The Hard Business of Balancing Budgets

A Study of Public Finances in 17 OECD Countries

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Abstract

Reduction of budget deficits and public debts has become of central importance in modern democracies. Our results show that during election years governments avoid raising taxes which leads to bigger deficits. Also the number of parties in government coalitions is an important determinant of public expenditures and taxation. Multiparty governments are likely to spend more and have higher levels of taxation leading to increased size of the public sector. One-party governments with centralised and multiparty governments with decentralised labour markets were equally successful in their budget-balancing efforts. In one-party government systems fiscal consolidation was achieved via spending cuts. In corporatist systems expenditures continued to increase and consequently budget balance was sought through tax increases. Multiparty governments with decentralised labour markets were not as likely to be successful in their deficit management.

Ever since the post-war economic boom ended in the early 1970's, budget balances in the OECD countries began to worsen systematically, leading to growing public indebtedness. By the early 1980's it became clear that the economic slowdown was rather persistent. As a result, governments have increasingly turned away from expansionary fiscal policies towards more controlled government spending and increasingly active deficit management.

Given the large cross-national differences in deficit management and debt policies, researchers have started to focus on governmental decision-making as a crucial factor explaining the differences in deficit reduction policies. The aim of this paper is to study systematically how political factors (party ideologies and political institutions) are related to public deficits and to the components of a budget (expenditure and revenue). In particular it is asked *why governments in certain institutional settings tend to be more successful in their attempts to reduce deficits than others*. Most of the former studies in this tradition have concentrated on explaining cross-national variation either in public expenditures, in taxation or in deficits but rarely combining these three elements. However, the starting point in this study is that *in order to form a full picture of factors affecting public finances all three components have to be analysed together*. For example, if a study finds out that certain types of government are able to maintain a low deficit, this still does not explain whether they do it by reducing spending, increasing the tax burden or by simultaneously combining these two strategies.

Theoretically this analysis is based on the "institutionalist" political economy tradition and particularly on its rational choice variant.[1] It is assumed that the participants in the decision-making process strive to achieve their goals using the rational means available to them. However, institutions provide a strategic framework for their actions, restricting and guiding their choices. Thus, different political institutions result in

different policy outcomes. In this study it is assumed that budget decisions are affected by *government-related attributes* and more *stable political institutions*. Government-related attributes change when a new government is elected (for example the government's political ideology, its support in the parliament or the number of parties forming the government coalition). Institutional factors remain rather stable throughout the period of this analysis. Examples of these institutional factors are the centralisation of labour markets or the overall stability of governments.

Economy and public finances 1970-1995

In this section the economic development and the emergence of fiscal problems as a context for the shift in economic policies are outlined. As Table 1 shows, there was a clear shift in economic performance around the middle of 1970's in the OECD countries. Before the first oil shock the OECD countries experienced a long and sustained period of economic growth. After the recession in the early 1970's the average growth rate of the economy decreased clearly almost everywhere in the developed world.

Another central feature of the post-war economic development is the steady expansion of the public sector. Especially in the 1960's and 1970's the growth of public expenditures was strong, which reflected the strong and widespread belief in the allocation, intervention and redistribution responsibilities of the public sector. Nevertheless, while the growth of the public sector can be seen in all countries there still are differences in the scope. The public sector is largest in the Scandinavian countries and clearly smaller in such countries as Australia, Japan or the USA.

[TABLE 1 APPROXIMATELY HERE]

One problematic feature of the public sector expansion has been that public expenditures have increased faster than national economies (GDP), and consequently the very basis of the public finances has been considered to be unsustainable. This development, coupled with increased public fiscal problems, has led to attempts to limit and cut public expenditures. These attempts, along with the economic upturn, led to a temporary decrease in the public expenditure/GDP ratio in the late 1980's. However, in the 1990's public expenditure ratios have started to grow again. Thus, there are not yet any clear signs that the size of the public sector will decrease in the future although government expansion has clearly slowed during the past ten years.

[TABLE 2 APPROXIMATELY HERE]

In Table 2 the 25-year trends of fiscal balances of the OECD countries are summarised. Since the recession in the early 1970's most of the OECD countries have shifted from balanced or surplus budgets to structural financial deficits. Before the first oil shock government budget balances were positive or at least tolerable everywhere in the OECD countries.[2] However, as economic growth slowed public finances worsened in almost all OECD countries. Furthermore, as budgets have remained unbalanced during last two decades, public indebtedness has exploded in most of the industrialised countries. This is particularly apparent in 'deficit economies', such as those of Belgium and Italy, where highly unbalanced budgets have led to enormous public debts.

The fact that governments in OECD countries were not able to handle the deepening economic and fiscal crisis with the economic policy apparatus that had been dominant in previous decades has resulted in a shift in economic policy thinking in the 1980's and 1990's. During the decades after the war developed countries committed themselves to the expansionary Keynesian fiscal policies in order to smooth the business cycle. Since

the middle of the 1970s governments have more or less shifted away from the Keynesian macroeconomic principles.[3] Furthermore, by the early 1980's governments in the OECD countries had become widely aware that welfare state expansion could not continue in the post-war development path and that rising levels of public expenditure would not be compatible with sluggish economic growth but would only lead to persisting budget deficits and rising public indebtedness.[4]

The efficiency of the government fiscal policies and intervention became highly questionable in the 1970's when governments entered a period of stagflation (stagnation combined with inflation). Since 1973 both unemployment and inflation began to rise sharply, and it did not seem feasible anymore for governments to combat unemployment, output and inflation with expansionary fiscal policies. Accordingly, economic theory and economic policy began to shift away from the Keynesian expansionary stance towards liberal thinking and monetarism.[5]

The change in economic policy thinking from the Keynesian framework to monetarism was twofold. On the one hand monetarists suggested that governments should not follow expansionary fiscal policies because no (or very little) benefits for employment or economic performance can be achieved. On the other hand it was suggested that governments should focus more on maintaining low inflation than on fighting unemployment. This, of course, was in sharp contrast to the Keynesian approach, which traditionally aimed at full employment. With respect to government activities monetarists suggested that markets can produce efficient outcomes without government intervention and that governments should adopt tight fiscal policies to avoid increasing public spending and budget deficits.

Governments, institutions and public finances

To a large degree, budget deficits and public debts accumulated since the mid-1970s are products of slow economic growth in the OECD countries. One of the main reasons for the growing public indebtedness are so-called automatic stabilisers, that is, the basic structure of the public finances in the modern states. Automatic stabilisers mean that governments tend to conduct counter-cyclical fiscal policies automatically—even if they do not actually decide to do so.[6] During economic upturns governments collect more tax revenues and they spend less through income transfer mechanisms. Respectively, during slow economic growth the tax revenues decrease and transfer payments increase. As a consequence the ability to balance the budget is related to economic performance and especially to the unemployment rate, which has a strong impact on public transfers.[7]

However, much of the political economy literature has argued that budget deficits are not merely products of economic development but are also affected by the intentions of the policy-makers and political institutions.[8] Therefore, it is important to focus on "the discretionary component of fiscal policy" and to ask why some governments tend to incur bigger deficits that others and why some governments can balance their budgets more efficiently than others.[9]

One of the possible factors affecting public finances is the *ideology of the political decision makers.* Traditionally, the left wing parties are seen as proponents of the strong public sector. Indeed, some empirical studies show that social democratic and labour parties spend more than non-leftist parties.[10] However, the observation that left-wing governments spend more does not necessarily mean that they make bigger deficits. While leftist governments are prone to spend more they may also be willing to tax more, that is, they finance public expenditure increases with tax increases and not with budget

deficits. Thus, we assume that left wing parties in government increase both public expenditure and revenue. Because the financial balance is the difference between these two variables, it is difficult to hypothesise on the effect of left wing parties on the deficit.

Authors of studies on public finances have often emphasised the centrality of the 'strength' of government in the determination of budget balances.[11] Following the pioneering work by Roubini & Sachs[12] researchers have focused mainly on the different government attributes that may explain successes and failures of deficit management strategies. The general argument is that 'weak' governments are not able to pursue consistent economic policies and they ran into economic problems easier than 'strong' governments.

In particular, it has been assumed that during multiparty government coalitions deficit reduction is slower and less efficient than during single-party governments. One reason for this is that strong political consensus and commitment to deficit reduction is a requirement for successful financial policies. However, it is much harder for politicians to cut expenditures than to approve more funding for their constituents. Furthermore, as game theory suggests, co-operation and consensus formation is harder when the number of players is large. Thus, coalition governments, which are combinations of several parties with differing preferences, are thought to find it hard to accomplish tax increases and spending cuts, which are required to reduce budget deficits.[13]

Accordingly, we assume that *the number of parties* participating in the government is an attribute which is related to the governments' efficiency to reduce budget deficits. In a large multiparty coalition government it is likely that more variable political preferences are represented than in a small coalition. For example, in a large coalition it is possible that some partners are not as enthusiastically committed to deficit

management than other parties. Thus, competing interests are likely to result in a lack of consensus. Furthermore, in a coalition government even a small party has a veto against all changes because it has the ability to break up the government. Thus, the more parties there are in the coalition government, the more difficult it will be to achieve a strong consensus for efficient deficit reduction.

The argument of the 'weakness' of multi-party governments can also be applied to the analysis of taxation and spending. The existence of multiple coalition partners (i.e. 'veto players') makes spending cuts difficult because each party has an incentive to protect its own clientele (voters or supportive interest groups).[14] Similar argument can be made for taxation. There is an incentive for parties to protect their clientele from heavier tax burden.[15] Consequently, we assume that, all other things being equal, multiparty governments are likely to increase spending while not raising taxation. This leads directly to increased deficits.

The number of parties is just one component of government decision-making. The *parliamentary status* of the government (i.e. is it a majority or a minority government) may also determine how governments behave in deficit management. Minority governments may not be able to pass any major budget balancing programmes in the parliament. This may effectively prevent minority governments from attempting such policies and if they try it is likely that parties in opposition will block these attempts. As a result, we assume that majority governments are more successful than minority governments in their attempts to balance budgets.

However, it is difficult to predict how majority governments behave with regards to spending and taxation. Majority governments by definition have enough support in the parliament to implement their financial policies, whether they are cuts or increases in spending or taxes. While majority governments may be successful in balancing budgets

they can do it by 'fixing' the income or expenditure side of the budget. Thus, we leave the question of the relationship between majority governments and spending or taxation open. Empirical results show what the direction of the relationship is (if there is such a relationship).

The factors affecting the government's financial management mentioned earlier in this section were all related to government-specific attributes (number of parties, ideological orientation and parliamentary status). These variables are likely to change when a new government is elected. But the political system also consists of characteristics that are not likely to change as quickly. The effects of these underlying structures of the state and its political decision-making processes must be considered as well. We call these factors stable institutional political factors.

Some researchers assume that the *government stability* or the expected longevity of the government may have important consequences for budgetary decision-making.[16] The reason for this is that unstable governments behave myopically, i.e. they put less weight to the future costs of their decisions than more stable governments.[17] If a country has a tradition of short-lived governments, a government in office will expect that its continuance may be interrupted soon. Therefore, a government with a short 'life-expectancy' may not have incentives to balance the budget because it would only suffer the short-term political costs of the spending cuts (or tax increases) without the long-term benefits of the efficient deficit policy. The same disregard of the long-term consequences may also lead to increased spending or decreased taxes in efforts to "buy" more time in office from the supporters. Thus, short-lived governments behave in a way that leads to similar consequences as was in the case of multiparty government. They produce bigger deficits because of increased likelihood of higher expenditures without matching raises in taxation.

One recurrent institution in democratic countries is general *elections*. The relationship between elections and macro economic policies has been a central focus of study in the 'political cycles' approach of political economy.[18] This approach has developed several useful hypotheses on the connection between incumbent policymakers and public finances. The principal idea is that policymakers are tempted to use public finances opportunistically to enhance their possibilities of re-election. Accordingly we assume that incumbent governments "prepare" for general elections by increasing transfer expenditures (leading to higher total expenditures) or by lowering taxes in the election year to boost their popularity. Whether they use either of these measures or both, the outcome is same: during election years the deficit is higher than in other years.

Finally, we consider how *labour market institutions* are likely to affect public finances. Since the start of the '(neo-)corporatism' discussion in late 1970's and early 1980's economists and political scientists have analysed the effects of different labour market arrangements on macroeconomic conditions.[19] Although, the authors may disagree on specific points the overall conclusion of these studies is that labour market institutions are very important. Labour market arrangements have effects on inflation, GDP growth and employment.

As far as we know there are not many studies that systematically analyse how labour marker institutions affect public deficits. Garrett found in his study that the combination of 'strong left-labour regimes' and openness to international markets leads to higher average deficits.[20] On the other hand, Alesina and Ardagna found that that to have long lasting positive effects, fiscal consolidation demand cuts in public expenditures.[21] For these measures to be politically possible they must be supported by labour unions' modest wage demands. Thus, labour unions play one of the key roles in deficit management.

The most common way to differentiate between various labour market institutions is to measure their degree of bargaining centralisation. Highly centralised labour markets have a high degree of unionisation, the coverage rate of the wage-agreements is high and agreements are decided by national level employers' and employees' peak organisations. In decentralised systems the opposite is true: the rate of unionisation is low and wage-agreements are bargained on the industry or even on the company level.

Traditionally researchers assume that centralised bargaining institutions lead to more moderate wage demands. This is because the leaders of centralised labour market unions understand that high wage demands lead to higher inflation, which in turn hinders the economic growth and ultimately reduces the wages of all workers.[22] Moderate wage demands may lead to better well-being of workers in the long run because of continued and stable economic growth.

In countries with centralised labour markets labour unions' and employers' organisations (or their peak organisations) usually have strong political connections and can thus influence the government decision making. For example, governments may offer better social benefits for workers in compensation for low wage demands which leads to increased public expenditures. These increased expenditures must be matched with raised taxes to keep public finances in balance. Also employers' organisations may accept higher taxes when they know that workers' wage demands are moderate. Thus, we assume that in countries with centralised labour market institutions public spending and taxation is higher than in countries with decentralised bargaining.

The effect of labour market institutions on budget deficits a more difficult question. If governments in countries with centralised wage bargaining are able to raise taxes as much as is needed to cover increased expenditures the deficit is under control. However, this may not be the case. Governments may also try to "buy" low wage demands with

promises of tax cuts. Thus, we make no initial assumption about the relationship between labour market centralisation and budgets deficits and let the empirical analysis show what the relationship is (if it exists).

Table 3 summarises our theoretical expectations between dependent and independent variables. Because changes in expenditures, revenues and financial balances are always affected by economical conditions, we include also two economic variables in the model to control for changing economic situations. Rising unemployment leads almost automatically to increased public spending because of the rise in unemployment costs and other welfare transfers. It also leads to diminishing tax returns because unemployed people pay less tax. Financial balances are also affected by the growth of the GDP. It is especially unexpected changes in the GDP growth that affect the deficits because public budgets are largely based on projections of how the economy will be doing in the year the budget is implemented.[23] Consequently, a variable measuring these changes is included in the model.

[TABLE 3 APPROXIMATELY HERE]

Data and the model

The data for the empirical analysis was compiled from 17 OECD countries[24] for the years from 1982 to 1997. Thus, there are 272 (16×17) observations in the data matrix. The dependent variables (expenditures, revenue, financial balance) are from OECD data sets and they are measured as percentage of GDP. All other economic variables are also coded from the OECD tables.

As was explained in the theoretical part, there are two types of political variables that affect economic policies. Institutional political factors are variables that do not vary much over the years. Government-related variables are factors that are likely to change when a new government is elected. These variables are measured as follows:[25]

Institutional political factors:

- *Government stability*. This variable measures the average life span of a government in the country between the years 1980-94. The variable ranges from 12.8 (Italy) to 48 months (USA).
- *Election year*. This is a dummy variables indicating whether parliamentary lower house elections were held during the year.[26]
- *Labour market centralisation*. This is an index variable that measures the labour market centralisation. Its composition is explained in more detail in Appendix.

Government-related attributes:

- *Number of parties in the government*. This variable simply measures the number of parties in the government coalition. It ranges from one to five.
- *Majority status of government*. This is a dummy variable indicating whether the government coalition has a support of more than 50% of the votes in the legislature.
- *Ideological orientation of government*. This variable measures the share of government portfolios held by left-wing parties.

The regression model that is used to model the public financial balance (i.e. public deficit or surplus) in the subsequent empirical analysis is of the following form:

$$\Delta BAL = \alpha + \beta_1 BAL_{-1} + \beta_2 \Delta BAL_{-1} + \beta_3 \Delta GDP + \beta_4 \Delta UNEMP + \Sigma \beta_i INSVAR + \Sigma \beta_j GOVVAR + \varepsilon$$

where

ΔBAL is the annual change in the public financial balance,

ΔBAL_{-1} is the change in the public financial balance in the previous year,

BAL_{-1} is the level of financial balance in the previous year,

ΔGDP is the unexpected change in the GDP growth,[27]

$\Delta UNEMP$ is the annual change in the level of unemployment,

INSVAR are the variables related to political institutions and

GOVVAR are the variables related to government-specific attributes.

The regression models for the public expenditures and public revenue shares of GDP are similar to the above model but dependent variables are changes in these variables respectively. Likewise the first two variables on the right hand side of the equation are changed to be lagged levels and changes of expenditures and revenues respectively.

In the model the dependent variables are changes in the levels of the variables of interest.[28] Because one of the independent variables is the lagged level of the dependent variable, the model assumes that there is some long-term equilibrium relationship between these two variables, and the changes in the short-term are adjustments or 'corrections' to the direction of the equilibrium state. Thus, it is expected that the coefficients on the lagged level of the dependent variable are negative. In practical terms this means, for example, that when the level of public deficit is 'unusually' high, next year (all other things being equal) adjustment will be made in the direction of the 'normal' level, i.e. the deficit will be smaller. The additional benefit of this model specification is that the lagged changes and levels of the dependent variable also address automatically the problem of serial correlation.

The panel design of the data presents additional technical problems for the analysis. Using the normal ordinary least squares (OLS) technique to estimate the parameter values and their standard errors is inappropriate because the panel design violates many

of the standard assumptions of OLS. First, there may be panel heteroskedasticity in the data i.e. the error processes may differ from country to country. Second, the error terms may be spatially correlated, i.e. errors in one country at a specific time point may be correlated with errors in another country at the same time point. The result of these violations of the OLS assumptions is that the standard errors from OLS estimation are highly inaccurate. To correct for these problems in this study "panel corrected standard errors" (PCSEs) developed by Beck and Katz are used.[29] Beck and Katz use Monte Carlo analysis to show that these PCSEs perform much better and produce much more accurate estimates of the parameter standard errors than other methods. All the standard errors reported in the empirical part of this study are PCSEs.

Empirical results

In this section empirical results from the regression analysis are presented. Three sets of analyses are performed. The dependent variables in these analyses are public expenditures, public income and public financial balance.[30] The last dependent variable is the difference between the first two variables. Most of the previous studies have concentrated either on modelling the deficits or the expenditures. Studies analysing public revenues are more rare.[31] However, to form a more comprehensive picture of the impact of political factors on the economic policies, it is important to look at all three components of the public finances.

The independent variables (except the lagged dependent variables) are the same in all the models and they were all presented earlier in this study. For each dependent variable four different models are presented. The first model includes only economic variables. The two following models include the two sets of independent variables: the institutional political factors and the government-related factors respectively. Finally,

the fourth model includes all variables from the first three models. The conclusions regarding the significance of independent variables are primarily based on this full model. The 'SSR' in the tables refers to the sum of squared residuals and the 'BG test of autocorrelation' is the Breush-Godfrey test of autocorrelation.[32] The 5 percent critical value of the test for rejecting the null hypothesis of no autocorrelation is 3.84. None of the values in tables 4-6 exceed this value.

Table 4 shows the results of the regression analysis of the GDP share of public expenditures. All economic variables have the expected signs and they are statistically significant. Especially changes in the employment situation seem to have an important effect on public expenditures. When unemployment grows by one percentage point the public expenditures also grow (all other things being equal) by 0.4 percentage points. This shows how the public economy in modern societies is very tightly linked to changes in the unemployment situation.

[TABLE 4 APPROXIMATELY HERE]

Of the government-related attributes only the variable measuring the size of the government coalition is statistically significant. This means that the GDP share of public expenditures tends to grow faster in countries with large coalition governments. This is in accordance with the theory that increased bargaining costs in multiparty government coalitions restrain possibilities for expenditure cuts. It is also interesting to notice that the variable measuring the left-wing orientation of the government is not statistically significant. This indicates that there are no systematic differences in the behaviour of governments dominated by left-wing parties when compared to other governments. None of the institutional variables are statistically significant on the 5% confidence level indicating that changes in public expenditures are not likely to be affected by the labour market centralisation, the government stability or election years.

Table 5 present results from the regression analysis in which the GDP share of public revenues is the dependent variable. The R^2 figures in Table 5 show that independent variables explain significantly less the variation in the changes in revenues than in expenditures. Although, the revenue side of the budget is affected by unexpected changes in the GDP growth these changes are smaller than in the case of expenditures. This observation is important because it seems to indicate that fiscal imbalances are more results of expenditure changes than changes in tax revenues. This observation is, at least partly, in line with the "tax-smoothing model" which states that it is advantageous for governments to keep the level of taxation approximately constant during economic recessions and build up public debt. This debt can then be paid off during times of good economic growth.[33] Our results corroborate the theory in the sense that the taxation seems to be the less volatile part of the budget. However, as one can easily see from Table 2, there is little evidence for the idea that governments really pay their debts during good times.

[TABLE 5 APPROXIMATELY HERE]

Of the political factors the number of parties in government variable is again statistically significant. This means that parallel to the situation with the expenditures the public revenues are higher in countries with multiparty coalition governments. Also the labour market centralisation index is statistically significant. This means that governments in countries with centralised labour markets raise taxes more than in countries with decentralised labour markets. Altogether, these results indicate that highest levels of taxes should be found in countries with centralised labour markets and multiparty governments. This applies at least to Belgium, Denmark and Finland which all have high levels of taxation. Also the election year variable is statistically significant

suggesting that during election years governments lower taxes or at least do not increase them as much as in other years.

Finally Table 6 presents the regression analysis results for public financial balance. Although the financial balance is defined as the difference between public expenditures and revenues, one cannot use the results presented in Tables 4 and 5 to deduce what the results are. As in the previous regression analyses the economic situation has a major impact on the financial balance. It is especially the changes in unemployment levels that define the development of the financial balance.

[TABLE 6 APPROXIMATELY HERE]

Of the political variables only the election year variable is significant. This means that during election years governments let the deficit grow in order to enhance the likelihood of their election victory in the upcoming elections. As was discussed earlier they do it by lowering (or not raising) taxes, not through increased expenditures. Another interesting observation is that according to these results governments with several coalition partners do not have (as suggested by the theory) bigger deficits than governments with fewer participants.[34] The results from Tables 4 and 5 show that multiparty governments raise taxes to match their increased spending and as a result their budget balance is no worse than in other countries.

As a summary of these regression analyses one can conclude that although the public economy is mostly determined by the overall economic situation, some political factors are also significant. Especially, the existence of large multiparty government coalitions seems to lead both increased spending and increased taxation. Also the effect of labour market centralisation was significant. Governments in countries with centralised labour markets are able (or forced) to raise the level of taxation to match with spending. This

may be related to the centralised wage-negotiations frequently used in these countries. Labour unions may agree to moderate wage demands if the government promises worker better social or health care benefits. Better benefits mean higher taxes.[35] Also employer organisations can accept higher taxation in return of lower wage demands.

It is also interesting to look at factors that do not have effects on public finances. First, the political or ideological composition of the government does not play a major role. This is perhaps explained by the fact that social democratic and labour parties have increasingly moved to the centre of the political spectrum and accepted the rules of the market economies.[36] Second, the majority status of the government is not a statistically significant predictor in any of the regression analyses. It seems that the internal bargaining costs (the size of the coalition) have more effect than the power of the government vis-à-vis the parliamentary opposition. Third, we found that the government stability is not directly related to management of fiscal policies.

Magnitude of the effects of political factors

As was shown in the previous section political factors indeed have an impact on public expenditures, revenues and financial balance. Because the estimated regression models were dynamic in nature (i.e. past events have an effect on current situation), it is very hard to judge the magnitude of individual variables on the public economic situation. Thus, in this section predictions based on the model results are shown. A five-year scenario is presented and the consequences for certain types of political systems and governments are presented.

Before proceeding with the analysis there is one caution that is related to our results. Our analysis shows the effects of political factors on public finances with given

economic development. However, there is lots of evidence showing that political factors and labour market institutions also affect the economic situation. The predictions given in following figures are based on the premise that the four exemplary political systems find themselves in the same economic situation. However, the likelihood of a country experiencing recessions or periods of growth is at least partly dependent on its political institutions.

The first two years in the scenario present a period of economic downturn. In both of these years the expected growth of GDP drops by one percentage point and unemployment grows by one percentage point. The third year is a short stable period in which the change in the expected GDP growth is zero and there is no change in the unemployment situation. The last two years of the scenario represent a period of modest growth and they are a 'mirror image' of the first two years. In both of these years the unexpected growth of GDP is one percentage point and the unemployment drops by one percentage point.

The scenario demonstrates how four political systems adjust their pubic finances in a given economic situation. The analysis in the previous section showed that the number of coalition parties in the government and the centralisation of labour markets are the two key political variables that affect public finances. By "cross-tabulating" these two variables we form four different types of political systems. These types are (1) *a one-party government with decentralised labour markets*, (2) *a multiparty government with centralised labour markets*, (3) *a multiparty government with decentralised labour markets,* and (4) *a one-party government with centralised labour markets.* Example countries for the first two systems are easy to find (e.g. USA for the first and Belgium or Finland for the second) but the last two systems are more rare. However, there are political systems in which the criteria are fulfilled for some periods of time. Australia was a country in which labour markets are (relatively)

centralised and which was ruled by a singe-party government from early 1980's to mid-1990's. Another example is Sweden (except years from 1991-94 when a multiparty government was in power). Examples for a country with a multiparty governments and decentralised labour markets are harder to find (perhaps France and Netherlands come closest although their labour market centralisation indices are merely just under the average level of centralisation, see Appendix).

The 'predictions' in the following scenarios are calculated from Tables 4, 5 and 6 using the coefficients in full model (on the right hand side columns). We assume that the multiparty governments in the scenarios are formed by 5 parties. For labour market index we use value 0.3 for decentralised systems and 0.8 for centralised systems (see Appendix). As mentioned above to control for economic situation we used the following sets of values for the five years respectively: unexpected change in GDP growth [-1,-1,0,1,1] and change in unemployment [1,1,0,-1,-1].[37]

Figure 1 depicts what happens to the financial balance in countries led by these four different types of governments. The multiparty government in a country with centralised labour markets and the one-party government in a country with decentralised labour markets seem to follow approximately the same path. During first two years they accumulate debt but after two years of growth their economies are almost back to zero deficit. However, the picture is different for multiparty governments in countries with decentralised labour markets. These governments start to accumulate public debt very quickly and recovery in the period of growth is slow. This means that unless there is a longer period of steady growth the debt burden in these countries grows rapidly. The one party government in a country with centralised labour markets displays the 'best' results in terms of deficit management.

[FIGURE 1 APPROXIMATELY HERE]

The financial balance of a country is simply the difference between the public expenditures and the public revenues. What happens to these two variables in the scenario is depicted in Figures 2 and 3. The starting point for both of these variables at the beginning of the scenario is 40% GDP share of expenditures and revenues. It should also be remembered that the regression model for public revenues was the worst model in terms of explained variance (R^2). Thus, the results in Figure 4 are not as reliable as in two previous figures.

In Figure 1 it was shown that both singe-party governments in countries with decentralised labour markets and multiparty governments in countries with centralised labour markets perform fairly well in balancing their budgets after an economic downturn. Nevertheless, from Figures 2 and 3 it is easy to see that these countries use different strategies to recover from the deficit. In countries with one-party governments the adjustment is accomplished by decreasing expenditures in times of economic growth. The adjustment process in countries with centralised labour markets is a direct opposite of this strategy. In these countries the expenditures stay on a new higher level after the economic recession and do not adjust downwards. The financial balance is recovered through increases in the tax burden. Furthermore, to curb the growth of public revenues in these countries takes several years of good economic growth. The final outcome for these countries is of course that the size of the public sector grows.

[FIGURE 2 APPROXIMATELY HERE]

[FIGURE 3 APPROXIMATELY HERE]

Conclusions

Budgetary deficits can be managed from the expenditure or the revenue side of the budget or both. In this study public spending, public revenue and financial balance were studied together to form a comprehensive picture of the management of public finances. According to the empirical results the level of public expenditures and the size of budget deficits are heavily affected by the overall economic situation while on the income side of the budget the economic adjustment is clearly weaker. This may imply, as has been suggested by Alesina and Perotti[38], that to be permanent and effective fiscal adjustment must focus on the level and structure of expenditures rather than on taxation. The reason for this is that tax increases ease fiscal problems only temporarily. Furthermore, temporary tax increases may be hard to reverse and therefore tax-driven deficit reduction easily generates higher tax ratios.

The fact that the economic situation largely determines fiscal balances does not get us very far when attempting to explain the variation in budgetary outcomes. Therefore, we focused on political determinants of public finances. With respect to the government-related attributes our first results confirmed findings from some of the previous studies:[39] Party ideologies do not have an important impact on public finances in the context of fiscal adjustments. There was no statistically significant indication in the empirical analysis that governments dominated by left-wing parties behaved differently than other governments in their public finance management.

However, these findings do not mean that political factors are insignificant. We also assumed that political institutions affect the process of deficit management. First it was assumed that the composition of governments has an impact on the prospects of balancing budgets. In particular, large coalition governments are likely to find it hard to cut expenditures or raise taxes because of the threat of government break-up and the

protection of party-related budgetary interests. These expectations were only partially corroborated by empirical evidence. Our analyses showed that the size of government (measured as the number of parties participating) was not related to budget deficits. However, we found that multiparty governments are likely to have higher levels of both public spending and taxation.

Another finding is related to labour market centralisation. In countries with centralised labour markets wage setting is frequently decided in bargaining process that involves labour unions' central organisations, employers' central organisations and the government. In these countries the taxation was on a higher level than in countries with decentralised labour markets. The probable reason for this is that all participants of wage bargaining are more willing to accept higher taxes when the level of taxation is decided simultaneously with the wage level.

Furthermore, we found signs of clear electoral cycles. Incumbent governments try to enhance their possibilities of re-election with lower taxes. This leads directly to increased deficit problems. However, we did not find corroboration for the idea that incumbent governments try to 'buy' votes with increased expenditures during election years.

Finally, the deficit scenarios of different political system characteristics were analysed. Here some interesting views on the different deficit management practices were presented. Both single-party government in countries with decentralised labour markets and multiparty governments in countries with centralised labour markets were equally successful in their budget-balancing efforts while multiparty governments in countries with decentralised labour markets were not likely to be as successful in their deficit management. However, there was a sharp contrast in the mode of budget balancing between multiparty governments with centralised and one party governments with

decentralised labour markets. In the systems with decentralised labour markets fiscal consolidation was achieved via spending cuts and thus in these countries the need to raise taxes has been less vital. In the systems with centralised labour markets expenditures continued to increase and consequently a balanced budget had to be sought through tax increases.

On a more general level our results contribute to the rapidly growing literature on the effects of political institutions on policy making. These results show that institutions may even have a bigger role that party politics in the management of public finances in modern democracies. However, one must keep in mind that we studied budgets only on a macro level. Even if it is true that global markets and increased international competition create limits to governments' financial policies on the macro level, partisan politics are still likely to have effects inside the budget, i.e. how policymakers allocate expenditures and taxes to various sectors of society.

Appendix. Labour market centralisation index.

To construct the labour market centralisation index we used data collected by the OECD.[40] Originally the data was collected to analyse the relationship between labour market arrangements and economic performance but it is also suitable for our analysis. The index consists of four components: *trade union density*, *bargaining coverage*, *centralisation* and *degree of co-ordination*. The first component is quite self-evident. It measures the percentage of unionised workers of all labour force. The bargaining coverage shows the percentage of workers who are covered by collective agreements. In most countries this figure is higher that the trade union density. The last two components are more qualitative and are based on OECD Secretariat's estimates on the situations in member countries. Both of these components range from one (uncoordinated/decentralised) to three (coordinated/centralised). Centralisation refers to

the locus of the formal structure of wage bargaining. Most centralised bargaining occurs when wage agreements are made on national level by the peak organisations and firm-level agreements represent the most decentralised form of bargaining. Co-ordination focuses on the on the degree of consensus between the collective bargaining partners. The main idea is that bargaining may be centralised but uncoordinated if lower-level negotiations undermine its intentions. Coordination among dominant employers unions bargaining can prevent wage drift even if the actual bargaining is decentralised.

The index used in the empirical analysis is formed from these four components. First, each component is divided by its maximum value (i.e. 100% or 3) and then the components are summed. Finally, the resulting value is divided by four to make the index range between 0 and 1. In the text countries with high values on this index are called countries with 'centralised labour markets' or with 'centralised bargaining'. Unfortunately, figures for the calculation of this index are only available from three times points (1980, 1990 and 1994). Thus, we had to code the index values from a given time point to cover more years. We use 1980 figures for years 1982-85 in our data, 1990 figures for 1986-92 and 1994 figures for 1993-97 (see Table 7). However, we believe that this restriction is not very harmful for our analysis. Labour marker institutions are rather stable and changes in them usually take place over a period of years. Thus, we believe that the cross-country variation in our labour market centralisation index is more important that changes in time, although the average figures in Table 6 show a slow decentralisation pattern over time.

[TABLE 7 APPROXIMATELY HERE]

[1] See Sven Steinmo and Caroline C. Tolbert, 'Do Institutions Really Matter? Taxation in Industrialised Democracies', *Comparative Political Studies,* 31 (1998), 165-187.

[2] Nouriel Roubini and Jeffrey Sachs, 'Government Spending and Budget Deficits in the Industrial Countries', *Economic Policy,* 4 (1989), 99-127.

[3] See Carles Boix, 'Privatizing the Public Business Sector in the Eighties: Economic Performance, Partisan Responses and Divided Governments', *British Journal of Political Science,* 27 (1997), 473-496; Arnold J. Heidenheimer, Hugh Heclo and Carolyn Teich Adams, *Comparative Public Policy. The Politics of Social Choice in America, Europe, and Japan, (*New York: St. Martin's Press, 1990).

[4] OECD, *The Control and Management of Government Expenditure*. (Paris: OECD, 1987).

[5] See e.g. Paul Pierson and Miriam Smith, 'Bourgeois Revolutions? The Policy Consequences of Resurgent Conservatism', *Comparative Political Studies,* 25 (1993), 487-520.

[6] E.g. Michael Burda and Charles Wyplosz, *Macroeconomics. A European Text*. (Oxford: Oxford University Press, 1993).

[7] See Alesina and Perotti, 'Fiscal Expansion and Adjustment'.

[8] Grilli et al, 'Political and Monetary Institutions'; Nouriel Roubini and Jeffrey Sachs, 'Political and Economic Determinants of Budget Deficits in Industrial Democracies', *European Economic Review,* 33 (1989), 903-938; Roubini and Sachs, 'Government Spending and Budget Deficits'; de Haan and Sturm, 'Political and Institutional Determinants of Fiscal Policy'.

[9] Alesina and Perotti, 'Fiscal Expansion and Adjustment', pp. 211-212.

[10] D. R. Cameron, 'The Expansion of the Public Economy: a Comparative Analysis', *American Political Science Review* 72 (1978), 1243-1261; Roubini and Sachs, 'Political and Economic Determinants of Budget Deficits'.

[11] Roubini and Sachs, 'Government Spending and Budget Deficits'; Roubini and Sachs, 'Political and Economic Determinants of Budget Deficits'; Alberto Alesina and Allan Drazen, 'Why Are Stabilizations Delayed?', *American Economic Review,* 81 (1991), 1170-1188; Grilli et al, 'Political and Monetary Institutions'; de Haan and Sturm, 'Political and Institutional Determinants of Fiscal Policy'; Borrelli and Royed, 'Government 'Strength' and Budget Deficits'; Alesina and Perotti, 'Fiscal Expansion and Adjustment'.

[12] Roubini and Sachs, 'Political and Economic Determinants of Budget Deficits'.

[13] de Haan and Sturm, 'Political and Institutional Determinants of Fiscal Policy', p. 158; Roubini and Sachs, 'Government Spending and Budget Deficits', p. 126.

[14] Borrelli and Royed, 'Government Spending and Budget Deficits', p. 234.

[15] Steinmo and Tolbert, 'Do Institutions Really Matter?', p. 175.

[16] The 'age' of a government is, of course, an attribute of the government itself, not a systemic variable. However, a government can never know for certain when it will be terminated. Thus, the government assumes that its life span will be approximately the same as the life of its predecessors. Accordingly, we use the average life span of government in a particular country as a 'system level' variable indicating the general stability of the political system in question.

[17] Grilli et al, 'Political and Monetary Institutions', p. 349.

[18] For a good review and empirical analysis of 'political cycles' models see Alberto Alesina, Nouriel Roubin and Gerald D. Cohen, *Political Cycles and the Macroeconomy*, (Cambridge, MIT Press 1997).

[19] For more recent examples see Lars Calmfors and John Driffill, 'Centralization of Wage Bargaining', *Economic Policy*, 6 (1988), 13-61; Torben Iversen, 'Wage Bargaining, Hard Money and Economic Performance: Theory and Evidence for Organized Market Economies', *British Journal of Political Science*, 28, (1998), 31-61; Geoffrey Garrett and Christopher Way, 'Public Sector Unions, Corporatism, and Macroeconomic Performance', *Comparative Political Studies*, 32 (1999), 411-434.

[20] Geoffrey Garrett, *Partisan Politics in the Global Economy*. (Cambridge: Cambridge University Press, 1998).

[21] Alberto Alesina and Silvia Ardagna, 'Fiscal Adjustments. Why They can Be Expansionary', *Economic Policy*, 27 (1998), 487-545.

[22] Garrett, *Partisan Politics in the Global Economy*, p. 32.

[23] Thomas R. Cusack, 'Partisan Politics and Fiscal Policy', *Comparative Political Studies* 32 (1999), 475.

[24] The countries are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden, the UK and the USA. Greece, Iceland, Ireland New Zealand and Switzerland are not included because comparable OECD economic data or labour market data were not available.

[25] For the measurement of political variables we used following sources: Jan-Erik Lane, David McKay and Kenneth Newton, *Political Data Handbook. OECD Countries*. (2nd ed., Oxford: Oxford University Press, 1997); 'Political Data 1945-1990. Party Government in 20 Democracies', Special Issue of *European Journal of Political Research* 24 (1993); Jaap Woldendorp, Hans Keman and Ian Budge, 'Party Government in 20 Democracies: an Update (1990-1995)', *European Journal of Political Science,* 33 (1998), 125-164; André Blais and Agnieszka Dobrzynska, 'Turnout in Electoral Democracies', 33 (1998), 239-261; various Political Data Yearbooks of the *European Journal of Political Research*.

[26] The USA is an exception. In this case we coded presidential election years to have value one.

[27] We measure the unexpected change in GDP growth as the growth rate at year t minus an average of GDP growth rates in the previous three years. The same measure is used e.g. by Roubini & Sachs, 'Political and Economic Determinants'.

[28] Actually in this case the models analyse both the levels and the changes in the dependent variables. It is easy to see that simple rearrangement of the terms in the model results in a normal lagged dependent variable model:

$BAL = \alpha + (1+\beta_1)BAL_{-1} + \beta_2 \Delta BAL_{-1} + \beta_3 \Delta GDP + \beta_4 \Delta UNEMP + \Sigma \beta_i INSVAR + \Sigma \beta_j GOVVAR + \varepsilon$

[29] Nathaniel Beck and Jonathan Katz, 'Nuisance vs. Substance: Specifying and Estimating Times-Series-Cross-Section Models', *Political Analysis*, 6 (1996), 1-36; Nathaniel Beck and Jonathan Katz, 'What To do (and Not to Do) with Times-Series-Cross-Section Data', *American Political Science Review,* 89 (1995), 634-647.

[30] The dependent variables are all from official OECD statistics. They are all measured as a percentage share of the GDP. With the term 'public expenditures' we refer to 'general government total outlays' in the OECD terminology. Likewise, with 'public revenues' we refer to 'general government current receipts' and with 'public financial balance' to 'general government financial balances'.

[31] See however Steinmo and Tolbert, 'Do Institutions Really Matter?'; Geoffrey Garrett, *Partisan Politics in the Global Economy*, (Cambridge, Cambridge University Press, 1998).

[32] William H. Greene, *Econometric Analysis*, 2nd ed., (New York, Macmillan 1993), 426-428.

[33] Alesina et al, *Political Cycles and the Macroeconomy*, pp. 248-252.

[34] This result is in line with several other analyses. Hahn et al. found little evidence for the theory that deficit is related to the strength of government; Sung Deuk Hahm, Mark S. Kamlet and David C. Mowery, 'The Political Economy of Deficit Spending in Nine Industrialized Parliamentary Democracies', Comparative Political Studies, 29 (1996), pp 52-77. Similar conclusion was made by de Haan and Strum; de Haan and Sturm, 'Political and Economic Determinants of OECD Budget Deficits'

[35] However, one should note that the coefficient measuring the effect of labour market centralisation on expenditures is statistically significant only on 10% confidence level.

[36] See e.g. Daniel Cohen, 'What Caused the Rise of Conservatism: a French View',. *Economic Policy,* 6 (1988), 196-219. Also results from Cusack show that differences between left-wing and right-wing governments' policies have reduced over recent years. See Thomas R. Cusack, Partisan Politics and Fiscal Policy', *Comparative Political Studies* 32(1999), 464-486.

[37] The results can be calculated with the coefficients in Tables 4, 5 and 6 using these values as input variables. For other variables (that proved to be statistically insignificant in the regression analyses) we use following coding: the governments are majority governments (1= the coded value for this particular variable), there are no left-wing parties in the government (0) and the government stability is 26 months (the average value in our sample). Furthermore, we assumed that there are no elections during the five year period (0).

[38] Alesina and Perotti, 'Fiscal Expansion and Adjustment'.

[39] Hahm et al. state in their study that they did "not find any systematic influence of the ruling party's political ideology on deficits"; Hahm et al, 'The Political economy of Deficit Spending', p. 68. Alesina

and Perotti conclude that "left-wing and right-wing governments are about equally likely to make successful fiscal adjustments"; Alesina and Perotti, 'Fiscal Expansion and Adjustment', p. 234.

[40] OECD, 'Economic Performance and the Structure of Collective Bargaining', *OECD Employment Outlook*, July 1997, 63-91.

TABLE 1 ECONOMIC GROWTH AND PUBLIC EXPENDITURES IN 17 OECD COUNTRIES, 1960-1995.

Country	Economic growth				Public expendi-tures			
	1960-73	1973-79	1979-89	1989-95	1960-73	1974-79	1980-89	1990-95
Australia	5.2	2.8	3.3	2.5	24.4	33.6	36.5	38.7
Austria	4.9	3.0	2.1	2.3	38.7	45.8	50.3	51.7
Belgium	4.9	2.3	1.9	1.6	39.1	52.6	60.5	56.0
Canada	5.4	4.2	3.1	1.2	31.6	39.2	45.0	49.9
Denmark	4.3	1.9	1.8	1.9	33.8	49.1	59.0	61.3
Finland	5.0	2.1	3.7	-0.6	30.3	38.7	43.5	57.6
France	5.4	2.7	2.1	1.3	38.0	43.3	50.2	52.7
Germany	4.3	2.4	2.0	2.0	37.5	47.5	47.8	50.0
Italy	5.3	3.5	2.4	1.3	33.7	42.9	49.3	54.3
Japan	9.7	3.5	3.8	1.9	19.5	28.4	32.7	33.5
Netherlands	4.8	2.6	1.9	2.4	40.8	53.6	61.2	58.1
Norway	4.3	4.8	2.7	3.4	36.7	47.0	46.6	51.7
Portugal	6.9	2.9	2.9	1.9	20.4	33.0	40.7	44.1
Spain	7.3	2.3	2.8	1.7	-	26.8	39.1	44.1
Sweden	4.1	1.8	2.0	0.6	38.9	54.4	62.9	67.0
United Kingdom	3.1	1.5	2.4	1.0	36.7	44.4	44.9	42.3
United States	4.0	2.6	2.4	1.9	29.1	32.3	35.3	33.5
Total OECD	4.9	2.8	2.6	1.8	30.5	36.6	40.5	43.2

Note: Economic growth measures are year-to-year percentage changes in real GDP. Public expenditures are general government total outlays as a percentage of GDP.
Sources: OECD Historical Statistics 1960-1995; OECD Economic Outlook 61 (June 1997).

TABLE 2 BUDGET BALANCE AND PUBLIC DEBT IN 17 OECD COUNTRIES, 1970-1995 (% OF GDP).

Country	Financial Balance				Public debt			
	1970	1975	1985	1995	1980	1985	1990	1995
Australia	2.8	-2.1	-2.8	-2.1	-	-	23.5	45.3
Austria	1.2	-2.5	-2.6	-5.0	37.3	49.8	57.9	69.2
Belgium	-2.1	-5.3	-8.9	-3.9	78.7	120.1	125.7	130.8
Canada	0.8	-2.5	-6.8	-4.1	44.0	63.1	71.5	97.6
Denmark	3.2	-1.4	-2.0	-1.8	44.7	74.9	64.8	73.6
Finland	4.3	2.6	2.9	-5.2	14.1	16.5	14.5	58.1
France	1.1	-2.4	-2.9	-5.0	30.9	38.6	40.2	60.1
Germany	0.2	-5.6	-1.2	-3.3	32.8	42.8	43.2	60.5
Italy	-4.0	-12.9	-12.6	-7.0	58.1	82.3	104.5	124.2
Japan	1.7	-2.8	-0.8	-3.7	51.2	65.3	61.4	76.0
Netherlands	-1.1	-2.5	-3.6	-3.7	46.9	71.5	78.8	78.6
Norway	3.2	3.3	9.9	3.3	47.6	34.6	32.4	41.1
Portugal	-	-5.5	-7.5	-5.8	33.0	57.0	65.3	65.9
Spain	0.0	-0.5	-6.8	-6.5	18.3	50.8	50.6	71.4
Sweden	4.6	2.8	-3.8	-7.0	44.3	67.6	44.3	79.8
United Kingdom	2.9	-4.5	-2.8	-5.6	54.0	59.4	39.1	59.0
United States	-1.1	-4.1	-3.2	-1.9	37.0	49.5	55.3	62.2
OECD average	0.1	-4.0	-3.4	-3.3	41.0	54.5	56.3	69.2

Note: Financial balance measure is general government surplus/deficit as a percentage of GDP. Public debt refers to general government gross financial liabilities as a percentage of GDP.
Sources: OECD Economic Outlook 64 (June 1998); OECD Economic Outlook 60 (December 1996), OECD Economic Outlook.53 (June 1993); OECD Economic Outlook 47 (June 1990).

Table 3. Expected relations between dependent and independent variables (- decreases, + increases, ? not specified).

	Expenditure	Revenue	Financial balance (deficit/surplus)
Government attributes			
Left-wing governments	+	+	?
Multiparty governments	+	-	-
Majority governments	?	?	+
Institutional factors			
Election year	+	-	-
Government instability	+	-	-
Labour market centralisation	+	+	?

TABLE 4. REGRESSION ANALYSIS OF FACTORS AFFECTING THE CHANGE IN THE GDP SHARE OF PUBLIC EXPENDITURES (PANEL CORRECTED STANDARD ERRORS IN PARENTHESES; *** P<0.01, ** P<0.05, * P<0.10; N=270).

	Model I	Model II	Model III	Model IV
Constant	1.22***	0.93**	1.50***	0.73*
	(0.40)	(0.45)	(0.42)	(0.44)
Expenditures$_{-1}$	-0.03***	-0.04***	-0.04***	-0.05***
	(0.01)	(0.01)	(0.01)	(0.01)
Δ in expenditures$_{-1}$	0.14**	0.14**	0.13*	0.13*
	(0.05)	(0.07)	(0.07)	(0.07)
Δ in Unemployment	0.43***	0.41***	0.44***	0.41***
	(0.09)	(0.10)	(0.10)	(0.10)
Unexpected Δ in GDP growth	-0.29***	-0.29***	-0.28***	-0.29***
	(0.04)	(0.04)	(0.05)	(0.05)
Institutional attributes				
Election year		0.32*		0.30*
		(0.17)		(0.17)
Labour market index		1.08*		1.23*
		(0.61)		(0.72)
Government stability		0.00		0.01
		(0.01)		(0.01)
Government attributes				
Left-wing government			0.04	-0.07
			(0.18)	(0.21)
Number of parties in government			0.16***	0.19***
			(0.05)	(0.06)
Majority government			-0.09	-0.12
			(0.15)	(0.16)
Adjusted R^2	0.43	0.44	0.43	0.44
SSR	411.0	400.4	402.4	391.1
BG test of autocorrelation	1.36	0.27	0.27	0.27

TABLE 5. REGRESSION ANALYSIS OF FACTORS AFFECTING THE CHANGE IN THE GDP SHARE OF PUBLIC REVENUES (PANEL CORRECTED STANDARD ERRORS IN PARENTHESES; *** P<0.01, ** P<0.05, * P<0.10; N=270).

	Model I	Model II	Model III	Model IV
Constant	0.92***	1.36***	1.27***	1.37***
	(0.32)	(0.34)	(0.28)	(0.36)
$Revenues_{-1}$	-0.01*	-0.04***	-0.03***	-0.05***
	(0.01)	(0.01)	(0.01)	(0.01)
Change in $revenues_{-1}$	-0.01	-0.02	-0.03	-0.02
	(0.09)	(0.08)	(0.09)	(0.08)
Δ in Unemployment	-0.08	-0.10	-0.08	-0.11*
	(0.06)	(0.07)	(0.06)	(0.06)
Unexpected Δ in GDP growth	-0.10***	-0.10***	-0.11***	-0.10***
	(0.03)	(0.03)	(0.03)	(0.03)
Institutional attributes				
Election year		-0.41***		-0.42***
		(0.13)		(0.13)
Labour market index		1.43***		1.52**
		(0.50)		(0.59)
Government stability		-0.01**		-0.00
		(0.00)		(0.01)
Government attributes				
Left-wing government			0.23	0.04
			(0.17)	(0.19)
Number of parties in government			0.17***	0.14**
			(0.04)	(0.06)
Majority government			-0.20	-0.26
			(0.16)	(0.16)
Adjusted R^2	0.04	0.09	0.06	0.10
SSR	316.7	295.7	304.4	289.0
BG test of autocorrelation	1.36	1.36	0.54	0.54

TABLE 6. REGRESSION ANALYSIS OF FACTORS AFFECTING THE CHANGE IN THE PUBLIC FINANCIAL BALANCE SHARE OF THE GDP (PANEL CORRECTED STANDARD ERRORS IN PARENTHESES; *** P<0.01, ** P<0.05, * P<0.10; N=270).

	Model I	Model II	Model III	Model IV
Constant	-0.13 (0.16)	-0.24** (0.31)	-0.05 (0.23)	0.23 (0.38)
Balance$_{-1}$	-0.10*** (0.03)	-0.11*** (0.03)	-0.12*** (0.03)	-0.13*** (0.03)
Change in balance$_{-1}$	0.10 (0.07)	0.11* (0.06)	0.10 (0.07)	0.11* (0.06)
Δ in unemployment	-0.61*** (0.09)	-0.61*** (0.10)	-0.61*** (0.10)	-0.62*** (0.10)
Unexpected Δ in GDP growth	0.14*** (0.05)	0.15*** (0.05)	0.13*** (0.04)	0.14*** (0.05)
Institutional attributes				
Election year		-0.74*** (0.17)		-0.72*** (0.17)
Labour market index		0.77* (0.42)		0.88* (0.51)
Government stability		-0.01 (0.01)		-0.01 (0.01)
Government attributes				
Left-wing government			0.29 (0.20)	0.09 (0.21)
Number of parties in government			-0.02 (0.06)	-0.11 (0.08)
Majority government			-0.26 (0.19)	-0.23 (0.17)
Adjusted R^2	0.34	0.38	0.34	0.38
SSR	532.3	497.4	524.0	488.9
BG test of autocorrelation	1.36	1.90	1.09	1.36

TABLE 7. LABOUR MARKET CENTRALISATION INDEX.

Country	***1982-85***	***1986-92***	***1993-97***
Australia	0.715	0.678	0.538
Austria	0.823	0.798	0.788
Belgium	0.719	0.707	0.714
Canada	0.349	0.352	0.352
Denmark	0.758	0.704	0.717
Finland	0.808	0.793	0.815
France	0.570	0.588	0.593
Germany	0.734	0.724	0.719
Italy	0.606	0.576	0.678
Japan	0.481	0.453	0.446
Netherlands	0.611	0.576	0.601
Norway	0.705	0.723	0.726
Portugal	0.619	0.632	0.591
Spain	0.567	0.556	0.576
Sweden	0.873	0.798	0.783
UK	0.592	0.465	0.411
USA	0.287	0.252	0.252
Average	0.636	0.610	0.606

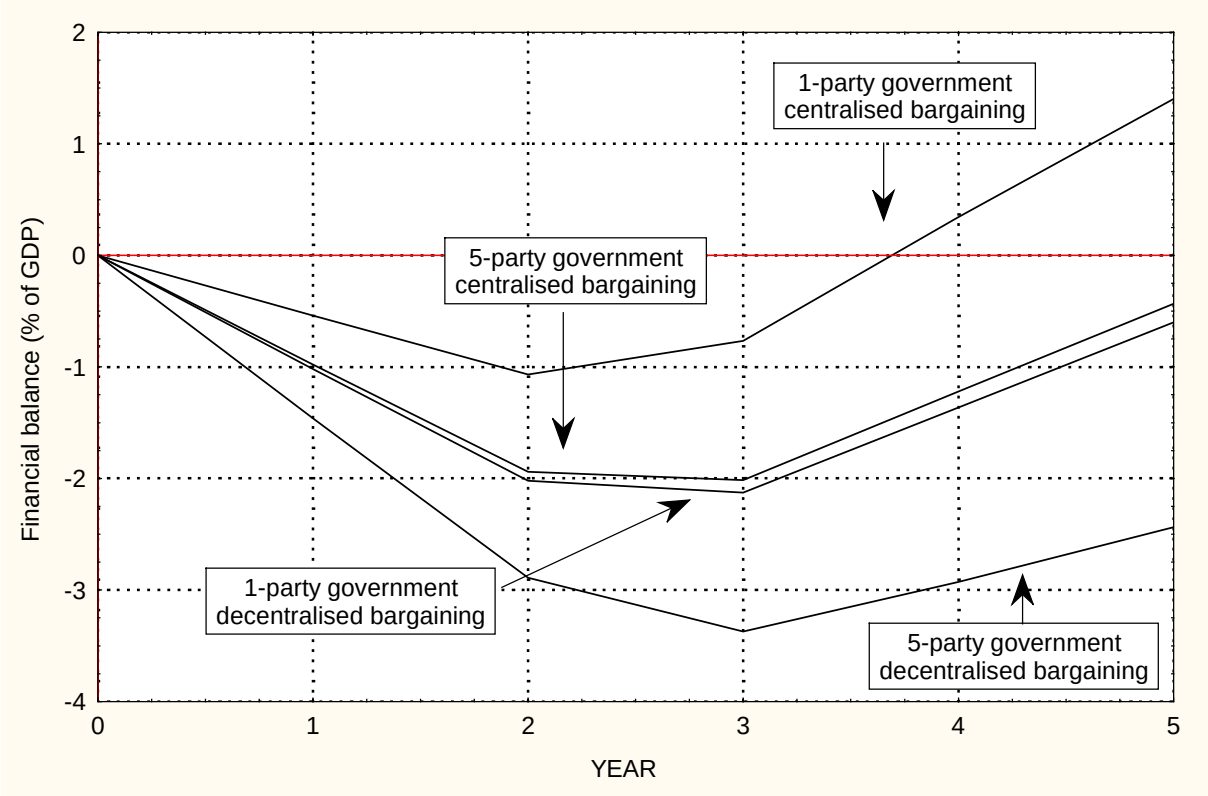

FIGURE 1. DEVELOPMENT OF THE FINANCIAL BALANCE IN THE SCENARIO.

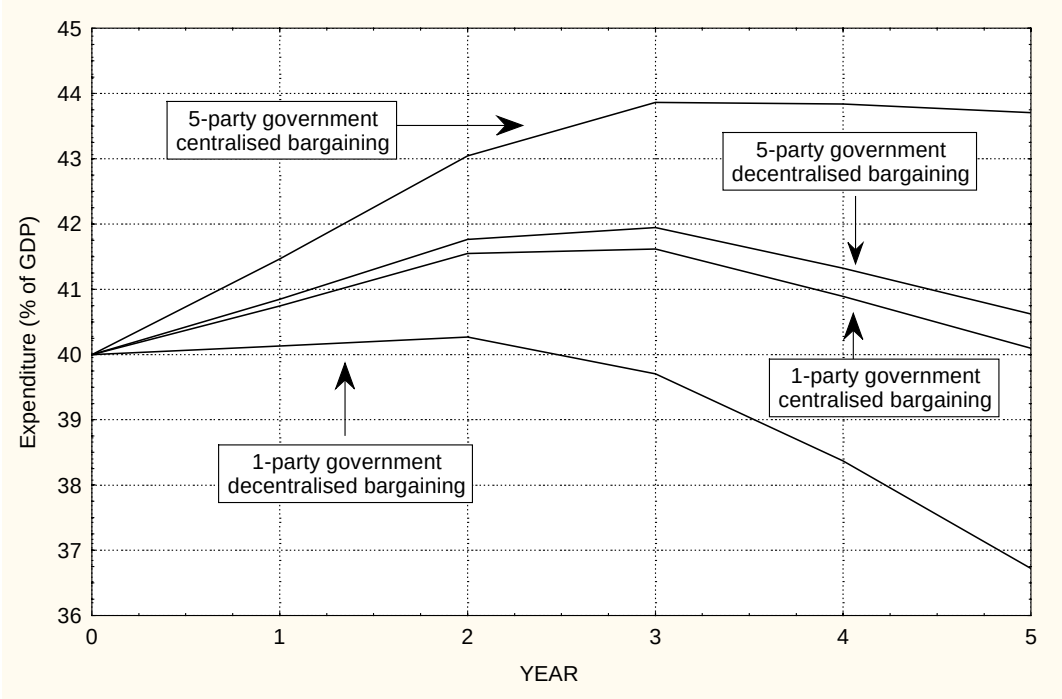

FIGURE 2. DEVELOPMENT OF EXPENDITURES IN THE SCENARIO.

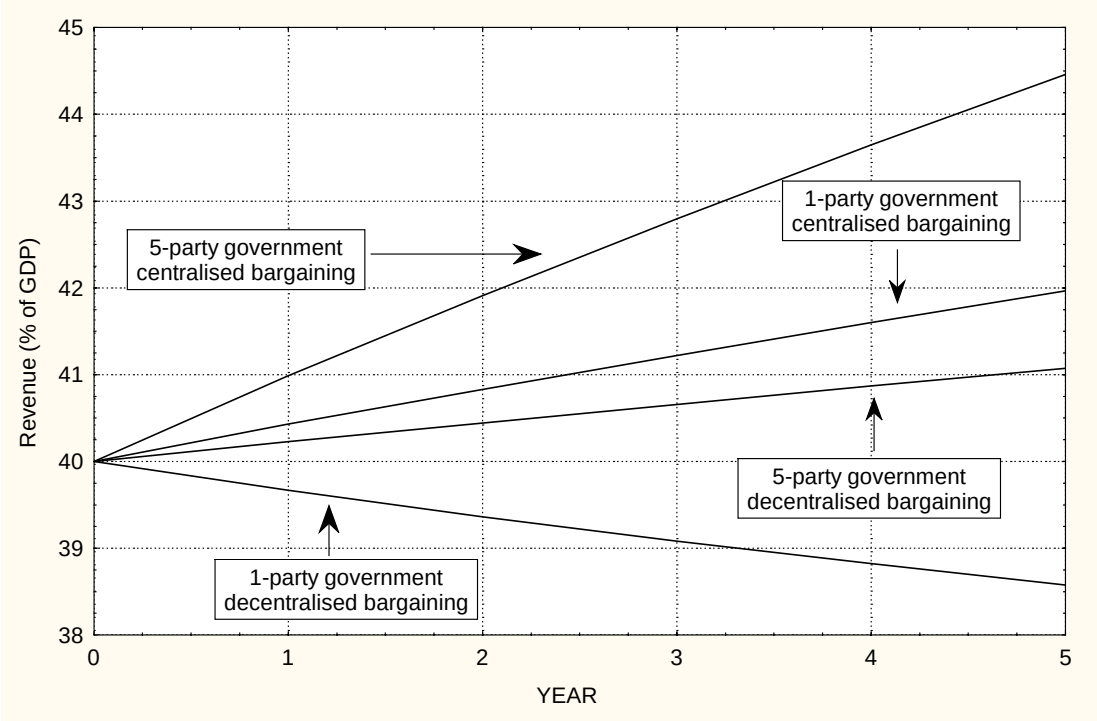

FIGURE 3. DEVELOPMENT OF REVENUES IN THE SCENARIO.