The Hard Business of Balancing Budgets

A Study of Public Finances in 20 OECD Countries

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Abstract

Reduction of budget deficits and public debts has become of central importance in modern democracies. In this study public spending, public revenue and financial balance were studied together to form a comprehensive picture of deficit management. The focus was the relationships between political factors and public finances. The number of parties in government coalitions is an important determinant of public expenditures and budget deficits. Multiparty governments are likely to spend more and have bigger deficits. In addition, government stability was found to be related to the tax burden and the budget deficit, indicating that short-lived governments were less successful in their deficit reduction policies. The existence of a corporatist system was found to be an important component of fiscal policies. In corporatist systems budget deficits have been smaller than in non-corporatist systems. However, the combination of government types and the corporatist system had considerable effects as well. One-party governments with a non-corporatist system and multiparty governments with a corporatist system 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 in non-corporatist systems were not as likely to be successful in their deficit management.

1 Introduction

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 (see Steinmo & Tolbert 1998). 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 stable throughout the period of this analysis. Examples of these institutional factors are the existence of a corporatist system, the overall stability of governments or whether the country is a unitary or a federal state.

2 Economy and economic policy 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 (Saunders 1985; Bruno & Sachs 1985).

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 (OECD 1985). 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 (e.g. OECD 1992). 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 countries in the developed world 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 (Roubini & Sachs 1989b). 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, Italy and Greece, where highly unbalanced budgets have led to enormous public debts.

The development that has generated these fiscal problems has its foundation in the fact that increased government spending has been accompanied by slow economic growth. Since the 1980s most of the OECD governments have been committed to putting public finances on a sound basis, i.e. to control and cut back the level of public expenditures. Thus, in most of the OECD countries deficit policies and debt management have become a central part of national fiscal policies (Buiter 1985; Grilli et al. 1991; Oxley & Martin 1991; de Haan & Sturm 1994, 1997; Alesina & Perotti 1995; Borrelli & Royed 1995).

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 (see Boix 1997; Heidenheimer et al. 1990). 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 (OECD 1987).

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 (see e.g. Pierson & Smith 1993).

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.

3 Balancing the budget, party politics and political institutions

To a large degree, the budget deficits and public debts that have been accumulated since the mid-1970s are products of poor economic performance in the OECD countries. One of the main reasons for the growing public indebtedness is 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 (e.g. Burda

& Wyplosz 1993, 290). During economic upturns governments collect more tax revenues and they spend less through income transfer mechanisms. Respectively, during recessions the tax revenues decrease and transfer payments increase. As a consequence the ability to balance the budget is related to economic performance (GDP) and especially to the unemployment rate, which has a strong impact on public transfers (see Alesina & Perotti 1995, 212-214).

However, much of the political economy literature has argued that budget deficits are not merely products of economic developments but are also affected by the intentions of the policy-makers and political institutions as well (Grilli et al. 1991; Roubini & Sachs 1989a, 1989b; de Haan & Sturm 1994). 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 (Alesina & Perotti 1995, 211-212).

First it needs to be considered how parties or the political ideologies they represent affect public spending and budgetary balances. Although the impact of parties has not traditionally been considered as a central determinant of political economy, it has been found that social democratic and labour parties spend more than non-leftist parties (Cameron 1978, 1251; Roubini & Sachs 1989a, 118). Therefore, it is justified to assume that left-wing governments are more tolerant of budget imbalances, as they tend to increase public expenditures more than non-leftist parties.

However, the observed fact 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 (Borrelli & Royed 1995, 239). Likewise, while it may be true that conservative governments want to reduce public spending they may be equally enthusiastic to lower taxes. Therefore it is not easy to evaluate what effects party ideologies actually have on the budget balance, and thus, the direction of the relationship is uncertain. Also it is quite possible that because of the general shift in economic policy attitudes in the 1980's, left-wing governments do not actually differ from the non-leftist governments in their fiscal policies.

Authors of studies on public finances have quite often emphasised the centrality of political factors in the determination of budget balances in developed countries (Roubini & Sachs 1989a, 1989b; Alesina & Drazen 1991; Grilli et al. 1991; de Haan & Strum 1994, 1997; Borrelli & Royed 1995; Alesina & Perotti 1995). Following the pioneering work by Roubini & Sachs (1989a) researchers have focused mainly on the different government attributes that may explain successes and failures of deficit management strategies. In particular, it has been assumed that in the presence of multiparty coalition governments deficit reduction is slower and less efficient than in the presence of single-party governments.

In order to formulate a valid theory of deficit management it is essential to clarify what it is exactly that makes some governments less (or more) efficient in balancing budgets than others. First, it is assumed that strong political consensus and commitment to deficit reduction is required because it is much harder for politicians to cut expenditures than to approve more funding for their constituents (Roubini & Sachs 1989b, 126). 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 (de Haan & Strum 1994, 158).

To express accurately why it is hard for coalition governments to manage budget deficits we have formulated these assumptions in the form of a budgetary game. We assume that two parties in a budgetary game attempt to reduce a budget deficit by cutting government expenditure. The first party is an agrarian party that is willing to make cuts in unemployment benefits, but is very reluctant to accept any cuts in farming benefits. The other party is a labour party that wants cuts in farming benefits but is not willing to accept cuts in unemployment benefits. Furthermore, it is assumed that the total budget consists of these two types of expenditure only.

Because neither of the parties wants to see the government coalition break up, the approval of both parties is needed to make decisions. In practise this means that both parties have a veto power to block any unwanted decisions. The situation of the

parties is depicted in Figure 1. The exemplary payoffs for both parties are also included in the figure. It is assumed that the worst possible situation for either of the parties is the alternative in which its own preferred expenditure is cut, but the other party's favourite expenditure is not. For example the labour party faces this situation if it accepts cuts in unemployment benefits, but the farming benefits are left uncut (upper right hand corner in Figure 1).

FIGURE 1. BUDGETARY CUTBACK GAME BETWEEN TWO GOVERNMENT COALITION PARTIES.

		Agrarian Party	
		Accepts cuts in farming benefits	Does not accept cuts in farming benefits
Labour Party	Accepts cuts in unemployment benefits	Labour (-2) Agrarian (-2)	Labour (-6) Agrarian (+1)
	Does not accept cuts in unemployment benefits	Labour (+1) Agrarian (-6)	Labour (-3) Agrarian (-3)

When the two parties enter budgetary negotiations they have to consider whether or not they are ready to approve cuts in those appropriations that may violate the interests of their own constituents. Both parties know that if they approve budgetary cuts on their behalf and the other party does not, political costs of the cuts will fall mainly on their own party. On the other hand, both parties acknowledge that if they do not approve budget savings on their behalf (but the other party would), some deficit reduction will be gained but without substantial costs for themselves. Therefore, the budgetary game will result resembling the prisoner's dilemma: each party protects its own budgetary interest and the budget remains unbalanced (see Roubini & Sachs 1989a, 924). If either of the parties is committed to saving its preferred expenditure from cuts in all situations and the other party knows this, the outcome of the game will be that no cuts will be made (lower right hand corner).

Based on the model it is justified, first, to assume that *the number of parties* participating in the government is a central government attribute which is related to

the governments' efficiency to reduce budget deficits. If there is only one party in the government with a coherent preference set, the prospects for deficit reduction are favourable because the prisoner's dilemma situation cannot occur. 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, in multiparty governments 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 (Roubini & Sachs 1989a, 924). 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.

However, the number of parties is just one component of government decision-making. The *parliamentary status* of the government may also determine how governments behave in deficit management. In the policy formation process it is important whether government has a majority in the parliament or if it is a minority government. It is very uncertain whether a minority government is able to pass any major budget balancing programmes in the parliament. This may effectively prevent minority governments from attempting to create any major policies to balance the budget and if they try it is very probable that opposite parties will block these attempts in the parliament. As a result, minority governments are thought to be less successful in their attempts to balance budgets.

The possible 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 very quickly. The effects of these underlying structures of the state and its political decision-making processes are considered as well. These factors can be called stable institutional political factors.

It is assumed that the *government stability* or the expected longevity of the government may have important consequences for budgetary decision-making.[1] 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.

Furthermore, there is a question to what extent political power is centralised or decentralised in the state, i.e. whether the state is *a federal or unitary*. In federal systems much of the financial power is partly decentralised to the regional states and this may create problems for the federal government in its effort to manage public finances. In federal systems regional states are often capable of using their veto power in federal decision-making, which makes federal states relatively favourable towards joint decision-making and status quo. In unitary states governments may simply have more capacity to cut spending and increase taxes and as a consequence unitary states may be more able to implement efficient deficit reduction policies than federal states.

Another institutional factor that may affect the way public finances are managed in modern states is the *existence of a corporatist system*. Studies have shown that the corporatist system may have a discernible impact on economic growth, inflation or other measures of macroeconomic performance (see e.g. Hicks 1994; Alvarez et al. 1991; Hicks & Patterson 1989). Furthermore, it has been assumed that the corporatist system is related to increased public welfare expenditures (e.g. Garrett & Lange 1985) and, consequently, to a higher tax burden (Steinmo & Tolbert 1998). Studies that try directly to analyse the consequences of corporatism on deficit management are fewer. In this study it is assumed that corporatism leads to higher spending and a higher tax burden. Because the deficit is the difference between these two macroeconomic variables it is difficult to evaluate the effect of corporatism on changes in financial

[1] 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

public balance. However, because the corporatist system has effects on the two components of a deficit (expenditure and revenues) it is justified to believe that a systematic relation between corporatism and the budget deficits exists.

4 Data and the model

The data for the empirical analysis was compiled from 20 OECD countries[2] for the years from 1982 to 1996. Thus, there are 300 (15×20) 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 of this study, it is expected that there are two sets of political variables that may affect economic policies. Institutional political factors are variables that remain constant 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:

Institutional political factors:

- *Government stability*. This variable measures the average life span of a government in the country between the years 1980-94. These figures are from Lane et al. (1997, 130). The variable ranges from 12.8 (Italy) to 48 months (USA).
- *Federalism*. This is a simple dummy variable measuring whether the political system in the country is federalist (source: Lane et al. 1997).

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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.

[2] The countries are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden, the UK and the USA. New Zealand is not included because comparable OECD data from this country are available only from 1986.

- *Corporatism*. This is a dummy variable indicating whether the country is considered to be corporatist. In the data set Austria, Denmark, Finland, Norway and Sweden are coded as corporatist systems.[3]

Government-related attributes:

- *Number of parties in the government*. This variable simply measures the number of parties in the government coalition (source: Lane et al. 1997). 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. (Source: Lane et al. 1997; Woldendorp et al. 1998; various issues of European Journal of Political Research Political Data Yearbooks).
- *Ideological orientation of government*. The political orientation of the government is measured with two dummy variables ('left' and 'right' dummies).[4] These dummies are coded to one if the government is led by a left-wing or a right-wing prime minister. (Source: Lane et al. 1997; Woldendorp et al. 1998; various Political Data Yearbooks of the European Journal of Political Research).

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:

$$\Delta BAL = a + \beta_1 BAL_{-1} + \beta_2 \Delta GDP + \beta_3 \Delta UNEMP + \sum \beta_i INSVAR + \sum \beta_j GOVVAR + e$$

where

ΔBAL is the annual change in the public financial balance,

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[3] The measurement of corporatism is not an easy task. Initially we hoped to find a theoretically motivated (quantitative) measure of corporatism that would cover all the countries in our data set. However, we did not find such a measure. Thus, we decided to use the dummy variable approach. Our choice of corporatist countries is based on the original classification of Schmitter (1981). Although this classification is rather old, it is expected that the corporatist system is rather stable and changes take place only gradually (see Traxler 1996). There are some other more recent figures (e.g. for bargaining concentration, union coverage and organisational unity of labour) that support our choice of these countries (see Mitchell 1996; Traxler 1996). We also tested different choices of countries (using stricter or looser 'cut-off points' for corporatist countries) but these did not affect the interpretation of our results significantly.

[4] We coded the left-wing dummy to be one if the prime minister's party is listed as socialist, left-socialist or communist in Lane et al. (1997, 138-148). Likewise we coded the right-wing dummy to be one if the prime minister's party was listed as conservative.

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

? GDP is the annual change in the level of GDP growth,

? UNEMP is the annual change in the level of unemployment,

INSVAR are the variables related to stable 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 variables on the right hand side of the equations are changed to be lagged levels of expenditures and revenue respectively.

In the model the dependent variables are changes in the levels of the variables of interest.[5] 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.[6] 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 dependent variable also addresses 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

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[5] 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:

$BAL = a + (1+ß_1)BAL_{-1} + ß_2? GDP + ß_3? UNEMP + S ß_iINSVAR + S ß_jGOVVAR + e$

[6] In this sense the model is somewhat similar to the 'error correction model' (see e.g. Greene 1993, 566-568). However, error correction models are normally used only in situations in which the dependent variable is non-stationary, and this variable and (some of) the independent variables are cointegrated.

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 (1995; 1996). 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.

5 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.[7] 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 (see however Steinmo & Tolbert 1998). 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 sector in modern economies.

The independent variables (except the lagged dependent variable) 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. In the first model only economic factors are included. In the two following models two sets of independent variables are included in the analysis: the stable political factors and the government-related factors respectively. Finally, the fourth model includes all variables from the first three

[7] 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".

models. The inferences and conclusions regarding the significance of independent variables are primarily based on this full model.

Table 3 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 0.7 percentage points. This shows how the public economy in modern societies is very tightly linked to changes in the unemployment situation.

[TABLE 3 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 variables measuring the ideological composition of the government are not statistically significant (except the left-wing dummy in Model III). This would seem to indicate that there are no systematic differences in the behaviour of left-wing, right-wing or centre party led governments. Of the stable systemic variables only the corporatism variable is statistically significant indicating, that public expenditures are higher in countries with a corporatist system.

Table 4 present results from the regression analysis in which the GDP share of public revenues is the dependent variable. Although economic development affects the changes in revenues as GDP growth changes, changes in unemployment do not affect the income side of the public sector. This is in stark contrast with the results obtained in the analysis of the expenditure side of the public sector. All in all it seems that the public expenditure adjusts more to changing economic situations than the income side.

[TABLE 4 APPROXIMATELY HERE]

Of the political factors the corporatism variable is again statistically significant. This means that parallel to the situation with the expenditures the public revenues are higher in corporatist countries. However, neither the number of government parties nor the ideological composition of the government has a statistically significant effect on the public revenues.

Also government stability has an impact on the level of the tax burden. This effect is negative, indicating that in countries with unstable governments the GDP share of public revenues is on a lower level than in countries with more long-lived governments. This result fits to an extent with the theory presented by Steinmo and Tolbert (1998, 175-176). According to their theory long-term political coalitions have an incentive to compromise with other political groups or societal interest groups. These compromises lead to higher spending and consequently higher taxes. However, one must bear in mind that the results in Table 3 did not support the idea that government durability is related to the level of public expenditures.

Finally Table 5 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 3 and 4 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 5 APPROXIMATELY HERE]

The political variables that have an effect on the public balance are the same as in previous analyses. In corporatist countries the balance is better than in non-corporatist countries. A negative effect is on the variable measuring the number of parties in the government coalition. The more parties there are in the government, the worse is the balance. This supports the theory that multiparty governments are less efficient in their deficit reduction policies than single party governments. Furthermore, government durability has a (small) negative effect. In countries with unstable governments the deficit is bigger than in countries led by stable governments. This

result is probably related to the previous finding that the short-lived governments tend to keep public revenues on a lower level than more stable governments.

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 and the corporatist system tend to raise the level of public expenditures in modern societies. It is also interesting to look at factors that do not have effects on the public economy. 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 (see e.g. Cohen 1988). 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 much more effect than the power of the government vis-à-vis the parliamentary opposition. Third, there is no evidence in this study that the constitutional delegation of the state power to federal states has an impact on the macro level management of the public economy.

6 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 simple 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.

The first two years in the scenario present a period of economic downturn. In both of these years the 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 there are no changes in the GDP or 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 GDP grows by one percentage point and the unemployment drops by one percentage point. This scenario demonstrates how the economic policies adjust to the economic development in three typical political systems. The first of these types is the *non-corporatist system with a one-party government*. The second type is the *non-corporatist system with a multiparty government* (5 parties in this scenario). The third type is the *corporatist system with a multiparty government* (again 5 parties). The political orientation of the government is not included in this 'simulation' because it proved not to be significant in the regression analysis.

Figure 2 depicts what happens to the financial balance in countries led by these three different types of government. The multiparty government in a corporatist system and the one-party government 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 the multiparty government in a non-corporatist system. This government starts to accumulate public debt very quickly and recovery in the period of growth is very slow. This means that unless there is a longer period of steady growth the debt burden in these countries grows rapidly. Two countries that frequently have governments that fit these criteria are Belgium and Italy. They are non-corporatist countries with several party government coalitions. If one looks at their public debt figures (see Table 2), it is easy to note that they stand out. In both countries the GDP share of public debt was well over 100% in 1995 (145% and 118% respectively).

[FIGURE 2 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 3 and 4. The starting point for both of these variables at the beginning of the scenario is 40% GDP share of expenditures and revenues. In Figure 4 only two countries are presented because the variable measuring the number of parties in government was not statistically significant in the regression analysis of public 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 2 it was shown that the multiparty government in a corporatist system and the one-party government in a non-corporatist country both perform fairly well in balancing their budgets after an economic downturn. Nevertheless, from Figures 3 and 4 it is easy to see that these countries use different strategies to recover from the deficit. In countries with a one-party government the adjustment is accomplished by decreasing expenditures in times of economic growth. The adjustment process in corporatist countries with multiparty governments 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. This can be easily verified from Table 1. In all of the corporatist countries the average GDP share of public expenditures during years 1990-95 was over 50%, in some of these countries even over 60% when the total OECD average was 43%.

[FIGURE 3 APPROXIMATELY HERE]
[FIGURE 4 APPROXIMATELY HERE]

7 Conclusions

During past two decades governments in the OECD countries have committed themselves to putting public finances on a sound basis. Consequently, reduction of budget deficits, public debts and government spending have become of central importance. 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 (especially the unemployment 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 (1995), 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 (de Haan & Sturm 1994, 1997): 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 led by left-wing or right-wing prime ministers behaved differently in their public finance management.

However, these findings do not mean that political factors are insignificant. It was also assumed that different political institutions affect the process of deficit management. First it was assumed that the composition of governments has a crucial impact on the prospects of balancing budgets. In particular, large coalition governments are likely to find it hard to cut expenditures because of the threat of government break-up and the protection of party-related budgetary interests. Consequently a prisoner's dilemma type of situation is expected to occur where an efficient deficit policy and a collectively favourable outcome (a balanced budget) are likely to be prevented.

According to the empirical analysis the variable measuring the number of parties in government coalitions appeared to be an important determinant of public expenditures and budget deficits. All other things being equal, multiparty government coalitions are likely to spend more and have bigger deficits. Also government stability was found to be related (although weakly) to the tax burden and the budget deficit, indicating that short-tenure governments had less successful deficit policies than more stable governments. However, parliamentary status of governments appeared not to be

important, which is in contrast to the results of some previous studies (e.g. Roubini & Sachs 1989a). According to the empirical results the existence of a corporatist system was found to be an important component of fiscal policies as it was found that in corporatist nations budget deficits have been smaller than in non-corporatist systems.

Finally, the deficit scenarios of different political system characteristics were analysed. Here some interesting views on the different deficit management practices were presented. One-party governments in non-corporatist systems and multiparty governments in corporatist systems were equally successful in their budget-balancing efforts while multiparty governments in non-corporatist systems were not likely to be as successful in their deficit management. However, there was a sharp contrast in the mode of budget balancing between non-corporatist/one-party government and corporatist/multiparty government systems. In the one-party government systems fiscal consolidation was achieved via spending cuts and thus in these countries the need to raise taxes has been less vital. In the corporatist systems with multiparty coalition governments expenditures continued to increase and consequently a balanced budget had to be sought through tax increases.

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

Country	Economic growth				Public expenditures			
	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
Greece	7.7	3.7	1.8	1.3	20.8	28.0	40.3	50.6
Iceland	5.5	5.3	3.2	0.8	29.6	33.6	36.5	40.6
Ireland	4.4	4.9	3.1	6.2	34.4	45.1	51.4	39.7
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
Luxembourg	4.0	1.3	4.3	4.9	34.1	48.2	-	-
Netherlands	4.8	2.6	1.9	2.4	40.8	53.6	61.2	58.1
New Zealand	4.0	0.7	1.9	2.3	-	-	-	-
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
Switzerland	4.4	-0.4	2.3	0.4	20.3	29.2	30.3	34.8
Turkey	5.6	4.5	4.0	4.2	21.0	-	-	-
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 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	25.5	11.6	-	41.3
Austria	1.2	-2.5	-2.6	-5.0	-	-	-	-
Belgium	-2.1	-5.3	-8.9	-3.9	79.9	122.3	130.7	144.8
Canada	0.8	-2.5	-6.8	-4.1	44.6	65.0	71.6	90.7
Denmark	3.2	-1.4	-2.0	-1.8	33.5	64.1	59.5	72.1
Finland	4.3	2.6	2.9	-5.2	13.9	19.0	16.6	70.9
France	1.1	-2.4	-2.9	-5.0	37.3	45.5	46.6	66.3
Germany	0.2	-5.6	-1.2	-3.3	32.8	42.5	43.5	60.0
Greece	-0.1	-3.4	-11.5	-9.8	27.7	57.9	89.0	108.5
Iceland	-	-	-1.7	-3.0	-	-	-	-
Ireland	-3.6	-11.1	-10.9	-1.9	72.5	104.3	98.7	87.0
Italy	-4.0	-12.9	-12.6	-7.0	59.0	84.3	100.5	118.0
Japan	1.7	-2.8	-0.8	-3.7	52.0	68.7	69.8	72.4
Netherlands	-1.1	-2.5	-3.6	-3.7	44.8	67.9	76.5	82.8
New Zealand	-	-	6.9[a]	3.2	-	-	-	-
Norway	3.2	3.3	9.9	3.3	52.2	40.7	39.2	54.2
Portugal	-	-5.5	-7.5	-5.8	37.5	66.5	66.6	71.4
Spain	0.0	-0.5	-6.8	-6.5	18.3	48.8	46.8	66.0
Sweden	4.6	2.8	-3.8	-7.0	44.3	67.6	44.2	91.2
United Kingdom	2.9	-4.5	-2.8	-5.6	54.1	52.7	34.7	56.4
United States	-1.1	-4.1	-3.2	-1.9	37.7	48.1	55.4	64.1
OECD average	0.1	-4.0	-3.4	-3.3	42.6	59.9	64.1	78.8

* Estimate

[a] 1986

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: Lane et al. (1997): Political data handbook. Second edition; OECD Economic Outlook 61 (June 1997); OECD Economic Outlook.53 (June 1993); OECD Economic Outlook 47 (June 1990).

TABLE 3. 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, N=300).

	Model I	Model II	Model III	Model IV
Constant	1.48**	2.36**	1.36*	1.68
	(0.47)	(0.58)	(0.56)	(0.72)
$Expenditures_{-1}$	-0.03**	-0.05**	-0.04**	-0.05**
	(0.01)	(0.01)	(0.01)	(0.01)
? Unemployment	0.73**	0.72**	0.73**	0.72**
	(0.09)	(0.09)	(0.09)	(0.09)
? GDP	-0.26**	-0.25**	-0.26**	-0.25**
	(0.04)	(0.04)	(0.04)	(0.04)
Stable institutional attributes				
Corporatism		0.53**		0.45*
		(0.17)		(0.22)
Government stability		-0.01		0.00
		(0.12)		(0.01)
Federalism		-0.08		-0.15
		(0.15)		(0.15)
Government attributes				
Left-wing government			0.36*	0.16
			(0.17)	(0.23)
Right-wing government			0.17	0.05
			(0.19)	(0.15)
Number of parties in government			0.23**	0.20*
			(0.08)	(0.08)
Majority government			-0.03	0.10
			(0.16)	(0.15)
Adjusted R^2	0.38	0.39	0.39	0.39

TABLE 4. 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, N=300).

	Model I	Model II	Model III	Model IV
Constant	0.84**	2.35**	0.92**	2.25**
	(0.28)	(0.47)	(0.32)	(0.59)
$Revenues_{-1}$	-0.01*	-0.04**	-0.02**	-0.04**
	(0.01)	(0.01)	(0.01)	(0.01)
? Unemployment	0.01	-0.01	0.01	-0.01
	(0.06)	(0.06)	(0.06)	(0.06)
? GDP	-0.14**	-0.14**	-0.14**	-0.14**
	(0.03)	(0.03)	(0.03)	(0.03)
Stable institutional attributes				
Corporatism		0.61*		0.67*
		(0.24)		(0.26)
Government stability		-0.02**		-0.02*
		(0.01)		(0.01)
Federalism		-0.08		-0.11
		(0.10)		(0.10)
Government attributes				
Left-wing government			0.13	-0.13
			(0.19)	(0.20)
Right-wing government			0.04	-0.09
			(0.17)	(0.17)
Number of parties in government			0.15**	0.07
			(0.06)	(0.07)
Majority government			-0.09	0.03
			(0.15)	(0.14)
Adjusted R^2	0.08	0.12	0.09	0.12

TABLE 5. 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, N=300).

	Model I	Model II	Model III	Model IV
Constant	-0.23 (0.17)	-0.26 (0.24)	-0.03 (0.32)	0.52 (0.43)
$Balance_{-1}$	-0.12** (0.03)	-0.14** (0.03)	-0.13** (0.03)	-0.15** (0.03)
? Unemployment	-0.73** (0.09)	-0.75** (0.09)	-0.73** (0.09)	-0.75** (0.09)
? GDP	0.10* (0.04)	0.09* (0.04)	0.09* (0.04)	0.08 (0.04)
Stable institutional attributes				
Corporatism		0.53* (0.26)		0.74** (0.28)
Government stability		-0.01 (0.01)		-0.02** (0.01)
Federalism		0.01 (0.14)		0.08 (0.14)
Government attributes				
Left-wing government			0.03 (0.21)	-0.27 (0.21)
Right-wing government			0.13 (0.24)	0.04 (0.24)
Number of parties in government			-0.03 (0.08)	-0.20* (0.10)
Majority government			-0.34 (0.19)	-0.09 (0.17)
Adjusted R^2	0.30	0.30	0.30	0.31

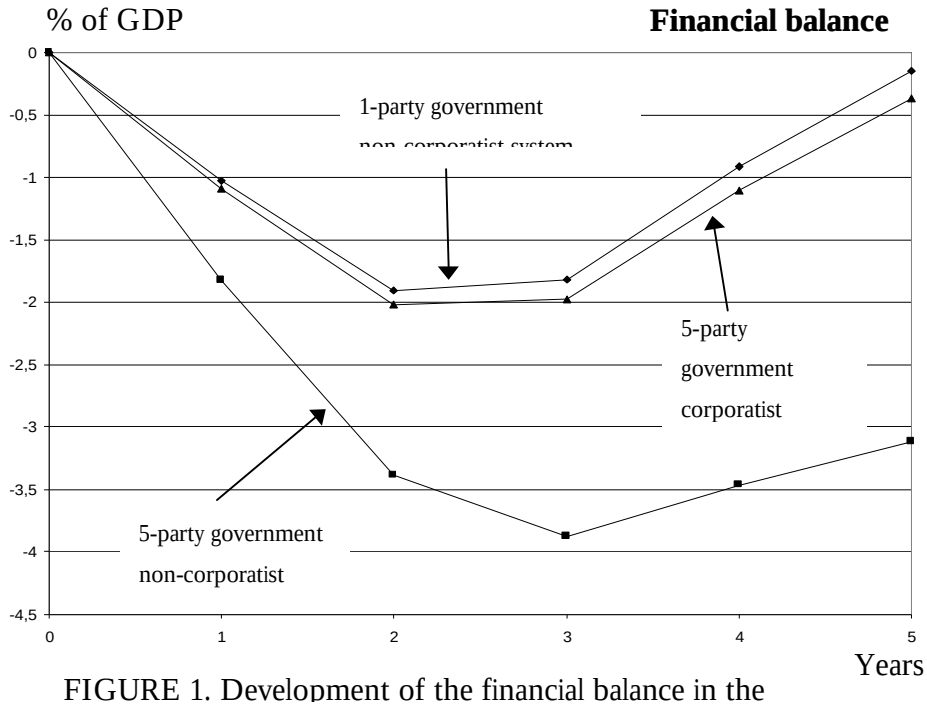

FIGURE 1. Development of the financial balance in the

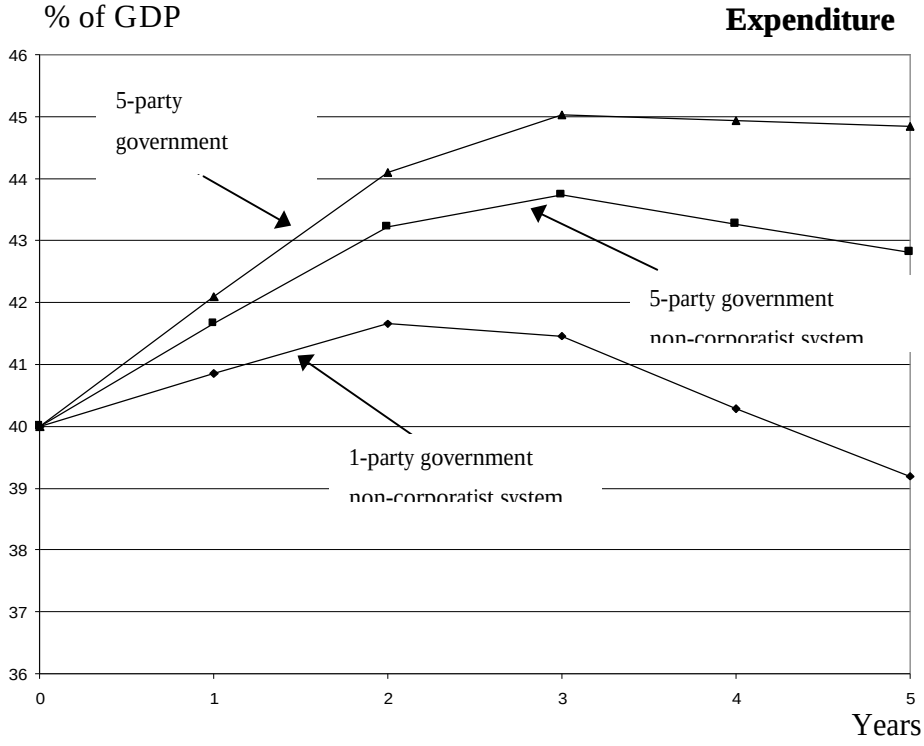

FIGURE 2. Development of the GDP share of the public expenditures

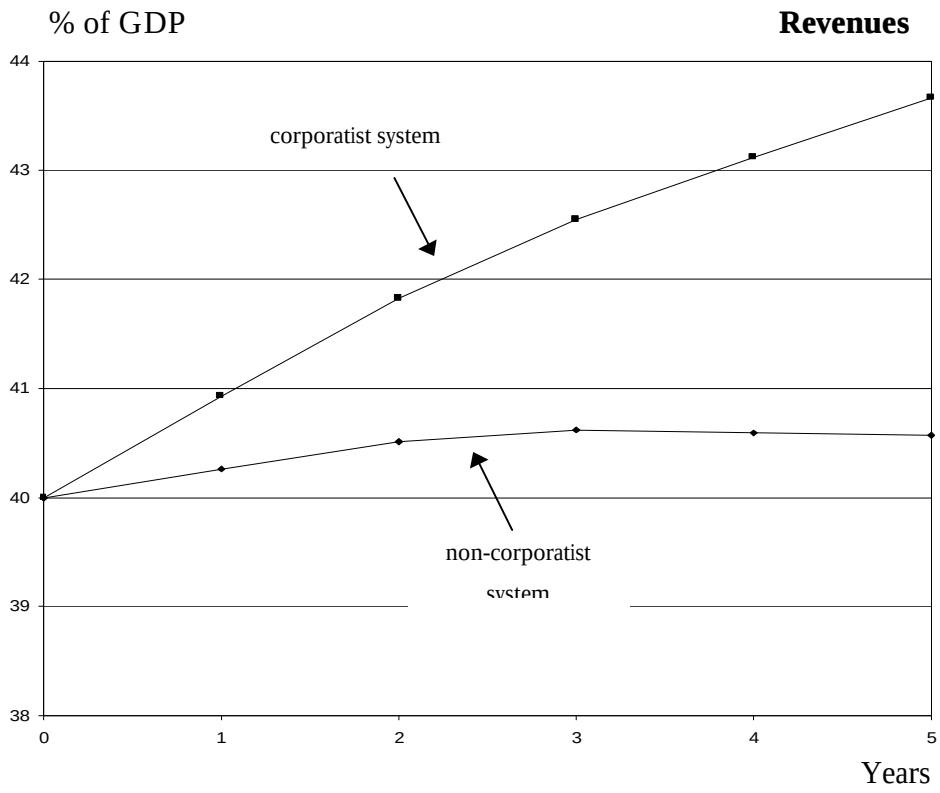

FIGURE 3. Development of the GDP share of the public revenues in