Essay I

Abstract: In both economics and political science, conventional wisdom states that austerity policies are unpopular among voters, and that those governments which implement tax hikes and cutbacks in public spending will lose votes in the subsequent election. However, this claim has received little empirical support. This paper finds that parties which implement fiscal consolidations are punished by the voters in the following election, a result that goes against previous research, but one which is in line with conventional wisdom. The estimated effects are larger when the adjustments are visible and when there is a unified control of policymaking. There do not appear to be any electoral consequences for implementing fiscal expansions.

Punished for austerity?

The electoral consequences of fiscal adjustments

Faced with international pressure and a public debt out of control, the Greek government implemented large budget cuts in response to the Great Recession. In the following election, the largest government party, PASOK, saw their vote share cut from 44 to 13 per cent. Greece is not alone. In the wake of the great recession, many countries will have to consolidate public finances. But is it possible to find political support for reducing debts and deficits, or does the Greek fate await any government that implements tax hikes or cuts in public spending?

The assumption that voters punish governments for fiscal austerity is a defining feature of many theories central to both economics and political science. It is one of the core assumptions of the *new politics* of the welfare state (Pierson 1998); it is supposed to give rise to *political business cycles* (Franzese 2002); and it is a cornerstone of the *public finance* literature (Alesina and Perotti 1995). However, this assumption has received little empirical support. Most evidence suggests that there are no electoral consequences for governments that pursue austerity measures (Alesina et al. 2012; Giger and Nelson 2012), or that fiscal adjustments actually improve the chances of re-election (Brender 2003; Brender and Drazen 2008; Drazen and Eslava 2010). How is it possible that these studies contradict what at first sight appears so obvious?

In this essay I will argue that previous research has underestimated these electoral consequences as a result of two identification problems. First, it is possible that governments that are confident of being re-elected are more likely to consolidate public finances. This problem of reverse causation is larger when re-election is used as the dependent variable, instead of the change in vote shares. Second, budget improvements often result from favourable economic conditions rather than discretionary fiscal adjustments. It is therefore important to use a cyclically adjusted measure of the budget balance or control for macroeconomic conditions. Unless both of these problems are addressed, fiscal adjustments will appear more popular than they actually are.

After replacing the variables used in previous research with variables less susceptible to estimation bias, I find that parties which implement fiscal consolidations are punished by the voters. The estimated effects are large. For every percent of GDP by which the budget balance is improved, the vote share for each government party is predicted to fall by one percentage point. I also examine whether the effects differ depending on the visibility of fiscal consolidations and the degree of clarity of responsibility. The results confirm that the electoral consequences are larger for the prime minister's party and when the adjustments cannot be hidden behind economic growth. I also find suggestive evidence that left-wing governments are punished harder when defaulting was an alternative to consolidation.

On the other hand, I do not find that voters reward governments which implement fiscal expansions. My interpretation of this asymmetry between consolidation and expansion is that the concept of a general *deficit bias* can be misleading. Under normal circumstances, there are no electoral reasons for why fiscal policy should be different from what it would be with a social planner.[14]

Previous research

The research most closely related to this essay is the political economy literature concerned with budget deficits – henceforth called the public finance literature. This literature attempts to explain why countries sometimes accumulate unsustainable levels of debt. The conventional wisdom is that deficit reductions are costly for those who implement them. Governments that attempt to strengthen the budget balance – be it through tax increases or spending cuts – are assumed to be punished by the voters in subsequent elections. This latter claim has, however, received very little empirical support.

I am familiar with seven studies that deal directly with the electoral consequences of fiscal consolidations. Three of them analyse the variation between countries to study fiscal policy at the national level. Alesina et al. (1998) and Alesina et al. (2012) examine cabinet changes in OECD countries, while Brender and Drazen (2008) analyse a larger panel of countries. None of these studies find that governments are more likely to be voted out of office following a fiscal consolidation. On the contrary, the results indicate that voters are fiscal conservatives and punish governments that weaken the budget balance. The other studies use regional variation

---

[14]There are explanations of a deficit bias which do not build upon an electoral disadvantage for fiscally disciplined governments, like the strategic debt approach by (Alesina and Tabellini 1990; Persson and Svensson 1989).

within countries (Brender 2003; Drazen and Eslava 2010; Lowry et al. 1998; Peltzman 1992). All of these conclude that incumbents are punished for loose fiscal policies. More precisely, Peltzman (1992) concludes that voters dislike public spending regardless of whether it is paid by tax hikes or deficits, Lowry et al. (1998) find that voters dislike both positive and negative imbalances and Brender (2003) only finds any effect in one out of the three elections analysed.

In other words, little empirical evidence has been provided for the conventional wisdom that voters punish governments for fiscal adjustments. However, there are two reasons why I think we should doubt the conclusions reached in previous research.

First, the majority of the studies mentioned use cabinet changes instead of vote shares as the dependent variable (Alesina et al. 1998, 2012; Brender 2003; Brender and Drazen 2008). Not only does this mean that a lot of variation is lost, which is scarce in the context of large fiscal adjustments, it also exacerbates the risk of reverse causality. If governments which anticipate a high probability of remaining in office are more likely to implement fiscal adjustments, this would bias the estimates so that fiscal consolidations appear more popular than they actually are. There are good reasons to believe this is true. If the government expects a close election, they might not take the risk of unpopular austerity measures. If the governing parties are certain of defeat, they may not worry too much about the election result, but might still postpone fiscal consolidation in order to restrict their political opponents' room for manoeuvre (Alesina and Tabellini 1990; Persson and Svensson 1989; Pettersson-Lidbom 2001).

There are many reasons why a government party might expect to be re-elected. One reason could be that support for the party has grown in the opinion polls since the last election, in which case the problem of reverse causality remains regardless of how the dependent variable is measured. Other reasons include how close the last election was, the outlook for coalition formation, and different party characteristics which affect the probability of being included in the government. For example, populist and ideologically extreme parties are probably less likely to be re-elected than fiscally responsible and centrist parties. For all these reasons, the risk of reverse causality disappears when the change in vote share is used as the dependent variable. Moreover, to the extent that the problem remains, it causes a bias toward an underestimation of the true electoral costs of fiscal adjustments. Because this is the first study to find any punishment effects at all, I believe that is a minor problem.

Second, most of these studies use a measure of the budget balance that has not been adjusted for macroeconomic conditions (Brender 2003; Brender and Drazen 2008; Drazen and Eslava 2010; Lowry et al. 1998).

As most budget improvements result from economic upturns rather than discretionary fiscal actions, and voters reward incumbents for both low unemployment and fast growth (Lewis-Beck and Stegmaier 2000), the estimated electoral consequences will be biased unless the economic situation is properly taken into account. In other words, the use of unadjusted budget balances might lead us to estimate the electoral consequences of favourable economic development instead of fiscal consolidations. This problem is best solved by using a cyclically adjusted measure of the budget balance. If such measures are not available, researchers should at least control for the unemployment rate or the GDP gap.[15]

Another strand of research related to this essay is the welfare state research on 'new politics' and the retrenchment of the welfare state. One of the core assumptions in this literature is that cutbacks in social programmes – much more than tax hikes – are so unpopular among voters that governments which implement them will try to avoid public debate and responsibility for such reforms (Pierson 1996). However, similar to the situation in the public finance literature, the conventional wisdom that voters punish governments for retrenchment has received little empirical support (Armingeon and Giger 2008; Giger and Nelson 2011, 2012; Schumacher et al. 2013).

While spending cuts constitute a larger part than tax hikes in most fiscal consolidations (Devries et al. 2011), retrenchment differs from fiscal adjustments in three important ways. First, it has been a continuous process – going on for decades in many countries – and is therefore commonly referred to as a state of 'permanent austerity' (Pierson 1998). Second, considering that retrenchment in many countries has been accompanied by large tax reductions, these cutbacks are not necessarily implemented to strengthen public finances. Therefore, most studies in this field actually estimate the joint effect of cutbacks and tax reductions, not only the effect of austerity. Third, when measuring retrenchment, theoretical relevance and politically contested reforms appear to have precedence over empirical concerns. Most studies therefore analyse reforms of a much smaller scale than what is done in the public finance literature. For example, the largest fiscal adjustments in this essay amount to almost 15 per cent of GDP. Reducing the replacement rate in the unemployment insurance by five percentage points – which Armingeon and Giger (2008) call a 'major retrenchment' – would in most countries not even cut public spending by 0.1 per cent of GDP.[16]

---

[15]Of these four studies, only Brender and Drazen (2008) use a satisfactory set of macroeconomic control variables. I acknowledge the difficulties involved in adjusting the budget balance for the business cycle. However, that is not an excuse for not trying.

[16]Because of these three differences, this study should not be interpreted as a test of new

Why would voters punish responsible governments?

It is easy to doubt the findings of previous research when it contradicts conventional wisdom. However, as the provocative title of this section suggests, it is not obvious why voters would oppose fiscal consolidation. In fact, if voters are either discounting the future at the same rate as the financial markets, or if they are able to compensate for government policy through changes in private saving, they should be indifferent to the inter-temporal reallocation of taxes and public spending. It is also difficult to imagine why governments would implement supposedly unpopular policies if they did not believe them to be beneficial for the citizens. To argue that we should expect voters to punish governments for fiscal consolidations, we must make additional assumptions about how voters behave. Broadly speaking, we can understand opposition to fiscal consolidations as the result of either a deficit bias or a bias against negative events.

In the public finance literature, it has traditionally been argued that politics is characterized by a deficit bias. The behaviour of voters plays a key role in most of the explanations for this bias. Either because voters are short-sighted (Buchanan and Wagner 1977), exploit future generations (Alesina and Perotti 1995; Bowen et al. 1960; Cukierman and Meltzer 1989) or lack information about the nation's financial position (Rogoff and Sibert 1988). If at least one of those assumptions is true, voters might prefer government spending today in favour of future government spending and therefore disapprove of fiscal adjustments implemented by the government. For the same reason, we would expect voters to reward governments for fiscal expansion.

Voters might also oppose fiscal consolidation because they react asymmetrically to contractions and expansions. This is a cornerstone of the 'new-politics' approach, which emphasizes how retrenchment of the welfare state is something fundamentally different from the expansion of the same. Pierson (1996) states two reasons for this asymmetry. First, the costs of retrenchment are typically concentrated, immediate and well-defined. According to dominating theories of collective action, clearly defined and concentrated interests will gain stronger political support than those which are diffuse and scattered (Lohmann 1998; Olson 1965; Wilson 1973). For example, a school closure will typically face resistance from both pupils and teachers, but when a decision is taken to fund the establishment of a new school, there will be no one to celebrate the decision. Pierson's second argument is that voters exhibit a negativity bias, in that they react more strongly to losses and negative risks than to gains and other positive

---

politics. However, the results in this essay, as well as the clarification of these differences, should interest anyone who analyses retrenchment of the welfare state.

events. Following the seminal works of Kahneman and Tversky (1979, 1984), this loss aversion has been confirmed in a countless number of experiments. Beginning with Bloom and Price (1975), this has also been a common finding in the literature on retrospecting voting (Lewis-Beck and Paldam 2000). To Pierson's arguments, we can add that the economic news coverage appears to be more responsive to negative events (Soroka 2006).[17]

Accountability and conditional effects

The ability of the electorate to punish the parties responsible for fiscal adjustments requires that voters both observe government policy and know which parties are responsible for it. I use the term *visibility* to denote the degree to which voters have information about the government's fiscal policy, while *clarity of responsibility* refers to whether voters know which party should be held accountable for it. These concepts bear close resemblance to König and Wenzelburgers (2014) division of political strategies into those which affect *the perception of policies* and those which affect *the attribution of responsibility*. However, the term strategies would be misleading in my case, because most variables which affect visibility and responsibility are primarily governed by other things than strategic choices by the incumbent parties. For example, it is probably difficult to escape blame for the government party to which the prime minister belongs, but having one of its members appointed prime minister has more to do with election results than with strategies of blame avoidance. I end this section with a discussion of whether voters hold left- and right-wing parties accountable to the same degree.

Visibility

Different concepts of visibility and transparency are important in both the public finance and the retrenchment literature. Researchers in the former tradition have argued that fiscal transparency reduces budget deficits, because governments cannot hide them from the voters (Alt and Lassen 2006b). In the latter literature, it has long been argued that retrenchment bears no costs for incumbents that manage to avoid blame and public

---

[17]A fourth reason for why we might estimate asymmetric effects has to do with how consolidations are measured. The size of a fiscal adjustment is usually defined as the change in the cyclically adjusted budget balance. However, these adjustments are difficult to make, and what appears as large fiscal expansions in the data often result from downward revisions of potential output. Similar upward revisions are much less common, which makes the size of fiscal consolidations more reliable than the size of fiscal expansions.

debate. Visibility can be operationalized in many different ways. In this essay I will examine three kinds of visibility and how it affects the voter reactions to fiscal adjustments.

First, the least visible cutbacks are probably those that do not require any discretionary actions at all. It is well established that governments can obfuscate retrenchment by allowing inflation and wage increases to erode the value of benefits and transfers (Green-Pedersen 2002; Lindbom 2007; Pierson 1994). Because most government expenditures are not tied to wages – or only partially so – that argument applies to all forms of public spending. Consequently, the faster the economy grows, the larger the possibilities to obfuscate retrenchment, and we should therefore expect the voter reactions on fiscal adjustments to be smaller.

Second, visibility is also a matter of scale. Armingeon and Giger (2008) argue that voters do not even notice small and incremental cutbacks. And even if they did, voters' knowledge of and opinion on a particular issue mostly matters when the issue is on the political agenda (Krosnick and Kinder 1990). According to this argument, fiscal adjustments only affect the vote decision if they are large enough to be a part of public debate. In terms of model specifications, this hypothesis corresponds to a non-linear relationship by which the electoral costs of additional budget improvements increase with the size of fiscal adjustments.

Third, fiscal adjustments are more visible when the budget process is transparent, so that policy decisions are properly presented in the budget documents. The budget process is often said to be transparent when budgets are easily available to the public and present consolidated information in a 'bottom line' measure (Poterba and von Hagen 1999), so that the voters can assess the nation's financial position and the economic and social implications of government activities (Craig and Kopits 1998). While it is commonly assumed that fiscal transparency enhances budget discipline – by making fiscal misconduct more visible – it is also possible that it makes fiscal consolidations more transparent and therefore more costly for the government that implements them. To examine this hypothesis, I will condition the voter reactions to fiscal adjustments on the commonly used index of fiscal transparency that was created by Alt and Lassen (2006a). This index is based on criteria such as whether reports on the fiscal outlook are released prior to elections and whether the budget documentation contains projections of future expenditures.

Clarity of responsiblity

It is not always evident which party should be held accountable for fiscal policy. When no party has a majority of their own, government policy

will be the result of negotiations – either between parties in a coalition government or between the government and other parties in parliament. Power can also be divided between the national and the local level or between the executive and the legislative majority. When the responsibility for fiscal policy is shared between several parties, I would expect the electoral consequences to be smaller for any single party.

Much of the literature on retrospective voting builds on the concept of *clarity of responsibility*, which was first developed by Powell and Whitten (1993). Their argument is that 'the greater the perceived unified control of policymaking by the incumbent government, the more likely is the citizen to assign responsibility for economic and political outcomes to the incumbents'. I will sometimes refer to it as just *responsibility*, because separation of powers is factual and not only a matter of clarity.[18]

After numerous empirical studies (Bengtsson 2004; Duch and Stevenson 2008, 2010; Powell and Whitten 1993; Rudolph 2003), a consensus has emerged that economic voting is conditioned by the clarity of responsibility.[19] Hobolt et al. (2013) find that electoral accountability is more affected by variables related to the government, which vary over time, than by constitutional variables. Based on their results, and because most of the variation in my dataset is found over time, I will focus my study on variables that determine how much influence each party has compared to other parties.

The literature on economic voting is primarily concerned with unemployment, growth and inflation, but there are also indications that responsibility conditions the effects of fiscal consolidations. Lowry et al. (1998) find that accountability is stronger when the governor and the state legislative majority belong to the same party. Alesina et al. (2012) present some suggestive evidence that minority and coalition governments are more likely to be re-elected after a fiscal consolidation than majority and single-party governments. And the literature on economic voting has shown that small parties in coalition governments can gain votes from

---

[18]Whether weak and disperse governments are held accountable to a lesser extent because voters do not know which parties to blame, or because voters realize that parties should not be punished when their influence over policy was limited compared to the influence of other parties or exogenous shocks, does not affect how I design my models. While the first approach is dominant in this field, there are also exceptions (Duch and Stevenson 2005).

[19]This consensus is problematic. There is an unfortunate habit in this literature of not formally testing the hypothesis – e.g., through an interaction term – but instead running split sample regressions and drawing conclusions from why some coefficients are significant and others are not. See Gelman and Stern (2006) for the problems with this approach. In fact, the difference in accountability between clear and non-clear responsibility does not appear to be statistically significant in many of these studies (Bengtsson 2004; Powell and Whitten 1993).

the dominant parties when the latter are punished for poor economic conditions (van der Brug et al. 2007).

In this essay I include three dummy variables which measure the degree to which a government party can be held responsible for implemented policy. These are assigned the value one if the prime minister belongs to the party, if the government holds a majority of the seats in parliament and if the government is a coalition government. They are otherwise coded as zero. The clarity of responsibility is assumed to be high when a party has the position of the prime minister and constitutes a majority government on its own.

Partisan differences

Partisan differences are often neglected, both within the political economy literature and the 'new politics' perspective of welfare state research. It is still possible to find two opposing ideas about whether left-wing or right-wing parties are most likely to be punished for fiscal austerity. On the one hand, fiscal adjustments tend to affect government spending more than taxes (Devries et al. 2011) and left-wing parties could thus be held accountable to a larger degree because voters expect them to defend the welfare state. If these parties were to implement cutbacks, it could be interpreted as a broken promise and cause disappointed supporters to vote for another party. In support of this hypothesis, Schumacher et al. (2013) find that only parties with a 'positive welfare image' are punished for welfare state retrenchment.

On the other hand, the credibility of left-wing parties in these matters may be so strong that it makes them immune to criticism about being anti-welfare. Both Kitschelt (2001, p. 275) and Ross (2000) argue that, just as it was the anti-communist Nixon who went to China, social democratic or labour parties have more credibility in social policy and are therefore less likely to be punished by the voters. Tavares (2004) uses the same metaphor to make a similar point: implementing policies in disagreement with the party's ideological profile is a way of signalling to the voters the necessity of a fiscal consolidation. Therefore, he argues, governments must implement reforms that collide with their ideological position. It is only when right-wing governments raise taxes and left-wing governments cut expenditures that the voters give them credibility.

Previous empirical research does not offer much more guidance than that, because it is typically concerned with slightly different topics. Lowry et al. (1998) do not find any differences in voter reactions to deficits between democratic and republican incumbents. However, they find that voters punish republicans for increasing the size of government and

democrats for unexpected cutbacks, which is difficult to reconcile with the findings in Tavares (2004). Pettersson-Lidbom (2001) finds that right-wing governments accumulate debt when they face a high probability of defeat. His interpretation is a strategic use of debt in the sense of Persson and Svensson (1989), but the same pattern would emerge if parties are more vote-seeking when facing a close election and voters are more responsive to the fiscal policies of right-wing parties. And while it has been shown that left-wing parties are less likely to implement cutbacks (Allan and Scruggs 2004; Korpi and Palme 2003), which in turn has been interpreted as showing that their electoral incentives differ (Giger and Nelson 2011), it could very well reflect purely ideological differences.

Fiscal policy is often analysed as an inter-temporal distribution of consumption. Because the lines of conflict between left and right are different from those between generations, the fiscal balance is not often politicized in the literature. However, I would argue that the distributive aspects of fiscal balances are more evident when a government default is perceived as an alternative. The worst losers of large deficits are then the holders of government bonds that lose their investments when the government defaults or deflates its debt instead of repaying the debtors. For example, following the second world war, many countries had debts in the range of 100–200 per cent of GDP. Had governments chosen to implement fiscal adjustments instead of letting inflation take care of the debt, it would have had radically different redistributive effects in favour of the often wealthy rentiers.[20] It is likely that voters become disappointed when they perceive a left-wing government as taking the side of the creditors. For that reason, I would expect left-wing parties to be punished harder than right-wing parties for fiscal consolidations, at least when the risk of default is substantial. To measure this risk, I use the nation's long-term interest rates on government bonds compared to the interest rate on government bonds in Germany.

Method

The empirical strategy of this essay is to regress each party's change in vote share between two elections on the size of fiscal adjustments implemented while the party was in government. The size of the fiscal adjustment is defined as the accumulated change in the cyclically adjusted net lend-

---

[20]I am not arguing in favour of defaulting on public debt. The fact that capital owners lose more than other citizens does not alone imply that a policy is either just or sound. It should also be noted that countries differed in their post-war policies on public debt. For example, Britain was more keen on repaying its debtors than Germany or France (Piketty 2014).

ing, which is a measure of the budget balance that has been adjusted for macroeconomic conditions. I will refer to it as the structural balance. If correctly estimated, changes in the structural balance will reflect discretionary actions, such that an increase in the structural budget balance will correspond to either a tax raise or a reduction of expenditure (if not both).

Each observation corresponds to a party (p) over one election period (e) and the sample consists of parties that spent at least half the election period in government. The main sample includes elections from 27 countries between 1974 and 2014[21]. The basic structure of most regressions follows the equation below, where the party's change in vote share ($\Delta v_{p,e}$) is regressed on the change in the structural budget balance while that party was in cabinet ($\Delta sbb_{p,e}$) and a vector of control variables ($x_{p,e}$). In the second table, I use interaction variables to analyse whether the electoral consequences are conditioned by different measures of visibility, responsibility and partisanship. In all these models I also include interaction terms between the change in the structural balance and the control variables.

$$\Delta v_{p,e} = a + b \times \Delta sbb_{p,e} + \delta \times x_{p,e} + e_{p,e} \qquad (1.1)$$

Some of the election level variables are calculated from cabinet level data. Because there can be multiple cabinets during an election period, all variables that differ between cabinets are first calculated at the cabinet level (c) and then aggregated to election periods. For example, the change in the structural budget balance for which a party is accountable ($\Delta sbb_{p,e}$) is calculated using the equation below, where $sbb_{last,c}$ and $sbb_{first,c}$ denote the structural budget balance during the cabinet's first and last year in office, and where cab_c is a dummy variable equal to 1 if the party was a part of the cabinet. Under the assumption that cabinets influence the economy and fiscal policy for the first year after they enter office, and that they have no influence the year after they leave office, the difference between the cabinet's first and last year can be interpreted as the development for which the cabinet is accountable. The equation below shows how the main independent variable is calculated.

$$\Delta sbb_{p,e} = \sum_{c=1}^{n} (sbb_{last,c} - sbb_{first,c}) \times cab_{p,c} \qquad (1.2)$$

The literature on economic voting has shown that incumbents are punished for slow growth (Campbell 2005), rising prices and high unemploy-

---

[21]The countries included are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland and United Kingdom

ment (Lewis-Beck and Stegmaier 2000). Because all these variables might affect the probability of fiscal adjustments, I include the average GDP growth, the average inflation and the change in the unemployment rate as control variables. They are all measured over the whole election period. I also include the change in the annual net migration, measured as a share of the population, and the size of the party at the previous election. To control for time trends in the data, the election date has been transformed to a cubic time spline which is included in all models.[22] Every model also includes country fixed effects. Because the main variables measure changes over time, these country dummies control for the cross-national variation in electoral performance (compared to the previous election) for government parties. For example, because country characteristics could affect both the volatility of fiscal policy and the cost of ruling,[23] the estimations would be biased unless those country characteristics are controlled for.

As argued earlier, there are reasons to believe that the electoral consequences of fiscal consolidations are not the additive inverse of fiscal expansions. More precisely, voters might punish governments for fiscal consolidation to a higher degree than they reward them for fiscal expansions. I will test this asymmetry through an interaction effect, before eventually restricting the sample to episodes of fiscal contraction. Data on vote shares, coalition composition and the ideological position of parties is provided by the Parlgov database. All economic data comes from OECD Economic Outlook 96 and the index of fiscal transparency is collected from Alt and Lassen (2006a). A complete variable list is included on the last pages of this thesis.

Results

I present my regression results in three tables. Table 1.1 contains the main results and illustrates why previous research has not found that voters punish incumbents for fiscal consolidations. This is also where I test the asymmetric effects between expansions and consolidations. The conditional effects of visibility, clarity of responsibility and party ideology are presented in Table 1.2. Table 1.3 presents the results from a set of robustness checks.

---

[22] A cubic spline is a set of piecewise third-order polynomials which pass through a set of knots. I use five knots distributed at the 5th, 27.5th, 50th, 72.5, and 95th percentiles, as recommended by Harrell (2001, p.21) and implemented as Stata's default option. The second derivative of each polynomial is set to zero at the endpoints.

[23] Incumbent parties have indeed fared better in Germany and the Nordic countries than governments in southern Europe, where fiscal policy has tended to be less conservative (Bengtsson et al. 2014, p. 126).

Table 1.1: The electoral consequences of fiscal adjustments

	(1) Re-election	(2) Vote change	(3) Vote change	(4) Vote change
Δ Str. budget balance (ΔSBB)	0.01		−0.33**	−1.11***
	(0.01)		(0.14)	(0.23)
Δ Non-adjusted budget balance		0.03		
		(0.10)		
Δ Unemployment rate	−0.02		−0.59**	−0.52**
	(0.02)		(0.23)	(0.22)
Average inflation	0.00		−0.09	−0.10
	(0.01)		(0.09)	(0.07)
Average growth	0.00		−0.04	−0.09
	(0.03)		(0.39)	(0.37)
Previous vote share	0.01***	−0.17***	−0.16***	−0.16***
	(0.00)	(0.03)	(0.03)	(0.03)
Δ Net migration	−0.03	−0.32	−1.29*	−0.41
	(0.12)	(0.79)	(0.69)	(0.67)
Expansion				−2.93***
				(0.82)
ΔSBB × Expansion				0.93***
				(0.33)
Constant	0.43	12.41*	10.82	11.02
	(0.62)	(6.58)	(7.42)	(7.63)
Country dummies	Yes	Yes	Yes	Yes
Cubic time spline	Yes	Yes	Yes	Yes
Observations	341	341	341	341
Adjusted R^2	0.05	0.17	0.24	0.27

Election-clustered standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 1.1 shows how the estimated electoral effects of fiscal adjustments depend on the choice of dependent variable and whether the macroeconomic conditions are properly controlled for. The first column presents the results from a linear regression where the dependent variable is the binary outcome of re-election.[24] The coefficient of the structural budget balance is positive but very close to zero, indicating that an incumbent party's probability of re-election is unaffected by fiscal adjustments. This finding is in line with previous studies that use cabinet changes as the dependent variable.

The second column shows the estimated effects when a measure of the budget balance is used that has not been adjusted for the business cycle. Like all models, it includes a time spline, which might capture some common economic shocks, but all macroeconomic control variables are omitted. The estimated effect of fiscal adjustments is still positive and close to zero. This is probably because the coefficient here captures the

---

[24]To facilitate comparisons between the models, I present the results from a linear regression even if the dependent variable in this case is binary. The interpretation remains the same if I use logit or probit instead.

joint effect of budget improvements that result from economic upturns (positive electoral consequences) and discretionary fiscal actions (negative electoral consequences).

In the model presented in the third column, I have replaced the nominal budget balance with a cyclically adjusted balance and added the change in the unemployment rate, the average inflation and the average growth as control variables. Compared to the model in the first column, it is instead the dependent variable which differs. The estimated electoral effect of fiscal policy is now statistically significant. For every per cent of GDP by which the government raises (lowers) taxes or reduces (increases) spending, an incumbent party is expected to decrease (increase) its vote share by 0.33 percentage points.

So far, the results in Table 1.1 support my criticism of previous research. Arguably, both the choice of dependent variable and the adjustment for macroeconomic conditions are critical. As soon as cabinet changes are used as the dependent variable, or if macroeconomic conditions are not taken into account, the estimated effects of fiscal adjustments disappear. One could argue that staying in cabinet is the ultimate goal for a party – and that votes are only valuable if they affect the probability of incumbency – but then they should not interpret the effects in terms of voter behaviour. Besides, this argument is invalid if the reason behind the difference in results is that the estimation bias caused by reverse causation is larger when re-election is used as the dependent variable.

As argued earlier, there are reasons to believe that voters are more willing to punish governments for fiscal consolidations than they are to reward fiscal expansions. To differentiate between these effects, the model in the fourth column includes an interaction term between the change in the structural budget balance and a dummy variable for fiscal expansions (1 if ΔSBB is negative, 0 if ΔSBB is positive). The top row coefficient can now be interpreted as the electoral consequences of fiscal *consolidations* – and it increases substantially. For every per cent of GDP by which the budget balance is improved, the party is expected to decrease its vote share by one percentage point. The interaction term has a positive effect of a similar size, which implies that the punishing effect of consolidation has no rewarding counterpart for fiscal expansions. The negative effect of the expansion dummy implies that, compared to a modest fiscal expansion, the consolidation must amount to at least a few percent of GDP for any electoral punishment to take place.

This asymmetry is illustrated in Figure 1.1, which shows the estimated vote share conditioned by the change in the structural budget balance. The regression model is identical to the model represented in the last column of Table 1.1, with the exception that a cubic spline is used here

Figure 1.1: The asymmetric effect of fiscal policy
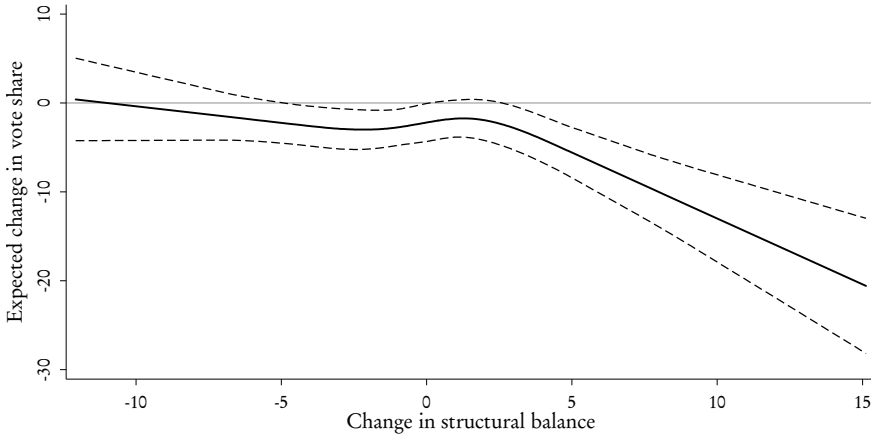
Predicted change in vote share when the change in the structural budget balance is modeled using a restricted cubic spline and the values of all other variables are set to their mean. The shaded area represents a 95 percent confidence interval for the estimate.

to allow for a more flexible functional form than permitted by the linear interaction. The graph confirms the previous conclusions. First, there do not seem to be any major electoral consequences of fiscal expansions. On average, the vote share for incumbent parties increases as long as they do not implement fiscal consolidations, but large fiscal expansions do not yield any further advantages. Second, neither can we identify an electoral effect of small consolidations, because the slope does not become negative until the budget balance is increased by at least 2–3 percentage points. This could reflect the fact that the budget balance is usually improved in the absence of discretionary actions, because most expenditures are not tied to the increase in wages or GDP, but it could also be a pure coincidence.

We will now proceed to the conditional effects. For this analysis, the sample has been restricted to observations where there was a positive change in the structural balance. The alternative would have been to include interactions for any variable where we might expect asymmetric effects. Because this applies to more or less all the variables, it would only have resulted in a more complex parametrization. Table 1.2 presents the results from four regressions where the electoral consequences are conditioned by the degree of visibility, clarity of responsibility and the party's ideological position. All models expand upon column 3 in Table 1.1 by including an interaction term between the size of the fiscal adjustment and a set of conditioning variables. All models also include interactions between the change in the structural balance and the different control variables, but they are excluded from the table because of space restrictions.

Table 1.2: Conditional effects

	(1)	(2)	(3)	(4)
Δ Str. budget balance (ΔSBB)	−0.35	0.25	1.74*	−0.81
	(0.74)	(1.77)	(0.94)	(1.85)
Δ Unemployment rate	−2.04***	−0.60	−1.51***	−1.92***
	(0.74)	(0.40)	(0.52)	(0.62)
Average inflation	0.36**	−0.02	1.72***	1.48
	(0.14)	(0.12)	(0.58)	(0.90)
Previous vote share	−0.10**	−0.29**	−0.10**	−0.31***
	(0.05)	(0.12)	(0.04)	(0.11)
Δ Net migration	−1.99**	−17.93***	0.85	−20.18***
	(0.76)	(2.36)	(0.74)	(3.16)
Average growth	−1.59**	−0.27	−0.56	−1.22**
	(0.71)	(0.48)	(0.48)	(0.53)
Fiscal transparency	−0.82			0.96
	(0.74)			(1.05)
Prime minister's party		7.53**		8.06***
		(2.86)		(2.89)
Majority government		0.25		−0.72
		(2.01)		(1.99)
Coalition		0.83		0.87
		(2.92)		(3.02)
Right-wing party			3.21*	1.73
			(1.69)	(1.63)
Int. rate dif.			−0.79	−0.73
			(0.48)	(0.50)
Right-wing party × Int. rate dif.			−0.58*	−0.14
			(0.33)	(0.50)
ΔSBB × Average growth	0.43***			0.45**
	(0.14)			(0.20)
ΔSBB × ΔSBB	−0.10			0.20
	(0.11)			(0.17)
ΔSBB × Fiscal transparency	−0.45**			−0.27
	(0.21)			(0.23)
ΔSBB × Prime minister's party		−1.81**		−2.30***
		(0.79)		(0.83)
ΔSBB × Majority government		−1.17*		−0.47
		(0.66)		(0.54)
ΔSBB × Coalition		0.07		0.60
		(1.11)		(1.13)
ΔSBB × Right-wing party			−1.75*	−1.02
			(0.90)	(1.13)
ΔSBB × Int. rate dif.			−0.36**	−0.69*
			(0.18)	(0.38)
ΔSBB × Right-wing party × Int. rate dif.			0.49**	0.42
			(0.22)	(0.39)
Constant	18.39**	11.01	2.30	7.83
	(7.31)	(7.35)	(7.81)	(10.53)
Observations	148	168	165	143
Adjusted R^2	0.22	0.45	0.41	0.35

All models include country fixed effects, a cubic time spline and interactions between SBB and the control variables (unemployment, inflation, previous vote share and net migration). Election-clustered standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The first column includes three variables which are assumed to affect the visibility of fiscal consolidations. These are the average GDP growth during the election period, the square of the size of the consolidation and an index of fiscal transparency. As shown by its positive coefficient, rapid growth reduces the electoral costs of fiscal adjustments. I have two explanations for this phenomenon. First, public spending as share of GDP decreases automatically when GDP grows, because most expenditures are not fully indexed to the growth of output and wages. Such decrementalistic cutbacks are probably the least visible of all. Second, voters might not pay as much attention to a tax hike if they experience a simultaneous increase of their gross wage, because their net income would then remain unchanged.[25] Armingeon and Giger (2008) argue that it is better for governments to implement incremental adjustments over a long time instead of doing it all at once, because voters do not react to small cutbacks. If they are right, and the marginal electoral effect of an improvement in the budget balance increases with the total size of the consolidation, the squared balance would have a negative effect. While the coefficient has the right sign, it is not statistically significant. Alt and Lassen (2006b) argue that fiscal transparency increases the visibility of government actions, because it allows voters and other actors to separate policy decisions from stochastic factors. The negative coefficient for the interaction with their index of fiscal transparency provides support for their argument. When fiscal transparency is high, the predicted electoral loss following a consolidation is larger. To sum up, the results presented in the first column provide support for the fact that the electoral consequences of fiscal consolidations are larger when the latter are visible to the voters.

The model presented in the second column includes variables which measure the degree to which the party is responsible for the implemented policy. It is assumed that the prime minister's party has more influence over policy than other government parties, that a majority government has more influence than minority governments – which are dependent on the support of parties outside parliament – and that parties in coalition governments have less influence than single-party governments because they must negotiate with the other government parties. The interaction terms for both the prime minister's party and belonging to a majority government has large effects in the expected direction, although the latter is only significant at the 90 per cent level. It should also be noted that the model includes an interaction term between the change in the structural balance and the previous vote share, so the effects should not be driven by

---

[25] A third – although less likely – alternative, is that voters are more responsive to negative actions of the incumbent when they are in a bad mood or already critical to the economic performance (Bower 1981)

large parties being punished harder in absolute terms. In other words, the results indicate that voters hold influential parties responsible to a higher degree than government parties with little influence over policy.

The third column shows how the electoral consequences are conditioned by the interest rate difference compared to Germany and party ideology, with left-wing parties serving as the category of reference. The hypothesis is that left-wing parties are punished harder for fiscal consolidations when default is perceived as an alternative. The probability of default is here measured as the interest rate difference. The interaction effect between the change in the budget balance and the interest rate (−0.36) shows that the electoral cost that left-wing parties face after fiscal consolidation increases with the interest rate. Because the three-way interaction has a positive coefficient of similar size (0.49), no such effect is found for right-wing parties. This partisan difference in how the interest rate conditions electoral consequences is statistically significant at the 95 per cent level. This result supports the hypothesis that left-wing parties are punished harder for implementing fiscal adjustments when there is a large probability of default on the government debt. However, the table does not tell us whether the difference between left-wing and right-wing parties is significant at high interest rates. We can only see that the difference between left- and right-wing parties borders on significant when the interest rate difference is zero (−1.75).

A graphical solution to this problem is presented in Figure 1.2. The line shows how the ideological position of a party conditions the electoral consequences of fiscal consolidations. A positive value means that left-wing parties lose more votes than right-wing parties when they implement a fiscal adjustment. For interest rate differences above 4 percentage points, the estimated consequences are larger when left-wing parties implement fiscal consolidations compared to when right-wing parties do it. This difference is statistically significant for interest rate differences above 6 percentage points.

This three-way interaction has a strong theoretical appeal. Fiscal adjustments are ideologically neutral when it is a matter of consumption today or consumption in the future. But when default is a realistic alternative, fiscal consolidations have distributional consequences in favour of the creditors, and it is probably more costly for left-wing governments to be perceived as serving the interests of big banks or the IMF. However, the results should be interpreted as suggestive. The effect is barely significant at the 95 per cent level, it is estimated on relatively few observations and – as shown in the last column of Table 1.2 – it is no longer statistically significant when we include all regressors in the same model.

Figure 1.2: Ideology, the risk of default and electoral consequences
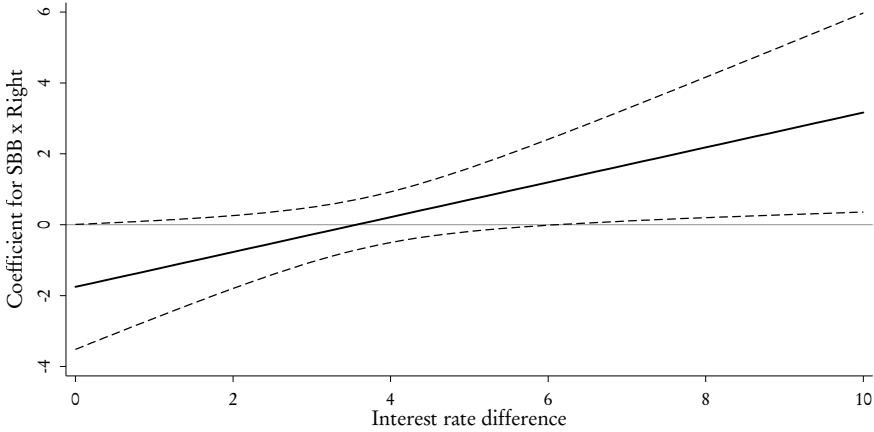
This graph shows how the ideological position of a party conditions the electoral consequences of fiscal consolidations. A positive value means that left-wing parties lose more votes than right-wing parties when they implement a fiscal adjustment. The height of the line is given by the coefficient for SBB × Right-wing party (−1.75) plus the coefficient for SBB × Right-wing party × Int. rate dif (0.58) multiplied by the interest rate. The shaded area represents a 95 percent confidence interval.

On the one hand, it is not surprising that the standard errors are inflated when so many interaction variables are included in the same model. This is the nature of multicollinearity and country level data. On the other hand, it means that we cannot separate the effects of the different variables from one another with sufficient precision. Therefore, we cannot be sure whether the conditioning effects of fiscal transparency, majority governments and party ideology were indeed spurious, or if it only is the lack of precision which is the reason for why they are no longer statistically significant.

To examine whether the main results are robust to alternative specifications, I have estimated different variations of the main model. The results from these regressions are presented in Table 1.3. The model in the first column is identical to that of the third column of Table 1.1, with the difference that fiscal expansions have been excluded from the sample, and it serves as a point of reference for the other columns. All the other models address specific problems that might affect my results.

First, as argued by Lindbom (2014), if the fiscal consolidations were expected by the voters, they might have already punished the responsible parties in the preceding election, in which case the estimations in this essay would underestimate the true effects. To investigate this possibility, the second column shows a model where the dependent variable is substituted

Table 1.3: Robustness tests

	(1)	(2)	(3)	(4)	(5)
Δ Str. budget balance (ΔSBB)	−0.94***	−0.72**	−0.90***		−0.54**
	(0.27)	(0.32)	(0.27)		(0.26)
Δ Underlying primary balance				−1.15***	
				(0.28)	
Δ Unemployment rate	−0.80**	−0.99***	−0.82**	−1.00***	−0.81**
	(0.40)	(0.30)	(0.37)	(0.37)	(0.40)
Average inflation	0.09	0.17	0.11	0.28**	0.08
	(0.12)	(0.20)	(0.12)	(0.13)	(0.11)
Average growth	−0.22	−1.24**	−0.37	−0.45	−0.50
	(0.53)	(0.50)	(0.52)	(0.50)	(0.50)
Previous vote share	−0.10**	0.06	−0.07**	−0.10***	−0.10**
	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
Δ Net migration	−0.19	−2.57***	−0.58	−0.29	−0.46
	(0.60)	(0.87)	(0.65)	(0.54)	(0.56)
Vote change prev. election			−0.16*		
			(0.10)		
Constant	4.80	3.27	4.48	0.90	8.18
	(8.38)	(10.69)	(7.79)	(9.18)	(7.81)
Observations	171	170	170	171	169
Adjusted R^2	0.36	0.17	0.38	0.39	0.38

Election-clustered standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

with the change in vote shares compared to two elections ago. If there is prospective punishment, we would expect the coefficient to increase, but instead the estimated effect is now marginally smaller than before.

Second, the inter-election correlation of the dependent variable is negative, meaning that parties that gain votes in one election tend to reduce their vote share in the election after that. If parties that do well are more likely to implement fiscal adjustments, that could possibly bias my results. However, as shown in the third column, controlling for the lagged change in vote share does not alter any of my conclusions.

Third, in this essay I have measured the size of fiscal consolidations as the change in the cyclically adjusted net lending. Another alternative would be to use the underlying primary balance, which is a measure of the budget balance where the interest payments on government liabilities have been excluded. As shown in the fourth column, changing variables does not affect my results.

Fourth, while most observations consist of minor fiscal adjustments, the large adjustments exert a major influence on the estimated effects. Calculating dfbeta statistics reveals that 15 observations can be characterized as influential, using the common threshold of $|df\,beta| > 2/\sqrt{n}$. There is nothing suspicious about any of these influential observations and they

certainly belong in the sample. However, it is still interesting to see how sensitive the results are to the exclusion of one or two observations.

The most influential observations are the 2012 election for the Greek party PASOK and the 2013 result for the Social Democratic party in Iceland. In both these cases, the ruling party faced huge vote losses after having implemented large fiscal adjustments. If both observations are excluded from the sample, the coefficient drops to −0.54, but it is still significant at the 95 per cent level. This model is presented in the last column of Table 1.3. A substantial negative dfbeta coefficient was found for the Liberal Party of Canada, which only lost 3 percentage points in the 1997 elections, even though the party had implemented an extensive fiscal consolidation and promised to continue the same policy if they remained in office. The successful consolidation in Canada has partly been attributed to its strong public support. For two decades, it was politically extremely difficult to run deficits in Canada (Guillemette 2010).

Conclusions

In many theories central to both economics and political science, a core assumption is that voters punish governments which implement fiscal adjustments. This is also a commonly held view among policy makers and political commentators. To the best of my knowledge, this is the first study to provide empirical evidence in support of this claim.

The estimated effects are significant. According to my estimates, each government party loses one percentage point of its vote share for every per cent of GDP by which the budget balance is improved. I have also found that political parties can avoid electoral consequences when cutbacks can be hidden behind economic growth and when the party's responsibility for policy implemented is unclear. Finally, I have found suggestive evidence for the hypothesis that left-wing parties are punished harder when fiscal discipline can be framed as a conflict between debtors and creditors instead of a purely inter-temporal distribution.

The largest identification problem, in this as well as in previous studies, is most likely the risk for reverse causation. If popular governments – or less popular, for that matter – are more likely to implement fiscal consolidations, that would bias the results. I believe that the best way to handle this problem would be to analyse the dynamics and timing of political support and fiscal adjustments. It is therefore promising that comprehensive cross-country datasets on vote-intention polls are under development (see, in particular, Jennings and Wlezien [2016]).

The asymmetrical responses to fiscal expansions and consolidations have important implications. First, they provide an argument against a

deficit bias caused by fiscal illusion (Rogoff and Sibert 1988), short-sighted voters (Buchanan and Wagner 1977) and the exploitation of future generations (Bowen et al. 1960). Possible explanations for this asymmetry can be found in the new-politics approach (Pierson 1996, 2001), which is built on the fundamental differences between the expansion and retrenchment of the welfare state. Second, constitutional settings that increase accountability are usually thought to be beneficial for fiscal discipline (Persson and Tabellini 2003). However, if the main challenge lies in the electoral incentives for governments to implement consolidations, we could expect fiscal discipline to benefit from institutions that *reduce* accountability, at least during periods of austerity.

My results also indicate that more research is needed both on the circumstances that shape voter behaviour, and on how government coalitions are formed during times of economic and political turbulence. There are many examples of fiscal adjustments which have been followed by tremendous vote losses for the incumbent parties. But there are also many examples of governments being re-elected after implementing large fiscal consolidations. Moreover, even when parties experience large reductions in voter support, they may sometimes manage to remain in government. One of the most dramatic examples of this is PASOK who, after losing 70 per cent of their voters, managed to spend another election period as part of the coalition government in Greece.