></tr>
<tr><td>Federal system, unitary character</td><td>weak legislative competencies for sub-national regions</td><td>1</td></tr>
<tr><td>Unitary system</td><td>no legislative competences for sub-national regions</td><td>2</td></tr>
</table></td><td>“Democratic Systems“ data set. WZB.</td></tr>
</table>

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