ELSEVIER

Journal of Public Economics 88 (2004) 2447–2468

JOURNAL OF PUBLIC ECONOMICS

www.elsevier.com/locate/econbase

Does right or left matter? Cabinets, credibility and fiscal adjustments

José Tavares*

Faculdade de Economia, Universidade Nova de Lisboa, Campus de Campolide, 1099-032 Lisbon, Portugal

Received 18 April 2003; received in revised form 5 October 2003; accepted 9 November 2003
Available online 18 February 2004

Abstract

This paper tests the widely held assumption that left-wing cabinets favor higher public spending and examines whether cabinet ideology affects the persistence of major fiscal adjustments. In a panel of large fiscal adjustments in OECD countries during the last 40 years, we find evidence that left-wing and right-wing cabinets are partisan: the left tends to reduce the deficit by raising tax revenues while the right relies mostly on spending cuts. Our testable hypothesis is that cabinets can signal commitment by undertaking fiscal adjustments in ways that are not favored by their constituencies. In other words, the left gains credibility when it cuts spending while the right becomes more credible when it increases tax revenues. Probit estimates of the determinants of persistence in fiscal adjustments confirm that spending cuts by the left and tax increases by the right are associated with persistent adjustments. The effect is significant for cuts in public spending, public consumption (wage or nonwage), increases in total revenues, direct taxes on businesses and other taxes. We test for the role of several other determinants of persistence, confirming that coalition and majority cabinets are associated with less persistence while periods of high or rising levels of indebtedness favor persistence. The estimates of the impact of ideology and other variables on GDP and its components show that it is the size of the spending cut rather than cabinet ideology that is most important.

JEL classification: E62; H30; H62
Keywords: Fiscal adjustments; Cabinet ideology; Credibility; Economic and monetary union; Probit analysis

1. Introduction

Economists have devoted a substantial effort to understanding the political economy of fiscal adjustments, identifying several factors that favor the persistence of adjustments—

* Tel.: +351-21-380-1669; fax: +351-21-380-1669.
E-mail address: jtavares@econ.ucla.edu (J. Tavares).

0047-2727/$ - see front matter © 2003 Elsevier B.V. All rights reserved.
doi:10.1016/j.jpubeco.2003.11.001

including some characteristics of the adjustment itself. Giavazzi and Pagano (1990) first uncovered cases of major fiscal contractions associated with an expansion of output and consumption. Alesina and Perotti (1997) have shown how adjustments that rely on spending cuts are more persistent, and Perotti (1999) documented the relationship between the economic context—periods of high deficits or high levels of public debt—and the likelihood of success in a fiscal adjustment. When authors put forward an explanation for these empirical regularities, the concept of "credibility" is almost always invoked.

This paper conducts an empirical search for credibility effects in fiscal adjustments. Specifically, we test whether the match cabinet ideology–composition of the adjustment affects the probability of success.[1] Our claim is that adjustments where left-wing cabinets cut spending or right wing cabinets increase taxes are more likely to be successful.[2] The reasoning is straightforward: since left-wing and right-wing parties tend to disagree over the ideal size of government[3] and this disagreement is widely recognized by economic agents[4], a cut in public spending by the left or an increase in taxes by the right signals commitment to the adjustment and adds credibility to their actions. In sum, pursuing a policy that is painful to their own constituents, cabinets signal the urgency of the fiscal adjustment. Our study is important since successful adjustments are less contractionary than unsuccessful ones.[5] If we understand which factors increase the likelihood of success, deficit cuts can be undertaken at a lower economic cost.

The paper is organized as follows. Section 2 briefly reviews the literature on fiscal adjustments and presents our hypotheses. Section 3 presents the data set, documents partisanship during fiscal adjustments and produces Probit estimates of the impact of different variables on the persistence of fiscal adjustments. Section 4 concludes.

2. Fiscal adjustments and credibility

In what circumstances can adjustments be expansionary? What is the role of credibility and of ideological differences in particular? These are the two issues we will discuss in this section. In the standard Keynesian framework, under the assumption of sticky wages in the short run, a cut in government spending (or an increase in taxes) leads to decreases in output and consumption. The Keynesian framework is static and only current policies matter. There is no role for expectations about the path of future policies so that the discussion of the issue of credibility is not essential. However, as ably pointed out in Bertola and Drazen (1993), "a policy innovation that would be contractionary in a static model may be

[1] The terms success and persistence will be used interchangeably when applied to fiscal adjustments.

[2] As suggested in the literature, center cabinets are seldom, if ever, successful when pursuing fiscal adjustments suggesting that ideology may be an essential element in explaining success.

[3] Another issue over which there may be partisan differences is the possible trade-off between unemployment and inflation, as in Hibbs (1977) and Keech (1995). In this paper we do not address this issue, not least because the debate over whether there actually is an unemployment–inflation tradeoff has been reopened.

[4] As expressed by Robert Samuelson, when commenting on the 1996 Clinton–Dole Presidential campaign in the United States: "(...) the real issue concerns government direction. Will it grow bigger and more activist? Or will it be more restrained and disciplined? And here genuine party differences exist". See Samuelson (1996).

[5] See Giavazzi and Pagano (1990), Alesina and Perotti (1997) and Alesina et al. (1998).

expansionary, if it induces sufficiently strong expectations of future policy in the opposite direction". A deficit cut can be expansionary for several distinct reasons. As all public spending is ultimately financed by taxes (current or future), a decrease in permanent spending implies a concomitant decrease in the present discounted value of taxes. A credible decrease in permanent government spending lowers the net value of future tax receipts and increases private wealth, leading to a boom.[6] Increases in taxes can also lead to increases in output either because the path of taxes over time is smoothed—when the distortionary costs of taxation depend nonlinearly on tax rates[7]—or solve uncertainty over the future course of fiscal policy.[8] Finally, cuts in the deficit can raise household wealth—labor and nonlabor—through a decrease in interest rates, as credible cuts in the deficit can substantially lower interest rates, in tandem with expected inflation and default risk.

What has the literature uncovered as to the factors that make fiscal adjustments more credible? A fiscal adjustment is defined as a change in the primary deficit above a given threshold,[9] while success is associated with the persistence of the deficit cut.[10] The success of a fiscal adjustment depends crucially on its credibility, i.e., how permanent the initial change in the deficit is *believed* to be. When a cut in the deficit is perceived as permanent—i.e., unlikely to be reversed in the future—it may induce an expansionary effect that contributes to its persistence through an increase in GDP that lowers the deficit as a share of GDP. The literature on fiscal adjustments has put forward different factors that add credibility to the adjustment. Giavazzi and Pagano (1990) suggested that the *size of the deficit cut* was key to the success of the Irish and Danish adjustments of the mid-1980s.[11] A second source of credibility is the *composition of the deficit cut*: Alesina and Perotti (1997) show that adjustments relying on spending cuts (rather than tax increases) tend to be more successful. The public understands that these adjustments harm particular constituencies such as trade union members and pensioners and thus assigns them a higher credibility.[12] Finally, the *circumstances of the adjustment*, in particular the level and increase of the public debt in the years before the adjustment, may further success. Perotti

[6] This is a corollary of the full discounting of future taxes behind the well-known Ricardian Equivalence result that purports that changes in the deficit today do not lead to any change in consumption, interest rates or output if government spending is unchanged and individuals discount future taxes appropriately. See Barro (1989).

[7] This argument was originally made in Blanchard (1990).

[8] For a given level of spending, tax increases have two effects on work effort: the wealth effect leads to increased work effort, higher consumption and output; the substitution effect leads to reduced work effort, lower consumption and output. If the tax cut is temporary, the substitution effect is likely to dominate, but if the tax increase is permanent, the wealth effect tends to dominate. Pencavel (1986) shows that the substitution effect is likely to be small.

[9] Usually defined as a change of 1.5% of GDP or more.

[10] Whose definition depends on the total change in the 2 or 3 years after the adjustment.

[11] Giavazzi and Pagano (1996) found some evidence of an expansionary effect associated with larger adjustments. In contrast, Alesina and Perotti (1997) find little association between size of the deficit cut and success.

[12] Alesina et al. (1998) showed that the electoral success of a cabinet is not affected by the size of the cut. If anything, larger deficit cuts and cuts in government wages increase the probability of survival of the cabinet. The reason why cabinets do not adjust more often has to be that governments are sympathetic to or afraid of particular interest groups. See De Haan (1997) for a reassessment of these findings.

(1999) presents empirical evidence showing that, when public debt is high, deficit cuts are more likely to be expansionary.[13]

An altogether different source of credibility is associated with the structure of the cabinet and the polity, namely, the number of "veto players" in the political system. Tsebelis (1995) defined veto players as individuals or institutions (parties, the parliament, etc.) whose agreement is necessary to change the status quo. The likelihood of policy change (e.g., fiscal adjustment) decreases as the number of veto players increases.[14] Coalition cabinets and minority cabinets increase the number of veto players in the system relative to one-party majority cabinets, so that the credibility of a policy change such as a fiscal adjustment can decrease.[15] Empirically, Roubini and Sachs (1989) and Grilli et al. (1991) show that coalition cabinets tend to be more fiscally irresponsible than other cabinets, increasing expenditures at the cost of larger deficits. Volkerink and De Haan (2000) find that measures of political fragmentation, including the number of parties in the cabinet, correlate positively with higher deficits.[16]

The success of fiscal adjustments might depend on the exchange rate regime in place.[17] Lambertini and Tavares (2000) examine in detail the role of exchange rates before, during and after fiscal adjustments, and find a strong and robust association between depreciation of the exchange rate before the fiscal adjustment and the persistence of the ensuing adjustment, but the compositional effect and the other determinants of persistence remain as important. Lane and Perotti (2001) also provide theory and evidence on the role of exchange rate regimes but find their results are entirely consistent with the compositional effects of fiscal policy.

Cabinets that undertake fiscal adjustments can reduce public spending, increase taxes or pursue a mix of policies where at least one of the former actions is taken. One

[13] Sutherland (1997) shows that, in a model where consumers have finite lives, a decrease in spending (or increase in taxes) has contractionary effects at low debt levels but is expansionary at high debt levels. Bertola and Drazen (1993) also present a model where cuts in spending have different effects at different levels of public spending but they do not derive clear empirical implications.

[14] Tsebelis (1995) highlights that less congruence—dissimilarity of positions between veto players—or less coherence—dissimilarity of positions among elements of the same veto player institution—decreases the likelihood of policy change. Tsebelis (1999) shows that political systems with more veto players and less congruence changed labor legislation less frequently, while Tsebelis and Chang (2001) find that an increase in the number of veto players in advanced industrialized countries leads to less frequent changes in the composition of government budgets.

[15] Alesina and Drazen (1991) and Spolaore (1993) have shown how coalition cabinets are less likely to reach agreement in such matters as when and how to cut a government deficit. A coalition government has more difficulty than a single party majority government to assign the costs of adjustment to specific groups since coalition partners are likely to veto some of the possible options. One can extend the theoretical argument to argue that coalition cabinets are more likely to break an agreement over a fiscal adjustment, decreasing its persistence.

[16] In a reassessment of the results in Roubini and Sachs (1989), Edin and Ohlsson (1991) argue that it is minority cabinets that are fiscally loose and not majority coalition cabinets, concluding that it is harder to negotiate with parliament than within the cabinet. These authors find coalition cabinets to be as fiscally loose as single party majority cabinets, which suggests both the number of parties in the cabinet and their support in parliament may be relevant. See also De Haan (1997) for a reassessment of the Roubini and Sachs findings.

[17] More generally, the institutionalist view of Hallerberg and Von Hagen (1999) contends that it is the presence of budgetary institutions such as a strong finance minister and negotiated budget targets that explains fiscal discipline.

characteristic of cabinets that is explicitly made public is their ideological persuasion. Thus, if a left-wing cabinet adjusts by increasing taxes it may be perceived as partisan, whereas if the same cabinet cuts spending it signals to economic agents the urgency and benefits of the fiscal adjustment. This is one of the implications of the "why it takes a Nixon to go to China" argument, formalized in Cukierman and Tommasi (1998): "when voters are not fully informed about the way in which policies map into outcomes, policy proposals convey information". In other words, policies that benefit the majority of economic agents (such as deficit reduction) may be more easily implemented by "unlikely" characters.[18] While Drazen and Masson (1994) distinguish between the credibility of policies versus that of policymakers, Cukierman and Tommasi (1998) argue, as we do in the current paper, that it is the policymaker–policy pair that matters.

A key element is the motivation of politicians. In spite of the widely held prior belief that fiscal adjustments are politically costly, Alesina et al. (1998) have found no evidence of that political cost in a recent examination of poll data and cabinet turnover after fiscal adjustments. According to these authors, cabinets do not bear an electoral cost after fiscal adjustments but avoid them due to risk aversion or to protect special interests. Policymakers who are simultaneously motivated by partisanship, the benefits of office and aggregate welfare may, in circumstances such as a high public debt situation and in the absence of electoral punishment, sacrifice partisan interests. Specifically, a left-wing cabinet may cut public spending—if it buys them a higher likelihood of remaining in office.

In sum, our search for the effects of credibility on fiscal adjustments relies on four elements. First, *partisanship*: policymakers are ideological, i.e., the public recognizes the preferred course of action for each cabinet. Second, *asymmetric information*: the economic benefits of reducing the deficit are uncertain and the cabinet has better information than the public. Third, *signaling*: by pursuing policies that are costly and against the immediate interests of their constituents, policymakers provide information on their economic benefits. Fourth, *feedback*: signaling policy commitment improves the chances of the fiscal adjustment being successful.

3. Empirical analysis

3.1. Data and summary statistics

Our data set covers 19 countries in the OECD between the years 1960 and 1995[19] and relies on two main sources. Macroeconomic indicators—including the fiscal policy variables—are from the OECD Economic Outlook (OECD, 1997) while cabinet

[18] Rodrik (1993) pointed out that dramatic fiscal, trade or institutional reforms are carried out by populist governments. Cukierman and Tommasi (1998) carry the argument further and suggest that those parties may actually have an advantage over other parties when carrying out those reforms.

[19] The countries are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden, the United Kingdom and the United States.

characteristics are taken from Budge et al. (1993), updated to 1995 by Woldendorp et al. (1998). We used the Political Handbook of the World (1996) to compute political data for Greece, Portugal and Spain, as well as cabinet changes for 1995, using the criteria in Budge et al. (1993).[20] The ideological index in Budge et al. (1993) locates all cabinets on a left–right scale according to each party's share of seats in government (or of supporting parties in parliament when the latter explicitly support the cabinet).[21] This index takes values between 1 and 5, taking the value 1 if the share of right-wing seats is equal to or greater than 2/3, 2 if it is between 1/3 and 2/3, 3 if the center parties account for more than 50% of seats (or left-wing and right-wing parties balance each other out in the cabinet), with the values 4 and 5 for left-wing dominated cabinets likewise defined. We also use three alternative indices of cabinet ideology, as defined in Appendix A and in the text below. Other cabinet characteristics are the number of parties and whether the cabinet holds a majority. If more than one party holds posts in the cabinet, the cabinet is classified as a coalition; if the parties supporting the cabinet hold a majority of seats in the lower house of parliament, it is a majority cabinet. In sum, cabinets are classified in a right–left scale (taking values between 1 and 5, where 5 is most leftist) and according to whether they are majority or coalition cabinets (with each characteristic noted by a dummy variable).[22]

In Table 1 below we present summary statistics for the main variables during fiscal adjustments. We define a fiscal adjustment as a year for which the change in the primary deficit is -1.5 GDP or less. An adjustment is *successful* if the total change in the primary deficit in the 3 years after the tight period is -1% (or less) of GDP or, 3 years after the initial adjustment year, the debt-to-GDP ratio is 5% below its level before the tight period.[23] An analysis of the distribution of fiscal adjustments by country and year shows that they are widely distributed in both dimensions. Table 1 shows that the size of the deficit cut is not radically different for successful and unsuccessful adjustments, confirming previous results in the literature. However, there is a strong composition effect: successful adjustments reducing spending more than increasing taxes and unsuccessful adjustments doing the opposite. Coalition and majority cabinets are both less likely to be successful in fiscal adjustments and the level and the increase in public debt are higher just before successful adjustments. There are no major differences as to the stage of the cycle at which both types of adjustments are undertaken, even if successful adjustments tend to occur when unemployment is decreasing rather than increasing.

[20] Greece, Portugal and Spain are included only from appropriate dates in the mid-1970s, when they adopted a democratic regime.

[21] The classification of a party's ideological position used by Budge et al. (1993) is taken from Castles and Mair (1984), a cross-national study that surveys experts, mostly political scientists, on party ideology. Castles and Mair (1984) place each party on a segment representing left–right political orientation with the aim of arriving at a political scale that is comparable across countries.

[22] The cabinet considered is that which is in power for most of the calendar year according to Budge et al. (1993).

[23] This is virtually the same definition as used in Alesina et al. (1998).

Table 1
Characteristics of adjustments, successful and unsuccessful

	All sample	Fiscal adjustments	Successful adjustments	Unsuccessful adjustments
Change in Deficit	0.12	− 2.33	− 2.56	− 2.17
Change in Spending	0.57	− 1.05	− 1.71	− 0.58
Change in Revenues	0.46	1.29	0.87	1.59
Lag Debt	44.53	54.39	68.63	44.00
Lag Change Debt	2.93	7.57	11.18	4.92
Growth UNR	1.29	− 0.11	− 3.44	1.70
Growth GDP	3.46	3.42	3.42	3.41
Majority	73.44	71.72	57.14	79.69
Coalition	50.42	49.49	34.29	57.81
Left	32.50	38.38	37.14	39.06
Right	49.17	42.42	60.00	32.81

Change in Deficit, Change in Spending and Change in Revenues correspond, respectively, to the change in the primary public deficit, public expenditures and government revenues as a share of Gross Domestic Product (GDP), in percentage points. Lag Debt and Lag Change Debt are the level of public debt at the time of adjustment and the change in its level in the 3 years before the adjustment, as shares of GDP, in percentage points. The variables Growth Unemployment and Growth GDP are the yearly change in the unemployment rate and in real GDP, in percentage points. Majority, Coalition, Left and Right give the frequency of cabinets each characteristic, with left and right corresponding to an *Ideology Tavares* index strictly greater than and strictly smaller than 3. See Appendix A for the description of the variables.

3.2. Ideology and fiscal policy

To motivate the argument that left-wing and right-wing cabinets might differ in fiscal adjustments we present three pieces of evidence: opinion surveys, the empirical literature on ideology and fiscal policy and statistics computed in our sample. For our purposes, it suffices to determine whether the preferred size of government differs for left and right, and that this difference has fiscal consequences.[24] Several surveys document the association between ideology and fiscal preferences. Kay et al. (1995) report results from a broad sample of interviews in 1992 and 1995. Individuals were asked to locate themselves in both the Republican–Independent–Democrat and the Conservative–Moderate–Liberal spectra and then asked the question: "In order to reduce the deficit, what is your desired percentage decrease in spending for each point increase in taxes?"[25] The survey results are

[24] We will not discuss the origin of the different character of left and right—discussed, for instance, in Lewis-Beck (1988)—nor where the diverging preferences for government size come from. The obvious candidate is that parties cater to different constituencies and parties on the left cater to a lower income constituency who benefits more from public expenditure programs and/or face lower tax rates. Piketty (1995) quotes survey evidence associating income and voter preferences that supports the contention that lower income individuals tend to vote with the left.

[25] The question mentions explicitly tax increases and spending cuts and thus captures precisely what we are interested in: the individual trade-off between the benefits of public spending and the costs of taxation. Hansen (1998) states that "[c]itizen's preferences over the public budget are remarkably well structured. Most people have no difficulty in determining their views. Most have no difficulty *recognizing tradeoffs*". (Italics added)

clear: Republicans favor larger spending cuts than Democrats for each point of increase in taxes, 1.98 instead of 1.43 and 2.95 instead of 1.75, respectively, in 1992 and 1995. This difference of 0.55% and 1.10% of GDP, respectively, for 1992 and 1995, is not negligible. The difference between Conservative and Liberal is similar, at 0.87 and 0.99 for the same two years.[26] Other surveys such as Fuller et al. (1995) have found similar results. Gallup (1990) gauged individual support for senators who had favored tax increases. Individuals who classified themselves as Democrats (or Liberals)[27] were more likely to grant their support than those defining themselves as Republicans (or Conservative) and the difference was larger than for other individual characteristics—such as gender, age, race and education. Hansen (1999) finds that individuals identified with the left favor higher taxes and higher spending. Interestingly, no similar partisan differences can be uncovered with respect to the deficit. Hansen (1998) documents how most of the voters prefer the status quo when choosing between greater domestic spending, lower deficits and lower taxes. This is consistent with the finding in Blinder and Holtz-Eakin (1984) that individual ideology has no direct effect on support for a balanced-budget amendment.

The literature that tests the link between cabinet ideology and fiscal action uncovers some evidence in favor of the hypothesis that leftist cabinets increase spending more than rightist cabinets. Such is the case in Golden and Poterba (1980)—for the US between 1952 and 1978—and Roubini and Sachs (1989)—for the OECD.[28] In contrast, and despite the popular assumption that left-wing cabinets are more prone to deficit spending, empirical studies such as Hahm et al. (1995) have been unable to uncover a clear correlation between partisanship and the size of the deficit. Mulas-Granados (2003) finds that in the nineties "the ideology of the party in government has become the most powerful predictor of fiscal policies and strategies of adjustment." Specifically, there is evidence that left-wing cabinets are particularly reluctant to cut public investment and public employment.

We now turn to our data set and classify cabinets into left and right according to four different indices, as mentioned in Appendix A. Our ideology index, which will be used throughout the empirical work, is complemented by three additional indices, made available by George Tsebelis from the original Castles and Mair (1984), Laver and Hunt (1992) and Warwick (1994) articles. Castles and Mair (1984) generate their ideological scores from a questionnaire survey of more than 115 political scientists in Western Europe and the United States. Each expert was asked to place the parties holding seats in the national legislature on a left–right political spectrum ranging from 0 (extreme left) to 10 (extreme right), with 2.5, 5 and 7.5 representing the moderate left, the center and the moderate right, respectively.[29] Laver and Hunt (1992) asked experts to locate the policy

[26] It is remarkable that middle-of-the-road voters (independents/moderates) display middle-of-the-road fiscal preferences, i.e., they favor spending cuts that are larger than those favored by the left, but smaller than those favored by the right. These results suggest that preferences over the level of public spending are systematically associated with preferences on a broader set of political issues that determine individual political alignment.

[27] The use of the two dimensions attempts to correct for prejudices associated with specific labels that could bias results. However, here as in other studies, the results do not depend on the labels used.

[28] The study of the components of public spending does not uncover dramatic differences. Blais et al. (1993), for instance, conclude that "parties do make a difference, but a small one".

[29] The authors present results only for countries where at least three experts provided answers and compute the ideological score as the average of all available responses.

Table 2
Summary statistics for ideology and fiscal adjustments

		Left	Center	Right
Ideology Tavares	Frequency of Adjustment	12.2	10.8	8.9
	Change in Deficit	− 2.37	− 2.36	− 2.34
	Change in Spending	− 0.74	− 1.03	− 1.28
	Change in Revenues	1.46	1.46	1.09
Ideology Laver–Hunt	Frequency of Adjustment	6.6	14.6	12.6
	Change in Deficit	− 2.18	− 2.36	− 2.48
	Change in Spending	− 0.63	− 0.70	− 1.58
	Change in Revenues	1.45	1.59	0.95
Ideology Warwick	Frequency of Adjustment	8.7	13.9	13.3
	Change in Deficit	− 2.27	− 2.53	− 2.34
	Change in Spending	− 0.78	− 1.46	− 1.35
	Change in Revenues	1.38	1.20	1.09
Ideology Castles–Mair	Frequency of Adjustment	7.9	14.2	14.8
	Change in Deficit	− 2.34	− 2.14	− 2.59
	Change in Spending	− 0.84	− 0.69	− 1.67
	Change in Revenues	1.37	1.50	0.97

For each of the four ideology indicators, we present the values for the Frequency of a Fiscal Adjustment and the Changes in Deficit, Spending and Revenues correspond for Left, Right and Center cabinets. The variables Change in Deficit, Change in Spending and Change in Revenues correspond to the yearly changes in the share of the primary public deficit, primary spending and current revenues as shares of GDP, as defined in Appendix A. *Ideology Tavares*, *Ideology Laver–Hunt*, *Ideology Warwick* and *Ideology Castles–Mair* are alternative indices of a cabinet's ideological orientation.

positions of party leaders and party voters according to whether they favored relatively more an increase in public services or a cut in taxes.[30] Warwick (1994) generates its ideological index from 40 different measures presented from experts, party manifestos and survey sources. The four alternative indices have varying sample sizes with our ideology index covering most countries and cabinets. In addition, our ideology index—henceforth denoted *Ideology Tavares*—covering most displays a simple correlation of 0.69, 0.56 and 0.75 with each of the other three indices, to be denoted *Ideology Laver–Hunt*, *Ideology Castles–Mair* and *Ideology Warwick*.

A first evidence of cabinet partisanship is the fact that cabinet behavior differs in adjustment years as compared to other years. While changes in spending and changes in revenue display a positive correlation of 0.34 in the sample as a whole, this correlation more than doubles to 0.73 during adjustments. In other words, during fiscal adjustments, cabinets tend to change spending and revenues in the same direction. If these are adjustment years, this may be evidence that they tend to be partisan, i.e., decrease the deficit by changing government size towards their preferred ideal level.[31] Table 2 presents strong evidence of partisanship during adjustment years. We report the change in the deficit, public spending and revenues for the subsamples of left- and right-wing cabinets,

[30] Respondents assigned each party a score between 1 (“favors raising taxes to increase public services”) and 20 (“favors cutting public services to cut taxes”).

[31] So that, for instance, left-wing cabinets might decrease the deficit by increasing public spending and increasing taxes at the same time.

during years of fiscal adjustments. We find that, regardless of the ideology index used, the average change in the deficit is remarkably similar between left, right and center cabinets, while left and right differ substantially as to the average composition of the deficit cut. If on the left, cabinets tend to increase taxes more than cut expenditures, while on the right, the opposite holds. More than half of the cut in the deficit by the left relies on tax increases, while the opposite holds for right-wing cabinets.[32] This, we believe, is in accordance with the prior belief held by most economists and policymakers. Partisanship during fiscal adjustments is also suggested by a comparison of the simple correlation between ideology and fiscal changes. While all indices of cabinet ideology have a correlation coefficient very close to 0 in the whole sample, during years of fiscal adjustments, all ideological indices with the exception of Ideology Warwick displays coefficients of correlation of 17% or more.[33] This suggests that cabinets tend to be partisan during adjustments, the implication being that they can gain credibility when they are not partisan and adjust in ways contrary to the interests of their constituents.

3.3. Specification and estimates

Previous studies and Table 1 above show that adjustments relying on spending cuts are the most successful—the compositional effect. Table 2 shows that left and right tend to be partisan during fiscal adjustments, i.e., the left is more likely to increase taxes and the right cut spending. These two facts lead us to expect the right to be much more successful than the left in cutting the deficit. That is not the case. As Table 1 documents, confirming previous results in the literature, left-wing cabinets constitute virtually the same share of adjustments, whether successful or unsuccessful. The only way to reconcile the three facts—successful adjustments rely on spending cuts, the left cuts spending less than the right in achieving deficit cut—is for the success rate of left-wing and right-wing to differ when pursuing adjustments in different ways. Specifically, it must be the case that, though the left is less likely to cut spending, *when it does* it is more successful than the right.[34] This suggests the hypotheses to be tested empirically:

Hypothesis 1. An adjustment pursued by cutting public expenditure is more likely to be successful if pursued by the left than by the right.

Hypothesis 2. An adjustment pursued by increasing the level of taxes is more likely to be successful if pursued by the right than if it is pursued by the left.

Our basic specification estimates the effect of the different sources of credibility on the probability of a fiscal adjustment being successful. We compute Probit estimates of the impact of the independent variables on the probability of success for the sample of adjustment years. The dependent variable takes the value 1 if the adjustment is successful

[32] Government wages and nonwage consumption and transfers account for most of this difference between left and right.

[33] The positive sign of the correlation suggests that left-wing cabinets (assigned a higher ideology index) tend to promote positive changes in spending and taxes, especially during adjustments, suggesting a partisan choice.

[34] Conversely, the right is more successful in the few instances when it increases taxes.

and 0 otherwise.[35] Our main variable of interest is the interaction of ideology and the change in the fiscal variable. In addition to their interaction, we add the ideology indicator and the change in fiscal variable as independent controls.[36] If the coefficient associated with the ideology–fiscal change interaction is significant, we interpret it as evidence of credibility effects associated with cabinet ideology. An analysis of the results for different components of spending and revenues will allow us to determine which subcategories of spending and revenues are important sources of credibility. We include other controls in the basic specification, including the type of cabinet initiating the adjustment (whether it is a coalition cabinet or it holds a majority), the stage of the business cycle (proxied by the rate of growth of real GDP and of the unemployment rate) and the fiscal position at the time of the adjustment (level of public debt and change in public debt before the adjustment year).

It is important to mention the controls we do not include. The size of the adjustment is omitted since there is a high correlation between changes in the deficit and changes in spending and its components, but our results on the ideology indicators are robust to the addition of the size of the deficit cut. More importantly, we do not add indicators of the election cycle. These could be important in light of partisan political business cycle theory, which proposes a relationship between economic policy and the electoral cycle, as in Hibbs (1977) and surveyed in Alesina et al. (1997), which extend the discussion to rational partisan cycles. Two reasons support our exclusion of electoral dating variables: first, empirical studies have found little evidence of significant effects of election dates on fiscal policy,[37] and we have confirmed that our results are robust to inclusion of these variables; second, in our sample we find no evidence that major fiscal adjustments tend to occur at a particular point in the electoral cycle or be more successful when they do.[38]

One way to avoid reverse causation is using a dependent variable depends on information available 3 years into the future—the success indicator—whereas the independent variables are measured at the time of or before the adjustment. In Appendix B we present sample summary statistics that corroborate the lack of reverse causation. The first table presents the share of observations with cabinets that have been in power for 1 year and up to 4 years. We examine the whole sample, the years of fiscal adjustment and the years of fiscal adjustments classified as success, and find that the distribution of cabinets across tenure years is virtually unchanged across these samples. The typical adjustment—successful or not—occurs in the second year of tenure. When we examine the number of changes in the cabinet ideology (due to an election or parliamentary

[35] As mentioned above, a fiscal adjustment is defined as a yearly change in the deficit of at least -1.5% of GDP. It is considered successful if the average deficit decreases 3 years after the adjustment year or the level of public debt decreases by 5% after those 3 years. The dummy for success takes the value 0 when neither of the criteria is met.

[36] Thus, we are able to control for the role of ideology in success, *independently of the fiscal action* undertaken. And likewise for the effect of composition of fiscal change, independently of the cabinet ideology.

[37] See Alesina et al. (1997).

[38] See Appendix B, which presents summary statistics on the timing and success of fiscal adjustments, the timing of changes in the ideology of the cabinet. There is no clear relationship between the times at which there are cabinet changes, the ideological changes involved and the pursuit or success rate of adjustments.

reshuffles), again we do not discern any different across samples. There is no substantially higher likelihood of a leftward or rightward change before adjustments, whether successful or not. Thus, the timing of adjustments and the probability of an ideology change just before the adjustment suggest that fiscal adjustments are not undertaken directly in response to the electorate. We can thus interpret the emperical results below as documenting a relationship running from fiscal changes to success and not the reverse.

In Tables 3 and 4, we present specifications for different independent variables, each corresponding to the interaction of the ideology index with the change in a specific fiscal variable, shown at the top of each column. A negative sign in the coefficient associated with this interaction indicates that a cut in the spending category by cabinets further to the left is associated with a higher likelihood of success. When we analyze the results for the different components of public spending in Table 3, we verify that total public spending and public consumption—both its wage and nonwage components—are all significant at the 10% level or above. The estimated size of the coefficients is higher for public consumption and its two components, suggesting a dramatic increase in the credibility for an adjustment by a left-wing cabinet that cuts public spending. The estimate of -7.92 for the coefficient on the "cabinet ideology–change in public spending" pair suggests that a 1% cut in spending by the leftmost cabinet has a 32% higher likelihood of success than the exact same policy undertaken by the rightmost cabinet. This is an important difference. Notice that the ideology indicator suggests that left-wing cabinets are less likely to be successful but the size of the coefficient is very small, so that when pursuing the credible policy, left-wing cabinets easily attain success. As to the variable capturing the change in fiscal policy in isolation, it is never even close to significance, except in the case of public investment when the coefficient has the sign opposite to what is expected. As to the control variables, both the characteristics of the cabinet and the fiscal status have strong effects on the likelihood of success, so periods of when the level of public debt increases and minority single party cabinets tend to be more successful. The type of government has a noticeable effect on the likelihood of a persistent adjustment: other things being equal, as an adjustment pursued by a coalition or minority cabinet is around 30% less likely to be persistent.[39]

Table 4 presents results for changes in total tax revenues and its components. The results are similar to those for spending in that the cabinet type and the recent change in fiscal position matter for success. As to our main variable of interest, Ideology∗Change in Revenues, it tends to be associated with a negative coefficient,[40] suggesting that increases

[39] Why minority single party cabinets are more successful than others can be due to a series of factors. First, using the terminology in Tsebelis and Chang (2001), a single-party cabinet has more coherence. The fact that the cabinet does not hold a majority may decrease congruence, i.e., similarity of positions, between veto players. However, three other forces may lead to more congruence: first, before fiscal adjustments the fiscal situation tends to deteriorate so rapidly that agreement becomes easier to attain; secondly, fiscal changes that are credible represent a compromise among veto players—left-wing cabinets decrease spending or right-wing cabinets increase taxes—so that agreement is also made easier; third, the impact of the adjustment on the economy, which is likely to be positive in successful adjustments, also adds support for the adjustment, independently of how it is to be achieved.

[40] The exception is indirect taxes.

Table 3
Likelihood of success and changes in public spending. Probit estimates—sample of adjustments. Dependent variable: likelihood of success

	Change in spending							
	(1)	(2)	(3)	(4)	(5)	(6)	(6)	(7)
	Total spending	Public consumption	Public consumption wages	Public consumption nonwages	Transfers	Social security payments	Subsidies	Public investment
Ideology × Change in Spending	−7.92**	−23.70**	−24.35*	−36.23*	−0.01	−5.08	−9.75	5.75
	(−2.10)	(−2.00)	(−1.73)	(−1.84)	(0.00)	(−0.63)	(−0.82)	(0.35)
Ideology	−0.15**	−0.16**	−0.12**	−0.10*	−0.05	−0.06	−0.08*	−0.05
	(−2.30)	(−2.11)	(−2.08)	(−1.66)	(−1.04)	(−1.18)	(−1.69)	(−0.81)
Change in Spending	9.74	17.76	17.11	38.26	−23.91	−15.14	−14.96	−89.70*
	(0.92)	(0.56)	(0.43)	(0.77)	(−0.92)	(−0.60)	(−0.32)	(−1.72)
Lag Debt	0.30	0.17	0.30	0.15	0.33	0.31	0.28	0.47
	(0.84)	(0.55)	(1.07)	(0.46)	(0.96)	(0.87)	(0.79)	(1.40)
Lag Change Debt	1.37**	1.70**	1.22*	1.94**	0.93	1.02	1.28*	1.52**
	(2.13)	(2.76)	(1.76)	(2.58)	(1.34)	(1.40)	(1.77)	(2.17)
Majority	−0.40**	−0.39**	−0.36*	−0.40**	−0.25	−0.31*	−0.45**	−0.44**
	(−2.21)	(−2.03)	(−1.93)	(−2.32)	(−1.59)	(−1.88)	(−2.57)	(−2.72)
Coalition	−0.35**	−0.32**	−0.32**	−0.35**	−0.31**	−0.34**	−0.36**	−0.37**
	(−2.46)	(−2.26)	(−2.30)	(−2.34)	(−2.30)	(−2.45)	(−2.44)	(−2.57)
Growth GDP	−1.82	−2.80	−3.93	−2.34	−4.62	−4.28	−3.42	−0.84
	(−0.61)	(−0.98)	(−1.25)	(−0.87)	(−1.46)	(−1.48)	(−1.19)	(−0.30)
Growth UNR	−0.01**	−0.01**	−0.01**	−0.01**	−0.01*	−0.01*	−0.01**	−0.02**
	(−2.37)	(−2.55)	(−2.58)	(−2.69)	(−1.78)	(−1.54)	(−2.41)	(−2.85)
Number of observations	76	76	76	76	76	76	76	76
Log *L*	−32.62	−28.33	−30.01	−32.84	−35.05	−34.79	−34.09	−32.83
Pseudo *R*2	0.37	0.46	0.42	0.37	0.33	0.33	0.34	0.37
Observed *P*	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Predicted *P*	0.33	0.30	0.32	0.36	0.38	0.38	0.38	0.35

The independent variable Ideology∗Fiscal Change is the product of the ideological dummy and the yearly change in the variable at the top of each column. For each independent variable we report (d*F*/dx), i.e., the marginal change in the probability of success for the average values of the independent variables. In parentheses we report the *t*-statistic based on robust, heteroskedastic-consistent standard errors. See Appendix A for a complete description of the variables.

* Significant at the 10% level.

** Significant at the 5% level.

Table 4
Likelihood of success and changes in public revenue. Probit estimates—sample of adjustments. Dependent variable: likelihood of success

Component	Change in revenue						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Total revenues	Direct taxes	Social security taxes	Indirect taxes	Other taxes	Direct taxes business	Direct taxes households
Ideology × Change in Revenue	− 4.09	− 6.70	− 0.31	8.45	− 34.17**	− 50.99**	− 4.09
	(− 0.96)	(− 1.31)	(− 0.08)	(0.90)	(− 2.69)	(− 3.11)	(− 0.96)
Ideology	− 0.03	− 0.05	− 0.06	− 0.09	− 0.02	− 0.05	− 0.03
	(− 0.56)	(− 1.14)	(− 1.20)	(− 1.35)	(− 0.47)	(− 1.19)	(− 0.56)
Change in Revenue	6.90	− 1.80	12.66	− 29.91	79.31**	132.18**	6.90
	(0.50)	(− 0.11)	(0.88)	(− 1.26)	(2.39)	(2.79)	(0.50)
Lag Debt	0.37	0.27	0.36	0.32	0.39	0.73**	0.37
	(1.09)	(0.85)	(1.07)	(0.97)	(1.24)	(1.97)	(1.09)
Lag Change Debt	1.20*	1.41**	1.37**	1.26*	1.50**	1.58**	1.20**
	(1.64)	(1.93)	(1.89)	(1.78)	(2.25)	(2.17)	(1.64)
Majority	− 0.38**	− 0.37**	− 0.31**	− 0.35**	− 0.47**	− 0.54**	− 0.38**
	(− 2.36)	(− 2.23)	(− 1.92)	(− 2.27)	(− 2.63)	(− 3.32)	(− 2.36)
Coalition	− 0.33**	− 0.32**	− 0.37**	− 0.33**	− 0.36**	− 0.26*	− 0.33**
	(− 2.34)	(− 2.26)	(− 2.65)	(− 2.30)	(− 2.58)	(− 1.86)	(− 2.34)
Growth GDP	− 2.13	− 3.22	− 2.11	− 3.27	0.14	− 0.12	− 2.13
	(− 0.78)	(− 1.16)	(− 0.79)	(− 1.03)	(0.05)	(− 0.04)	(− 0.78)
Growth UNR	− 0.01**	− 0.01**	− 0.01**	− 0.01**	− 0.01**	− 0.01**	− 0.01**
	(− 2.38)	(− 2.27)	(− 2.38)	(− 2.50)	(− 2.03)	(− 2.00)	(− 2.38)
Number of observations	76	76	76	76	76	76	72
Log *L*	− 33.72	− 35.44	− 33.63	− 35.56	− 35.31	− 30.70	− 25.59
Pseudo *R*2	0.35	0.32	0.35	0.32	0.32	0.41	0.48
Observed *P*	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Predicted *P*	0.36	0.37	0.36	0.38	0.38	0.35	0.28

The independent variable Ideology∗Fiscal Change is the product of the ideology dummy *Ideology Tavares* and the yearly change in the variable at the top of each column. For each independent variable we report (d*F*/d*x*), i.e., the marginal change in the probability of success for the average values of the independent variables. In parentheses we report the *t*-statistic based on robust, heteroskedastic-consistent standard errors. See Appendix A for a complete description of the variables.

* Significant at the 10% level.

** Significant at the 5% level.

in tax revenues by the left are less likely to lead to persistent adjustments. The coefficient is significantly different from 0 at the 1% significance level in the case of other taxes and direct taxes on business, which are significant at the 1% level. These conditional coefficients suggest that a 0.25% increase in other tax revenues—the average for the sample of adjustments—leads to about 34% higher rate of success for the most left-wing cabinet as compared to the most right-wing. Note that, while the coefficient for the change in revenues in isolation is significant in both the Other Taxes and the Direct Taxes on Business, its sign is opposite to what would be expected if only this change mattered for credibility.

Table 5 tests whether our results are robust to different ideology coefficients. The interaction of the ideology indices and changes in the fiscal variable all come out negative, suggesting a credibility effect. While all but one of the interacted variables related to changes in spending are strongly significant, the interaction of ideology and changes in revenues displays lower significance. We ran the same specifications for the different components of spending and revenues—as in Tables 3 and 4—for the three additional ideology indices and found that public consumption and its components (wage and nonwage), other taxes and direct taxes on business, remained significant.

An issue requiring our attention is the extent to which the above results would change if cycle corrected fiscal variables were used instead. We have used cyclically adjusted definitions of the deficit to define the years of fiscal adjustments and our results remain unchanged. Moreover, the fact that business cycle indicators are never significant determinants of the timing or success of fiscal adjustments in Table 4 suggests that business cycle fluctuations do not explain our results.[41]

An important question is whether credibility originates different reactions to fiscal policy changes as far as GDP and its components are concerned. We start to address this question by considering that, if an adjustment is credible, variables such as output, investment and consumption may respond positively to the deficit cut. In Table 6 we test for the effect of the ideology–fiscal policy interaction for the case of public spending and its most important component, public consumption. For reasons of parsimony we report only the coefficients on the ideology–fiscal policy interaction and the two variables in isolation, but we have used all controls as in Tables 3–5. We find that it is the change in fiscal policy and not the interaction with ideology that matters for output, investment and consumption growth.[42] In fact, the negative sign on the coefficient of the fiscal policy change is statistically significant and suggests the larger the decrease in public spending or public consumption, the larger the increase in output and its components. This increase is substantial, with the share of business investment in GDP increasing between 7% and 14% in the 2 years after the adjustment. This is the first time the composition effect is tested for in terms of impact on output.

[41] Other papers in the literature, such as Alesina et al. (1998), have found no change in results when fiscal variables corrected for the cycle were used instead of simple shares of GDP. Hallerberg and Strauch (2002) have found extremely small cyclical variation in spending and tax receipts as shares of GDP for the European countries in our study.

[42] Here, as in Tables 3–5, the correlation between the interaction variable and the change in fiscal policy variable is high.

Table 5
Ideology, Change in Spending and Change in Revenues. Probit estimates—sample of adjustments. Dependent variable: likelihood of success

Ideology indicator	Ideology Tavares	Ideology Laver–Hunt	Ideology Warwick	Ideology Castles–Mair	Ideology Tavares	Ideology Laver–Hunt	Ideology Warwick	Ideology Castles–Mair
	Change in Spending				Change in Revenues			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ideology × Change in Fiscal Variable	−7.92**	−27.59**	−50.40**	−6.99	−4.09**	−17.12*	−0.64*	−16.79*
	(−2.10)	(−2.03)	(−3.40)	(−0.50)	(−0.96)	(−1.63)	(−1.58)	(−1.73)
Ideology	−0.15**	−0.47*	−0.69**	0.05	−0.03	0.12	0.00	0.24
	(−2.30)	(−1.48)	(−4.02)	(0.19)	(−0.56)	(0.76)	(1.51)	(1.60)
Change in Fiscal Variable	9.74	49.96*	186.82**	−13.03	6.90	29.32	2.48*	31.63
	(0.92)	(1.56)	(3.26)	(−0.29)	(0.50)	(1.05)	(1.58)	(1.02)
Lag Debt	0.30	0.75*	2.38**	0.69	0.37	0.79*	0.03*	0.85*
	(0.84)	(1.72)	(3.36)	(1.19)	(1.09)	(1.82)	(1.67)	(1.67)
Lag Change Debt	1.37**	3.21**	6.20**	3.36**	1.20*	3.01**	0.06*	3.13**
	(2.13)	(3.17)	(4.07)	(2.91)	(1.64)	(3.25)	(1.64)	(3.04)
Majority	−0.40**	−0.35*	−0.27*	−0.25	−0.38**	−0.38*	−0.01	−0.42**
	(−2.21)	(−1.82)	(−1.72)	(−1.23)	(−2.36)	(−1.81)	(−1.37)	(−1.95)
Coalition	−0.35**	−0.64**	−0.99**	−0.58**	−0.33**	−0.57**	−1.00*	−0.58**
	(−2.46)	(−2.24)	(−4.63)	(−2.74)	(−2.34)	(−2.22)	(−1.69)	(−2.44)
Growth GDP	−1.82	1.22	−0.21	−6.75	−2.13	0.65	−0.02	−1.44
	(−0.61)	(0.30)	(−0.04)	(−0.69)	(−0.78)	(0.16)	(−0.54)	(−0.22)
Growth UNR	−0.01**	−0.03**	−0.08**	−0.03**	−0.01**	−0.03**	0.001*	−0.03**
	(−2.37)	(−2.56)	(−3.45)	(−2.11)	(−2.38)	(−2.51)	(−1.68)	(−1.95)
Number of observations	76	60	50	55	76	60	50	55
Log *L*	−32.62	−18.05	−9.78	−14.09	−33.72	−19.17	−7.88	−15.59
Pseudo *R*2	0.37	0.56	0.72	0.63	0.35	0.54	0.77	0.59
Observed *P*	0.43	0.47	0.46	0.47	0.43	0.47	0.46	0.47
Predicted *P*	0.33	0.36	0.14	0.35	0.36	0.37	0.00	0.32

The independent variable Ideology*Fiscal Change is the product of the ideology dummy *Ideology Tavares* and the yearly change in the variable at the top of each column. For each independent variable we report (d*F*/d*x*), i.e., the marginal change in the likelihood of success, ideology, spending and revenues for the average values of the independent variables. In parentheses we report the *t*-statistic based on robust, heteroskedastic-consistent standard errors. See Appendix A for a complete description of the variables.

* Significant at the 10% level.

** Significant at the 5% level.

Table 6
Effect of Changes in Spending and Public Consumption on GDP growth and components. Ordinary least squares—sample of adjustments. Dependent variable: Growth in GDP, Private Investment and Components, Private Consumption

	Dependent variable									
	GDP		Private Investment		Business Investment		Housing Investment		Private Consumption	
	t to $t+1$	t to $t+2$	t to $t+1$	t to $t+2$	t to $t+1$	t to $t+2$	t to $t+1$	t to $t+2$	t to $t+1$	t to $t+2$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Ideology × Change in Public Spending	6.98	15.18	5.03	2.93	45.45	59.95	− 87.79	− 163.48*	20.22**	− 8.27**
	(0.97)	(1.17)	(0.19)	(0.09)	(1.58)	(1.36)	(− 1.41)	(− 1.67)	(3.05)	(3.69)
Ideology	− 0.13	− 0.18	− 0.89	− 0.44	− 0.72	− 0.38	− 1.41*	− 1.71	− 0.03	− 0.12
	(− 0.95)	(0.26)	(− 1.58)	(− 0.51)	(− 1.07)	(− 0.37)	(− 1.69)	(− 1.23)	(− 0.22)	(− 0.46)
Change in Public Spending	− 73.06**	− 154.27**	− 171.13	− 368.11*	− 358.86**	− 781.68**	− 49.18	164.11	− 75.70**	− 70.11
	(− 2.15)	(− 2.79)	(− 1.32)	(− 1.89)	(− 3.35)	(− 4.14)	(− 0.18)	(0.40)	(− 2.64)	(− 1.24)
Ideology × Change in Public Consumption	28.07	54.95	54.27	86.86	11.34	192.37	− 31.50	− 95.79	60.91**	70.26*
	(1.39)	(1.37)	(0.77)	(0.76)	(1.41)	(1.37)	(− 0.26)	(− 0.54)	(3.36)	(1.89)
Ideology	− 0.08	− 0.12	− 0.73	− 0.12	− 0.79	− 0.24	− 0.47	− 0.07	− 0.01	0.09
	(− 0.56)	(− 0.44)	(− 1.28)	(− 0.13)	(− 1.17)	(− 0.22)	(− 0.58)	(− 0.06)	(− 0.05)	(0.34)
Change in Public Consumption	− 230.75**	− 426.23**	− 704.43**	− 1445.55**	− 669.42**	− 1749.63**	− 771.44*	− 926.64	− 252.64**	− 433.68**
	(− 3.39)	(− 2.87)	(− 3.09)	(− 3.78)	(− 2.71)	(− 3.73)	(− 1.92)	(− 1.61)	(− 4.07)	(− 2.82)

In parentheses we report the t-statistic based on robust, heteroskedastic-consistent standard errors. The dependent variables are noted in the header row and include the growth rate of GDP and the change in some of its components, namely, Private Investment, Business Investment, Housing Investment and Private Consumption. For each dependent variable we use the accumulated rates of change, 1 and 2 years after the fiscal adjustment. Values are in percent of GDP for components of GDP and in growth rates for GDP itself. Here we report only the coefficient of the ideology–fiscal policy interaction, the ideology and the change in the fiscal variable, using *Ideology Tavares*, but specifications include the control variables in Tables 3 and 4 (not reported here for reasons of parsimony).

* Significant at the 10% level.

** Significant at the 5% level.

4. Conclusion

This paper draws on the assumption that left-wing cabinets favor a larger size of government than right-wing cabinets to assess the role of credibility in the persistence of fiscal adjustments. The literature on fiscal adjustments has documented two important facts on the determinants of success: First, fiscal adjustments that rely on spending cuts are more persistent than those relying on tax increases; second, fiscal adjustments initiated by left-wing cabinets are as persistent as those initiated by right-wing cabinets. In this paper we document a third fact: when a left-wing cabinet cuts the deficit it tends to rely on tax increases, whereas the right tends to rely on expenditure cuts. For all three facts to be internally consistent, it must be that left- and right-wing cabinets have different success rates when they cut the deficits in different ways, i.e., despite the fact that the left tends not to cut spending during adjusting, *when it does*, it gains in credibility.

Using data for a large sample of OECD countries, we show that it is during fiscal adjustments that the difference between the fiscal actions of left- and right-wing cabinets is starker, with the left relying mostly on tax increases and the right on spending cuts. We estimate how the interaction of cabinet ideology and fiscal change affects the likelihood that the adjustment is persistent. We find evidence in support of the hypothesis that the left is more credible than the right when cutting expenditures—total expenditures, public consumption and its components—and the right more credible when it increases taxes—namely, other taxes and direct taxes on businesses. We then investigate whether fiscal policy actions by left- and right-wing cabinets have differential impacts on output, private investment and consumption immediately after the adjustment. Our evidence shows that it is the fiscal policy change in itself that matters for the post-adjustment boom in output and its components.

These results are consistent with the literature on composition of adjustment but we go beyond the literature by explicitly testing for credibility effects on the persistence of adjustment and the determinants of the post-adjustment boom. Our paper provides strong evidence that, as far as the persistence of fiscal adjustments is concerned, what is important *is not only what you do, it is how you do it and who you are*.

Acknowledgements

The author has benefited from comments by Alberto Alesina, David Baron, Mário Centeno, David Cutler, Jeffry Frieden, Tim Groseclose, Fernanda Llussá, Francisco Rodriguez, Dani Rodrik, George Tsebelis, Romain Wacziarg, two anonymous referees and the editor, as well as participants at seminars at Stanford University, University of California at Los Angeles, Universidade Nova and the VIII World Conference of the Econometric Society, Seattle 2000. Roberto Perotti and George Tsebelis have kindly provided part of the data used in the paper. Financial support from the Banco de Portugal, the Fundação para Ciência e Tecnologia and NOVA FORUM is gratefully acknowledged. Any remaining error is my own.

Appendix A. The data

A.1. Cabinet data

Ideology—The cabinet ideological index developed by Budge et al. (1993) and updated by Woldendorp et al. (1998) locates the cabinet on a left–right scale, taking the values 1 to 5. It has been extended to include Greece, Portugal and Spain (from the respective democratic transitions) by the author using the Political Handbook of the World (1996). This index is denoted *Ideology Tavares*. The paper uses three alternative indices of cabinet ideology in addition to the previous one, based respectively on Castles and Mair (1984), Laver and Hunt (1992) and Warwick (1994) and named *Ideology Castles–Mair*, *Ideology Laver–Hunt* and *Ideology Warwick*. These last three indices were normalized so that they varied from a minimum value of 1 and a maximum of 5, with the latter denoting most left wing.

Coalition—A dummy variable taking the value 1 if a coalition cabinet—which includes ministers from two or more parties—is in power (from Woldendorp et al. (1998)).

Majority—A dummy variable that takes the value 1 if the cabinet has majority support in parliament (from Woldendorp et al. (1998)).

A.2. Macroeconomic data

Change in deficit—The yearly change in the primary deficit as a share of gross domestic product (GDP). All other fiscal variables are defined in a similar way: Change in Spending and Change in Revenues are, respectively, the changes in primary public expenditures and in public revenues as a share of GDP. We also use the disaggregated fiscal policy variables Change in Public Consumption, Change in Public Investment, Change in Transfers and Change in Subsidies. Change in Public Wage Expenditure and Change in Nonwage Public Expenditure sum up to Change in Public Consumption. Change in Direct Taxes, Change in Indirect Taxes, Change in Other Taxes are used, in addition to Change in Direct Taxes on Households and Change in Direct Taxes on Businesses sum up to the total change in direct taxes. We also use the Change in Social Security Payments and Change in Social Security Revenues as independent variables.

Lagged debt—Level of public debt as a share of GDP at the beginning of the fiscal year, in percent. The Lagged Change in Debt is the change in the level of public debt as a share of GDP in the last 3 years before the first adjustment year.

Growth GDP—Rate of growth in real GDP between the current year and the year before, in percent.

Growth UNR—Difference between the unemployment rate in the current year and the year before, divided by the unemployment rate the year before, in percent.

Growth Private Investment—The growth rate of private investment as a share of GDP, in percent. We define similarly growth in household investment, growth in business investment and growth in private consumption.

Appendix B. Ideology, the timing and success of fiscal adjustments

The timing of fiscal adjustments and success				
	Year of tenure for cabinet			
	Year 1	Year 2	Year 3	Year 4
All observations	0.36	0.22	0.19	0.13
Fiscal adjustments	0.31	0.21	0.22	0.11
Fiscal adjustments and success	0.31	0.20	0.20	0.07

Note: A fiscal adjustment is a change in the primary deficit by at least − 1.5% of GDP in a single year. Success is defined as a decrease in the fiscal deficit in the 3 years following the adjustment.

Changes in ideology, fiscal adjustments and success			
	Change in ideology year before		
	No change	To the left	To the right
All observations	731	65	50
Fiscal adjustments	82	7	8
Fiscal adjustments and success	41	5	6

Note: A fiscal adjustment is a change in the primary deficit by at least − 1.5% of GDP in a single year. Success is defined as a decrease in the fiscal deficit in the 3 years following the adjustment. The ideology index used is *Ideology Tavares*.

References

Alesina, A., Drazen, A., 1991. Why are stabilizations delayed? American Economic Review 81 (5), 1170–1188.
Alesina, A., Perotti, R., 1997. Fiscal adjustments in OECD countries: composition and macroeconomic effects. International Monetary Fund Staff Papers 44 (2), 210–248.
Alesina, A., Roubini, N., Cohen, G. Political Cycles and the Macroeconomy. MIT Press, Cambridge.
Alesina, A., Perotti, R., Tavares, J., 1998. The political economy of fiscal adjustments. Brookings Papers on Economic Activity 0 (1), 197–248.
Barro, R., 1989. The neoclassical approach to fiscal policy. In: Barro, R. (Ed.), Modern Business Cycle Theory. Harvard Univ. Press, Cambridge, MA, pp. 178–235.
Bertola, G., Drazen, A., 1993. Trigger points and budget cuts: explaining the effects of fiscal austerity. American Economic Review 83 (5), 1184–1198.
Blais, A., Blake, D., Dion, S., 1993. Do parties make a difference? Parties and the size of government in liberal democracies. American Journal of Political Science 37, 40–62.
Blanchard, O., 1990. Comments on Giavazzi and Pagano. In: Blanchard, O., Fischer, S. (Eds.), NBER Macroeconomics Annual 1990. MIT Press, Cambridge, MA, pp. 112–117.
Blinder, A., Holtz-Eakin, D., 1984. Public opinion and the balanced budget. American Economic Review 74 (2), 144–149.
Budge, I., Kemam, H., Woldendrop, J., 1993. Political data 1945–90. European Journal of Political Research, Special Issue 24, 1–120.
Castles, F., Mair, P., 1984. Left–right political scales: some expert judgements. European Journal of Political Research 12, 73–88.
Cukierman, A., Tommasi, M., 1998. When does it take a Nixon to go to China. American Economic Review 88 (1), 180–197.

De Haan, J., 1997. Political and economic determinants of budget deficits and of government spending: a reinvestigation. European Journal of Political Economy 13 (4), 739–750.
Drazen, A., Masson, P., 1994. Credibility of policy versus credibility of policymakers. Quarterly Journal of Economics, 735–754.
Edin, P., Ohlsson, E., 1991. Political Determinants of Budget Deficits: Coalition Effects versus Minority Effects. European Economic Review 35, 1597–1603.
Fuller, D., Alston, R., Vaughan, M., 1995. The split between political parties on economic issues: a survey of republicans, democrats, and economists. Eastern Economic Journal 21, 227–238.
Gallup Organization, 1990. The Gallup Poll Monthly. May.
Giavazzi, F., Pagano, M., 1990. Can severe fiscal adjustment be expansionary? Tales of two small European countries. In: Blanchard, O., Fischer, S. (Eds.), NBER Macroeconomics Annual 1990. MIT Press, Cambridge, MA, pp. 75–111.
Giavazzi, F., Pagano, M., 1996. Non-Keynesian effects of fiscal policy changes: international evidence and the Swedish experience. Swedish Economic Policy Review 3 (1), 67–103.
Golden, D., Poterba, J., 1980. The price of popularity: the political business cycle reexamined. American Journal of Political Science 24, 696–714.
Grilli, V., Masciandaro, D., Tabellini, G., 1991. Political and monetary institutions and public financial policies in the industrial countries. Economic Policy: A European Forum 6 (2), 341–392.
Hahm, S., Kamlet, M., Mowery, D., 1995. Influences on deficit spending in industrialized countries. Journal of Public Policy 15, 183–197.
Hallerberg, M., Strauch, R., 2002. On the cyclicality of fiscal policy in Europe. Empirica 29 (3), 183–207.
Hallerberg, M., Von Hagen, R., 1999. Electoral institutions, cabinet negotiations, and budget deficits in the European Union. In: Poterba, J., von Hagen, J. (Eds.), Fiscal Institutions and Fiscal Performance. NBER Conference Report Series University of Chicago Press, Chicago, pp. 209–232.
Hansen, J.M., 1998. Individuals, institutions, and public preferences over public finance. American Political Science Review 92 (3), 513–531.
Hansen, J.M., 1999. Thinking the Budget: Public Opinion and Tradeoffs Over Spending, Taxes and Deficits. Mimeo. Department of Political Science, University of Chicago.
Hibbs, D., 1977. Political parties and macroeconomic policy. American Political Science Review 23, 1467–1488.
Kay, A., Henderson, H., Steeper, F., Greenberg, S., Blunt, C., 1995. Who will reconnect with the people: republicans, democrats, or . . . none of the above? Americans Talk Issues August, Survey #28.
Keech, W., 1995. Economic Politics: The Costs of Democracy. Cambridge Univ. Press, New York.
Lambertini, L., Tavares, J., 2000. Exchange Rates and Fiscal Adjustments: Evidence From the OECD and Implications for the EMU. Mimeo, University of California Los Angeles.
Lane, P., Perotti, R., 2001. The Importance of Composition of Fiscal Policy: Evidence from Different Exchange Rate Regimes. Mimeo, European University Institute.
Laver, M., Hunt, W.B., 1992. Policy and Party Competition. Routledge, Chapman and Hall, New York.
Lewis-Beck, M., 1988. Economics and Elections: The Major Western Democracies. University of Michigan Press, Ann Arbor.
Mulas-Granados, C., 2003. The Political and Economic Determinants of Budgetary Consolidation in Europe. European Political Economy Review 1 (1), 015–039.
Organization of Economic Cooperation and Development, 1997. Economic Outlook. OECD, Paris.
Pencavel, J., 1986. Labor Supply of Men: A Survey. In: Ashenfelter, O., Layard, R., (eds), Handbook of labor economics. Volumes 1. Handbooks in Economics series, no. 5, Amsterdam; Oxford and Tokyo: North-Holland; distributed in North America by Elsevier Science, New York, 1986, pages 3–102.
Perotti, R., 1999. Fiscal policy in good times and bad. Quarterly Journal of Economics 114 (4), 1399–1436.
Political Handbook of the World, 1996. McGraw-Hill, New York.
Rodrik, D., 1993. The positive economics of policy reform. American Economic Review 83, 356–361.
Roubini, N., Sachs, J., 1989. Political and economic determinants of budget deficits in the industrial democracies. European Economic Review 33 (5), 903–933.
Samuelson, R., 1996. The debate we need. Newsweek 7 October.
Spolaore, E., 1993. Policy Making Systems and Economic Efficiency, Coalition Governments vs Majority Government. Harvard University. Unpublished paper.

Sutherland, A., 1997. Fiscal crisis and aggregate demand: can high public debt reverse the effects of fiscal policy? Journal of Public Economics 65 (2), 147–162.

Tsebelis, G., 1995. Decision making in political systems: veto players in presidentialism, parliamentarism, multicameralism and multipartyism. British Journal of Political Science 25, 289–325.

Tsebelis, G., 1999. Veto players and law production in parliamentary democracies: an empirical analysis. American Political Science Review 93 (3), 591–608.

Tsebelis, G., Chang, E., 2001. Veto Players and the Structure of Budgets in Advanced Industrialized Countries. Mimeo, University of California Los Angeles.

Volkerink, B., De Haan, J., 2000. Fragmented Government Effects on Fiscal Policy: New Evidence. Mimeo, Department of Economics, University of Groningen.

Warwick, P., 1994. Government Survival in Western European Parliamentary Democracies. Cambridge Univ. Press, New York.

Woldendorp, J., Keman, H., Budge, I., 1998. Party government in 20 democracies: an update (1990–1995). European Journal of Political Research 33, 125–164.